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Pocahontas Gas LLC
PO Box 570
Pounding Mill, VA 24637

phone: 276-608-5099
andystatzer@cnx.com

July 25, 2022

Mr. Kevin Rowsey
U.S. EPA Region 3 Office
Source Water & UIC Section
Water Division
1650 Arch Street
Philadelphia, PA 19103-2029

**RE: UIC Permit Application Well T38CV UIC**

Dear Mr. Rowsey;

Pocahontas Gas LLC hereby submits the above referenced UIC permit application. This application is for a Class II Type D disposal well in Buchanan County, Virginia. This well will be used for final disposal of produced fluids (brine water) from our coalbed methane and conventional shallow oil and gas wells. If you have any questions or require additional information, please contact us.

Sincerely,

Andrew Statzer
Manager Water Virginia Ops

Beverly Webb
Senior Permitting Agent

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## CERTIFICATION STATEMENT

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

*Name:* Mary Beth McGlothlin *Date:* 8/25/22

*Title:* Assistant Secretary *Phone No.* (276) 596-5009

*Signature:* Mary Beth McG

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OMB No. 2040-0042 Approval Expires 4/30/2022

United States Environmental Protection Agency

# Underground Injection Control
# Permit Application for a Class II Well

*(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, and 40 CFR Part 144)*

**For Official Use Only**

Date Received

Permit Number

***Read Attached Instructions Before Starting***

**I. Owner Name, Address, Phone Number and/or Email**

Pocahontas Gas LLC
PO Box 570
Pounding Mill, VA 24637

**II. Operator Name, Address, Phone Number and/or Email**

Pocahontas Gas LLC
PO Box 570
Pounding Mill, VA 24637

**III. Commercial Facility**

- [X] Yes
- [ ] No

**IV. Ownership**

- [X] Private
- [ ] Federal
- [ ] State/Tribal/ Municipal

**V. Permit Action Requested**

- [X] New Permit
- [ ] Permit Renewal
- [ ] Modification
- [ ] Add Well to Area Permit
- [ ] Other

**VI. SIC Code(s)**

1311

**VII. Indian Country**

- [ ] Yes
- [X] No

**VIII. Type of Permit (For multiple wells, use additional page(s) to provide the information requested for each additional well)**

- [X] A. Individual
- [ ] B. Area

Number of Wells: 1 (one)

Well Field and/or Project Names: Oakwood Field

**IX. Class and Type of Well (see reverse)**

| A. Class | B. Type (enter code(s)) | C. If type code is "X," explain. |
|---|---|---|
| II | D | |

**X. Well Status**

- [ ] A. Operating
- [x] B. Conversion
- [ ] C. Proposed

Date Injection Started:

Date Well Constructed: 7/12/2007

**XI. Well Information**

API Number: 450270349000

Permit (or EPA ID) Number:

Full Well Name: T38CV UIC

**XII. Location of Well or, for Multiple Wells, Approximate Center of Field or Project**

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location

___ 1/4 of ___ 1/4 of Section ___ Township ___ Range ___

___ ft. from (N/S) ___ Line of quarter section

___ ft. from (E/W) ___ Line of quarter section.

Latitude: 37.18938

Longitude: -81.8837

**XIII. Attachments**

***In addition to this form, complete Attachments A-U (as appropriate for the specific well class) on separate sheets. Submit complete information, as required in the instructions and list all attachments, maps or other figures, by the applicable letter.***

**XIV. Certification**

**I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)**

| Name and Official Title *(Please Type or Print)* | Signature | Date Signed |
|---|---|---|
| Mary Beth McGlothlin | Mary Beth McG | 8/25/22 |

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# TABLE OF CONTENTS

**Attachment A.** Map and Area of Review

Part I Individual Permit form 7520-6

Part II Area of Review Size Determination (fixed radius ¼ mile from well site)

Part III Maps 1,2, 3 & 4

1. Topographic map showing Area of Review (AOR):
    - Name and location of all production wells, injection wells, abandoned wells, dry holes, and all water wells, noting their types.
    - Springs and surface bodies of water
    - Mines (surface and subsurface) and quarries
    - Other pertinent surface features
2. Topographic map extending ¼ mile from the AOR
    - Name and location of all production wells, injection wells, abandoned wells, dry holes, and all water wells, noting their types.
    - Springs and surface bodies of water
    - Mines (surface and subsurface) and quarries
    - Other pertinent surface features
3. Topographic map extending one mile beyond the facility property boundary, showing the following items;
    - Project injection well, well pad, and/or project area
    - Applicable AOR
    - All outcrops of injection and confining formations
    - All surface water intake and discharge structures and,
    - All hazardous waste treatment, storage, or disposal facilities.

Part IV Area of Review and Corrective Action Plans

- *No corrective action is required. All wells are plugged or producing and properly cased to prevent migration of fluids.*

Part V Landowners Information

- *Table: Names and Addresses*

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**Attachment B.** Geological and Geophysical Information

Part I. Geological Data

Part II. Formation Testing Program

Part III. Well Logs

Part IV. Completion Reports

**Attachment C.** Well Construction/Conversion Information

Part I. Well Schematic Diagram

Part II. Well Construction or Conversion Procedures

**Attachment D.** Injection Operation and Monitoring Program

**Attachment E.** Plugging and Abandonment Plan

**Attachment F.** Financial Assurance

**Attachment G.** Site Security and Manifest Requirements

**Attachment I.** Existing EPA Permits

**Attachment J.** Description of Business

**Attachment K.** Optional Additional Project Information

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**Attachment A**

Area of Review and Maps

The subject proposed well T38CV, is a vertical, shallow natural gas and oil (SOG) well. The SOG wells are drilled and completed within commonly known natural gas producing sandstones, limestones, and shales, down to the Devonian Shale horizon. The Area of Review (AOR) was prepared using the current information available for all wells.

All the data was obtained from Pocahontas Gas LLC internal records; the Virginia Department of Mines, Minerals and Energy (DMME); and the Division of Gas and Oil (DGO).

Map 1 showing wells within a one quarter mile radius. Features within this radius are one (1) SOG well, three (3) CBM wells, five (5) GOB wells four (4) Plugged wells and two (2) springs within the AOR. The surface water bodies include Hurricane Branch. There are some surface and deep coal mining in the area shown on Map 1A. The CBM wells are drilled and completed within the Pocahontas No. 3 Seam at an average depth of 1,707 feet. These wells are currently producing coalbed methane from the Pocahontas No. 3 Seam and several other overlying coal seams.

Map 2 showing wells within a one-mile radius. Features within this radius are one (1) SOG well, ten (10) CBM wells, seventeen (17) GOB wells twenty-one (21) Plugged wells and eight (8) springs within the AOR. All well and surface water information is shown in Table 1. The CBM wells are drilled and completed within the Pocahontas No. 3 Seam at an average depth of 1,930 feet. These wells are currently producing coalbed methane from the Pocahontas No. 3 Seam as well as several other overlying coal seams. (See Part IV, Table 2).

Map 3 represents the AOR and a one-mile radius from the site. It shows the subject proposed injection well and pad and Area of Review. There are no outcrops of injection or confining formations, surface water intakes, discharge structures, or hazardous waste treatment, storage, or disposal facilities.

Map 4 is a depiction of the surface tracts and ownership based on our current mapping and parcel identification. In addition, we relied on county tax records available on the Buchanan County electronic database system (see Part V, Table 3).

Water wells, Springs, and Surface Water

Domestic water supply wells and springs were identified during the drilling of the wells as required by the Division of Gas and Oil. USDW sources are located no deeper than 300' which is protected by the water protection string of casing (see Part III, Table 1). The identified water sources included 8 natural springs. No water wells were identified within the AOR. See Map 2.

The prominent surface waters within the AOR are Hurricane Branch with numerous unnamed tributaries.

Other surface features within the AOR are roads and previous mining reclamation scaring of the topography. There is an active coal deep mine located in Hurricane Branch, which is discussed in the following paragraphs. See Map 3. This map also shows the one-mile radius from the project area and noting the regional topography of steep sided hills forming V-shaped valleys.

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## Mining

Mining is entirely for coal from the nearby surface and underground mine workings. Surface mining is afforded by contour, high-wall, and mountain top removal methods. Underground mining is accomplished from slope entries driving horizontally into the coal seam. Mining predominately occurs in the Raven, Jawbone and Tiller seams, with lesser amounts from coal seams at higher elevations. There is one active underground coal mine in the area. That mine is in the Tiller/Jawbone Seam and is accessed by slope entry located in Hurricane Branch. Buchanan 1 Mine is an extensive longwall mine underneath the entire subject area and lies approximately 2000 feet below the Hurricane Branch. There is no other mineral mining in the area. See Map 1A.

## Other Features

There are no outcroppings of the proposed injection strata. There are no surface water intakes or discharges in the area. There are no hazardous waste treatment, storage, or disposal facilities in the area. The nearest school, residence, or hospital is two miles, or more, away from the project area.

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## Part III Table 1: Domestic Water Supply Wells & Springs

| WELL ID | WELL/SPRING | TRACT ID | OWNER | Approx. Spring ELVELATION (FT) |
|---|---|---|---|---|
| R39E-1 | Spring Outcrop | 2 | CNX Gas Company LLC | 2067 |
| S39G-1 | Spring Outcrop | 2 | CNX Gas Company LLC | 2067 |
| T37F-1 | Spring Outcrop | 1 | Coal Mountain Mining Company | 2105 |
| T38H-1 | Spring Outcrop | 1 | Coal Mountain Mining Company | 2023 |
| T39G-1 | Spring Outcrop | 1 | Coal Mountain Mining Company | 2239 |
| T39H-1 | Spring Outcrop | 1 | Coal Mountain Mining Company | 2239 |
| U38K-1 | Srping | 1 | Coal Mountain Mining Company | 2016 |

**Part IV** Table 2: Summary of well Information

| Well Name | Operator | NAD 83 N (Y) Coords | NAD 83 E (X) Coords | Well Type | Formation | Date Drilled | Casing Conductor | Surface | Water Protection | Coal Protection | Total Depth (FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 423 | Pocahontas Gas LLC | 3611453.76 | 10498481.87 | Coalbed | Pocahontas 3 | 11/12/92 | 15 | | 332 | 332 | 1578 |
| S37 | Pocahontas Gas LLC | 3611650.09 | 10495474.98 | Coalbed/Pipeline | Pocahontas 3 | 12/22/98 | 15 | | 719 | 2398 | 2427 |
| S37B | Pocahontas Gas LLC | 3612389.39 | 10496400.44 | Coalbed/Pipeline | Pocahontas 3 | 7/16/99 | 20 | | 313 | 2206 | 2213 |
| S37G | Pocahontas Gas LLC | 3612368.73 | 10496395.89 | Coalbed/Pipeline | Pocahontas 3 | 2/28/07 | 21 | | 313 | 550 | 1878 |
| S38 | Pocahontas Gas LLC | 3611624.11 | 10497260.62 | Coalbed/Pipeline | Pocahontas 3 | 12/20/97 | 10 | 218 | 473 | 1759 | 1937 |
| S38A | Pocahontas Gas LLC | 3612400.85 | 10497182.04 | Coalbed/Pipeline | Pocahontas 3 | 5/6/99 | 54 | | 405 | 1900 | 1924 |
| S38C | Pocahontas Gas LLC | 3611935.07 | 10496473.44 | Coalbed/Pipeline | Pocahontas 3 | 2/7/07 | 21 | 31 | 320 | 552 | 1900 |
| S39A | Pocahontas Gas LLC | 3611516.53 | 10499837.16 | Coalbed/Pipeline | Pocahontas 3 | 7/1/08 | 31 | | 352 | 592 | 1941 |
| S39D | Pocahontas Gas LLC | 3611755.89 | 10498506.38 | Coalbed/Pipeline | Pocahontas 3 | 4/1/08 | 31 | | 376 | 376 | 1787 |
| S39E | Pocahontas Gas LLC | 3611213.83 | 10498430.37 | Coalbed/Pipeline | Pocahontas 3 | 3/25/08 | 20 | | 336 | 336 | 1493 |
| S39F | Pocahontas Gas LLC | 3612408.64 | 10498754.89 | Coalbed/Pipeline | Pocahontas 3 | 4/10/08 | 22 | | 376 | 376 | 1508 |
| S39G | Pocahontas Gas LLC | 3612608.03 | 10498504.68 | Coalbed/Pipeline | Pocahontas 3 | 4/18/08 | 14 | | 420 | 420 | 1620 |
| T37 | Pocahontas Gas LLC | 3610607.74 | 10494969.30 | Coalbed/Pipeline | Pocahontas 3 | 12/20/97 | 19 | | 805 | 2088 | 2268 |
| T37C | Pocahontas Gas LLC | 3610626.57 | 10494966.01 | Coalbed/Pipeline | Pocahontas 3 | 7/29/06 | 17 | | 550 | 817 | 2125 |
| T37F | Pocahontas Gas LLC | 3610873.50 | 10496205.54 | Coalbed/Pipeline | Pocahontas 3 | 2/1/07 | 22 | | 333 | 333 | 1630 |
| T38 | Pocahontas Gas LLC | 3610432.24 | 10497520.16 | Coalbed | Pocahontas 3 | 7/11/97 | 20 | | 405 | 1623 | 1756 |
| T38A | Pocahontas Gas LLC | 3610107.44 | 10496400.61 | Coalbed/Pipeline | Pocahontas 3 | 6/3/99 | 18 | | 408 | 2316 | 2338 |
| T38B | Pocahontas Gas LLC | 3611169.19 | 10496583.52 | Coalbed/Pipeline | Pocahontas 3 | 5/11/99 | 18 | | 1934 | 1934 | 1953 |
| T38C | Pocahontas Gas LLC | 3610091.58 | 10496387.07 | Coalbed/Pipeline | Pocahontas 3 | 1/23/07 | 22 | | 360 | 596 | 1972 |
| T38CV | Pocahontas Gas LLC | 3610209.99 | 10497538.38 | Gas/Pipeline | Pocahontas 3 | 10/2/08 | 24 | | 338 | | |
| T38D | Pocahontas Gas LLC | 3610356.58 | 10496425.07 | Coalbed/Pipeline | Pocahontas 3 | 1/23/07 | 22 | | 316 | 548 | 1893 |
| T38E | Pocahontas Gas LLC | 3611170.61 | 10496604.47 | Coalbed/Pipeline | Pocahontas 3 | 2/14/07 | 22 | | 302 | 302 | 1635 |
| T38F | Pocahontas Gas LLC | 3609724.57 | 10497478.92 | Coalbed/Pipeline | Pocahontas 3 | 6/27/07 | 22 | 259 | 341 | 341 | 1642 |
| T39 | Pocahontas Gas LLC | 3610108.32 | 10499648.81 | Coal Bed | Pocahontas 3 | 8/20/97 | 18 | 486 | 629 | 1918 | 2049 |
| T39B | Pocahontas Gas LLC | 3609570.36 | 10499620.59 | Coalbed/Pipeline | Pocahontas 3 | 6/11/08 | 22 | | 503 | 593 | 1904 |
| T39C | Pocahontas Gas LLC | 3610057.38 | 10499671.54 | Coalbed/Pipeline | Pocahontas 3 | 6/18/08 | 22 | 338 | 512 | 595 | 1907 |
| T39D | Pocahontas Gas LLC | 3610530.46 | 10499757.61 | Coalbed/Pipeline | Pocahontas 3 | 6/24/08 | 22 | | 341 | 583 | 1916 |
| T39E | Pocahontas Gas LLC | 3611040.23 | 10499959.04 | Coalbed/Pipeline | Pocahontas 3 | 6/30/08 | 22 | | 340 | 592 | 1957 |
| T39F | Pocahontas Gas LLC | 3609575.98 | 10498427.30 | Coalbed/Pipeline | Pocahontas 3 | 3/21/08 | 22 | | 211 | 463 | 1649 |
| T39G | Pocahontas Gas LLC | 3610078.40 | 10498509.65 | Coalbed/Pipeline | Pocahontas 3 | 3/31/08 | 22 | | 324 | 324 | 1647 |
| T39H | Pocahontas Gas LLC | 3610586.97 | 10498601.75 | Coalbed/Pipeline | Pocahontas 3 | 7/4/08 | 22 | | 341 | 341 | 1658 |
| U38 | Pocahontas Gas LLC | 3608914.28 | 10497382.00 | Coalbed/Pipeline | Pocahontas 3 | 7/18/97 | 13 3/8 | | 408 | 1639 | 1752 |
| U37E | Pocahontas Gas LLC | 3608804.55 | 10496205.05 | Coalbed/Pipeline | Pocahontas 3 | 1/11/07 | 22 | | 330 | 577 | 1896 |
| U38A | Pocahontas Gas LLC | 3607736.59 | 10497387.99 | Coalbed/Pipeline | Pocahontas 3 | 4/2/99 | 7 | | 1917 | 1917 | 1921 |
| U38C | Pocahontas Gas LLC | 3609322.84 | 10496593.88 | Coalbed/Pipeline | Pocahontas 3 | 4/8/99 | 13 3/8 | | 1985 | 1985 | 2018 |
| U38D | Pocahontas Gas LLC | 3607777.53 | 10496516.06 | Coalbed/Pipeline | Pocahontas 3 | 5/20/08 | 22 | | 250 | 335 | 1654 |
| U38E | Pocahontas Gas LLC | 3608311.22 | 10496327.05 | Coalbed/Pipeline | Pocahontas 3 | 1/11/07 | 22 | | 300 | 531 | 1880 |

**Part IV** Table 2: Summary of well Information

| Well Name | Operator | NAD 83 N (Y) Coords | NAD 83 E (X) Coords | Well Type | Formation | Date Drilled | Casing Conductor | Surface | Water Protection | Coal Protection | Total Depth (FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| U38G | Pocahontas Gas LLC | 3609310.22 | 10496572.90 | Coalbed/Pipeline | Pocahontas 3 | 12/19/06 | 22 | | 433 | 433 | 1637 |
| U38H | Pocahontas Gas LLC | 3607731.54 | 10497403.19 | Coalbed/Pipeline | Pocahontas 3 | 4/17/07 | 22 | | 341 | 341 | 1634 |
| U38I | Pocahontas Gas LLC | 3608234.95 | 10497206.31 | Coalbed/Pipeline | Pocahontas 3 | 4/5/07 | 22 | | 340 | 340 | 1579 |
| U38J | Pocahontas Gas LLC | 3608869.99 | 10497561.17 | Coalbed/Pipeline | Pocahontas 3 | 3/28/07 | 22 | | 343 | 343 | 1650 |
| U38K | Pocahontas Gas LLC | 3609245.26 | 10497553.37 | Coalbed/Pipeline | Pocahontas 3 | 6/11/07 | 22 | | 381 | 381 | 1521 |
| U39 | Pocahontas Gas LLC | 3608721.17 | 10498581.65 | Coal Bed | Pocahontas 3 | 7/22/97 | 13 3/8 | | 406 | 1645 | 1748 |
| U39D | Pocahontas Gas LLC | 3608475.43 | 10499515.91 | Coalbed/Pipeline | Pocahontas 3 | 5/20/08 | 22 | | 250 | 335 | 1654 |
| U39E | Pocahontas Gas LLC | 3609035.30 | 10499860.06 | Coalbed/Pipeline | Pocahontas 3 | 6/5/08 | 22 | | 506 | 587 | 1958 |
| U39F | Pocahontas Gas LLC | 3607862.76 | 10498660.55 | Coalbed/Pipeline | Pocahontas 3 | 3/17/08 | 18 | | 377 | 377 | 1528 |
| U39G | Pocahontas Gas LLC | 3608065.24 | 10498547.07 | Coalbed/Pipeline | Pocahontas 3 | 3/22/08 | 18 | | 378 | 378 | 1480 |
| U39H | Pocahontas Gas LLC | 3608595.94 | 10498370.70 | Coalbed/Pipeline | Pocahontas 3 | 3/12/08 | 22 | 50 | 418 | 418 | 1535 |
| U39I | Pocahontas Gas LLC | 3609147.34 | 10498506.28 | Coalbed/Pipeline | Pocahontas 3 | 3/12/08 | 22 | | 459 | 459 | 1652 |

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## Part V Table 3: Landowner Information

| Tract No. | Tax Info. | Owner | Address |
|---|---|---|---|
| 1 | 1HH080033 | Coal Mountain Mining Company | Box 675 Tazewell, VA 24651 |
| 2 | 1HH0801004 | CNX Gas Company LLC | PO Box 527 Pounding Mill VA 24637 |
| 3 | 1HH081002 | Raymond Davis, et al | 4656 Osborne Mtn Rd Raven VA 24639 |

T38H-1
T39H
T38D
T38
T38CV
T38A
T38C
T39G
T38F
T39F
U38C
U38K-1
U38K
U38G
U38
Cove Branch
Hurricane Branch

## LEGEND

- 1/4 MILE RADIUS
- CBM WELL
- GOB WELL
- CBM WELL (PLUGGED)
- CBM WELL (BOTTOM HOLE PLUGGED)
- GOB WELL (PLUGGED)
- T38CV — PROPOSED UIC WELL
- SPRING

CNX™

# T38CV
# AREA OF REVIEW

MAP 1 OF 4

BUCHANAN COUNTY, VIRGINIA

SCALE: 1" = 400'

PREPARED BY:

DATE: JULY 6, 2022

1402152

T38CV

Cove Branch

Hurricane Branch

LEGEND

- PROPOSED UIC WELL
- 1402152 SURFACE MINING AREA

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# T38CV
## AREA OF REVIEW

MAP 1A OF 4

BUCHANAN COUNTY, VIRGINIA

SCALE: 1" = 400'

PREPARED BY:

DATE: JULY 6,2022

S37B
S37G
S38A
S38C
S37
S38
S39G
R39E-1
S39G
S39F
S39D
423
S39E
S39A
T38E
T38B
T37F-1
T37F
T37C
T37
T38H-1
T38
T38D
T38A
T38C
T38CV
T38F
T39H
T39G-1
T39H-1
T39G
T39D
T39
T39C
T39F
T39B
U38C
U38G
U38K-1
U38K
U39I
U39E
U38E-1
U37E
U38
U38J
U39
U39H
U39D
U38I
U38E
U39G
U39F
U38D
U38A
U38H
Cove Branch
Hurricane Branch

LEGEND

- 1/4 MILE RADIUS
- 1/2 MILE RADIUS
- CBM WELL
- GOB WELL
- CBM WELL (PLUGGED)
- CBM WELL (BOTTOM HOLE PLUGGED)
- GOB WELL (PLUGGED)
- T38CV PROPOSED UIC WELL
- SPRING

CNX™

# T38CV
# AREA OF REVIEW

MAP 2 OF 4

BUCHANAN COUNTY, VIRGINIA

SCALE: 1" = 400'

PREPARED BY:

DATE: JULY 6, 2022

Hog Ridge

Turkey Gap

Osborne Mountain

Pendleton Ridge

Coal Gap

T38CV

628

629

Tornado Road

Hurricane Branch

Clifton Fork

Cove Branch

Osborne Mountain Road

Cem

Cem

Cem

Ch

LEGEND

1/4 MILE RADIUS

1 MILE RADIUS

PROPOSED UIC WELL

CNX™

# T38CV
## AREA OF REVIEW

MAP 3 OF 4

BUCHANAN COUNTY, VIRGINIA

SCALE:
1" = 800'

PREPARED BY:

DATE: JULY 6, 2022

2

3

T38CV

1

Cove Branch

Hurricane Branch

LEGEND

- 1/4 MILE RADIUS
- 1/2 MILE RADIUS
- PROPOSED UIC WELL
- PROPERTY LINE
- 3 TRACT IDENTIFICATION

NOTE:

PROPERTY LINES SHOWN ON THIS EXHIBIT WERE PROVIDED BY POCAHONTAS GAS LLC AND WERE TAKEN FROM DEED DESCRIPTIONS AND CHAIN OF TITLE OF RECORD IT DOES NOT REPRESENT A CURRENT BOUNDARY SURVEY.

CNX™

# T38CV
# AREA OF REVIEW

MAP 4 OF 4

BUCHANAN COUNTY, VIRGINIA

SCALE: 1" = 400'

PREPARED BY:

DATE: JULY 6, 2022

**Attachment B:** Geolofical and Geophysical Information

T38CV

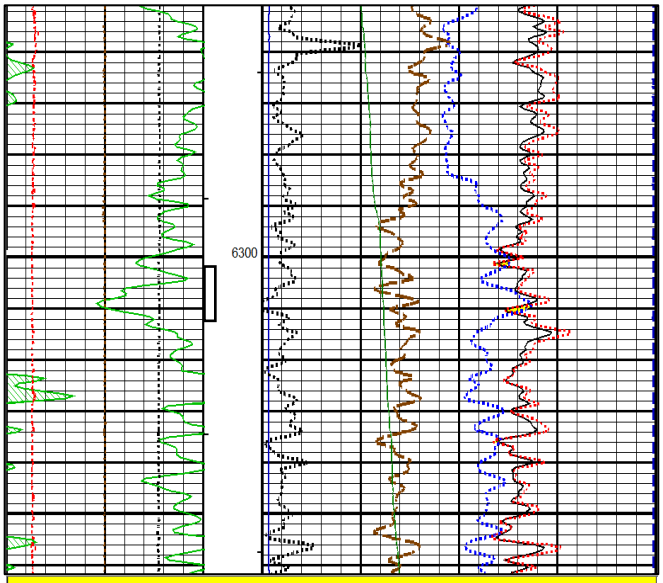
1.0 INJECTION ZONE

The uppermost planned injection zone in the T38CV well is the **Lower Huron Shale**. The Lower Huron Shale is considered Upper Devonian in age. In well T38CV, the Lower Huron is preceded by 1172' of unnamed grey Devonian shale. The perforated zones in the Lower Huron include the following ranges: 6502'-6518' and 6302'-6312' (measured depth from surface). According to the Halliburton frac report, the Lower Huron was fracture stimulated in two frac stages on October 30, 2008 and October 31, 2008 with a breakdown pressure of 2152 psi and an ISIP of 1287 psi for the 1st stage (6502'-6518') and a breakdown pressure of 2199 psi and an ISIP of 2418 psi for the 2nd stage (6302'-6312'). The open hole geophysical log response is indicative of fracture porosity, between organic rich shales of the Lower Huron, which show an average of 5% porosity.

3.0 CONFINING ZONE

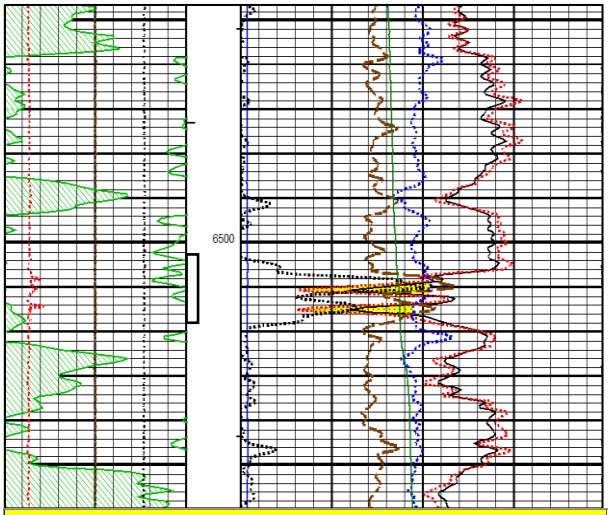
The Lower Huron Shale lies under 1100'+ of grey non-porous shale. All of these injection intervals possess confining layers of competent, low permeability, barriers that will limit the potential upward migration of fluids. No known faults are in close proximity of the injection area that would allow movement of fluids. This well is located on the eastern flank of the Dry Fork Anticline in a similar structural setting as well #25453, which is also a proposed UIC well.

## Lower Huron Intervals




MATRIX NEUTRON = LIMESTONE MAIN PASS 5 INCH = 100 FEET

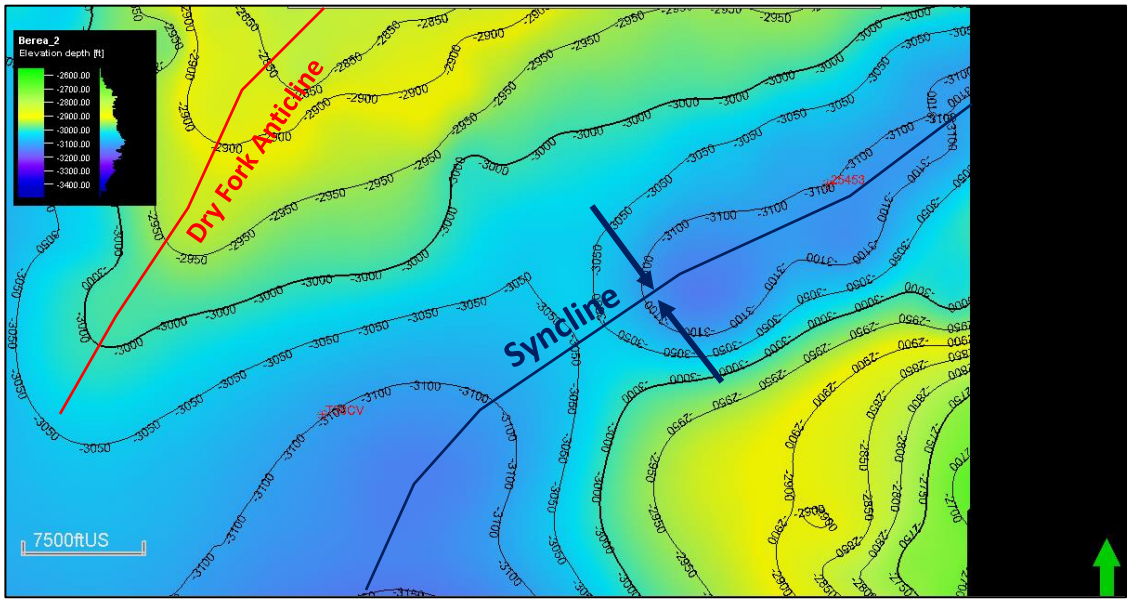
| | | | |
|---|---|---|---|
| Caliper (CALI) 5 (IN) 15 | Cable Drag From STIA to STIT | Bulk Density (RHOB) 2 (G/C3) 3 | |
| Gamma Ray (GR) 0 (GAPI) 200 | Tool/Tot. Drag From D3T to STIA | AudioUpper (AUDU) 0 (MV) 25000 | |
| Tension (TENS) 10000 (LBF) 0 | | AudioLower (AUDL) 25000 (MV) 0 | |
| GR > 200 From LHT1 to GR1 | | Density Porosity (DPHI) 0.3 (V/V) -0.1 | |
| GR > 400 From LHT1 to GR2 | | Photoelectric Factor (PEF) 0 (---) 10 | |
| Differential Gas Temperature Upper (DBFTU) -0.5 (DEGF) 0.5 | | Epithermal Neutron Porosity (ENPH) 0.3 (V/V) -0.1 | |
| | | Borehole Fluid Temperature Upper (BFTU) 80 (DEGF) 90 | |
| | | Bulk Density Correction (DRHO) -0.05 (G/C3) 0.45 | |
| | | GAS EFFECT From ILDT/DensityPorosity/Curve to ITGN/EpiPorosity/Curve | |




MATRIX NEUTRON = LIMESTONE MAIN PASS 5 INCH = 100 FEET

| | | | |
|---|---|---|---|
| Caliper (CALI) 5 (IN) 15 | Cable Drag From STIA to STIT | Bulk Density (RHOB) 2 (G/C3) 3 | |
| Gamma Ray (GR) 0 (GAPI) 200 | Tool/Tot. Drag From D3T to STIA | AudioUpper (AUDU) 0 (MV) 25000 | |
| Tension (TENS) 10000 (LBF) 0 | | AudioLower (AUDL) 25000 (MV) 0 | |
| GR > 200 From LHT1 to GR1 | | Density Porosity (DPHI) 0.3 (V/V) -0.1 | |
| GR > 400 From LHT1 to GR2 | | Photoelectric Factor (PEF) 0 (---) 10 | |
| Differential Gas Temperature Upper (DBFTU) -0.5 (DEGF) 0.5 | | Epithermal Neutron Porosity (ENPH) 0.3 (V/V) -0.1 | |
| | | Borehole Fluid Temperature Upper (BFTU) 80 (DEGF) 90 | |
| | | Bulk Density Correction (DRHO) -0.05 (G/C3) 0.45 | |
| | | GAS EFFECT From ILDT/DensityPorosity/Curve to ITGN/EpiPorosity/Curve | |

**Geologic Structure**




T38CV lies north of the same synclinal structure as the 25453, which is approximately 33,775' northeast. Both are proposed UIC wells in the Devonian.

For assistance in accessing this document, contact R3_UIC_Mailbox@epa.gov

# Attachment B

## II. Formation Testing

Well T38CV contains two zones that can be considered for injection.

Lower Huron 1
Lower Huron 2

Due to limited information regarding the wells completion a Step Rate Test was conducted on each zone separately. A retrievable plug was set below each zone and a packer was set above. Thus, isolating each zone separately for testing. Water was pumped down 2-3/8" production tubing at increasing rates and pressure was measure at the surface. Each pump interval was 15 minutes in duration and the rate was increased .5 bbl/min. The bottom hole pressure was calculated using the following equation:

$BHP = SP - FR$

BHP = Bottom Hole Pressure (psi)
SP = Surface or Pump Pressure (psi)
FR = Friction Resistance of the Pipe

$FR = (.039L\ \rho V^2 f)/D$

L = Length of Pipe (ft)
$\rho$ = Density (lbs/gal)
V = Velocity (ft/s)
f = Friction factor
D = ID of Pipe (in)

Based on industry standard, it was assumed the friction factor for the2-3/8" tubing is .002.

**Lower Huron 1**

Below are the results obtained from the step rate test:

*See included plot from pump truck*

# Step Rate Test

| | |
|---|---|
| Well Number: | T38CV |
| Company: | CNX |
| Date: | 4/13/2022 |
| Formation: | Lower Huron 1 |
| Interval: | 6502' - 6518' |
| Tubing Depth (ft): | 6472 |
| Tubing Type: | 2-3/8" J-55 4.7 lbs/ft |
| Tubing ID (in): | 1.995 |
| Friction Factor: | 0.002 |
| Interval Time (min): | 15 |

| Interval | Flow Rate (bbl/min) | Average Pump Pressure (psi) | Fluid Velocity (ft/s) | Friction Loss (psi) | Bottom Hole Pressure (psi) |
|---|---|---|---|---|---|
| 1 | 0.7 | 720 | 3.017213266 | 19.2233277 | [illegible] |
| 2 | 1 | 1130 | 4.310304666 | 39.23128103 | [illegible] |
| 3 | 1.5 | 1700 | 6.465457 | 88.27038231 | [illegible] |
| 4 | 2 | 1853 | 8.620609333 | 156.9251241 | [illegible] |




The above graphs plot the Rate (bbl/min) vs. Bottom Hole Pressure and Surface Pressure (ISIP). The break down pressure can be estimated from the point in which the slope of the curve changes. This is represented by the dotted lines on the graph. The intersection of the two dotted lines represents the point in which the formation begins to yield. In the above graph that is at approximately 4414 psi for Bottom Hole Pressure and 1700 psi for Surface Pressure.

For assistance in accessing this document, contact R3_UIC_Mailbox@epa.gov

**Lower Huron 2**

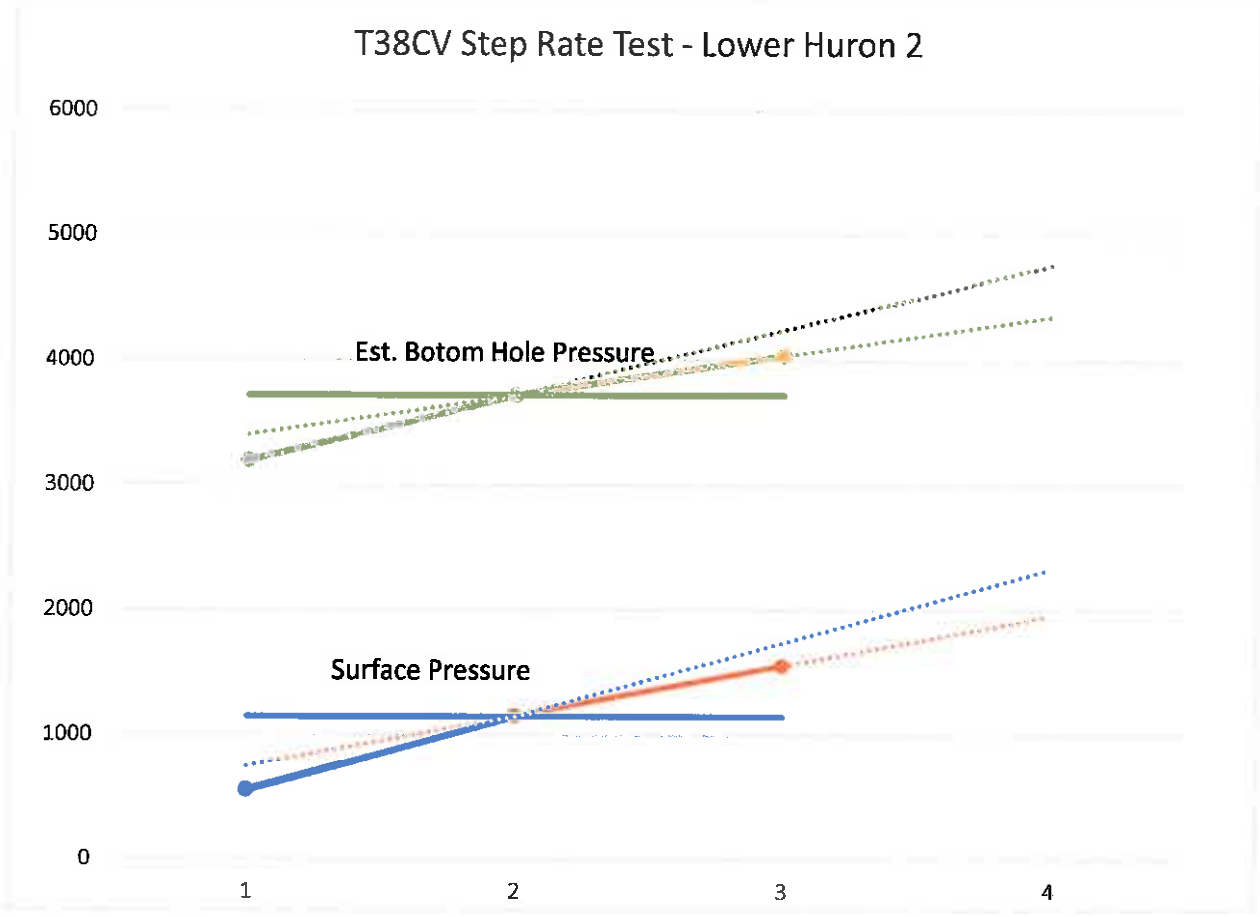
Below are the results obtained from the step rate test:

*See Included plot from Pump Truck:*

# Step Rate Test

| | |
|---|---|
| Well Number: | T38CV |
| Company: | CNX |
| Date: | |
| Formation: | Lower Huron 2 |
| Interval: | 6302' - 6312' |
| Tubing Depth (ft): | 6289 |
| Tubing Type: | 2-3/8" J-55 4.7 lbs/ft |
| Tubing ID (in): | 1.995 |
| Friction Factor: | 0.002 |
| Interval Time (min): | 15 |

| Interval | Flow Rate (bbl/min) | Average Pump Pressure (psi) | Fluid Velocity (ft/s) | Friction Loss (psi) | Bottom Hole Pressure (psi) |
|---|---|---|---|---|---|
| 3 | 1.5 | 562 | 6.465457 | 85.77447997 | [illegible] |
| 4 | 2 | 1150 | 8.620609333 | 152.4879644 | [illegible] |
| 5 | 2.5 | 1550 | 10.77576167 | 238.2624444 | [illegible] |




The above graphs plot the Rate (bbl/min) vs. Bottom Hole Pressure and Surface Pressure (ISIP). The break down pressure can be estimated from the point in which the slope of the curve changes. This is represented by the dotted lines on the graph. The intersection of the two dotted lines represents the point in which the formation begins to yield. In the above graph that is at approximately 3720 psi for Bottom Hole Pressure and 1150 psi for Surface Pressure.

**Summary**

| Formation | Depth (ft) | Breakdown Pressure (psi) | Surface Pressure (ISIP) (psi) |
|---|---|---|---|
| Lower Huron 1 | 6518 | 4414 | 1700 |
| Lower Huron 2 | 6312 | 3720 | 1150 |

The following formula to calculate the Fracture Gradient

$$FG = \frac{ISIP + (.433 * SG * D)}{D}$$

Where:
FG = Fracture Gradient (psi/ft)
ISIP = Instantaneous Shut-In Pressure (psi)
SG = Specific Gravity of Water Used
D = Formation Depth Ft)

$$FG = \frac{1150 + (.433 * 1.00 * 6312)}{6312}$$

$$FG = .615\ psi/ft$$

The following formula can be used to calculate the Maximum Injection Pressure

$$MIP = \left(FG - (.433 * SG)\right) * D$$

Where:
MIP = Maximum Injection Pressure (psi)
FG = Fracture Gradient (psi/ft)
SG = Specific Gravity of Injected Fluid
D = Depth (ft)
Using a specific gravity of injected fluid of 1.08:

$$MIP = \left((.615 - (.433 * 1.08)) * 6312\right)$$

$$MIP = 931\ psi$$

SUPERIOR
Black Lick, Pa.
Mercer, Pa.
Wooster, Ohio
Cleveland, Ok.

# GAMMA RAY
# CCL/VDL
# RADII BOND TOOL

Company CNX GAS LLC.
Well T-38-CV
Field HOKIE PROJECT
County BUCHANAN State VIRGINIA

Location: API #: 045027816701
LAT:329330 N
LON:1014550 E
SEC TWP RGE

Other Services

| | | | |
|---|---|---|---|
| Permanent Datum | GROUND LEVEL | Elevation | 2118 |
| Log Measured From | GROUND LEVEL | | |
| Drilling Measured From | KELLY BUSHING | | |

Elevation
K.B. 2128
D.F. 2128
G.L. 21148

Company CNX GAS LLC.
Well T-38-CV
Field HOKIE PROJECT
County BUCHANAN
State VIRGINIA

| | | | |
|---|---|---|---|
| Date | 10/10/2008 | | |
| Run Number | ONE | | |
| Depth Driller | 6952 | | |
| Depth Logger | 6672 | | |
| Bottom Logged Interval | 6669 | | |
| Top Log Interval | 0.0 | | |
| Casing Driller | 7 IN @ 2100 | | |
| Casing Logger | 7 IN @ 2208 | | |
| Bit Size | 6.25 | | |
| Type Fluid in Hole | WATER | | |
| Density / Viscosity | N/A | | |
| pH / Fluid Loss | N/A | | |
| Source of Sample | N/A | | |
| Rm @ Meas. Temp | N/A | | |
| Rmf @ Meas. Temp | N/A | | |
| Rmc @ Meas. Temp | N/A | | |
| Source of Rmf / Rmc | N/A | | |
| Rm @ BHT | N/A | | |
| Time Circulation Stopped | N/A | | |
| Time Logger on Bottom | 0830 | | |
| Maximum Recorded Temperature | 136 DEG | | |
| Equipment Number | TK 461 | | |
| Location | BECKLEY, WV | | |
| Recorded By | JODY THOMAS | | |
| Witnessed By | RICHARD CARPENTER | | |

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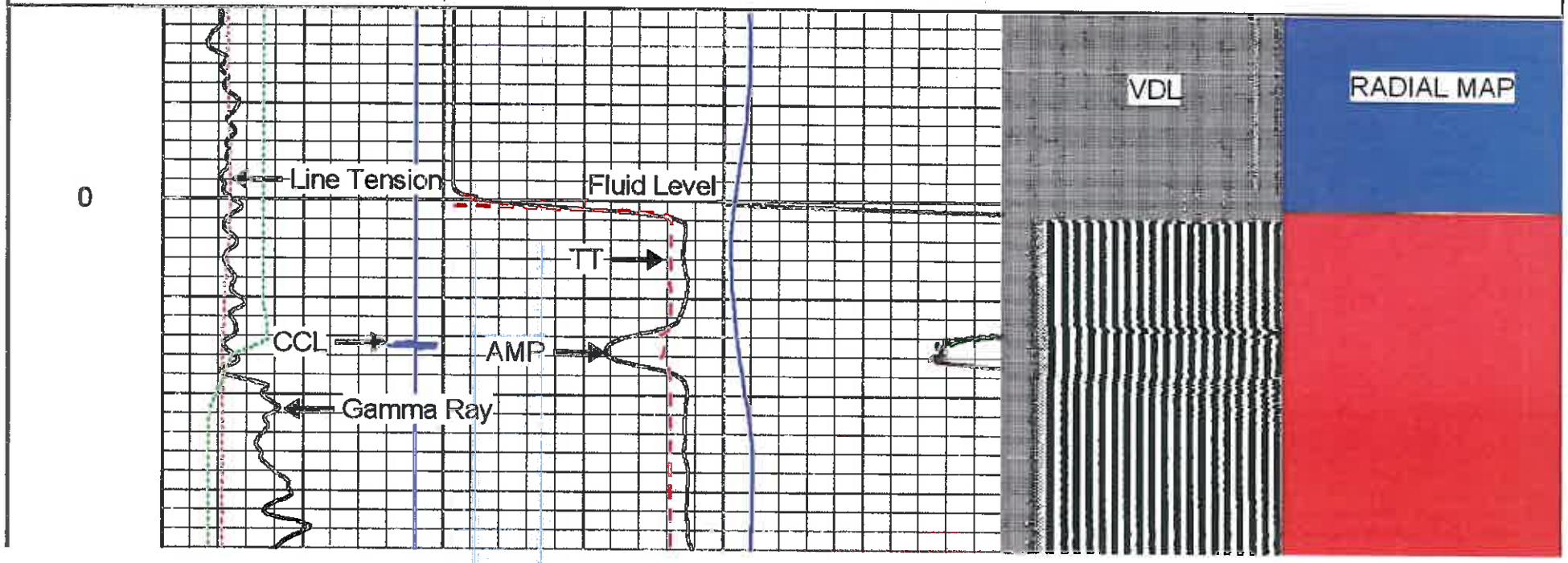
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness

SUPERIOR
Black Lick, Pa.
Mercer, Pa.
Wooster, Ohio
Cleveland, Ok.

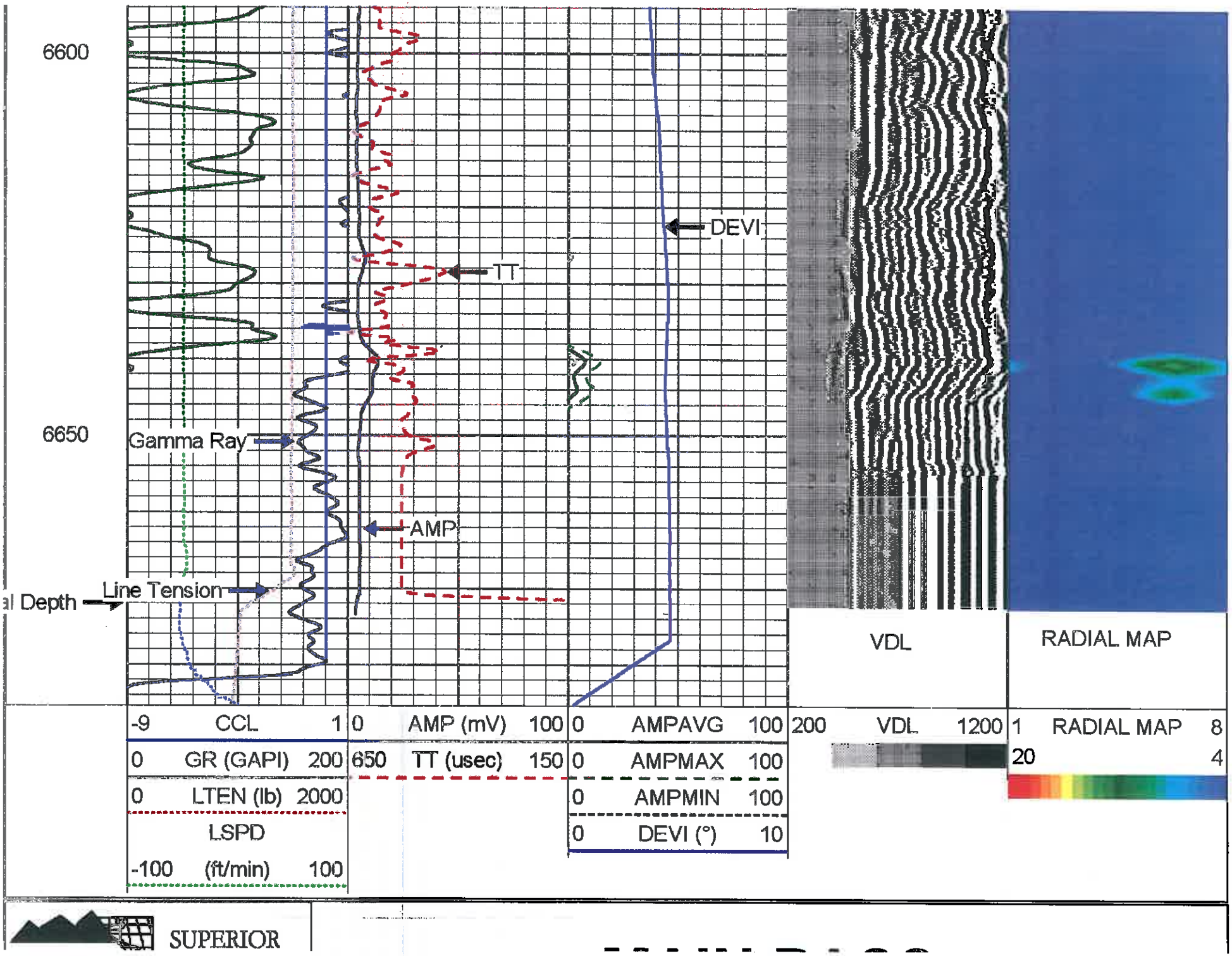
# MAIN PASS

Database File: cnx t-38-cv 10-10-08.db
Dataset Pathname: pass10
Presentation Format: rbt_gr_c
Dataset Creation: Fri Oct 10 09:35:30 2008 by Log Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -9 | CCL | 1 | 0 | AMP (mV) | 100 | 0 | AMPAVG | 100 | 200 | VDL | 1200 | 1 | RADIAL MAP | 8 |
| 0 | GR (GAPI) | 200 | 650 | TT (usec) | 150 | 0 | AMPMAX | 100 | | | | 20 | | 4 |
| 0 | LTEN (lb) | 2000 | | | | 0 | AMPMIN | 100 | | | | | | |
| | LSPD | | | | | 0 | DEVI (°) | 10 | | | | | | |
| -100 | (ft/min) | 100 | | | | | | | | | | | | |



50
100
150


6600
6650
Gamma Ray
Line Tension
al Depth
TT
AMP
DEVI
VDL
RADIAL MAP
-9 CCL 1
0 GR (GAPI) 200
0 LTEN (lb) 2000
LSPD
-100 (ft/min) 100
0 AMP (mV) 100
650 TT (usec) 150
0 AMPAVG 100
0 AMPMAX 100
0 AMPMIN 100
0 DEVI (°) 10
200 VDL 1200
1 RADIAL MAP 8
20
4
SUPERIOR

SUPERIOR
Black Lick, Pa.
Mercer, Pa.
Wooster, Ohio
Cleveland, Ok.

# GAMMA RAY
# CCL/VDL
# RADII BOND TOOL

Company CNX GAS LLC.
Well T-38-CV
Field HOKIE PROJECT
County BUCHANAN State VIRGINIA

Location: API #: 045027816701
LAT:329330 N
LON:1014550 E
SEC TWP RGE

Other Services

| | | | |
|---|---|---|---|
| Permanent Datum | GROUND LEVEL | Elevation | 2118 |
| Log Measured From | GROUND LEVEL | | |
| Drilling Measured From | KELLY BUSHING | | |

Elevation
K.B. 2128
D.F. 2128
G.L. 21148

Company CNX GAS LLC.
Well T-38-CV
Field HOKIE PROJECT
County BUCHANAN
State VIRGINIA

| | | | |
|---|---|---|---|
| Date | 10/10/2008 | | |
| Run Number | ONE | | |
| Depth Driller | 6952 | | |
| Depth Logger | 6672 | | |
| Bottom Logged Interval | 6669 | | |
| Top Log Interval | 0.0 | | |
| Casing Driller | 7 IN @ 2100 | | |
| Casing Logger | 7 IN @ 2208 | | |
| Bit Size | 6.25 | | |
| Type Fluid in Hole | WATER | | |
| Density / Viscosity | N/A | | |
| pH / Fluid Loss | N/A | | |
| Source of Sample | N/A | | |
| Rm @ Meas. Temp | N/A | | |
| Rmf @ Meas. Temp | N/A | | |
| Rmc @ Meas. Temp | N/A | | |
| Source of Rmf / Rmc | N/A | | |
| Rm @ BHT | N/A | | |
| Time Circulation Stopped | N/A | | |
| Time Logger on Bottom | 0830 | | |
| Maximum Recorded Temperature | 136 DEG | | |
| Equipment Number | TK 461 | | |
| Location | BECKLEY, WV | | |
| Recorded By | JODY THOMAS | | |
| Witnessed By | RICHARD CARPENTER | | |

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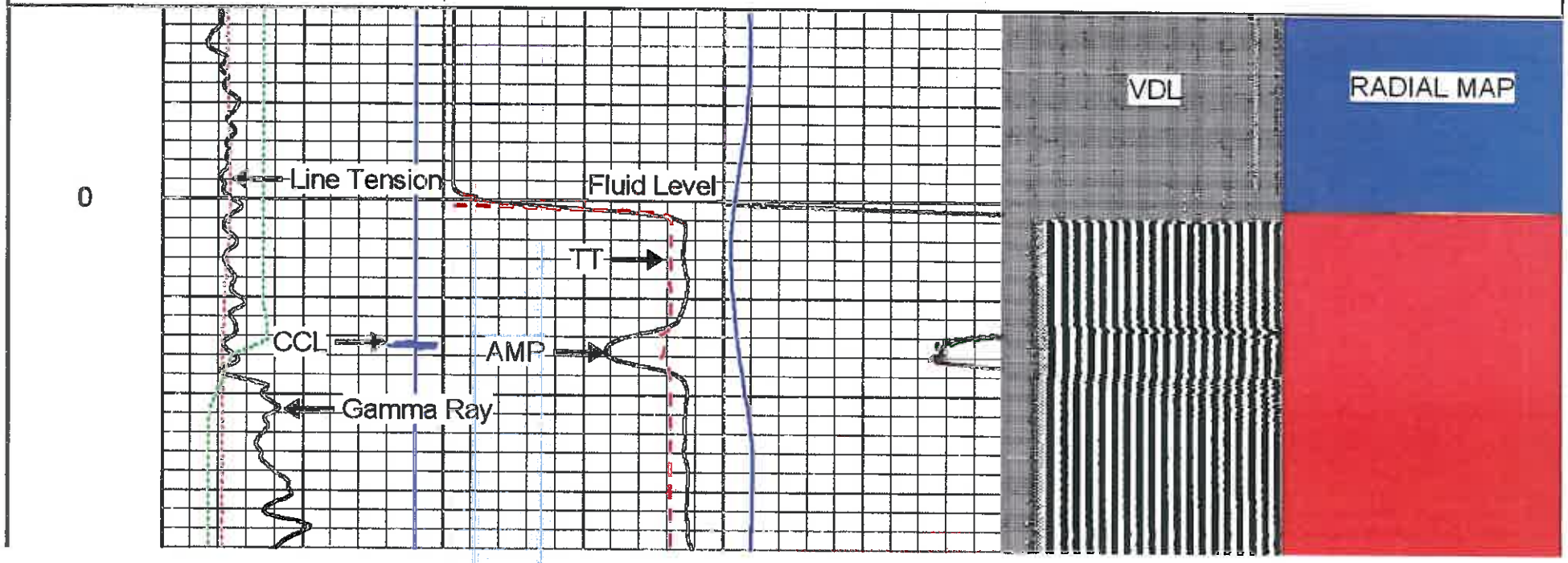
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Black Lick, Pa.
Mercer, Pa.
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Cleveland, Ok.

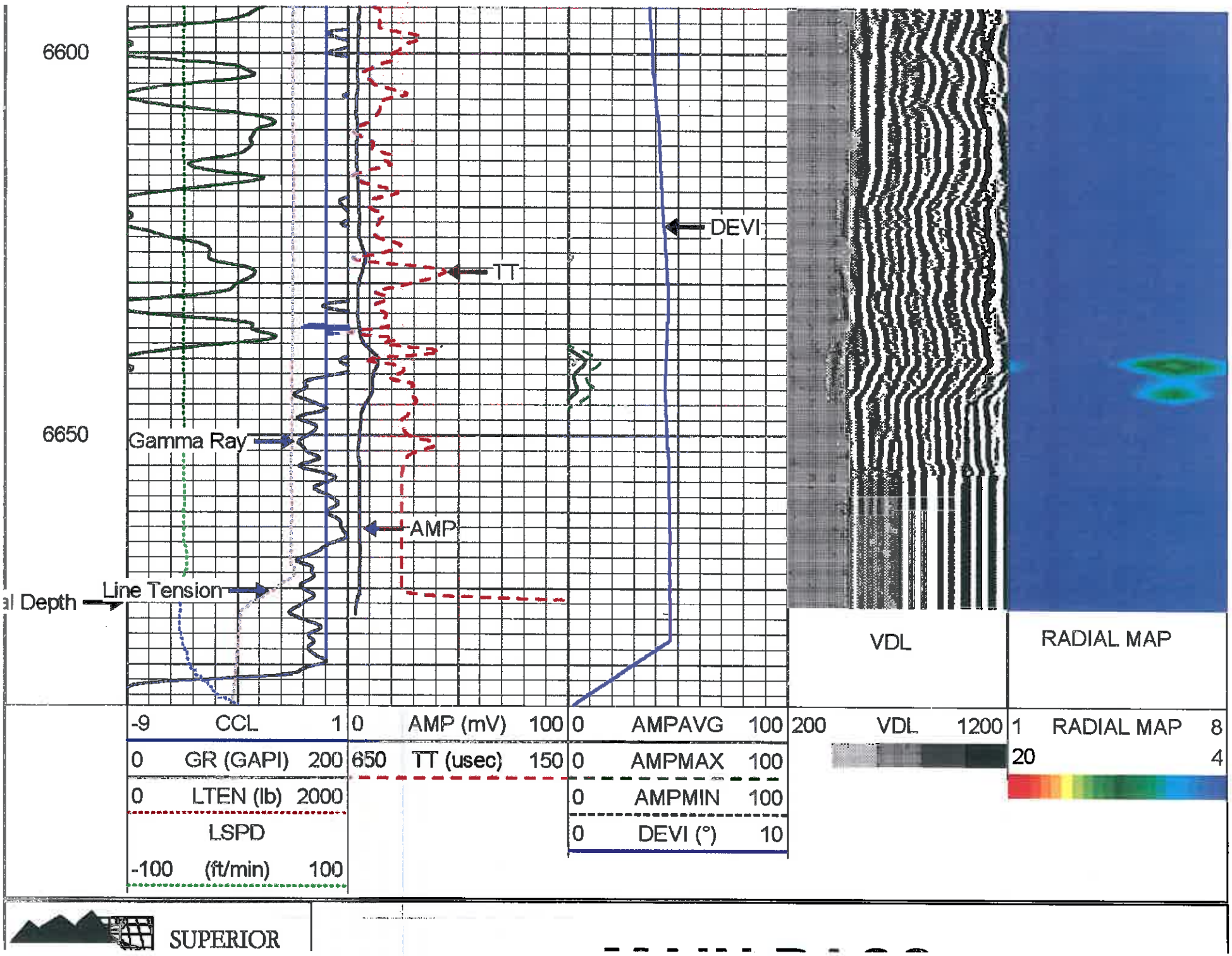
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Dataset Pathname: pass10
Presentation Format: rbt_gr_c
Dataset Creation: Fri Oct 10 09:35:30 2008 by Log Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -9 | CCL | 1 | 0 | AMP (mV) | 100 | 0 | AMPAVG | 100 | 200 | VDL | 1200 | 1 | RADIAL MAP | 8 |
| 0 | GR (GAPI) | 200 | 650 | TT (usec) | 150 | 0 | AMPMAX | 100 | | | | 20 | | 4 |
| 0 | LTEN (lb) | 2000 | | | | 0 | AMPMIN | 100 | | | | | | |
| | LSPD | | | | | 0 | DEVI (°) | 10 | | | | | | |
| -100 | (ft/min) | 100 | | | | | | | | | | | | |



50
100
150


6600
6650
Gamma Ray
Line Tension
al Depth
TT
AMP
DEVI
VDL
RADIAL MAP
-9 CCL 1
0 GR (GAPI) 200
0 LTEN (lb) 2000
LSPD
-100 (ft/min) 100
0 AMP (mV) 100
650 TT (usec) 150
0 AMPAVG 100
0 AMPMAX 100
0 AMPMIN 100
0 DEVI (°) 10
200 VDL 1200
1 RADIAL MAP 8
20
4
SUPERIOR

wellPORT

# CEMENT REPORT

NABORS

## Title Page

Field Ticket
S-00000000010132-00

Date
Wed, Apr 13, 2022

Service Center
Norton ( 27 )
NEXTIER

Service Representative(s)
LARRY HALL

Job Type
Pump Rental

Lease Project
T-38-CV

Number / ID

Township

County
BUCHANAN

State
VA

Physical Location

Country

Customer
CNX GAS CO LLC ( CNX1 )

Mailing Address
PO BOX 947

BLUE FIELD VA 24605

Division / District

Customer Representative(s)
ANDY

PO/RFQ/AFE Code

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# Table of Contents

Title Page ..... 1
Table of Contents ..... 3
Table of Contents ..... 3
Client Information ..... 5
Lease/Project/Well Information ..... 5
Service Center Information ..... 5
Pre-Job Information ..... 5
  Well Information ..... 5
  Call-Out Information ..... 5
Stage Summary ..... 6
  INJECTION TEST ..... 6
    INJECTION TEST - Total(s) ..... 6
    INJECTION TEST - Job Log ..... 6
      INJECTION TEST - Job Log - continued ..... 6
    INJECTION TEST - Key & Unit(s) ..... 6
    INJECTION TEST - Recorded Time Plot 1 - 1 of 2 ..... 7
    INJECTION TEST - Recorded Time Plot 1 - 2 of 2 ..... 9
Post-Job Information ..... 11
  Post Job Summary ..... 11
Disclaimer ..... 11
Appendix ..... 11
  Field Ticket ..... 12


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Cement Report

## Client Information

| | |
|---|---|
| Client Reference | CNX1 |
| Client | CNX GAS CO LLC |
| Address | PO BOX 947 |
| City State Zip | BLUE FIELD VA 24605 |
| Representative | ANDY |

## Lease/Project/Well Information

| | |
|---|---|
| Job Type | Pump Rental |
| Lease or Project | T-38-CV |
| County | BUCHANAN |
| State | VA |

## Service Center Information

| | |
|---|---|
| Service Center | Norton |
| Location Code | 27 |
| SWSI Entity | NEXTIER |

## Pre-Job Information

### Well Information

| | |
|---|---|
| Casing Size | --- |
| Casing Weight | --- |
| Casing Connection | --- |
| Casing I.D. | --- |
| Hole Size | --- |
| Calculated Annular Excess % | --- |
| BHST | --- |
| T.D. | --- |
| Casing Length | --- |
| Shoe Joint | --- |
| Float Collar | --- |
| Calculated T.O.C. | --- |
| Previous Casing Depth | --- |
| Previous Casing Size | --- |
| Previous Casing Weight | --- |
| Drill Pipe Size | --- |
| Drill Pipe Weight | --- |

### Call-Out Information

| | |
|---|---|
| Service Center(s) | NORTON |
| Bulk Location(s) | NORTON |
| Pumping Equipment | 92-1316 |



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| | |
|---|---|
| Auxilliary Equipment | — |
| Time Called Out | — |
| Time On Location | — |
| Planned Time of Job | — |
| Weather Conditions | RAIN |

# Stage Summary

==> INJECTION TEST

## INJECTION TEST

### INJECTION TEST - Total(s)

| Time | Comment |
|---|---|
| 14:50:48 | Establish Rate |
| 16:17:16 | — |

### INJECTION TEST - Job Log

| Time | Comment | CASING-psi (2) | PUMPf | PUMPp (2) | PUMPstg | PUMPjob (2) |
|---|---|---|---|---|---|---|
| 14:50:48 | Establish Rate | 0 | 2.1 | 0 | 119.92 | 119.94 |
| 14:50:49 | — | 0 | 2.1 | 0 | 119.92 | 119.94 |
| 16:17:16 | End Job | -3750 | -4.8 | -3750 | 161.52 | 281.52 |

### INJECTION TEST - Job Log - continued

| Time | Comment | DENcmt | — | — | — | — |
|---|---|---|---|---|---|---|
| 14:50:48 | Establish Rate | 0.44 | — | — | — | — |
| 14:50:49 | — | 0.44 | — | — | — | — |
| 16:17:16 | End Job | -6.25 | — | — | — | — |

### INJECTION TEST - Key & Unit(s)

| Name | Abbreviation | Units |
|---|---|---|
| Casing Pressure | CASING-psi (2) | psi |
| Pump Rate | PUMPf | bpm |
| Pump Pressure | PUMPp (2) | psi |
| Pump Volume Stage | PUMPstg | bbl |
| Pump Volume Job | PUMPjob (2) | bbl |
| Cement Density | DENcmt | ppg |

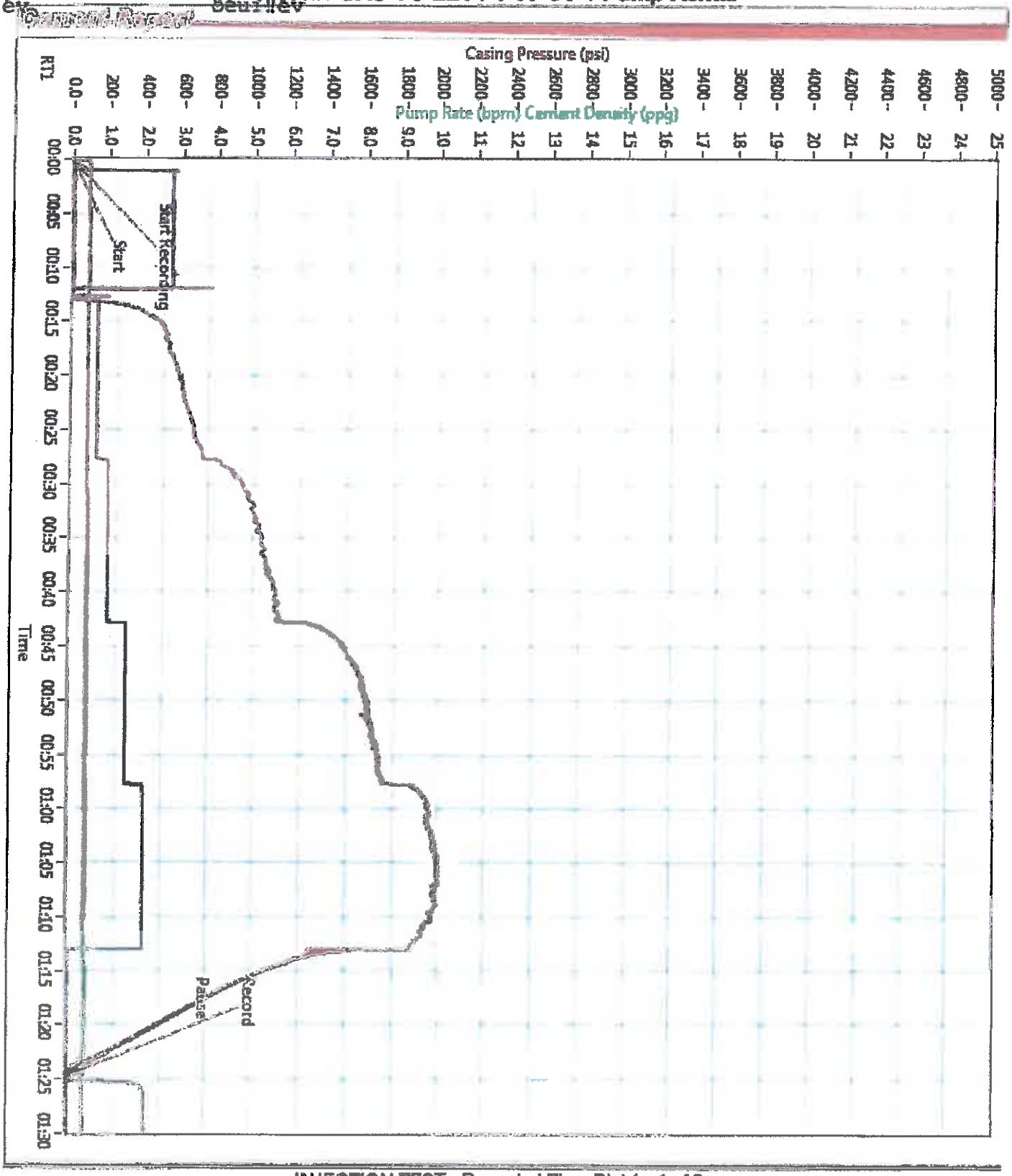


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INJECTION TEST - Recorded Time Plot 1 - 1 of 2



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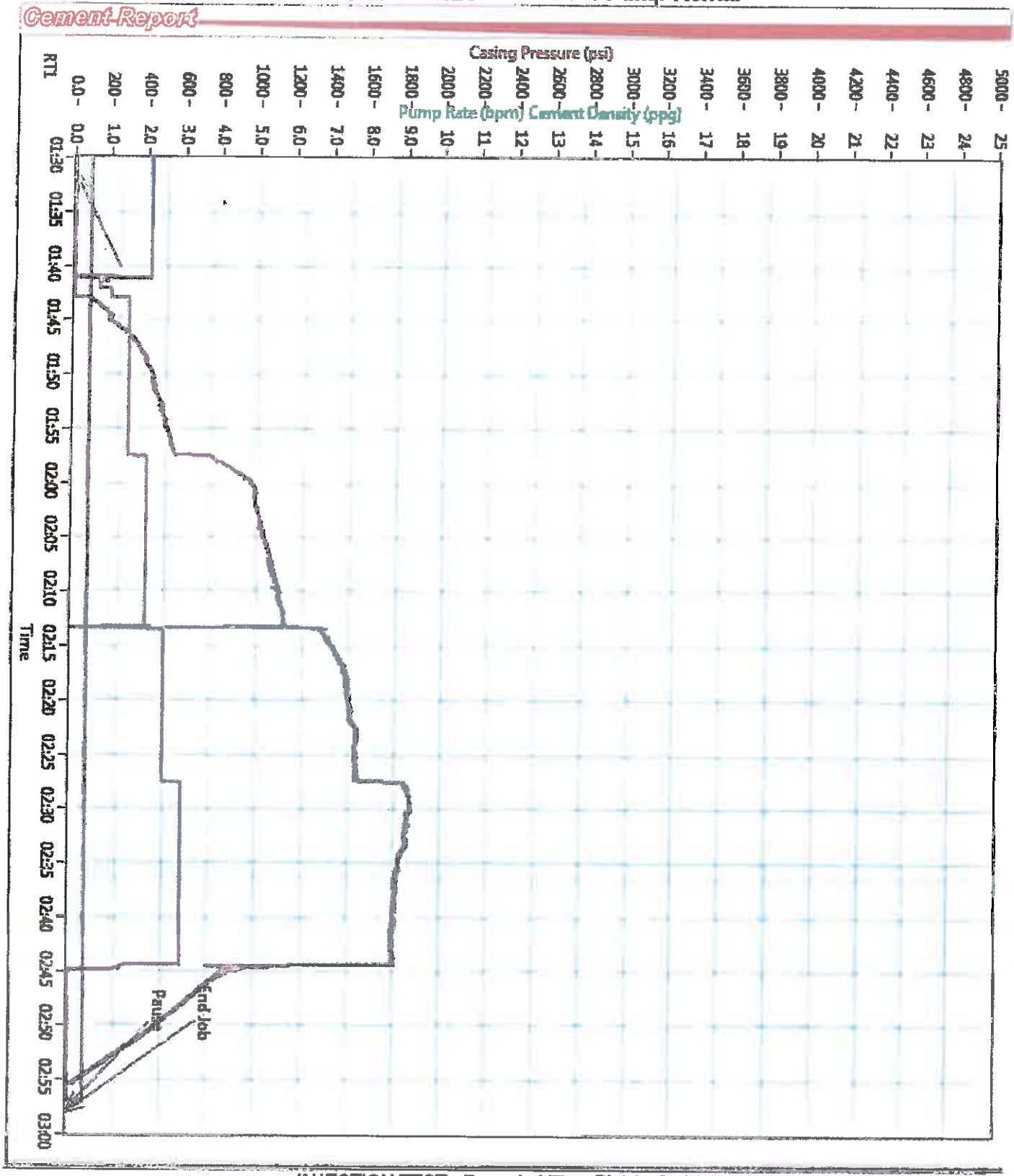

INJECTION TEST - Recorded Time Plot 1 - 1 of 2

INJECTION TEST - Recorded Time Plot 1 - 2 of 2



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Cement Report




INJECTION TEST - Recorded Time Plot 1 - 2 of 2



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# Post-Job Information

## Post Job Summary

| | |
|---|---|
| Pressure Test | --- |
| Initial Circulating Rate | --- |
| Initial Circulating Pressure | --- |
| Lead Slurry Sacks | --- |
| Lead Slurry Volume | --- |
| Tail Slurry Sacks | --- |
| Tail Slurry Volume | --- |
| Bottom Plug Displacement | --- |
| Top Plug Displacement | --- |
| Cmt Vol Circulated to Surface | --- |
| Average Displacement Rate | --- |
| Final Circulating Rate | --- |
| Final Circulating Pressure | --- |
| Plug Bumped? | --- |
| Pressure When Plug Bumped | --- |
| Floats Hold? | --- |

# Disclaimer

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND NABORS COMPLETION & PRODUCTION (NABORS) CANNOT AND DOES NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS. NABORS EXCLUDES AND DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, AMONG OTHERS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, EXCEPT FOR WARRANTY OF TITLE. NABORS DOES NOT GUARANTEE OR WARRANT: (1) THAT ITS CHART INTERPRETATION, RESEARCH ANALYSIS, JOB RECOMMENDATION OR OTHER DATA SUPPLIED BY NABORS IS ABSOLUTELY ACCURATE DUE TO THE NUMEROUS VARIABLES WITHIN A WELL; (2) OR THE EFFECTIVENESS OF THEPRODUCT OR THE RESULT OF ITS' USE. THE REMEDY OF THE CUSTOMER IN ANY CLAIM OR LITIGATION ARISING FROM THE SALE OR USE OF ITS PRODUCT IS EXPRESSLY LIMITED TO THE REPLACEMENT COST OF THE PRODUCT. SELLER SHALL NOT BE LIABLE TO CUSTOMER OR ANY OTHER PARTY FOR ANY OTHER DAMAGES, INCLUDING BUT NOT LIMITED TO, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR WHATEVER. THESE INTERPRETATIONS ARE ALSO SUBJECT TO OUR CURRENT GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

# Appendix

==> Field Ticket


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## Field Ticket

**This ACCUdat Report Appendix Template has not been developed.**

Developers of ACCUdat Appendix Report templates may insert an object, Word, Excel, Picture or PDF file in as this object as allowed by Word. Some examples of operational ACCUdat REport Templates are presented in the <user>Documents>ACCUdat_VI> Report>Appendix>"product line" directory

| | |
|---|---|
| Field_Ticket.dotx | Uses an Excel embedded object |
| Pride.dotx | Uses a Word with no embedded object |
| Safety.dotx | Uses an embedded PDF object |

This example uses a Word Pad Object to occupy and demonstrate the Report Appendix.

***Note for Office 2003 users the file extensions will be *.dot***

The requirements for ACCUdat are.

The embedded objects must be no larger then 8.2" tall and 7.5" tall. Set these properties by right clicking the object and select format object>size.

| | |
|---|---|
| Hieght | 8.2" |
| Width | 7.5" |

Leave lock asppect ratio unchecked to fill the page.

The word document must have margins maintianed also. Set these properties by selecting format page>margins:

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| Top | 0.56" |
| Bottom | 0.56" |
| Left | 0.50" |
| Right | 0.50" |

Margins as described above must be maintianed to aviod pagation over runs when creating the PDF documents. If Word and PDF reports contian "blank" pages the template has margin or object sizes exceeding the PDF page size. ACCUdat does not allow for margin corrections when assembling the documents.

The ACCUdat team has not developed these templates fully due to the specific needs of individual users and areas. However, it is hoped that as a company that a standardized look and content can eventually be achieved adding the professionalism we all aspire to achieve.

Users may request their local technical staff for assistance in developing these ACCUdat Appendix Reports.

The ACCUdat Team


(c) 2012 wellFORM Reports Nabors Completion & Production Services

NEXTIER

| | |
|---|---|
| CUSTOMER | CNX RESOURCES CORP |
| DISTRICT | 2761 |
| ADDRESS | 580 Hawthorn Dr., Norton, VA 24273 |
| PHONE | |

| | | | |
|---|---|---|---|
| AFE # | | PO | |
| LEASE NAME / NUMBER | | API WELL NUMBER | |
| T38CV T38CV | | | |
| SECTION | TOWNSHIP | RANGE | COUNTY, STATE |
| | | | Buchanan, VA |
| WELL PERMIT NUMBER | | | |
| JOB TYPE | | CM-PRESSURE TEST | |
| Vehicle Type | | Single | |

| | |
|---|---|
| TICKET | NVA-2204-0023 |
| DATE | 4/13/2022 |
| CREW INFORMATION | |
| SUPERVISOR | Larry Hall |
| PUMP UNIT NUMBERS | 92-1316 |
| ARRIVAL (D&T) | 4/13/22 10:00 AM |
| DEPARTURE (D&T) | 4/13/22 5:30 PM |

202-JLPjob 1

**Service & Equipment Charges**

| Price Code | Description | Unit | Quantity | Price | Gross Amount | Discount | Net Amount |
|---|---|---|---|---|---|---|---|
| 50001349 | AccuDat Recording System | JOB | 1 | $ 1,230.00 | $ 1,230.00 | 46.00% | $ 664.20 |
| 50001296 | MILEAGE; DOT UNITS | MILE | 45 | $ 7.60 | $ 342.00 | 46.00% | $ 184.68 |
| 50001297 | MILEAGE; NON-DOT UNITS | MILE | 45 | $ 4.30 | $ 193.50 | 46.00% | $ 104.49 |
| 50001379 | PRESSURE PUMPED 501 TO 1K PSI; 1ST 4 HRS | EA | 1 | $ 3,106.67 | $ 3,106.67 | 46.00% | $ 1,677.60 |
| 50001380 | PRESSURE PUMPED 1K TO 2K PSI; 1ST 4 HRS | EA | 1 | $ 3,266.67 | $ 3,266.67 | 46.00% | $ 1,764.00 |
| 50001381 | PRESSURE PUMPED 2K TO 3K PSI; 1ST 4 HRS | EA | 1 | $ 3,746.67 | $ 3,746.67 | 46.00% | $ 2,023.20 |
| | | | | $ - | $ - | | |
| | | | | $ - | $ - | | |
| | | | | $ - | $ - | | |
| | | | | $ - | $ - | | |
| | | | | $ - | $ - | | |
| | | | Subtotal | | $ 11,885.50 | | $ 6,418.17 |

**Materials & Products** #N/A

| Price Code | Description | Unit | Quantity | Price | Gross Amount | Discount | Net Amount |
|---|---|---|---|---|---|---|---|
| | | | | $ - | $ - | | |
| | | | | $ - | $ - | | |
| | | | | $ - | $ - | | |
| | | | | $ - | $ - | | |
| | | | | $ - | $ - | | |
| | | | | $ - | $ - | | |
| | | | Subtotal | | $ - | | $ - |
| | | | Fuel Surcharge | | | 0% | $ - |
| | | | Grand Total | | $ 11,885.50 | | $ 6,418.17 |

Customer Stamp

Customer Name Printed _____

Customer Signature _____

Date Signed _____

**Cement Job Log**

NEXTIER

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Customer: | CNX RESOURCES CORP | | | Date: | 13-Apr-22 | Serv. Supervisor: | Larry Hall |
| Cust. Rep.: | | | | Ticket #: | NVA-2204-0023 | Serv. Center: | Norton - 2761 |
| Well Name: | T38CV T38CV | RTS Date: | 13-Apr-22 | API Well #: | | County: Buchanan | State: VA |
| Well Type: | | RTS Time: | 10:00 AM | Rig: | | Type of Job: | CM-PRESSURE TEST |

| | Date | Time | | Date | Time | | Date | Time |
|---|---|---|---|---|---|---|---|---|
| Left Yard: | 13-Apr-22 | 8:00 AM | Left Loc.: | 13-Apr-22 | 5:30 PM | Start Pump: | 13-Apr-22 | 1:15 PM |
| Arrived Loc.: | 13-Apr-22 | 10:00 AM | Returned Yd.: | 13-Apr-22 | 7:30 PM | End Pump: | 13-Apr-22 | 4:45 PM |

| TIME<br>Note: Bold lines indicate bbl values | Rate<br>(bbl/min) | Csg. Press.<br>(psi) | Tbg. Press<br>(psi) | Ann. Press.<br>(psi) | Stg. Vol.<br>(bbl) | Cum. Vol.<br>(bbl) | Stage Num.<br>Stage # | Stage Details |
|---|---|---|---|---|---|---|---|---|
| 8:00 AM | | | | | | | | Left Yard or Current Location |
| 10:00 AM | | | | | | | | ARRIVE ON LOCATION |
| 10:00 AM | | | | | | | 1 | WAIT ON RIG |
| 1:00 PM | | | | | | | 1 | RIG UP |
| 1:10 PM | | | | | | | 1 | SAFETY MEETING |
| 1:15 PM | | | | | 40.0 bbl | 40.0 bbl | 1 | PUMP H20 LOAD HOLE |
| 1:25 PM | .5 | 200 | 720 | | 7.5 bbl | 47.5 bbl | 1 | PUMP .5 BBL/MIN |
| 1:40 PM | 1 | 820 | 1130 | | 15.0 bbl | 62.5 bbl | 1 | PUMP 1 BBL/MIN |
| 1:55 PM | 1.5 | 1335 | 1700 | | 22.5 bbl | 85.0 bbl | 1 | PUMP 1.5 BBL/MIN |
| 2:10 PM | 2 | 1850 | 1853 | | 30.0 bbl | 115.0 bbl | 1 | PUMP 2 BBL/MIN |
| 2:25 PM | | | | | | | 1 | WATCH 15 MINS |
| 2:36 PM | | 0 | | | | | 1 | CHANGE PACKERS |
| 3:25 PM | | | | | 40.0 bbl | 155.0 bbl | 1 | FILL HOLE |
| 3:45 PM | 1.5 | 100 | 562 | | | | 1 | PUMP 1.5 BBL/MIN |
| 4:00 PM | 2 | 760 | 1150 | | | | 1 | PUMP 2 BBL/MIN |
| 4:15 PM | 2.5 | 1340 | 1550 | | | | 1 | PUMP 2.5 BBL/MIN |
| 4:30 PM | 3 | 1806 | 1750 | | | | 1 | PUMP 3 BBL/MIN |
| 4:45 PM | | | | | | | 1 | WATCH 15 MINS |
| 5:00 PM | | | | | | | 1 | DONE |
| 5:15 PM | | | | | | | 1 | RIG DOWN |
| 5:30 PM | | | | | | | 1 | LEAVE LOCATION |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 3743 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-0614 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coal Bed | **Date Well Completed:** | 11/12/1992 |
| **Driller's Total Depth:** | 1578.00 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: £ Stimulated £ GOB R Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| PGP 423 | BU-0614 STIM & FINAL.pdf |

## 3. Final Production

| Description | FileName |
|---|---|
| PGP 423 | BU-0614 STIM & FINAL.pdf |

## 4. Comments

*Notes:*

[6/27/2013, jsa]
Information inserted by DGO [6/3/2013, jhh]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/3/2013 | *(Company)* |
| By: | Leslie Arrington | Title: | ******* | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/3/2013 | | |
| Status: | Approved | Date: | 6/27/2013 |
| Final PDF Date: | 6/27/2013 | | |

Comb
2-10-93

BU-0614

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-423
Permit #: _____

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: November 12, 1992 Total Depth of Well: 1578.23'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

Zone 1: not stimulated to date Formation Stimulated With: _____

Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

Zone 2: _____ Formation Stimulated With: _____

Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

Zone 3: _____ Formation Stimulated With: _____

Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: x Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | 66 | 24 | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled 66 MCFD 24 Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

Comb
2-10-93

BU-0614

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-423
Permit #: _____

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: November 12, 1992 Total Depth of Well: 1578.23'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

Zone 1: not stimulated to date Formation Stimulated With: _____

Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

Zone 2: _____ Formation Stimulated With: _____

Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

Zone 3: _____ Formation Stimulated With: _____

Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: x Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | 66 | 24 | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled 66 MCFD 24 Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 3742 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-0614 |
| **Operations Name:** | PGP 423 |
| **Operation Type:** | Coal Bed |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 11/2/1992

Drilling Contractor: Noah Horn Well Drilling

Date drilling completed: 11/7/1992

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 1578.23

Log Total Depth (feet): 0.00

Coal Seam At Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10498481.8600

Final Plat State Plane X: 10498481.8730

Permitted State Plane Y: 3611453.6900

Final Plat State Plane Y: 3611453.7600

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| PGP 423 | BU-0614 PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| PGP 423 | BU-0614 COAL.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| PGP 423 | BU-0614 GAS SHOWS.pdf |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Deviation/Gamma/Calipier

Did logs disclose vertical locations of a coal seam? R

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| PGP 423 | BU-0614 SURVEY & CASING.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|---|---|
| PGP 423 | BU-0614 SURVEY & CASING.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: _____

List of Attached Items:

| Description | FileName |
|---|---|
| PGP 423 | BU-0614 COAL.pdf |

## 9. Comments

[6/19/2013, bdb]
NO DRLLER LOG [6/3/2013, jhh]
Information inserted by DGO [6/3/2013, jhh]

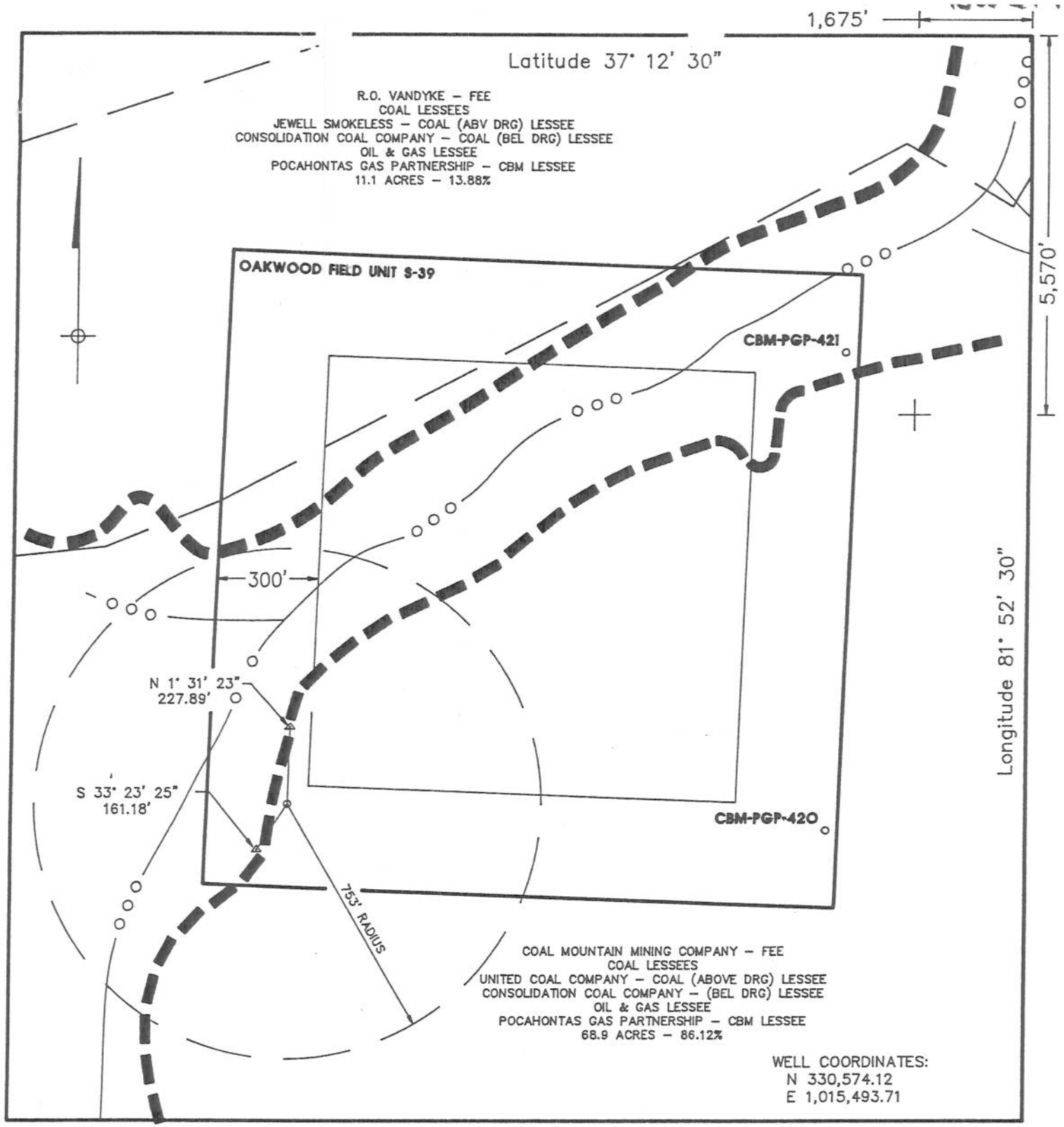
## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/3/2013

Signed By: Leslie Arrington Title: *****

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/3/2013 | | |
| Status: | A | Date: | 6/19/2013 |
| Final PDF Date: | 11/8/2013 | | |




WELL LOCATION PLAT

Company POCAHONTAS GAS PARTNERSHIP Well Name and Number CBM-PGP-423
Tract No. COAL MOUNTAIN Elevation 1,962.66 Quadrangle KEEN MOUNTAIN
County BUCHANAN District GARDEN Scale: 1"=400' Date _____

This plat is a new plat xxx ; an updated plat _____ ; or a final plat _____

+ Denotes the location of a well on United States topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

Charles O Moyer
Licensed Professional Engineer

No. 19058 (Affix Seal)

BO-0614

Form DGO-GO-7
Rev. 9/91

Appendix A

Pocahontas Gas Partnership
CBM-PGP-423
Surface Elevation: 1962.66

| Seam Name | Top | Bottom | BOC Elevation | Thickness | Mining in Area Yes | Mining in Area No | Mine Name |
|---|---|---|---|---|---|---|---|
| *Upper Seaboard | 514.90 | 515.90 | 1446.76 | 1.00 | | X | |
| *Greasy Creek | 549.00 | 550.50 | 1412.16 | 1.50 | | X | |
| *Sewell | 590.50 | 592.20 | 1370.46 | 1.70 | | X | |
| *Lower Seaboard | 635.40 | 636.60 | 1326.06 | 1.20 | | X | |
| *Lower Seaboard 1 | 638.50 | 639.40 | 1323.26 | 0.90 | | X | |
| *Upper Horsepen | 690.40 | 691.90 | 1270.76 | 1.50 | | X | |
| *Middle Horsepen | 744.30 | 745.80 | 1216.86 | 1.50 | | X | |
| *C | 807.70 | 808.70 | 1153.96 | 1.00 | | X | |
| *Pocahontas No.11 | 847.10 | 849.80 | 1112.86 | 2.70 | | X | |
| *Pocahontas No.10 | 871.70 | 872.90 | 1089.76 | 1.20 | | X | |
| *Lower Horsepen | 926.00 | 926.90 | 1035.76 | 0.90 | | X | |
| *Pocahontas No.9 | 996.10 | 997.20 | 965.46 | 1.10 | | X | |
| *Pocahontas No.9L | 1020.70 | 1021.80 | 940.86 | 1.10 | | X | |
| *Pocahontas No.8 | 1029.80 | 1031.00 | 931.66 | 1.20 | | X | |
| *Coal Seam | 1067.40 | 1068.10 | 894.56 | 0.70 | | X | |
| *Coal Seam | 1272.80 | 1273.90 | 688.76 | 1.10 | | X | |
| *Coal Seam | 1284.70 | 1285.40 | 677.26 | 0.70 | | X | |
| *Coal Seam | 1318.60 | 1319.90 | 642.76 | 1.30 | | X | |
| *Coal Seam | 1361.90 | 1362.70 | 599.96 | 0.80 | | X | |
| *Pocahontas No.5 | 1407.30 | 1407.70 | 554.96 | 0.40 | | X | |
| *Pocahontas No.4 | 1418.50 | 1419.30 | 543.36 | 0.80 | | X | |
| *Pocahontas No.3 | 1484.60 | 1490.50 | 472.16 | 5.90 | | X | |

*NOTE: Possible zones subject to this application for stimulation. This application to include all named and unnamed seams in the Pennsylvanian coals from below the Tiller Seam through the Pocahontas No.3 Seam.

BU-0614

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-423
Permit #:

RECEIVED
DEC 1992
DIVISION OF GAS & OIL

ENTERED

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

DEPT. of MINES, MINERALS and ENERGY
DIVISION of GAS and OIL

## DRILLING REPORT

Pursuant to VR-480-05-22.1, s 1.36, the undersigned Permittee submits this report on Well CBM-PGP-423 in the Garden District of the Buchanan City/County, Virginia on this 16th day, December month, 19 92.

### LOCATION

City/County: Buchanan District: Garden
Surface Elevation: 1962.64' Elevation of Kelly Bushing: _____ Quadrangle: Keen Mountain
----- Ft. S. of Latitude ----- and ----- Ft. W. of Longitude -----

or, State Plane Coordinates: Zone 5 N 330574.05' E 1015493.90'

Attach a final location plat as required by VR 480-05-22.1, s 1.36.

### DRILLING DATA

Date Drilling Commenced: November 2, 1992 Drilling Contractor: Noah Horn Well Drilling
Date Drilling Completed: November 7, 1992 Rig Type: x Rotary __ Cable Tool
Total Depth of Well: 1578.23'

### GEOLOGICAL DATA

Fresh Water at: See Note Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM

NOTE: No detectable water sources (fresh or salt) was encountered during drilling.

Salt Water at: _____ Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM

COAL SEAMS:

| NAME | TOP | BOTTOM | THICKNESS | MINING IN AREA YES | NO | MINED OUT |
|---|---|---|---|---|---|---|
| See DGO-GO-14, Appendix A | | | | | | |

GAS AND OIL SHOWS:

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 514.9 | 1490.5 | 975.6 | | | |

RECEIVED
DEC 1992
DIVISION OF GAS & OIL

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-423
Permit #: _____

Cuttings or samples are ___ are not _x_ available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have ___ have not _x_ been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes __x__ No _____

SURVEY RESULTS*:

| DEPTH OF SURVEY | DIRECTION/DISTANCE/DEGREES FROM TRUE VERTICAL |
|---|---|
| 210 | 0.3/0.2/S 78.4 E |
| 390 | 0.4/0.5/S 65.5 E |
| 600 | 0.1/1.1/S 71.3 E |
| 810 | 0.7/1.8/N 54.4 E |
| 840 | 0.8/2.0/N 45.3 E |
| 990 | 0.7/3.2/N 15.8 E |
| 1200 | 0.9/5.7/N 12.4 E |
| 1410 | 1.1/7.5/N 15.7 E |
| 1470 | 0.8/8.2/N 13.1 E |
| 1579 | 0.0/9.4/N 9.2 E |

* Use additional sheets if necessary.

CASING AND TUBING

| | SIZE | TOP | BOTTOM | CEMENT USED LENGTH | CEMENT USED IN CU/FT | DATE CEMENTED | PACKERS OR BRIDGE PLUGS KIND | PACKERS OR BRIDGE PLUGS SIZE | PACKERS OR BRIDGE PLUGS SET AT |
|---|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0 | 15'-0 | 15'-0 | | | | | |
| Surface | 13 3/8" | 0 | 15' | 15' | | | | | |
| Water Protection | 8 5/8" | 0 | 332.39' | 332.39' | | | | | |
| Coal Protection | 8 5/8" | 0 | 332.39' | 332.39' | | | | | |
| Other Casing and Tubing Left In Well | | | | | | | | | |
| Liners | | | | | | | | | |

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-423
Permit #: _____

Cuttings or samples are ___ are not _x_ available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have ___ have not _x_ been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes __x__ No _____

SURVEY RESULTS*:

| DEPTH OF SURVEY | DIRECTION/DISTANCE/DEGREES FROM TRUE VERTICAL |
|---|---|
| 210 | 0.3/0.2/S 78.4 E |
| 390 | 0.4/0.5/S 65.5 E |
| 600 | 0.1/1.1/S 71.3 E |
| 810 | 0.7/1.8/N 54.4 E |
| 840 | 0.8/2.0/N 45.3 E |
| 990 | 0.7/3.2/N 15.8 E |
| 1200 | 0.9/5.7/N 12.4 E |
| 1410 | 1.1/7.5/N 15.7 E |
| 1470 | 0.8/8.2/N 13.1 E |
| 1579 | 0.0/9.4/N 9.2 E |

* Use additional sheets if necessary.

CASING AND TUBING

| | SIZE | TOP | BOTTOM | CEMENT USED LENGTH | CEMENT USED IN CU/FT | DATE CEMENTED | PACKERS OR BRIDGE PLUGS KIND | PACKERS OR BRIDGE PLUGS SIZE | PACKERS OR BRIDGE PLUGS SET AT |
|---|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0 | 15'-0 | 15'-0 | | | | | |
| Surface | 13 3/8" | 0 | 15' | 15' | | | | | |
| Water Protection | 8 5/8" | 0 | 332.39' | 332.39' | | | | | |
| Coal Protection | 8 5/8" | 0 | 332.39' | 332.39' | | | | | |
| Other Casing and Tubing Left In Well | | | | | | | | | |
| Liners | | | | | | | | | |

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.

Appendix A

Pocahontas Gas Partnership
CBM-PGP-423
Surface Elevation: 1962.66

| Seam Name | Top | Bottom | BOC Elevation | Thickness | Mining in Area Yes | Mining in Area No | Mine Name |
|---|---|---|---|---|---|---|---|
| *Upper Seaboard | 514.90 | 515.90 | 1446.76 | 1.00 | | X | |
| *Greasy Creek | 549.00 | 550.50 | 1412.16 | 1.50 | | X | |
| *Sewell | 590.50 | 592.20 | 1370.46 | 1.70 | | X | |
| *Lower Seaboard | 635.40 | 636.60 | 1326.06 | 1.20 | | X | |
| *Lower Seaboard 1 | 638.50 | 639.40 | 1323.26 | 0.90 | | X | |
| *Upper Horsepen | 690.40 | 691.90 | 1270.76 | 1.50 | | X | |
| *Middle Horsepen | 744.30 | 745.80 | 1216.86 | 1.50 | | X | |
| *C | 807.70 | 808.70 | 1153.96 | 1.00 | | X | |
| *Pocahontas No.11 | 847.10 | 849.80 | 1112.86 | 2.70 | | X | |
| *Pocahontas No.10 | 871.70 | 872.90 | 1089.76 | 1.20 | | X | |
| *Lower Horsepen | 926.00 | 926.90 | 1035.76 | 0.90 | | X | |
| *Pocahontas No.9 | 996.10 | 997.20 | 965.46 | 1.10 | | X | |
| *Pocahontas No.9L | 1020.70 | 1021.80 | 940.86 | 1.10 | | X | |
| *Pocahontas No.8 | 1029.80 | 1031.00 | 931.66 | 1.20 | | X | |
| *Coal Seam | 1067.40 | 1068.10 | 894.56 | 0.70 | | X | |
| *Coal Seam | 1272.80 | 1273.90 | 688.76 | 1.10 | | X | |
| *Coal Seam | 1284.70 | 1285.40 | 677.26 | 0.70 | | X | |
| *Coal Seam | 1318.60 | 1319.90 | 642.76 | 1.30 | | X | |
| *Coal Seam | 1361.90 | 1362.70 | 599.96 | 0.80 | | X | |
| *Pocahontas No.5 | 1407.30 | 1407.70 | 554.96 | 0.40 | | X | |
| *Pocahontas No.4 | 1418.50 | 1419.30 | 543.36 | 0.80 | | X | |
| *Pocahontas No.3 | 1484.60 | 1490.50 | 472.16 | 5.90 | | X | |

*NOTE: Possible zones subject to this application for stimulation. This application to include all named and unnamed seams in the Pennsylvanian coals from below the Tiller Seam through the Pocahontas No.3 Seam.

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 4673 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1283 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 1/27/1999 |
| **Driller's Total Depth:** | 2426.60 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: R Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| STIM | BU-1283 stim_0129201414255500.pdf |
| STIM | BU-1283 stim_0129201414270900.pdf |

## 3. Final Production

| Description | FileName |
|---|---|
| FINAL | BU-1283 stim_0129201414255500.pdf |

## 4. Comments

*Notes:*

[2/3/2014, jsa]
Material inserted by DGO [1/8/2014, jhh]

**5. Signature**

Permittee: CNX Gas Company LLC Date: 1/29/2014 *(Company)*

By: L. Arrington Title: ********** *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 1/29/2014

Status: Approved Date: 2/3/2014

Final PDF Date: 2/3/2014

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-S37
Permit #: 3569

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 1/27/99 Total Depth of Well: 2426.6'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

Zone 1: P3 Formation Stimulated With: 404 MSCF N2, 310 bbl water, 481 sx 16/30
Perforated: 1999 TO 2005 No. of Perforations: 24 Perforation Size: .70" EHD
Formation Broke Down at: 2906 PSIG Average Injection Rate 30 BPM
ISIP 1267 PSIG 5 MIN SIP 1149 PSIG Average Injection Pressure: 2239 PSIG
Date stimulated: 1/27/99.

Zone 2: P4,P5,P6,C,P8,C,C Formation Stimulated With: 515 MSCF N2, 332 bbl water, 600 sx 16/30
Perforated: 1591 TO 1918 No. of Perforations: 60 Perforation Size: .70" EHD
Formation Broke Down at: 2948 PSIG Average Injection Rate 30 BPM
ISIP 1178 PSIG 5 MIN SIP 1133 PSIG Average Injection Pressure: 2507 PSIG
Date stimulated: 1/27/99.

Zone 3: P9,LH2,P10,P11,MH2 Formation Stimulated With: 347 MSCF N2, 236 bbl water, 450 sx 16/30
Perforated: 1334 TO 1555 No. of Perforations: 56 Perforation Size: .70" EHD
Formation Broke Down at: 2795 PSIG Average Injection Rate 30 BPM
ISIP ____ PSIG ___ MIN SIP ____ PSIG Average Injection Pressure: 2555 PSIG
Date stimulated: 1/27/99. Well sanded off!

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled ____ MCFD ____ Hours Tested ____ PSIG ____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

BU-1283

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-S37
Permit #: 3569

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 1/27/99 Total Depth of Well: 2426.6'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

Zone 4: MH1,UH2,UH1,LS1,S2,S1 Formation Stimulated With: 413 MSCF N2, 295 bbl water, 536 sx 16/30

Perforated: 1028 TO 1272 No. of Perforations: 52 Perforation Size: .70" EHD
Formation Broke Down at: NVB PSIG Average Injection Rate 30 BPM
ISIP 1562 PSIG 5 MIN SIP 1283 PSIG Average Injection Pressure: 2213 PSIG
Date stimulated: 1/27/99.

Zone 5: _____ Formation Stimulated With: _____

Perforated: ____ TO _____ No. of Perforations: _____ Perforation Size: .70" EHD
Formation Broke Down at: _____ PSIG Average Injection Rate 30 BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: 1/27/99.

Zone 6: _____ Formation Stimulated With: _____

Perforated: ____ TO _____ No. of Perforations: _____ Perforation Size: .70" EHD
Formation Broke Down at: _____ PSIG Average Injection Rate 30 BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: 1/27/99.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-S37
Permit #: 3569

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 1/27/99 Total Depth of Well: 2426.6'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

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Perforated: 1999 TO 2005 No. of Perforations: 24 Perforation Size: .70" EHD
Formation Broke Down at: 2906 PSIG Average Injection Rate 30 BPM
ISIP 1267 PSIG 5 MIN SIP 1149 PSIG Average Injection Pressure: 2239 PSIG
Date stimulated: 1/27/99.

Zone 2: P4,P5,P6,C,P8,C,C Formation Stimulated With: 515 MSCF N2, 332 bbl water, 600 sx 16/30
Perforated: 1591 TO 1918 No. of Perforations: 60 Perforation Size: .70" EHD
Formation Broke Down at: 2948 PSIG Average Injection Rate 30 BPM
ISIP 1178 PSIG 5 MIN SIP 1133 PSIG Average Injection Pressure: 2507 PSIG
Date stimulated: 1/27/99.

Zone 3: P9,LH2,P10,P11,MH2 Formation Stimulated With: 347 MSCF N2, 236 bbl water, 450 sx 16/30
Perforated: 1334 TO 1555 No. of Perforations: 56 Perforation Size: .70" EHD
Formation Broke Down at: 2795 PSIG Average Injection Rate 30 BPM
ISIP ____ PSIG ___ MIN SIP ____ PSIG Average Injection Pressure: 2555 PSIG
Date stimulated: 1/27/99. Well sanded off!

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled ____ MCFD ____ Hours Tested ____ PSIG ____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 4671 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1283 |
| **Operations Name:** | PGP S37 W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 12/16/1998

Drilling Contractor: Noah Horn Well Drilling

Date drilling completed: 12/22/1998

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 2426.60

Log Total Depth (feet): 0.00

Coal Seam at Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10495474.9300

Final Plat State Plane X: 10495474.9850

Permitted State Plane Y: 3611650.5900

Final Plat State Plane Y: 3611650.0970

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | BU-1283 plat_0129201414272600.pdf |

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| COAL | BU-1283 coal.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS | BU-1283 gs.pdf |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: NA

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| CASING | BU-1283 casing.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: _____

List of Attached Items:

| Description | FileName |
|---|---|
| LOG | BU-1283 log.pdf |

## 9. Comments

[2/3/2014, jsa]
Material inserted by DGO [1/8/2014, jhh]

## 10. Signature

Permitee: CNX Gas Company LLC Date: 1/29/2014

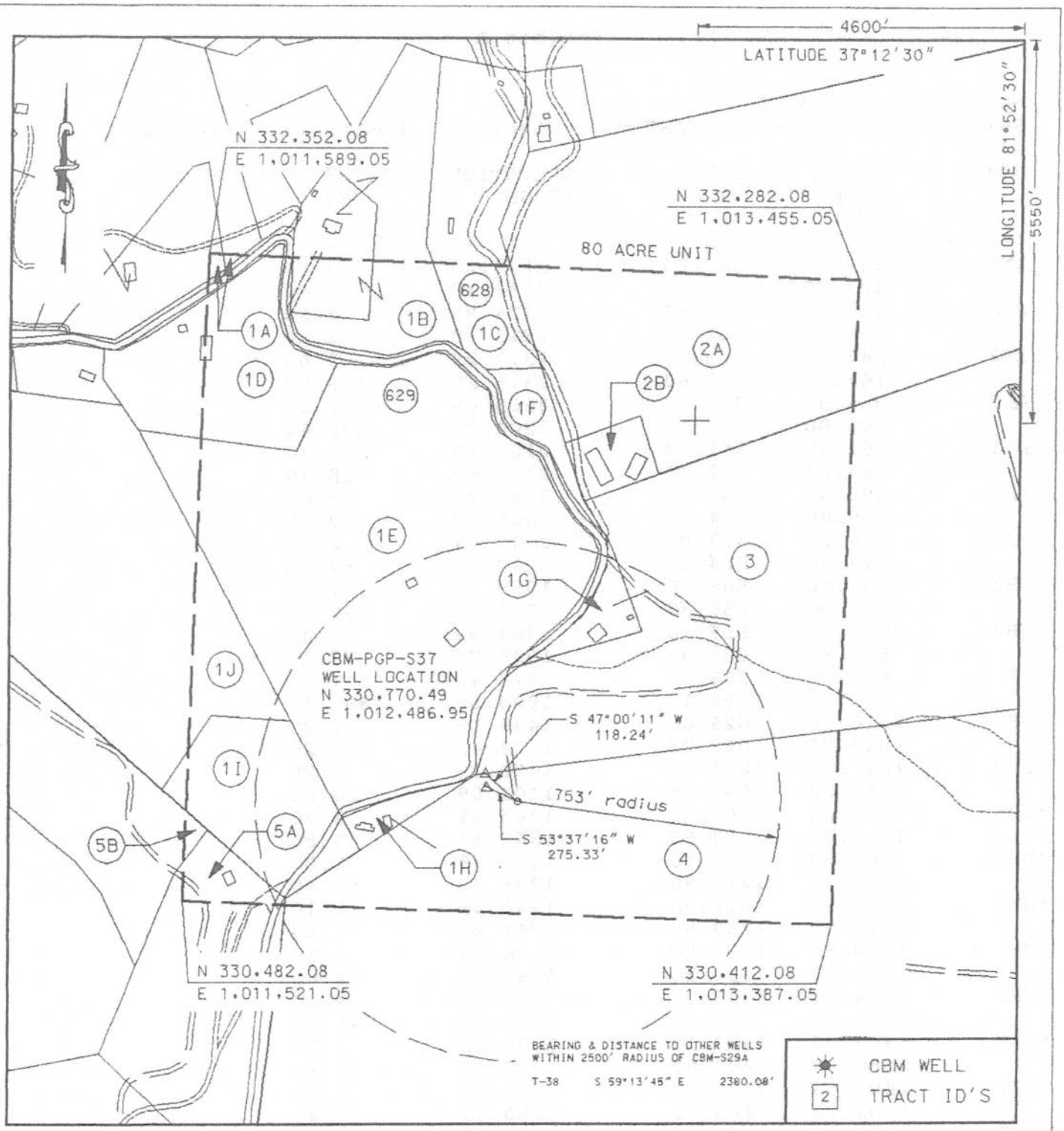
Signed By: L. Arrington Title: **********

## INTERNAL USE ONLY

Submit Date: 1/29/2014

Status: A Date: 2/3/2014

Final PDF Date: 2/3/2014




# WELL LOCATION PLAT

Company POCAHONTAS GAS PARTNERSHIP Well Name and Number CBM-S37

Tract No. COAL MOUNTAIN Elevation 2464.29' Quadrangle Deskins

County Buchanan District Garden Scale: 1" = 400' Date 1/22/99

This plat is a new plat ____ ; an updated plat ____ ; or a final plat ____

\+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

Form DGO-GO-7
Rev. 9/91

Claude D. Moyar
Licensed Professional Engineer or Licensed Land Surveyor

(Affix Seal)

STATE OF WEST VIRGINIA
CLAUDE D. MOYAR
PROFESSIONAL ENGINEER
No. 10958

Exhibit A

Well Name: 98-PGP-S-37
SURFACE ELEV: 2464.29 EASTING: 1012486.95 NORTHING: 330770.49

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| KN1 | 126.00 | 127.90 | 2338.29 | 1.90 | |
| | 127.90 | 139.30 | 2336.39 | 11.40 | |
| COAL | 139.30 | 140.80 | 2324.99 | 1.50 | |
| | 140.80 | 147.00 | 2323.49 | 6.20 | |
| KN2 | 147.00 | 149.00 | 2317.29 | 2.00 | |
| | 149.00 | 258.80 | 2315.29 | 109.80 | |
| AL2 | 258.80 | 260.00 | 2205.49 | 1.20 | |
| | 260.00 | 361.40 | 2204.29 | 101.40 | |
| RA1 | 361.40 | 363.60 | 2102.89 | 2.20 | |
| | 363.60 | 392.00 | 2100.69 | 28.40 | |
| RA2 | 392.00 | 395.00 | 2072.29 | 3.00 | |
| | 395.00 | 414.50 | 2069.29 | 19.50 | |
| RA3 | 414.50 | 417.00 | 2049.79 | 2.50 | |
| | 417.00 | 504.40 | 2047.29 | 87.40 | |
| JB1 | 504.40 | 506.00 | 1959.89 | 1.60 | |
| | 506.00 | 556.30 | 1958.29 | 50.30 | |
| JB3 | 556.30 | 559.50 | 1907.99 | 3.20 | |
| | 559.50 | 636.80 | 1904.79 | 77.30 | |
| T1 | 636.80 | 638.00 | 1827.49 | 1.20 | |
| | 638.00 | 1028.10 | 1826.29 | 390.10 | |
| *SE1 | 1028.10 | 1029.80 | 1436.19 | 1.70 | |
| | 1029.80 | 1062.00 | 1434.49 | 32.20 | |
| *SE2 | 1062.00 | 1063.20 | 1402.29 | 1.20 | |
| | 1063.20 | 1099.00 | 1401.09 | 35.80 | |
| *LS1 | 1099.00 | 1101.70 | 1365.29 | 2.70 | |
| | 1101.70 | 1163.50 | 1362.59 | 61.80 | |
| *UH1 | 1163.50 | 1165.50 | 1300.79 | 2.00 | |
| | 1165.50 | 1215.90 | 1298.79 | 50.40 | |
| *UH2 | 1215.90 | 1218.00 | 1248.39 | 2.10 | |
| | 1218.00 | 1269.50 | 1246.29 | 51.50 | |
| *MH1 | 1269.50 | 1271.60 | 1194.79 | 2.10 | |
| | 1271.60 | 1334.20 | 1192.69 | 62.60 | |
| *MH2 | 1334.20 | 1336.00 | 1130.09 | 1.80 | |
| | 1336.00 | 1377.70 | 1128.29 | 41.70 | |
| *P11 | 1377.70 | 1380.10 | 1086.59 | 2.40 | |
| | 1380.10 | 1402.00 | 1084.19 | 21.90 | |
| *P10 | 1402.00 | 1403.60 | 1062.29 | 1.60 | |
| | 1403.60 | 1463.00 | 1060.69 | 59.40 | |
| *LH2 | 1463.00 | 1464.40 | 1001.29 | 1.40 | |
| | 1464.40 | 1549.70 | 999.89 | 85.30 | |
| *P92 | 1549.70 | 1551.00 | 914.59 | 1.30 | |
| | 1551.00 | 1552.00 | 913.29 | 1.00 | |
| *P92 | 1552.00 | 1553.00 | 912.29 | 1.00 | |
| | 1553.00 | 1554.00 | 911.29 | 1.00 | |
| *P93 | 1554.00 | 1555.40 | 910.29 | 1.40 | |
| | 1555.40 | 1591.30 | 908.89 | 35.90 | |
| *COAL | 1591.30 | 1592.40 | 872.99 | 1.10 | |
| | 1592.40 | 1606.00 | 871.89 | 13.60 | |
| *COAL | 1606.00 | 1607.20 | 858.29 | 1.20 | |
| | 1607.20 | 1631.30 | 857.09 | 24.10 | |

| | | | | |
|---|---|---|---|---|
| *P82 | 1631.30 | 1633.00 | 832.99 | 1.70 |
| | 1633.00 | 1751.00 | 831.29 | 118.00 |
| *COAL | 1751.00 | 1753.00 | 713.29 | 2.00 |
| | 1753.00 | 1799.20 | 711.29 | 46.20 |
| *P62 | 1799.20 | 1802.00 | 665.09 | 2.80 |
| | 1802.00 | 1826.50 | 662.29 | 24.50 |
| *P51 | 1826.50 | 1828.40 | 637.79 | 1.90 |
| | 1828.40 | 1916.00 | 635.89 | 87.60 |
| *P41 | 1916.00 | 1918.40 | 548.29 | 2.40 |
| | 1918.40 | 1998.40 | 545.89 | 80.00 |
| *P3 | 1998.40 | 2003.90 | 465.89 | 5.50 |
| | 2003.90 | 2046.40 | 460.39 | 42.50 |
| *P21 | 2046.40 | 2048.00 | 417.89 | 1.60 |
| | 2048.00 | 2139.00 | 416.29 | 91.00 |
| *P01 | 2139.00 | 2140.20 | 325.29 | 1.20 |
| | 2140.20 | 2429.80 | 324.09 | 289.60 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: C:\GAS\S37.CMP
DATE: 01/07/99

BU-1283

Gas and Oil Shows

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 638.00' | 2426.6' | 1788.6' | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Cuttings or samples: _____ are __X__ are not available for examination by a member of the Virginia Division of Mineral Resources

Cuttings or samples: _____ have __X__ have not been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS

List logs ran on wellbore: Gamma, Caliper, Deviation

Did logs disclose vertical location of a coal seam? __X__ Yes _____ No

SURVEY RESULTS

| Depth Of Survey | Direction/Distance/ Degrees From True Vertical | Depth Of Survey | Direction/Distance Degrees From True Vertical |
|---|---|---|---|
| See Deviation Survey | | | |

Use additional sheets as necessary

BU-1283

Commonwealth of Virginia
Department of Mines, Minerals and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (540) 676-5423

Operations Name: CBM-PGP-S37
Permit Number: 3569

## DRILLING REPORT

ENTERED

ATTACH A FINAL LOCATION PLAT AS REQUIRED BY 4 VAC 25-150-360.C.

DRILLING DATA

Date drilling commenced: December 16, 1998 Drilling Contractor: Noah Horn Well Drilling, Inc.
Date drilling completed: December 22, 1998 Rig Type: X Rotary _____ Cable Tool
Total Depth of Well: 2426.6 ft

GEOLOGICAL DATA - no data available

Fresh Water at _____ Feet _____ GPM/Inch Stream _____ Feet _____ GPM/Inch Stream
_____ Feet _____ GPM/Inch Stream _____ Feet _____ GPM/Inch Stream
Salt Water at _____ Feet _____ GPM/Inch Stream _____ Feet _____ GPM/Inch Stream
_____ Feet _____ GPM/Inch Stream _____ Feet _____ GPM/Inch Stream

Coal Seams

| NAME | TOP | BOTTOM | THICKNESS | MINING IN AREA YES | NO | MINED OUT |
|---|---|---|---|---|---|---|
| See DGO-GO-14, Exhibit A | | | | | | |
| | | | | | | |
| | | | | | | |
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Form DGO-GO-14
Rev. 10/96

## CASING AND TUBING PROGRAM

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0–14.20' | 15" | | | | | |
| Surface | 13 3/8" | 0–14.20' | 15" | | | | | |
| Water Protection | 4 ½" | 0–2397.81' | 6 ½" | 250 | X | | 12-21-98 | |
| Coal Protection | 4 ½" | 0–2397.81' | 6 ½" | 250 | X | | 12-21-98 | |
| Other Casing And Tubing Left In Well | 7" | 0–719.00' | 8 7/8" | 120 | X | | 12-17-98 | Basket at 93.60' |
| Liners | | | | | | | | |

REMARKS: Shut down fishing jobs, depths and dates, caving, lost circulation, etc.: Basket set at 93.60'

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Cummings (Signature)

Form DGO-GO-14
Rev. 10/96

# DRILL DATA HOLE -- NOAH HORN WELL DRILLING, INC.

COMPANY: PGP

HOLE NO.: S-37

LOCATION: OSBORNE MTN.

DRILL: RIG #23

DATE STARTED: 12-16-98

ELECTRIC LOGGED: Yes

DATE COMPLETED: 12-22-98

GROUTED: Yes

| DEPTH | | THICKNESS | STRATA | REMARKS |
|---|---|---|---|---|
| FROM | TO | FT. | DESCRIPTION | VOIDS, ETC. |
| 0.00 | 14.00 | 14.00 | OVERBURDEN | 14.20 W/ 13 3/8" CASING |
| 14.00 | 25.00 | 11.00 | SANDY SHALE | |
| 25.00 | 56.00 | 31.00 | SAND | |
| 56.00 | 87.00 | 31.00 | SANDY SHALE | |
| 87.00 | 118.00 | 31.00 | SANDY SHALE | |
| 118.00 | 149.00 | 31.00 | SANDY SHALE | |
| 149.00 | 180.00 | 31.00 | SAND | |
| 180.00 | 211.00 | 31.00 | SANDY SHALE | |
| 211.00 | 242.00 | 31.00 | SANDY SHALE | |
| 242.00 | 272.00 | 30.00 | SAND | |
| 272.00 | 302.00 | 30.00 | SANDY SHALE | |
| 302.00 | 332.00 | 30.00 | SAND | |
| 332.00 | 362.00 | 30.00 | SAND | |
| 362.00 | 392.00 | 30.00 | SANDY SHALE / COAL | |
| 392.00 | 422.00 | 30.00 | SANDY SHALE / SANDSTONE | |
| 422.00 | 452.00 | 30.00 | SHALE / SANDSTONE | |
| 452.00 | 482.00 | 30.00 | SHALE | |
| 482.00 | 512.00 | 30.00 | SHALE / COAL | |
| 512.00 | 542.00 | 30.00 | SANDY SHALE | |
| 542.00 | 572.00 | 30.00 | SANDSTONE / COAL / SHALE | |
| 572.00 | 602.00 | 30.00 | SANDY SHALE | |
| 602.00 | 632.00 | 30.00 | SANDY SHALE | |
| 632.00 | 662.00 | 30.00 | SHALE / COAL / SANDSTONE | |
| 662.00 | 692.00 | 30.00 | SANDSTONE | |
| 692.00 | 722.00 | 30.00 | SANDY SHALE | 719.00 W/ 7" CASING |
| 722.00 | 752.00 | 30.00 | SANDY SHALE | |
| 752.00 | 782.00 | 30.00 | SANDY SHALE | 6 ½ HOLE |
| 782.00 | 812.00 | 30.00 | SAND | |
| 812.00 | 842.00 | 30.00 | SANDY SHALE | |
| 842.00 | 872.00 | 30.00 | SANDY SHALE | |
| 872.00 | 902.00 | 30.00 | SAND | |
| 902.00 | 932.00 | 30.00 | SAND | |

| FR | TO | FT. | DESCRIPTION |
|---|---|---|---|
| 932.00 | 962.00 | 30.00 | SANDY SHALE |
| 962.00 | 992.00 | 30.00 | SANDY SHALE |
| 992.00 | 1022.00 | 30.00 | SANDY SHALE |
| 1022.00 | 1052.00 | 30.00 | SANDY SHALE |
| 1052.00 | 1082.00 | 30.00 | SANDY SHALE |
| 1082.00 | 1112.00 | 30.00 | SANDY SHALE / SHALE |
| 1112.00 | 1142.00 | 30.00 | SANDSTONE |
| 1142.00 | 1172.00 | 30.00 | SANDY SHALE |
| 1172.00 | 1202.00 | 30.00 | SANDSTONE / SHALE |
| 1202.00 | 1232.00 | 30.00 | SANDY SHALE / COAL |
| 1232.00 | 1262.00 | 30.00 | SANDY SHAL |
| 1262.00 | 1292.00 | 30.00 | SHALE / COAL |
| 1292.00 | 1322.00 | 30.00 | SANDY SHALE |
| 1322.00 | 1352.00 | 30.00 | SHALE / SAND |
| 1352.00 | 1382.00 | 30.00 | SHALE / COAL |
| 1382.00 | 1412.00 | 30.00 | SANDY SHALE / COAL / SHALE |
| 1412.00 | 1442.00 | 30.00 | SANDSTONE / SHALE |
| 1442.00 | 1472.00 | 30.00 | SANDSTONE / SHALE |
| 1472.00 | 1502.00 | 30.00 | SANDY SHALE |
| 1502.00 | 1532.00 | 30.00 | SANDSTONE |
| 1532.00 | 1562.00 | 30.00 | SHALE / COAL |
| 1562.00 | 1592.00 | 30.00 | SANDY SHALE / SHALE / COAL |
| 1592.00 | 1622.00 | 30.00 | SANDSTONE |
| 1622.00 | 1652.00 | 30.00 | SHALE / COAL |
| 1652.00 | 1682.00 | 30.00 | SANDSTONE |
| 1682.00 | 1712.00 | 30.00 | SANDSTONE |
| 1712.00 | 1742.00 | 30.00 | SANDSTONE |
| 1742.00 | 1772.00 | 30.00 | SAND |
| 1772.00 | 1802.00 | 30.00 | SANDY SHALE |
| 1802.00 | 1832.00 | 30.00 | SANDY SHALE |
| 1832.00 | 1862.00 | 30.00 | SANDY SHALE |
| 1862.00 | 1892.00 | 30.00 | SAND |
| 1892.00 | 1922.00 | 30.00 | SAND |
| 1922.00 | 1952.00 | 30.00 | SAND |
| 1952.00 | 1982.00 | 30.00 | SANDY SHALE / SNAD |
| 1982.00 | 2012.00 | 30.00 | SANDY SHALE / COAL |
| 2012.00 | 2042.00 | 30.00 | SANDY SHALE |
| 2042.00 | 2072.00 | 30.00 | SANDY SHALE |
| 2072.00 | 2102.00 | 30.00 | SANDY SHALE |
| 2102.00 | 2132.00 | 30.00 | SAND |
| 2132.00 | 2162.00 | 30.00 | SANDSTONE / SHALE |
| 2162.00 | 2192.00 | 30.00 | SANDY SHALE |
| 2192.00 | 2222.00 | 30.00 | RED SHALE |
| 2222.00 | 2252.00 | 30.00 | SHALE / SANDSTONE |
| 2252.00 | 2282.00 | 30.00 | SANDSTONE |
| 2282.00 | 2312.00 | 30.00 | SANDSTONE |
| 2312.00 | 2342.00 | 30.00 | SANDSTONE |
| 2342.00 | 2372.00 | 30.00 | SANDSTONE |
| 2372.00 | 2402.00 | 30.00 | SANDY SHALE / RED 2399.81 W/4 ½" CASING |
| 2402.00 | 2432.00 | 30.00 | SAND / RED SHALE |
| 2432.00 | 2462.00 | 30.00 | SAND |
| 2462.00 | 2492.00 | 30.00 | RED SHALE |

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-S37B
Permit #: 4166

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane X or Injection __ well.

Date Well Completed: 7/28/99 Total Depth of Well: 2213.6'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

Zone 1: P3 Formation Stimulated With: 604 MSCF N2, 414 bbl water, 510 sx 16/30

Perforated: 1893 TO 1898 No. of Perforations: 20 Perforation Size: .70" EHD
Formation Broke Down at: 2927 PSIG Average Injection Rate 30 BPM
ISIP 2428 PSIG 5 MIN SIP 2073 PSIG Average Injection Pressure: 3310 PSIG
Date stimulated: 7/28/99.

Zone 2: P4-2,P4-1,C,P5-1,P6-2,P6-1 Formation Stimulated With: 0 N2, 9 bbl water, 0 sx 16/30

Perforated: 1687 TO 1835 No. of Perforations: 48 Perforation Size: .70" EHD
Formation Broke Down at: N/A PSIG Average Injection Rate 30 BPM
ISIP N/A PSIG N/A MIN SIP N/A PSIG Average Injection Pressure: N/A PSIG
Date stimulated: 7/28/99.

Zone 3: P7-2,P8-2,P8-1,C,P9-3,P9-2 Formation Stimulated With: 362 MSCF N2, 265 bbl water, 355 sx 16/30

Perforated: 1440 TO 1635 No. of Perforations: 48 Perforation Size: .70" EHD
Formation Broke Down at: 3900 PSIG Average Injection Rate 30 BPM
ISIP 1288 PSIG 5 MIN SIP 1402 PSIG Average Injection Pressure: 2680 PSIG
Date stimulated: 7/28/99.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: _____ (Company)

By: Leslie K. Cumming Jr. (Signature)

Form DGO-GO-15
Rev 9/91

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-S37B
Permit #: 4166

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 7/28/99 Total Depth of Well: 2213.6'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

Zone 4: LH2,P10,P11 Formation Stimulated With: 326 MSCF N2, 255 bbl water, 357 sx 16/30

Perforated: 1265 TO 1355 No. of Perforations: 28 Perforation Size: .70" EHD
Formation Broke Down at: 2933 PSIG Average Injection Rate 30 BPM
ISIP 1328 PSIG 5 MIN SIP 1241 PSIG Average Injection Pressure: 2340 PSIG
Date stimulated: 7/28/99.

Zone 5: MH2,MH1,UH3,UH1,LS1,S2,S1 Formation Stimulated With: 405 MSCF N2, 317 bbl water, 418 sx 16/30

Perforated: 923 TO 1228 No. of Perforations: 56 Perforation Size: .70" EHD
Formation Broke Down at: 1698 PSIG Average Injection Rate 30 BPM
ISIP 2159 PSIG 5 MIN SIP 1397 PSIG Average Injection Pressure: 2490 PSIG
Date stimulated: 7/28/99.

Zone 3: _____ Formation Stimulated With: _____

Perforated: ____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: _____ (Company)
By: Leslie K. Cummings (Signature)

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (540) 676-5423

Operations Name: CBM-PGP-S37B
Permit Number: 4166

# DRILLING REPORT

ATTACH A FINAL LOCATION PLAT AS REQUIRED BY 4 VAC 25-150-360.C.

## DRILLING DATA

Date drilling commenced: July 12, 1999 Drilling Contractor: Noah Horn Well Drilling, Inc.
Date drilling completed: July 16, 1999 Rig Type: X Rotary _____ Cable Tool
Total Depth of Well: 2213.60 ft

## GEOLOGICAL DATA - no data available

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Fresh Water at | _____ | Feet | _____ | GPM/Inch Stream | _____ | Feet | _____ GPM/Inch Stream |
| | _____ | Feet | _____ | GPM/Inch Stream | _____ | Feet | _____ GPM/Inch Stream |
| Salt Water at | _____ | Feet | _____ | GPM/Inch Stream | _____ | Feet | _____ GPM/Inch Stream |
| | _____ | Feet | _____ | GPM/Inch Stream | _____ | Feet | _____ GPM/Inch Stream |

Coal Seams

| NAME | TOP | BOTTOM | THICKNESS | MINING IN AREA YES | NO | MINED OUT |
|---|---|---|---|---|---|---|
| See DGO-GO-14, Exhibit A | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
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| | | | | | | |
| | | | | | | |

Form DGO-GO-14
Rev. 10/96

Gas and Oil Shows

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 527.00' | 2213.6' | 1686.6' | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Cuttings or samples: _____ are __X__ are not available for examination by a member of the Virginia Division of Mineral Resources

Cuttings or samples: _____ have __X__ have not been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS

List logs ran on wellbore: Gamma, Caliper, Resistivity, Deviation

Did logs disclose vertical location of a coal seam? __X__ Yes _____ No

SURVEY RESULTS

| Depth Of Survey | Direction/Distance/ Degrees From True Vertical | Depth Of Survey | Direction/Distance Degrees From True Vertical |
|---|---|---|---|
| See Deviation Survey | | | |

Use additional sheets as necessary

## CASING AND TUBING PROGRAM

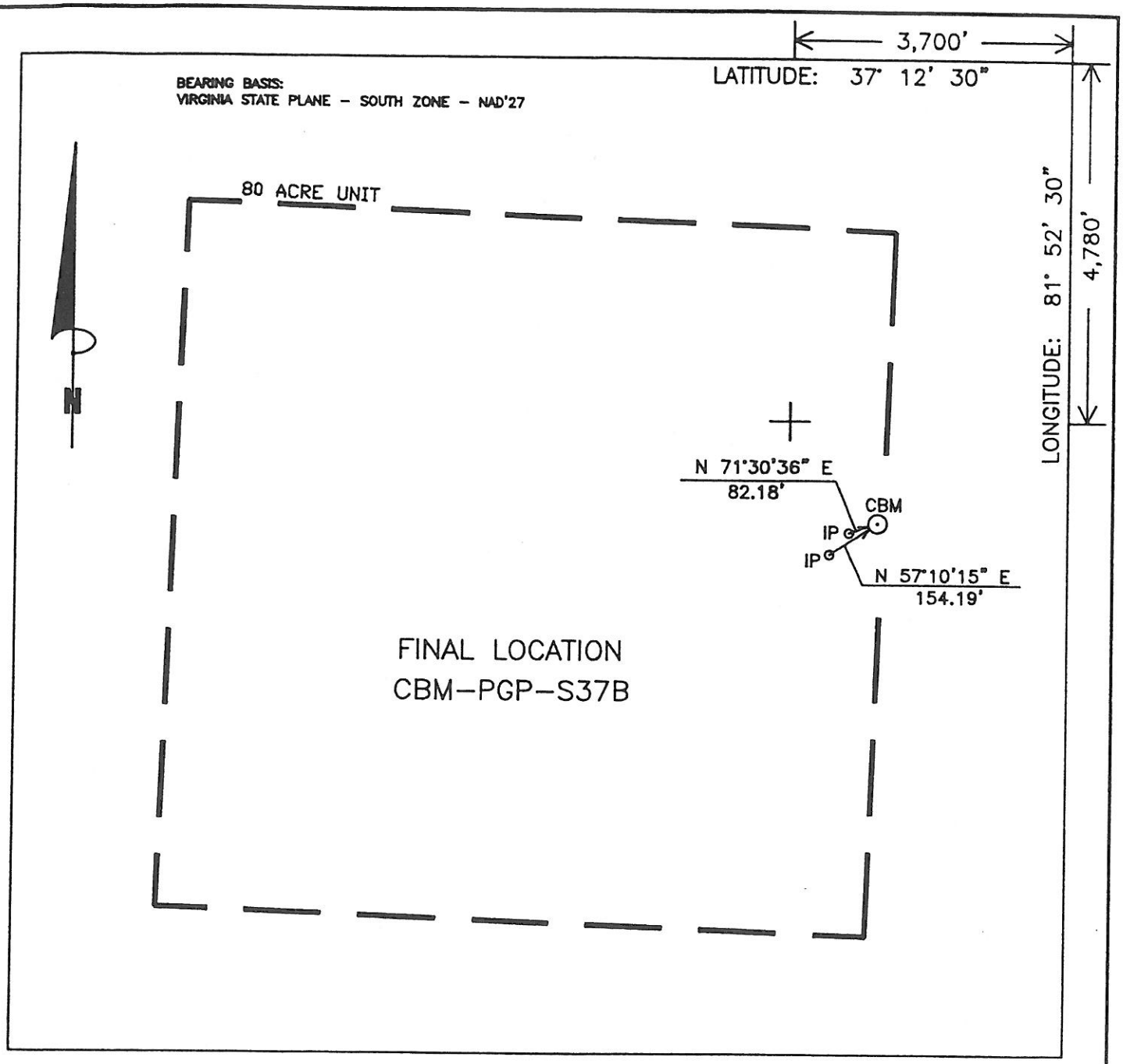
| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0–20' | 15" | | | | | |
| Surface | 13 3/8" | 0–20' | 15" | | | | | |
| Water Protection | 4 ½" | 0–2206.22' | 6 ½" | 210 | X | | 07-16-99 | |
| Coal Protection | 4 ½" | 0–2206.22' | 6 ½" | 210 | X | | 07-16-99 | |
| Other Casing And Tubing Left In Well | 7" | 0–313.30' | 8 7/8" | 55 | X | | 07-13-99 | Basket at 200' |
| Liners | | | | | | | | |

REMARKS: Shut down fishing jobs, depths and dates, caving, lost circulation, etc.: Basket set at 200', void at 255'.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Cunningham (Signature)

Form DGO-GO-14
Rev. 10/96




PGP S37BFNL
PGP3/98 – 9904/17

# WELL LOCATION PLAT

COMPANY POCAHONTAS GAS PARTNERSHIP WELL NAME OR NUMBER CBM–PGP–S37B

TRACT NUMBER R.O. VANDYKE / NEW GARDEN QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE N 331,509.75 E 1,013,412.36

ELEVATION: 2357.55 METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 07–21–99

THIS PLAT IS A NEW PLAT ____; AN UPDATED PLAT ____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

D R Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No.
8540
7/22/99
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 99-PGP-S37-B
SURFACE ELEV: 2358.55 EASTING: 1013412.36 NORTHING: 331509.75

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 32.00 | 32.50 | 2326.55 | 0.50 | |
| | 32.50 | 123.40 | 2326.05 | 90.90 | |
| AL1 | 123.40 | 124.00 | 2235.15 | 0.60 | |
| | 124.00 | 141.00 | 2234.55 | 17.00 | |
| AL2 | 141.00 | 142.00 | 2217.55 | 1.00 | |
| | 142.00 | 238.80 | 2216.55 | 96.80 | |
| RA1 | 238.80 | 240.00 | 2119.75 | 1.20 | |
| | 240.00 | 266.00 | 2118.55 | 26.00 | |
| RA2 | 266.00 | 268.50 | 2092.55 | 2.50 | |
| | 268.50 | 312.80 | 2090.05 | 44.30 | |
| RA3 | 312.80 | 313.20 | 2045.75 | 0.40 | |
| | 313.20 | 391.00 | 2045.35 | 77.80 | |
| JB1 | 391.00 | 392.40 | 1967.55 | 1.40 | |
| | 392.40 | 412.80 | 1966.15 | 20.40 | |
| JB2 | 412.80 | 413.40 | 1945.75 | 0.60 | |
| | 413.40 | 434.80 | 1945.15 | 21.40 | |
| JB3 | 434.80 | 435.50 | 1923.75 | 0.70 | |
| | 435.50 | 502.30 | 1923.05 | 66.80 | |
| T2 | 502.30 | 503.10 | 1856.25 | 0.80 | |
| | 503.10 | 523.40 | 1855.45 | 20.30 | |
| T1 | 523.40 | 524.80 | 1835.15 | 1.40 | |
| | 524.80 | 526.00 | 1833.75 | 1.20 | |
| TI | 526.00 | 527.00 | 1832.55 | 1.00 | |
| | 527.00 | 639.90 | 1831.55 | 112.90 | |
| *US1 | 639.90 | 640.60 | 1718.65 | 0.70 | |
| | 640.60 | 740.50 | 1717.95 | 99.90 | |
| *US2 | 740.50 | 741.20 | 1618.05 | 0.70 | |
| | 741.20 | 923.00 | 1617.35 | 181.80 | |
| *SE1 | 923.00 | 924.00 | 1435.55 | 1.00 | |
| | 924.00 | 958.80 | 1434.55 | 34.80 | |
| *SE2 | 958.80 | 960.00 | 1399.75 | 1.20 | |
| | 960.00 | 997.50 | 1398.55 | 37.50 | |
| *LS1 | 997.50 | 999.80 | 1361.05 | 2.30 | |
| | 999.80 | 1015.40 | 1358.75 | 15.60 | |
| *LS2 | 1015.40 | 1016.00 | 1343.15 | 0.60 | |
| | 1016.00 | 1060.60 | 1342.55 | 44.60 | |
| *UH1 | 1060.60 | 1062.00 | 1297.95 | 1.40 | |
| | 1062.00 | 1105.00 | 1296.55 | 43.00 | |
| *UH3 | 1105.00 | 1107.00 | 1253.55 | 2.00 | |
| | 1107.00 | 1160.80 | 1251.55 | 53.80 | |
| *MH1 | 1160.80 | 1162.20 | 1197.75 | 1.40 | |
| | 1162.20 | 1225.80 | 1196.35 | 63.60 | |
| *MH2 | 1225.80 | 1227.10 | 1132.75 | 1.30 | |
| | 1227.10 | 1265.10 | 1131.45 | 38.00 | |
| *P11 | 1265.10 | 1267.50 | 1093.45 | 2.40 | |
| | 1267.50 | 1290.80 | 1091.05 | 23.30 | |
| *P10 | 1290.80 | 1292.00 | 1067.75 | 1.20 | |
| | 1292.00 | 1352.40 | 1066.55 | 60.40 | |
| *LH2 | 1352.40 | 1353.90 | 1006.15 | 1.50 | |
| | 1353.90 | 1383.00 | 1004.65 | 29.10 | |

| | | | | |
|---|---|---|---|---|
| *COAL | 1383.00 | 1383.80 | 975.55 | 0.80 |
| | 1383.80 | 1441.10 | 974.75 | 57.30 |
| *P92 | 1441.10 | 1442.00 | 917.45 | 0.90 |
| | 1442.00 | 1444.50 | 916.55 | 2.50 |
| *P93 | 1444.50 | 1445.20 | 914.05 | 0.70 |
| | 1445.20 | 1453.70 | 913.35 | 8.50 |
| *COAL | 1453.70 | 1454.90 | 904.85 | 1.20 |
| | 1454.90 | 1486.90 | 903.65 | 32.00 |
| *P81 | 1486.90 | 1489.00 | 871.65 | 2.10 |
| | 1489.00 | 1514.30 | 869.55 | 25.30 |
| *P82 | 1514.30 | 1515.00 | 844.25 | 0.70 |
| | 1515.00 | 1633.00 | 843.55 | 118.00 |
| *P72 | 1633.00 | 1634.90 | 725.55 | 1.90 |
| | 1634.90 | 1686.90 | 723.65 | 52.00 |
| *P61 | 1686.90 | 1688.50 | 671.65 | 1.60 |
| | 1688.50 | 1695.00 | 670.05 | 6.50 |
| *P62 | 1695.00 | 1696.10 | 663.55 | 1.10 |
| | 1696.10 | 1727.00 | 662.45 | 30.90 |
| *P51 | 1727.00 | 1728.40 | 631.55 | 1.40 |
| | 1728.40 | 1752.00 | 630.15 | 23.60 |
| *COAL | 1752.00 | 1752.90 | 606.55 | 0.90 |
| | 1752.90 | 1824.90 | 605.65 | 72.00 |
| *P41 | 1824.90 | 1826.00 | 533.65 | 1.10 |
| | 1826.00 | 1833.00 | 532.55 | 7.00 |
| *P42 | 1833.00 | 1834.00 | 525.55 | 1.00 |
| | 1834.00 | 1892.50 | 524.55 | 58.50 |
| *P3 | 1892.50 | 1898.30 | 466.05 | 5.80 |
| | 1898.30 | 1936.10 | 460.25 | 37.80 |
| *P21 | 1936.10 | 1937.00 | 422.45 | 0.90 |
| | 1937.00 | 2020.80 | 421.55 | 83.80 |
| *P01 | 2020.80 | 2021.50 | 337.75 | 0.70 |
| | 2021.50 | 2068.00 | 337.05 | 46.50 |
| *SJ2 | 2068.00 | 2069.00 | 290.55 | 1.00 |
| | 2069.00 | 2213.60 | 289.55 | 144.60 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION.
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO HURRICANE BRANCH AND WATER WELL OM-24.
FILE: C:\GAS\S37B.CMP
DATE: 07/22/99

# DRILL DATA HOLE -- NOAH HORN WELL DRILLING, INC.

COMPANY: Buchanan Production

HOLE NO.: S-37-B

LOCATION:

DRILL: Rig #4

DATE STARTED: 07-12-99

ELECTRIC LOGGED: Yes

DATE COMPLETED: 07-16-99

GROUTED: Yes

| DEPTH | | THICKNESS | STRATA | REMARKS |
|---|---|---|---|---|
| FROM | TO | FT. | DESCRIPTION | VOIDS, ETC. |
| 0.00 | 20.00 | 20.00 | OVERBURDEN | 20' OF 13 3/8" CASING |
| 20.00 | 25.00 | 5.00 | SANDSTONE | |
| 25.00 | 55.00 | 30.00 | SANDSTONE | |
| 55.00 | 85.00 | 30.00 | SANDSTONE | |
| 85.00 | 115.00 | 30.00 | SANDSTONE | |
| 115.00 | 145.00 | 30.00 | SANDY SHALE | |
| 145.00 | 175.00 | 30.00 | SANDY SHALE | |
| 175.00 | 205.00 | 30.00 | SANDSTONE | |
| 205.00 | 235.00 | 30.00 | SANDY SHALE | |
| 235.00 | 255.00 | 20.00 | SANDY SHALE | |
| 255.00 | 257.00 | 2.00 | BROKE UP | |
| 257.00 | 265.00 | 8.00 | SANDSTONE | |
| 265.00 | 295.00 | 30.00 | SANDY SHALE | |
| 295.00 | 325.00 | 30.00 | SANDY SHALE | 313.30' OF 7" CASING |
| 325.00 | 332.00 | 7.00 | SANDSTONE | |
| 332.00 | 362.00 | 30.00 | SANDY SHALE | |
| 362.00 | 392.00 | 30.00 | SANDY SHALE | |
| 392.00 | 422.00 | 30.00 | SANDY SHALE | |
| 422.00 | 452.00 | 30.00 | SANDSTONE | |
| 452.00 | 482.00 | 30.00 | SANDSTONE | |
| 482.00 | 512.00 | 30.00 | SANDY SHALE | |
| 512.00 | 542.00 | 30.00 | SANDY SHALE | |
| 542.00 | 572.00 | 30.00 | SANDY SHALE | |
| 572.00 | 602.00 | 30.00 | SANDSTONE | |
| 602.00 | 632.00 | 30.00 | SANDY SHALE | |
| 632.00 | 660.00 | 28.00 | SANDY SHALE | |
| 660.00 | 690.00 | 30.00 | SANDY SHALE | |
| 690.00 | 720.00 | 30.00 | SHALE | |
| 720.00 | 750.00 | 30.00 | SANDY SHALE | |
| 750.00 | 780.00 | 30.00 | SANDY SHALE | |
| 780.00 | 810.00 | 30.00 | SANDY SHALE | |
| 810.00 | 840.00 | 30.00 | SHALE | |

| FR | TO | FT. | DESCRIPTION | |
|---|---|---|---|---|
| 840.00 | 870.00 | 30.00 | SHALE | |
| 870.00 | 900.00 | 30.00 | SANDY SHALE | |
| 900.00 | 930.00 | 30.00 | SANDY SHALE | |
| 930.00 | 960.00 | 30.00 | SANDY SHALE | |
| 960.00 | 990.00 | 30.00 | SANDSTONE | |
| 990.00 | 1020.00 | 30.00 | SANDSTONE | |
| 1020.00 | 1050.00 | 30.00 | SANDSTONE | |
| 1050.00 | 1080.00 | 30.00 | SANDY SHALE | |
| 1080.00 | 1110.00 | 30.00 | SANDY SHALE | |
| 1110.00 | 1140.00 | 30.00 | SANDY SHALE | |
| 1140.00 | 1170.00 | 30.00 | SANDY SHALE | |
| 1170.00 | 1200.00 | 30.00 | SANDY SHALE | |
| 1200.00 | 1230.00 | 30.00 | SANDY SHALE | |
| 1230.00 | 1260.00 | 30.00 | SANDSTONE | |
| 1260.00 | 1290.00 | 30.00 | SANDY SHALE | |
| 1290.00 | 1320.00 | 30.00 | SANDSTONE | |
| 1320.00 | 1350.00 | 30.00 | SANDY SHALE | |
| 1350.00 | 1380.00 | 30.00 | SANDSTONE | |
| 1380.00 | 1410.00 | 30.00 | SANDSTONE | |
| 1410.00 | 1440.00 | 30.00 | SANDY SHALE | |
| 1440.00 | 1470.00 | 30.00 | SANDY SHALE | |
| 1470.00 | 1500.00 | 30.00 | SANDSTONE | |
| 1500.00 | 1530.00 | 30.00 | SANDSTONE | |
| 1530.00 | 1560.00 | 30.00 | SANDSTONE | |
| 1560.00 | 1590.00 | 30.00 | SANDY SHALE | |
| 1590.00 | 1620.00 | 30.00 | SANDY SHALE | |
| 1620.00 | 1650.00 | 30.00 | SANDY SHALE | |
| 1650.00 | 1680.00 | 30.00 | SANDSTONE | |
| 1680.00 | 1710.00 | 30.00 | SANDSTONE | |
| 1710.00 | 1740.00 | 30.00 | SANDSTONE | |
| 1740.00 | 1770.00 | 30.00 | SANDSTONE | 6 ¼" HOLE |
| 1770.00 | 1800.00 | 30.00 | SANDSTONE | |
| 1800.00 | 1830.00 | 30.00 | SANDSTONE | |
| 1830.00 | 1860.00 | 30.00 | SANDSTONE | |
| 1860.00 | 1890.00 | 30.00 | SANDY SHALE | |
| 1890.00 | 1892.00 | 2.00 | SANDY SHALE | |
| 1892.00 | 1895.00 | 3.00 | COAL P-3 | |
| 1895.00 | 1920.00 | 25.00 | SANDY SHALE | |
| 1920.00 | 1950.00 | 30.00 | SANDSTONE | |
| 1950.00 | 1980.00 | 30.00 | SANDSTONE | |
| 1980.00 | 2010.00 | 30.00 | SANDSTONE | |
| 2010.00 | 2040.00 | 30.00 | SANDY SHALE | |
| 2040.00 | 2070.00 | 30.00 | SANDY SHALE | |
| 2070.00 | 2100.00 | 30.00 | SANDY SHALE / RED SHALE | |
| 2100.00 | 2130.00 | 30.00 | SANDSTONE | |
| 2130.00 | 2160.00 | 30.00 | SANDSTONE | |
| 2160.00 | 2190.00 | 30.00 | SANDY SHALE | |
| 2190.00 | 2220.00 | 30.00 | SANDSTONE | 2208.22' OF 4 ½" Casing |

2220.00 FT. TOTAL DEPTH
20.00 FT. OF 13 3/8" CASING
313.30 FT. OF 7" CASING
2208.22 FT. OF 4 ½" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 635
**Company:** CNX Gas Company LLC
**File Number:** BU-3251
**Operations Name:** CBM S37G W/PL
**Operation Type:** Coalbed/Pipeline
**Completion Report Type:** Original

# COMPLETION REPORT (DGO-GO-15)

**Well Type:** Coalbed/Pipeline **Date Well Completed:** 2/28/2007
**Driller's Total Depth:** 1,878 **Log's Total Depth:** 1,878

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

☐ Stimulated ☐ Not Stimulated ☑ Gob

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 9/6/2007 11:22:39 AM *(Company)*

By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 9/6/2007

Status: Inspr Approved Date: 9/21/2007

Final PDF Date: 9/21/2007

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 651 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3251 |
| **Operations Name:** | CBM S37G W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 2/12/2007
Drilling Contractor: Noah Horn
Date drilling completed: 2/28/2007
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,878
Log Total Depth (feet): 1,878
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,013,408
Final Plat State Plane X: 1,013,408
Permitted State Plane Y: 331,498
Final Plat State Plane Y: 331,489
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | Platt.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | Exhibit A.pdf |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | S37G Gas Show.xls |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper Gamma Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑ Yes ☐ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | S37G Casing.xls |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

Mine void @ 270' - 273'; 16" casing cemented to surface on the backside

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 9/6/2007 *(Company)*

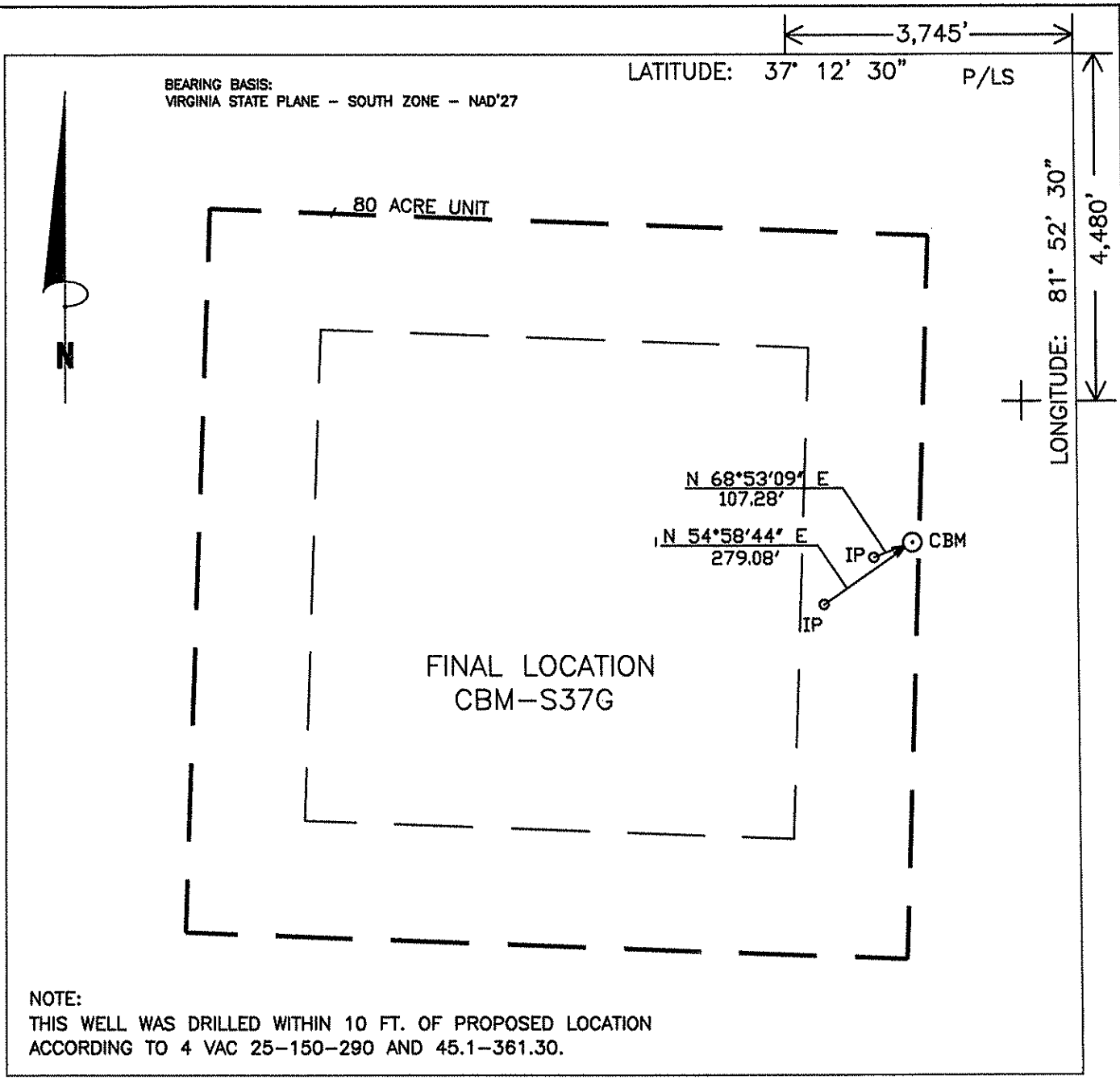
Signed By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 9/6/2007

Status: Inspr Approved Date: 9/21/2007

Final PDF Date: 9/21/2007




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25-150-290 AND 45.1-361.30.

S37GFNL
2N22/200-0003/36

# WELL LOCATION PLAT

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-S37G

TRACT NUMBER R.O. VANDYKE HEIRS QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 331,489.10 E 1,013,407.82

ELEVATION: 2364.54' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 02-20-07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

DRPrice

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No.
8540
2/21/07
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 10/96

Exhibit A

Well Name: 07 CBM S37G
SURFACE ELEV: 2364.54 EASTING: 1013407.82 NORTHING: 331489.10

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 28.20 | 29.00 | 2336.34 | 0.80 | |
| | 29.00 | 144.10 | 2335.54 | 115.10 | |
| AL2 | 144.10 | 144.90 | 2220.44 | 0.80 | |
| | 144.90 | 242.00 | 2219.64 | 97.10 | |
| RA1 | 242.00 | 244.00 | 2122.54 | 2.00 | |
| | 244.00 | 270.00 | 2120.54 | 26.00 | |
| RA2 | 270.00 | 273.00 | 2094.54 | 3.00 | MINED OUT |
| | 273.00 | 328.20 | 2091.54 | 55.20 | |
| COAL | 328.20 | 328.90 | 2036.34 | 0.70 | |
| | 328.90 | 393.00 | 2035.64 | 64.10 | |
| JB1 | 393.00 | 393.80 | 1971.54 | 0.80 | |
| | 393.80 | 433.50 | 1970.74 | 39.70 | |
| JB3 | 433.50 | 435.50 | 1931.04 | 2.00 | |
| | 435.50 | 506.90 | 1929.04 | 71.40 | |
| T1 | 506.90 | 507.50 | 1857.64 | 0.60 | |
| | 507.50 | 527.60 | 1857.04 | 20.10 | |
| TI | 527.60 | 529.20 | 1836.94 | 1.60 | |
| | 529.20 | 642.10 | 1835.34 | 112.90 | |
| *US1 | 642.10 | 643.80 | 1722.44 | 1.70 | |
| | 643.80 | 923.50 | 1720.74 | 279.70 | |
| *SE1 | 923.50 | 924.10 | 1441.04 | 0.60 | |
| | 924.10 | 961.10 | 1440.44 | 37.00 | |
| *SE2 | 961.10 | 963.70 | 1403.44 | 2.60 | |
| | 963.70 | 999.00 | 1400.84 | 35.30 | |
| *LS1 | 999.00 | 1001.10 | 1365.54 | 2.10 | |
| | 1001.10 | 1016.20 | 1363.44 | 15.10 | |
| *LS2 | 1016.20 | 1017.00 | 1348.34 | 0.80 | |
| | 1017.00 | 1058.60 | 1347.54 | 41.60 | |
| *UH1 | 1058.60 | 1059.80 | 1305.94 | 1.20 | |
| | 1059.80 | 1110.50 | 1304.74 | 50.70 | |
| *UH3 | 1110.50 | 1112.20 | 1254.04 | 1.70 | |
| | 1112.20 | 1166.40 | 1252.34 | 54.20 | |
| *MH1 | 1166.40 | 1168.90 | 1198.14 | 2.50 | |
| | 1168.90 | 1233.00 | 1195.64 | 64.10 | |
| *MH2 | 1233.00 | 1234.40 | 1131.54 | 1.40 | |
| | 1234.40 | 1271.90 | 1130.14 | 37.50 | |
| *P11 | 1271.90 | 1273.90 | 1092.64 | 2.00 | |
| | 1273.90 | 1296.20 | 1090.64 | 22.30 | |
| *P10 | 1296.20 | 1297.90 | 1068.34 | 1.70 | |
| | 1297.90 | 1362.10 | 1066.64 | 64.20 | |
| *LH2 | 1362.10 | 1363.90 | 1002.44 | 1.80 | |
| | 1363.90 | 1451.00 | 1000.64 | 87.10 | |
| *P91 | 1451.00 | 1452.00 | 913.54 | 1.00 | |
| | 1452.00 | 1464.10 | 912.54 | 12.10 | |
| *P92 | 1464.10 | 1465.10 | 900.44 | 1.00 | |
| | 1465.10 | 1496.50 | 899.44 | 31.40 | |
| *P81 | 1496.50 | 1497.00 | 868.04 | 0.50 | |

| | | | | |
|---|---|---|---|---|
| | 1497.00 | 1527.00 | 867.54 | 30.00 |
| *P82 | 1527.00 | 1527.90 | 837.54 | 0.90 |
| | 1527.90 | 1699.70 | 836.64 | 171.80 |
| *P62 | 1699.70 | 1700.50 | 664.84 | 0.80 |
| | 1700.50 | 1739.70 | 664.04 | 39.20 |
| *P51 | 1739.70 | 1741.00 | 624.84 | 1.30 |
| | 1741.00 | 1837.20 | 623.54 | 96.20 |
| *P42 | 1837.20 | 1837.90 | 527.34 | 0.70 |
| | 1837.90 | 1878.10 | 526.64 | 40.20 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\S37G.CMP
DATE: 04/18/07

Well: S37G

## Oil & Gas Show

| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 642 | 1465 | 823 | | | |
| Pocahontas | 1739 | 1741 | 2 | | | |
| Total IPF | | | | | | |
| | | | | | | |

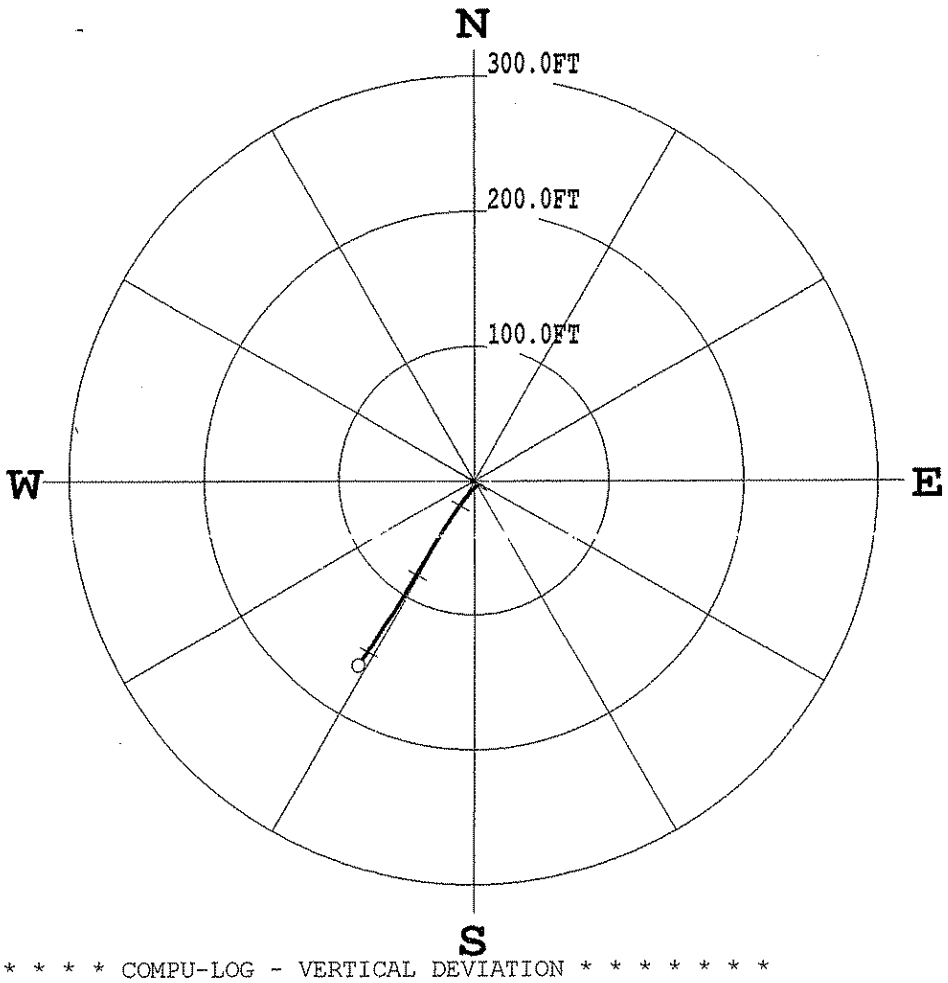
PLAN VIEW

# COMPU-LOG DEVIATION

CLIENT: CNX GAS
LOCATION: -
HOLE ID: 07-CNX-S-37-G
DATE OF LOG: 03/02/07
PROBE: 0026C 777

MAG DECL: -7.1

SCALE: 100 FT/IN
TRUE DEPTH: 1853.13 ft
AZIMUTH: 211.9
DISTANCE: 162.2 FT
+ = 300 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX GAS
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
HOLE ID. : 07-CNX-S-37-G
DATE OF LOG : 03/02/07
PROBE : 0026C , 777
DEPTH UNITS : FEET
LOG: 07-CNX-S-37-G_03-02-07_15-08_0026C_.10_0.00_1870.00_final2DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 6.6 | 6.60 | 0.00 | -0.00 | 0.0 | 306.0 | 0.5 | 306.0 |
| 10.0 | 10.00 | 0.01 | -0.02 | 0.0 | 301.3 | 0.4 | 1.1 |
| 20.0 | 20.00 | 0.00 | -0.05 | 0.1 | 275.1 | 0.3 | 225.7 |
| 30.0 | 30.00 | -0.03 | -0.10 | 0.1 | 255.8 | 0.3 | 236.7 |
| 40.0 | 40.00 | -0.06 | -0.12 | 0.1 | 241.5 | 0.6 | 358.3 |
| .0 | 50.00 | -0.02 | -0.16 | 0.2 | 263.0 | 0.3 | 315.6 |
| 60.0 | 60.00 | -0.01 | -0.22 | 0.2 | 267.8 | 0.4 | 199.1 |
| 70.0 | 70.00 | -0.07 | -0.25 | 0.3 | 254.1 | 0.5 | 228.5 |
| 80.0 | 80.00 | -0.13 | -0.25 | 0.3 | 241.9 | 0.5 | 115.2 |
| 90.0 | 90.00 | -0.15 | -0.17 | 0.2 | 228.0 | 0.5 | 108.2 |
| 100.0 | 100.00 | -0.19 | -0.09 | 0.2 | 205.9 | 0.6 | 82.4 |
| 110.0 | 110.00 | -0.22 | -0.09 | 0.2 | 203.0 | 0.5 | 103.5 |
| 120.0 | 120.00 | -0.17 | -0.02 | 0.2 | 186.0 | 0.5 | 38.4 |
| 130.0 | 130.00 | -0.11 | 0.03 | 0.1 | 163.4 | 0.5 | 322.1 |
| 140.0 | 140.00 | -0.08 | -0.04 | 0.1 | 206.6 | 0.5 | 279.5 |
| 150.0 | 150.00 | -0.03 | -0.11 | 0.1 | 254.6 | 0.5 | 296.3 |
| 160.0 | 160.00 | -0.05 | -0.19 | 0.2 | 255.7 | 0.6 | 198.6 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 90.0 | 90.00 | -0.15 | -0.17 | 0.2 | 228.0 | 0.5 | 108.2 |
| 100.0 | 100.00 | -0.19 | -0.09 | 0.2 | 205.9 | 0.6 | 82.4 |
| 110.0 | 110.00 | -0.22 | -0.09 | 0.2 | 203.0 | 0.5 | 103.5 |
| 120.0 | 120.00 | -0.17 | -0.02 | 0.2 | 186.0 | 0.5 | 38.4 |
| 130.0 | 130.00 | -0.11 | 0.03 | 0.1 | 163.4 | 0.5 | 322.1 |
| 140.0 | 140.00 | -0.08 | -0.04 | 0.1 | 206.6 | 0.5 | 279.5 |
| 150.0 | 150.00 | -0.03 | -0.11 | 0.1 | 254.6 | 0.5 | 296.3 |
| 160.0 | 160.00 | -0.05 | -0.19 | 0.2 | 255.7 | 0.6 | 198.6 |
| 170.0 | 169.99 | -0.14 | -0.24 | 0.3 | 240.9 | 0.6 | 231.3 |
| 180.0 | 179.99 | -0.19 | -0.26 | 0.3 | 234.0 | 0.6 | 13.2 |
| 190.0 | 189.99 | -0.09 | -0.23 | 0.2 | 249.9 | 0.7 | 52.1 |
| 200.0 | 199.99 | 0.00 | -0.17 | 0.2 | 270.6 | 0.3 | 336.7 |
| 210.0 | 209.99 | -0.01 | -0.17 | 0.2 | 267.5 | 0.3 | 76.1 |
| 220.0 | 219.99 | 0.01 | -0.13 | 0.1 | 276.4 | 0.3 | 14.8 |
| 230.0 | 229.99 | 0.04 | -0.11 | 0.1 | 290.8 | 0.2 | 25.0 |
| 240.0 | 239.99 | 0.01 | -0.14 | 0.1 | 272.5 | 0.3 | 236.5 |
| 250.0 | 249.99 | -0.05 | -0.17 | 0.2 | 252.8 | 0.4 | 199.6 |
| 260.0 | 259.99 | -0.11 | -0.19 | 0.2 | 239.4 | 0.3 | 231.2 |
| 270.0 | 269.99 | -0.16 | -0.23 | 0.3 | 235.1 | 0.3 | 193.1 |
| 280.0 | 279.99 | -0.17 | -0.20 | 0.3 | 230.1 | 0.2 | 319.8 |
| 290.0 | 289.99 | -0.17 | -0.16 | 0.2 | 223.6 | 1.2 | 190.7 |
| 300.0 | 299.99 | -0.26 | -0.21 | 0.3 | 218.6 | 1.1 | 13.3 |
| 310.0 | 309.99 | -0.10 | -0.24 | 0.3 | 246.2 | 0.9 | 244.0 |
| 320.0 | 319.99 | -0.04 | -0.23 | 0.2 | 259.2 | 1.0 | 82.0 |
| 330.0 | 329.99 | 0.05 | -0.15 | 0.2 | 289.1 | 0.6 | 17.0 |
| 340.0 | 339.98 | 0.15 | -0.11 | 0.2 | 324.4 | 0.7 | 11.7 |
| 350.0 | 349.98 | 0.25 | -0.05 | 0.3 | 348.9 | 0.8 | 37.1 |
| 360.0 | 359.98 | 0.31 | -0.09 | 0.3 | 344.1 | 0.7 | 265.8 |
| 370.0 | 369.98 | 0.24 | -0.23 | 0.3 | 316.7 | 1.1 | 228.0 |
| 380.0 | 379.98 | 0.12 | -0.37 | 0.4 | 287.4 | 1.1 | 223.4 |
| 390.0 | 389.98 | -0.04 | -0.49 | 0.5 | 265.6 | 1.2 | 196.2 |
| 400.0 | 399.98 | -0.25 | -0.44 | 0.5 | 241.0 | 1.3 | 151.9 |
| 410.0 | 409.97 | -0.37 | -0.29 | 0.5 | 218.4 | 0.8 | 86.0 |
| 420.0 | 419.97 | -0.38 | -0.14 | 0.4 | 200.7 | 0.9 | 95.9 |
| 430.0 | 429.97 | -0.37 | 0.00 | 0.4 | 179.4 | 0.9 | 51.0 |
| 440.0 | 439.97 | -0.30 | 0.10 | 0.3 | 161.1 | 1.1 | 88.9 |
| 450.0 | 449.97 | -0.25 | 0.20 | 0.3 | 141.2 | 0.4 | 24.7 |
| 460.0 | 459.97 | -0.21 | 0.17 | 0.3 | 140.8 | 0.8 | 246.0 |
| 470.0 | 469.97 | -0.26 | 0.07 | 0.3 | 164.6 | 1.2 | 210.3 |
| 480.0 | 479.97 | -0.46 | 0.01 | 0.5 | 179.2 | 1.3 | 178.3 |
| 490.0 | 489.96 | -0.67 | 0.02 | 0.7 | 177.9 | 1.2 | 188.0 |
| 500.0 | 499.96 | -0.86 | 0.12 | 0.9 | 172.2 | 1.2 | 167.4 |
| 510.0 | 509.96 | -1.05 | 0.22 | 1.1 | 168.3 | 1.2 | 140.5 |
| 520.0 | 519.96 | -1.11 | 0.38 | 1.2 | 161.3 | 1.1 | 104.5 |
| 530.0 | 529.95 | -1.18 | 0.56 | 1.3 | 154.5 | 1.1 | 111.8 |
| 540.0 | 539.95 | -1.19 | 0.73 | 1.4 | 148.5 | 0.9 | 83.1 |
| 550.0 | 549.95 | -1.16 | 0.81 | 1.4 | 145.2 | 1.1 | 97.7 |
| 560.0 | 559.95 | -1.13 | 0.88 | 1.4 | 142.3 | 0.1 | 305.7 |
| 570.0 | 569.95 | -1.20 | 0.88 | 1.5 | 143.7 | 0.4 | 142.1 |
| 580.0 | 579.95 | -1.29 | 0.95 | 1.6 | 143.5 | 0.6 | 140.4 |
| 590.0 | 589.95 | -1.41 | 1.05 | 1.8 | 143.3 | 1.9 | 147.1 |
| 600.0 | 599.95 | -1.55 | 1.12 | 1.9 | 144.1 | 0.9 | 148.3 |
| 610.0 | 609.95 | -1.70 | 1.16 | 2.1 | 145.6 | 0.9 | 176.4 |
| 620.0 | 619.95 | -1.81 | 1.16 | 2.2 | 147.4 | 0.4 | 183.8 |
| 630.0 | 629.95 | -1.86 | 1.18 | 2.2 | 147.5 | 0.3 | 112.8 |
| 640.0 | 639.95 | -1.91 | 1.25 | 2.3 | 146.9 | 0.9 | 147.2 |
| 650.0 | 649.94 | -2.05 | 1.33 | 2.4 | 147.1 | 0.9 | 170.5 |
| 660.0 | 659.94 | -2.20 | 1.34 | 2.6 | 148.6 | 0.5 | 200.1 |
| 670.0 | 669.94 | -2.25 | 1.34 | 2.6 | 149.3 | 0.1 | 139.8 |
| 680.0 | 679.94 | -2.28 | 1.38 | 2.7 | 148.7 | 0.7 | 130.0 |
| 690.0 | 689.94 | -2.34 | 1.47 | 2.8 | 147.8 | 0.7 | 132.0 |
| 700.0 | 699.94 | -2.44 | 1.58 | 2.9 | 147.2 | 0.7 | 129.7 |
| 710.0 | 709.94 | -2.57 | 1.66 | 3.1 | 147.1 | 0.8 | 172.2 |
| 720.0 | 719.94 | -2.68 | 1.64 | 3.1 | 148.5 | 0.4 | 225.0 |
| 730.0 | 729.94 | -2.73 | 1.65 | 3.2 | 148.8 | 0.3 | 116.3 |
| 740.0 | 739.94 | -2.79 | 1.75 | 3.3 | 148.0 | 1.2 | 138.4 |
| 750.0 | 749.94 | -2.90 | 1.89 | 3.5 | 147.0 | 1.1 | 136.5 |
| 760.0 | 759.93 | -3.04 | 2.01 | 3.6 | 146.5 | 1.0 | 140.8 |
| 770.0 | 769.93 | -3.18 | 2.08 | 3.8 | 146.8 | 0.7 | 164.8 |
| 780.0 | 779.93 | -3.28 | 2.10 | 3.9 | 147.3 | 0.6 | 165.8 |
| 790.0 | 789.93 | -3.36 | 2.16 | 4.0 | 147.3 | 0.6 | 115.4 |
| 800.0 | 799.93 | -3.39 | 2.27 | 4.1 | 146.1 | 0.7 | 98.9 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 760.0 | 759.93 | -3.04 | 2.01 | 3.6 | 146.5 | 1.0 | 140.8 |
| 770.0 | 769.93 | -3.18 | 2.08 | 3.8 | 146.8 | 0.7 | 164.8 |
| 780.0 | 779.93 | -3.28 | 2.10 | 3.9 | 147.3 | 0.6 | 165.8 |
| 790.0 | 789.93 | -3.36 | 2.16 | 4.0 | 147.3 | 0.6 | 115.4 |
| 800.0 | 799.93 | -3.39 | 2.27 | 4.1 | 146.1 | 0.7 | 98.9 |
| 810.0 | 809.93 | -3.41 | 2.38 | 4.2 | 145.1 | 0.6 | 104.4 |
| 820.0 | 819.93 | -3.46 | 2.48 | 4.3 | 144.4 | 0.7 | 140.2 |
| 830.0 | 829.93 | -3.55 | 2.51 | 4.3 | 144.8 | 0.5 | 182.4 |
| 840.0 | 839.93 | -3.63 | 2.51 | 4.4 | 145.3 | 0.6 | 162.9 |
| 850.0 | 849.93 | -3.69 | 2.51 | 4.5 | 145.7 | 0.2 | 215.8 |
| 860.0 | 859.93 | -3.69 | 2.48 | 4.4 | 146.1 | 0.2 | 324.8 |
| 870.0 | 869.93 | -3.64 | 2.47 | 4.4 | 145.8 | 0.4 | 10.7 |
| 880.0 | 879.93 | -3.59 | 2.51 | 4.4 | 145.0 | 0.4 | 76.1 |
| 890.0 | 889.93 | -3.60 | 2.57 | 4.4 | 144.4 | 0.4 | 141.3 |
| 900.0 | 899.93 | -3.66 | 2.61 | 4.5 | 144.5 | 0.4 | 164.2 |
| 910.0 | 909.93 | -3.72 | 2.62 | 4.5 | 144.9 | 0.4 | 159.8 |
| 920.0 | 919.93 | -3.77 | 2.63 | 4.6 | 145.1 | 0.3 | 236.3 |
| 930.0 | 929.93 | -3.74 | 2.58 | 4.5 | 145.4 | 0.4 | 336.4 |
| 940.0 | 939.93 | -3.66 | 2.60 | 4.5 | 144.6 | 0.5 | 24.8 |
| 950.0 | 949.93 | -3.57 | 2.64 | 4.4 | 143.6 | 0.6 | 24.5 |
| 960.0 | 959.93 | -3.50 | 2.68 | 4.4 | 142.6 | 0.5 | 50.9 |
| 970.0 | 969.93 | -3.49 | 2.75 | 4.4 | 141.8 | 0.4 | 106.1 |
| 980.0 | 979.93 | -3.52 | 2.80 | 4.5 | 141.5 | 0.3 | 139.9 |
| 990.0 | 989.93 | -3.55 | 2.80 | 4.5 | 141.7 | 0.3 | 285.6 |
| 000.0 | 999.93 | -3.51 | 2.75 | 4.5 | 141.9 | 0.4 | 328.3 |
| 010.0 | 1009.93 | -3.44 | 2.72 | 4.4 | 141.7 | 0.4 | 313.2 |
| 020.0 | 1019.93 | -3.37 | 2.73 | 4.3 | 140.9 | 0.6 | 46.0 |
| 030.0 | 1029.93 | -3.30 | 2.80 | 4.3 | 139.7 | 0.5 | 40.2 |
| 040.0 | 1039.92 | -3.24 | 2.84 | 4.3 | 138.8 | 0.4 | 35.1 |
| 050.0 | 1049.92 | -3.19 | 2.86 | 4.3 | 138.1 | 0.2 | 311.3 |
| 060.0 | 1059.92 | -3.23 | 2.73 | 4.2 | 139.7 | 1.9 | 230.5 |
| 070.0 | 1069.92 | -3.45 | 2.45 | 4.2 | 144.6 | 2.4 | 231.8 |
| 080.0 | 1079.90 | -3.84 | 2.01 | 4.3 | 152.3 | 3.8 | 227.1 |
| 090.0 | 1089.87 | -4.41 | 1.44 | 4.6 | 161.9 | 4.8 | 223.7 |
| 100.0 | 1099.81 | -5.16 | 0.71 | 5.2 | 172.2 | 6.7 | 223.2 |
| 110.0 | 1109.73 | -6.08 | -0.14 | 6.1 | 181.3 | 7.3 | 221.2 |
| 120.0 | 1119.63 | -7.15 | -1.05 | 7.2 | 188.4 | 8.9 | 219.7 |
| 130.0 | 1129.50 | -8.39 | -2.07 | 8.6 | 193.9 | 9.7 | 218.6 |
| 140.0 | 1139.35 | -9.76 | -3.18 | 10.3 | 198.0 | 10.4 | 218.9 |
| 150.0 | 1149.17 | -11.17 | -4.36 | 12.0 | 201.3 | 10.7 | 220.5 |
| 160.0 | 1159.00 | -12.63 | -5.53 | 13.8 | 203.6 | 10.8 | 218.9 |
| 170.0 | 1168.82 | -14.12 | -6.69 | 15.6 | 205.4 | 10.9 | 215.2 |
| 180.0 | 1178.64 | -15.61 | -7.87 | 17.5 | 206.7 | 10.8 | 217.9 |
| 190.0 | 1188.46 | -17.11 | -9.00 | 19.3 | 207.8 | 10.8 | 218.7 |
| 200.0 | 1198.28 | -18.61 | -10.09 | 21.2 | 208.5 | 10.9 | 215.3 |
| 210.0 | 1208.11 | -20.15 | -11.15 | 23.0 | 209.0 | 10.8 | 215.8 |
| 220.0 | 1217.93 | -21.69 | -12.17 | 24.9 | 209.3 | 10.5 | 208.5 |
| 230.0 | 1227.76 | -23.24 | -13.19 | 26.7 | 209.6 | 10.7 | 214.0 |
| 240.0 | 1237.59 | -24.80 | -14.20 | 28.6 | 209.8 | 10.7 | 212.8 |
| 250.0 | 1247.41 | -26.36 | -15.22 | 30.4 | 210.0 | 10.8 | 212.3 |
| 260.0 | 1257.24 | -27.93 | -16.23 | 32.3 | 210.2 | 10.8 | 213.8 |
| 270.0 | 1267.06 | -29.52 | -17.25 | 34.2 | 210.3 | 10.9 | 211.6 |
| 280.0 | 1276.88 | -31.11 | -18.26 | 36.1 | 210.4 | 10.9 | 209.3 |
| 290.0 | 1286.69 | -32.72 | -19.27 | 38.0 | 210.5 | 11.1 | 212.5 |
| 300.0 | 1296.51 | -34.33 | -20.28 | 39.9 | 210.6 | 10.9 | 211.0 |
| 1310.0 | 1306.32 | -35.96 | -21.31 | 41.8 | 210.6 | 11.1 | 215.9 |
| 1320.0 | 1316.13 | -37.60 | -22.33 | 43.7 | 210.7 | 11.2 | 209.9 |
| 1330.0 | 1325.94 | -39.26 | -23.35 | 45.7 | 210.7 | 11.2 | 209.3 |
| 1340.0 | 1335.75 | -40.92 | -24.36 | 47.6 | 210.8 | 11.4 | 206.7 |
| 1350.0 | 1345.55 | -42.62 | -25.38 | 49.6 | 210.8 | 11.9 | 212.3 |
| 1360.0 | 1355.35 | -44.32 | -26.43 | 51.6 | 210.8 | 11.7 | 214.5 |
| 1370.0 | 1365.15 | -46.03 | -27.45 | 53.6 | 210.8 | 11.5 | 209.9 |
| .0 | 1374.94 | -47.76 | -28.50 | 55.6 | 210.8 | 11.6 | 210.9 |
| 1390.0 | 1384.73 | -49.50 | -29.55 | 57.7 | 210.8 | 11.8 | 211.3 |
| 1400.0 | 1394.52 | -51.24 | -30.60 | 59.7 | 210.8 | 11.9 | 213.8 |
| 1410.0 | 1404.31 | -52.99 | -31.67 | 61.7 | 210.9 | 11.9 | 209.3 |
| 1420.0 | 1414.09 | -54.75 | -32.72 | 63.8 | 210.9 | 11.5 | 199.9 |
| 1430.0 | 1423.87 | -56.55 | -33.77 | 65.9 | 210.8 | 12.1 | 208.8 |
| 1440.0 | 1433.65 | -58.35 | -34.83 | 68.0 | 210.8 | 12.0 | 210.4 |
| 1450.0 | 1443.43 | -60.15 | -35.91 | 70.1 | 210.8 | 12.1 | 211.5 |
| 1460.0 | 1453.21 | -61.95 | -36.99 | 72.2 | 210.8 | 12.1 | 212.2 |
| 1470.0 | 1462.99 | -63.74 | -38.07 | 74.2 | 210.8 | 12.1 | 211.1 |
| 1480.0 | 1472.76 | -65.53 | -39.16 | 76.3 | 210.9 | 12.1 | 211.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 410.0 | 1404.31 | -52.99 | -31.67 | 61.7 | 210.9 | 11.7 | 200.1 |
| 420.0 | 1414.09 | -54.75 | -32.72 | 63.8 | 210.9 | 11.5 | 199.9 |
| 430.0 | 1423.87 | -56.55 | -33.77 | 65.9 | 210.8 | 12.1 | 208.8 |
| 440.0 | 1433.65 | -58.35 | -34.83 | 68.0 | 210.8 | 12.0 | 210.4 |
| 450.0 | 1443.43 | -60.15 | -35.91 | 70.1 | 210.8 | 12.1 | 211.5 |
| 460.0 | 1453.21 | -61.95 | -36.99 | 72.2 | 210.8 | 12.1 | 212.2 |
| 470.0 | 1462.99 | -63.74 | -38.07 | 74.2 | 210.8 | 12.1 | 211.1 |
| 480.0 | 1472.76 | -65.53 | -39.16 | 76.3 | 210.9 | 12.1 | 211.1 |
| 490.0 | 1482.54 | -67.33 | -40.24 | 78.4 | 210.9 | 12.1 | 211.6 |
| 500.0 | 1492.32 | -69.12 | -41.32 | 80.5 | 210.9 | 12.2 | 211.5 |
| 510.0 | 1502.09 | -70.92 | -42.42 | 82.6 | 210.9 | 12.3 | 211.6 |
| 520.0 | 1511.87 | -72.71 | -43.51 | 84.7 | 210.9 | 12.1 | 208.4 |
| 530.0 | 1521.65 | -74.49 | -44.60 | 86.8 | 210.9 | 12.2 | 212.7 |
| 540.0 | 1531.42 | -76.31 | -45.71 | 88.9 | 210.9 | 12.3 | 211.1 |
| 550.0 | 1541.19 | -78.13 | -46.82 | 91.1 | 210.9 | 12.4 | 211.0 |
| 560.0 | 1550.96 | -79.94 | -47.95 | 93.2 | 211.0 | 12.4 | 211.1 |
| 570.0 | 1560.73 | -81.77 | -49.07 | 95.4 | 211.0 | 12.5 | 209.7 |
| 580.0 | 1570.49 | -83.61 | -50.21 | 97.5 | 211.0 | 12.5 | 212.0 |
| 590.0 | 1580.25 | -85.46 | -51.36 | 99.7 | 211.0 | 12.6 | 211.3 |
| 600.0 | 1590.01 | -87.31 | -52.51 | 101.9 | 211.0 | 12.7 | 209.3 |
| 610.0 | 1599.76 | -89.19 | -53.64 | 104.1 | 211.0 | 12.8 | 212.5 |
| 620.0 | 1609.51 | -91.08 | -54.81 | 106.3 | 211.0 | 13.0 | 213.9 |
| 630.0 | 1619.26 | -92.99 | -55.96 | 108.5 | 211.0 | 12.9 | 212.6 |
| 640.0 | 1629.01 | -94.90 | -57.14 | 110.8 | 211.1 | 13.0 | 212.8 |
| 650.0 | 1638.75 | -96.80 | -58.31 | 113.0 | 211.1 | 12.5 | 217.6 |
| 660.0 | 1648.52 | -98.58 | -59.49 | 115.1 | 211.1 | 12.2 | 216.0 |
| 670.0 | 1658.29 | -100.28 | -60.74 | 117.2 | 211.2 | 12.3 | 217.3 |
| 680.0 | 1668.07 | -101.97 | -62.02 | 119.4 | 211.3 | 12.3 | 217.1 |
| 690.0 | 1677.84 | -103.66 | -63.30 | 121.5 | 211.4 | 11.7 | 220.1 |
| 700.0 | 1687.60 | -105.40 | -64.61 | 123.6 | 211.5 | 13.4 | 216.6 |
| 710.0 | 1697.35 | -107.26 | -65.83 | 125.8 | 211.5 | 12.9 | 210.8 |
| 720.0 | 1707.09 | -109.15 | -67.02 | 128.1 | 211.5 | 12.9 | 212.5 |
| 730.0 | 1716.84 | -111.06 | -68.20 | 130.3 | 211.6 | 13.0 | 211.4 |
| 740.0 | 1726.58 | -112.96 | -69.38 | 132.6 | 211.6 | 13.0 | 211.0 |
| 750.0 | 1736.33 | -114.87 | -70.57 | 134.8 | 211.6 | 12.9 | 211.8 |
| 760.0 | 1746.07 | -116.78 | -71. | 137.1 | 211.6 | 13.0 | 210.8 |
| 770.0 | 1755.81 | -118.70 | -72. | 139.3 | 211.6 | 13.1 | 213.8 |
| 780.0 | 1765.55 | -120.61 | -74.15 | 141.6 | 211.6 | 13.1 | 212.1 |
| 790.0 | 1775.30 | -122.5 | -75.35 | 143.8 | 211.6 | 12.6 | 213.4 |
| 800.0 | 1785.05 | -124. | -76.64 | 146.0 | 211.7 | 13.2 | 215.5 |
| 810.0 | 1794.78 | -126.2 | -77.95 | 148.3 | 211.7 | 13.7 | 206.5 |
| 820.0 | 1804.51 | -128.15 | -79.16 | 150.6 | 211.7 | 13.2 | 215.3 |
| 830.0 | 1814.24 | -130.08 | -80.41 | 152.9 | 211.7 | 13.0 | 221.7 |
| 840.0 | 1823.97 | -131.93 | -81.72 | 155.2 | 211.8 | 13.9 | 227.7 |
| 850.0 | 1833.70 | -133.85 | -83.01 | 157.5 | 211.8 | 13.5 | 207.3 |
| 860.0 | 1843.41 | -135.85 | -84.26 | 159.9 | 211.8 | 13.8 | 209.1 |
| 870.0 | 1853.13 | -137.76 | -85.61 | 162.2 | 211.9 | 13.6 | 217.5 |
| 870.0 | 1853.13 | -137.76 | -85.61 | 162.2 | 211.9 | 13.6 | 217.5 |

Well: S37G

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented |
|---|---|---|---|---|---|---|---|
| Conductor | 22" | 21' | 24" | 5.9 | X | | 2/12/2007 |
| Surface | 16" | 313' | 20" | 306.8 | | X | 2/13/2007 |
| Water Protection | 13 3/8" | 549.90' | 15" | 177 | X | | 2/17/2007 |
| Coal Protection | 13 3/8" | 549.90' | 15" | 177 | X | | 2/17/2007 |
| Other Casing & Tubing | | | | | | | |
| Other Casing & Tubing | | | | | | | |
| Liners | | | | | | | |

| Packers or Bridge Plugs Kind/Size/Set |
| --- |
| |
| Bkt @ 220' |
| Bkt @ 88' |
| Bkt @ 88' |
| |
| |
| |

## DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC

**COMPANY:** CNX **HOLE #:** S-37G

**LOCATION:** OSBORNE MTN **DRILL RIG #:** 93

**DATE STARTED:** 02-12-07 **DATED COMPLETED:** 02-28-07

**ELECTRIC LOGGED:** YES **GROUTED:** YES

| DEPTH | | THICKNESS | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 21 | 21 | |
| 21 | 34 | 13 | SANDY SHALE |
| 34 | 64 | 30 | SANDY SHALE/SAND |
| 64 | 94 | 30 | SANDY SHALE |
| 94 | 124 | 30 | SANDY SHALE/COAL & SAND |
| 124 | 155 | 31 | SAND STONE/SAND STONE |
| 155 | 218 | 63 | SAND STONE |
| 218 | 250 | 32 | SAND/COAL/SAND STONE |
| 250 | 282 | 32 | SAND STONE/OPEN @258-262 |
| SAND STONE | | | |
| 282 | 313 | 31 | SANDY SHALE/COAL |
| 313 | 785 | 472 | |
| 785 | 817 | 32 | SHALE |
| 817 | 848 | 31 | SHALE/SAND STONE |
| 848 | 879 | 31 | SAND STONE |
| 879 | 911 | 32 | SHALE/SAND STONE |
| 911 | 942 | 31 | SHALE/COAL |
| 942 | 974 | 32 | SAND STONE |
| 974 | 1006 | 32 | SHALE/COAL |
| 1006 | 1037 | 31 | SANDY SHALE |
| 1141 | 1173 | 32 | SANDY SHALE/COAL |
| 1173 | 1203 | 30 | SANDY SHALE |
| 1203 | 1235 | 32 | SAND/SHALE/COAL |
| 1235 | 1266 | 31 | SANDY SHALE/COAL |
| 1266 | 1298 | 32 | SHALE/COAL |
| 1298 | 1330 | 32 | SAND STONE |
| 1330 | 1362 | 32 | SANDY SHALE/COAL |
| 1362 | 1425 | 63 | SAND STONE |
| 1425 | 1456 | 31 | SAND/SHALE/COAL |
| 1456 | 1519 | 63 | SHALE/COAL |
| 1519 | 1551 | 32 | SAND STONE |
| 1551 | 1614 | 63 | SANDY SHALE |
| 1614 | 1646 | 30 | SANDY SHALE/COAL |
| 1646 | 1678 | 32 | SHALE/COAL |
| 1678 | 1709 | 31 | SANDY SHALE |
| 1709 | 1772 | 63 | SAND STONE |
| 1772 | 1804 | 32 | SANDY SHALE |
| 1804 | 1836 | 32 | SHALE/COAL |
| 1836 | 1868 | 32 | SANDY SHALE |

| | | | |
|---|---|---|---|
| 1868 | 1878 | 10 | SHALE/COAL |

1878.00 FT. TOTAL DEPTH
21.00 FT. OF 22" CASING
313.00 FT. OF 16" CASING
549.00 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 5072 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1581 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 6/9/1999 |
| **Driller's Total Depth:** | 1923.70 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: R Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| STIM | BU-1581 stim.pdf |

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

[6/30/2014, jsa]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 5/30/2014 | *(Company)* |
| By: | Leslie Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 5/30/2014 | | |
| Status: | Approved | Date: | 6/30/2014 |
| Final PDF Date: | 6/30/2014 | | |

ENTERED

BU-1581

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-S38A
Permit #: 4136

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

**COMPLETION REPORT**

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 6/9/99 Total Depth of Well: 1923.7'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** ~~C,SJ2,P1,P2-2,P2-1~~ Formation Stimulated With: 527 MSCF N2, 336 bbl water, 500 sx 16/30

Perforated: 1605 TO 1775 No. of Perforations: 44 Perforation Size: .70" EHD
Formation Broke Down at: 2875 PSIG Average Injection Rate 30 BPM
ISIP 1985 PSIG 5 MIN SIP 1863 PSIG Average Injection Pressure: 2761 PSIG
Date stimulated: 6/9/99 .

**Zone 2:** P3 Formation Stimulated With: 90 MSCF N2, 110 bbl water, 5 sx 16/30

Perforated: 1559 TO 1564 No. of Perforations: 20 Perforation Size: .70" EHD
Formation Broke Down at: 3796 PSIG Average Injection Rate 30 BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: 3465 PSIG
Date stimulated: 6/9/99 .**Well Press Out!**

**Zone 3:** P4-1,P5-1,P6-2,P7-2,P8-2,P8-1 Formation Stimulated With: 411 MSCF N2, 335 bbl water, 506 sx 16/30

Perforated: 1151 TO 1479 No. of Perforations: 48 Perforation Size: .70" EHD
Formation Broke Down at: 1911 PSIG Average Injection Rate 30 BPM
ISIP 1132 PSIG 5 MIN SIP 1022 PSIG Average Injection Pressure: 1571 PSIG
Date stimulated: 6/9/99 .

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

BU-1581

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-S38A
Permit #: 4136

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 6/9/99 Total Depth of Well: 1923.7'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** P9-3,P9-2,P9-1,LH2,P10,P11 Formation Stimulated With: 507 MSCF N2, 419 bbl water, 575 sx 16/30

Perforated: 930 TO 1112 No. of Perforations: 56 Perforation Size: .70" EHD
Formation Broke Down at: 1853 PSIG Average Injection Rate 30 BPM
ISIP 1117 PSIG 5 MIN SIP 834 PSIG Average Injection Pressure: 2058 PSIG
Date stimulated: 6/9/99.

**Zone 5:** MH2,MH1,UH3,UH1,LS3,LS1,S2 Formation Stimulated With: _____

Perforated: 630 TO 892 No. of Perforations: 56 Perforation Size: .70" EHD
Formation Broke Down at: _____ PSIG Average Injection Rate 30 BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: 6/9/99.

**Zone 3:** _____ Formation Stimulated With: _____

Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

RECEIVED
JUN 1999
DIVISION OF GAS & OIL

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 4537 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1285 |
| **Operations Name:** | PGP S38 W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 12/16/1997

Drilling Contractor: Noah Horn

Date drilling completed: 12/20/1997

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 1936.50

Log Total Depth (feet): 0.00

Coal Seam at Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10497260.6100

Permitted State Plane Y: 3611624.1100

Final Plat State Plane X: 10497260.6210

Final Plat State Plane Y: 3611624.1190

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | BU-1285 plat.pdf |

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| COAL | BU-1285 coal.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS | BU-1285 gs.pdf |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: Deviation/Gamma/Caliper

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| CASING | BU-1285 casing.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: _____

List of Attached Items:

| Description | FileName |
|---|---|
| LOG | BU-1285 log.pdf |

## 9. Comments

[12/10/2013, jsa]
Material inserted by DGO [11/18/2013, jhh]

## 10. Signature

Permitee: CNX Gas Company LLC Date: 11/20/2013

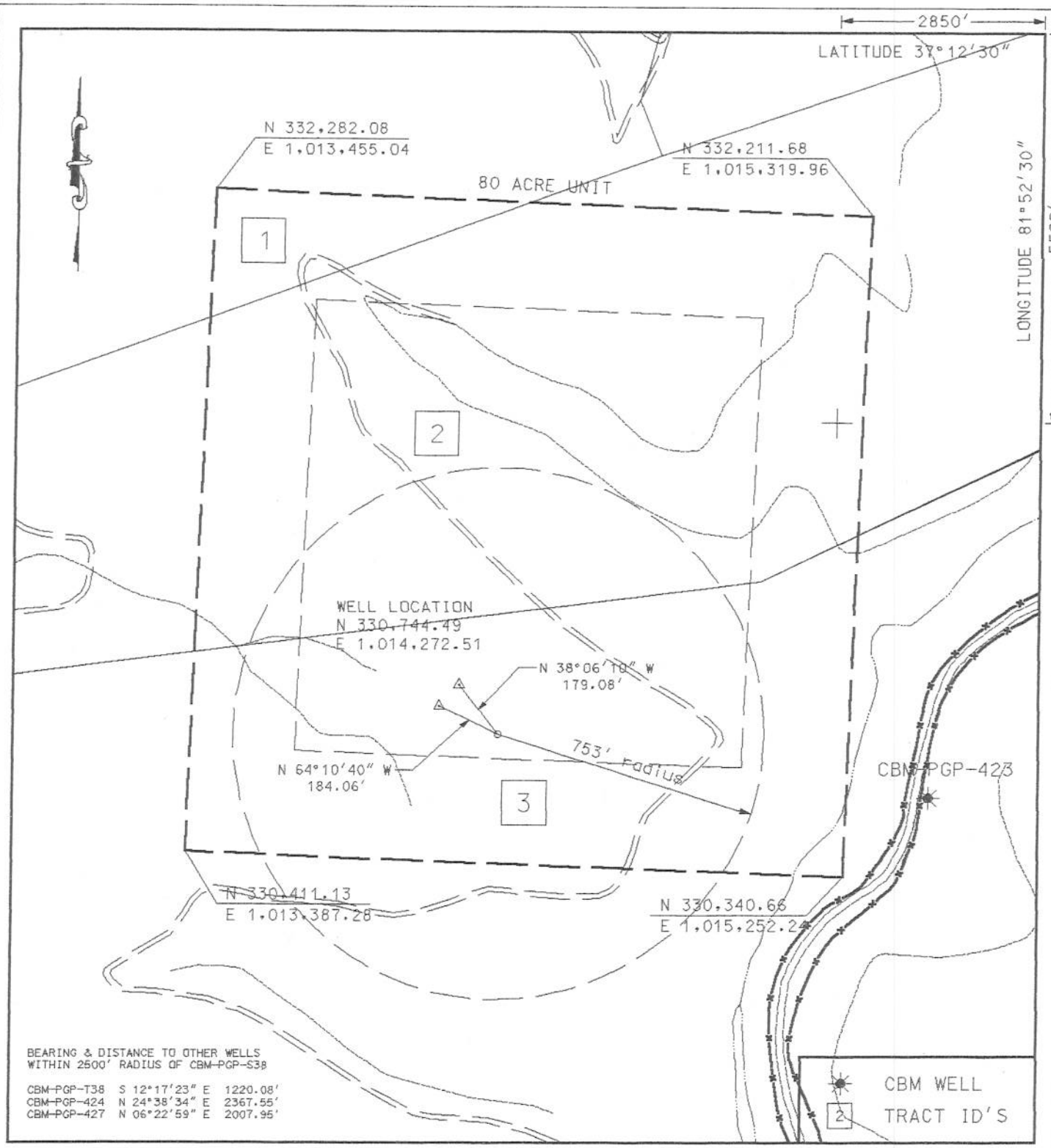
Signed By: L. Arrington Title: **********

## INTERNAL USE ONLY

Submit Date: 11/20/2013

Status: A Date: 12/10/2013

Final PDF Date: 12/10/2013




# WELL LOCATION PLAT

Company Pocahontas Gas Partnership Well Name and Number CBM-PGP-S38

Tract No. R.O. Vandyke Elevation 2250.82' Quadrangle Keen Mountain

County Buchanan District Garden Scale: 1" = 400' Date 1/7/98

This plat is a new plat ____ ; an updated plat ____ ; or a final plat X

\+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

Form DGO-GO-7
Rev. 9/91

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

# Exhibit A

Well Name: 97-PGP-S38
Elevation: 2250.82

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA1 | 122.40 | 124.40 | 2128.42 | 2.00 | |
| | 124.40 | 147.50 | 2126.42 | 23.10 | |
| RA2 | 147.50 | 150.30 | 2103.32 | 2.80 | MINED IN AREA |
| | 150.30 | 185.00 | 2100.52 | 34.70 | |
| RA3 | 185.00 | 186.20 | 2065.82 | 1.20 | |
| | 186.20 | 188.00 | 2064.62 | 1.80 | |
| RA3 | 188.00 | 188.40 | 2062.82 | 0.40 | |
| | 188.40 | 269.20 | 2062.42 | 80.80 | |
| JB1 | 269.20 | 271.20 | 1981.62 | 2.00 | |
| | 271.20 | 314.40 | 1979.62 | 43.20 | |
| JB3 | 314.40 | 316.70 | 1936.42 | 2.30 | |
| | 316.70 | 408.40 | 1934.12 | 91.70 | |
| TI | 408.40 | 409.10 | 1842.42 | 0.70 | |
| | 409.10 | 627.00 | 1841.72 | 217.90 | |
| US2 | 627.00 | 627.90 | 1623.82 | 0.90 | |
| | 627.90 | 805.20 | 1622.92 | 177.30 | |
| SE1 | 805.20 | 806.30 | 1445.62 | 1.10 | |
| | 806.30 | 842.70 | 1444.52 | 36.40 | |
| SE2 | 842.70 | 845.00 | 1408.12 | 2.30 | |
| | 845.00 | 880.10 | 1405.82 | 35.10 | |
| LS1 | 880.10 | 882.30 | 1370.72 | 2.20 | |
| | 882.30 | 929.50 | 1368.52 | 47.20 | |
| UH1 | 929.50 | 930.00 | 1321.32 | 0.50 | |
| | 930.00 | 932.10 | 1320.82 | 2.10 | |
| UH1 | 932.10 | 932.90 | 1318.72 | 0.80 | |
| | 932.90 | 984.00 | 1317.92 | 51.10 | |
| UH2 | 984.00 | 985.50 | 1266.82 | 1.50 | |
| | 985.50 | 1037.00 | 1265.32 | 51.50 | |
| MH1 | 1037.00 | 1038.80 | 1213.82 | 1.80 | |
| | 1038.80 | 1099.80 | 1212.02 | 61.00 | |
| MH2 | 1099.80 | 1101.00 | 1151.02 | 1.20 | |
| | 1101.00 | 1143.00 | 1149.82 | 42.00 | |
| P11 | 1143.00 | 1145.90 | 1107.82 | 2.90 | |
| | 1145.90 | 1167.60 | 1104.92 | 21.70 | |
| P10 | 1167.60 | 1169.00 | 1083.22 | 1.40 | |
| | 1169.00 | 1192.80 | 1081.82 | 23.80 | |
| LH1 | 1192.80 | 1193.00 | 1058.02 | 0.20 | |
| | 1193.00 | 1221.40 | 1057.82 | 28.40 | |
| LH3 | 1221.40 | 1222.20 | 1029.42 | 0.80 | |
| | 1222.20 | 1300.00 | 1028.62 | 77.80 | |
| P91 | 1300.00 | 1300.90 | 950.82 | 0.90 | |
| | 1300.90 | 1318.60 | 949.92 | 17.70 | |
| P92 | 1318.60 | 1320.80 | 932.22 | 2.20 | |
| | 1320.80 | 1362.80 | 930.02 | 42.00 | |
| P81 | 1362.80 | 1363.30 | 888.02 | 0.50 | |
| | 1363.30 | 1393.40 | 887.52 | 30.10 | |
| P82 | 1393.40 | 1393.80 | 857.42 | 0.40 | |
| | 1393.80 | 1528.20 | 857.02 | 134.40 | |
| P72 | 1528.20 | 1531.20 | 722.62 | 3.00 | |
| | 1531.20 | 1557.20 | 719.62 | 26.00 | |

| | | | | |
|---|---|---|---|---|
| P61 | 1557.20 | 1558.00 | 693.62 | 0.80 |
| | 1558.00 | 1568.30 | 692.82 | 10.30 |
| P62 | 1568.30 | 1569.10 | 682.52 | 0.80 |
| | 1569.10 | 1600.80 | 681.72 | 31.70 |
| P51 | 1600.80 | 1602.10 | 650.02 | 1.30 |
| | 1602.10 | 1697.20 | 648.72 | 95.10 |
| P41 | 1697.20 | 1698.70 | 553.62 | 1.50 |
| | 1698.70 | 1704.80 | 552.12 | 6.10 |
| P42 | 1704.80 | 1705.10 | 546.02 | 0.30 |
| | 1705.10 | 1769.48 | 545.72 | 64.38 |
| P3 | 1769.48 | 1771.24 | 481.34 | 1.76 |
| | 1771.24 | 1840.00 | 479.58 | 68.76 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION

BU-1285

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP-S38
Permit #: 3571




Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## DRILLING REPORT

Pursuant to VR-480-05-22.1, s 1.36, the undersigned Permittee submits this report on Well CBM- PGP-S38 in the Garden District of the Buchanan City/County, Virginia on this 23rd day, March month, 1998.

LOCATION

City/County: Buchanan District: Garden
Surface Elevation: 2250.82' Elevation of Kelly Bushing: _____ Quadrangle: Keen Mountain
---- Ft. S. of Latitude ------ and ----- Ft. W. of Longitude -----

or, State Plane Coordinates: Zone 5 N 330,744.49 E 1,014,272.51

Attach a final location plat as required by VR 480-05-22.1, s 1.36.

DRILLING DATA

Date Drilling Commenced: December 16, 1997 Drilling Contractor: Noah Horn
Date Drilling Completed: December 20, 1997 Rig Type: x Rotary __ Cable Tool
Total Depth of Well: 1936.50'

GEOLOGICAL DATA

Fresh Water at: N/R Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM

Salt Water at: _____ Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM

| COAL SEAMS: NAME | TOP | BOTTOM | THICKNESS | MINING IN AREA YES | NO | MINED OUT |
|---|---|---|---|---|---|---|
| See DGO-GO-14, Exhibit A | | | | | | |

GAS AND OIL SHOWS:

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 472.90' | 1936.50' | 1463.60' | | | |



ENTERED

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP-S38
Permit #: 3571

Cuttings or samples are __ are not x available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have __ have not x been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes x No ____

SURVEY RESULTS*:

* See Deviation Survey

CASING AND TUBING

| | SIZE | TOP | BOTTOM | CEMENT USED LENGTH | DATE IN CU/FT | PACKERS OR BRIDGE PLUGS CEMENTED | KIND | SIZE | SET AT |
|---|---|---|---|---|---|---|---|---|---|
| Conductor | 18' | 0 | 10.00' | 10.00' | | | | | |
| Surface | 18' 0 | 0 | 10.00' | 10.00' | | | | | |
| Water Protection | 13 3/8" | 0 | 218.40' | 218.40' | 12/17/97 | 95 Std | Cement to Surface | | |
| Coal Protection | 8 3/8' | 0 | 472.90' | 472.92' | 12/18/97 | 70 Std 80 H.L. | Cement to Surface | | |
| Other Casing and Tubing Left In Well | 5 1/2" | 0 | 1758.75' | 1758.75' | 2/19/98 | 120 Std 145 H.L. | Cement to Surface | | |

Liners

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.
Basket at 53.30' and 152.50'
Void at 147'

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-S38
Permit #: 3571

# DRILLER'S LOG

Compiled by - NOAH HORN

| Geologic Age | Formation | General Lithology | Color | Depth Top | Depth Bottom | Thickness | Remarks |
|---|---|---|---|---|---|---|---|
| | | OVERBURDEN | | 0 | 10 | | 20" HOLE |
| | | SHALE | | 10 | 20 | | 18" CASING |
| | | SAND | | 20 | 110 | | 15 3/8" HOLE |
| | | SANDY SHALE | | 110 | 135 | | |
| | | COAL | | 135 | 136 | | |
| | | SHALE | | 136 | 140 | | |
| Pennsylvanian | Pocahontas | SANDY SHALE | | 140 | 152 | | |
| | | VOID | | 152 | 154 | | |
| | | SANDY SHALE | | 154 | 170 | | |
| | | SAND | | 170 | 220 | | 13 3/8" CASING |
| | | SANDY SHALE | | 220 | 240 | | 11" HOLE |
| | | SHALE | | 240 | 278 | | |
| | | COAL | | 278 | 279 | | |
| | | SAND | | 279 | 360 | | |
| | | SANDY SHALE | | 360 | 420 | | 8 5/8" CASING |
| | | SAND | | 420 | 600 | | 7 7/8" HOLE |
| | | SANDY SHALE | | 600 | 690 | | |
| | | SHALE | | 690 | 750 | | |
| | | SANDY SHALE | | 750 | 810 | | |
| | | SHALE W/COAL | | 810 | 840 | | |
| | | SANDY SHL W/COAL | | 840 | 870 | | |
| | | SHALE | | 870 | 900 | | |
| | | SANDY SHALE | | 900 | 930 | | |
| | | SANDY SHL W/COAL | | 930 | 960 | | |
| | | SAND | | 960 | 1050 | | |
| | | SANDY SHL W/COAL | | 1050 | 1080 | | |
| | | SHALE W/COAL | | 1080 | 1110 | | |
| | | SAND | | 1110 | 1170 | | |
| | | SANDY SHALE | | 1170 | 1200 | | |
| | | SHALE W/COAL | | 1200 | 1230 | | |
| | | SANDY SHALE | | 1230 | 1320 | | |
| | | SHALE W/COAL | | 1320 | 1350 | | |
| | | SHALE | | 1350 | 1380 | | |
| | | SANDY SHALE | | 1380 | 1440 | | |
| | | SAND | | 1440 | 1530 | | |
| | | SANDY SHALE | | 1530 | 1590 | | |
| | | SHALE W/COAL | | 1590 | 1620 | | |
| | | SAND | | 1620 | 1740 | | |
| | | SHALE | | 1740 | 1770 | | |
| | | SANDY SHALE | | 1770 | 1805 | | |
| | | COAL | | 1805 | 1810 | | |
| | | SANDY SHALE | | 1810 | 1890 | | |
| | | SAND | | 1890 | 1950 | | |

Permittee: POCAHONTAS GAS PARTNERSHIP (Company)

By: Leslie K. Thornton (Signature)



Form DGO-GO-14
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 5072 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1581 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 6/9/1999 |
| **Driller's Total Depth:** | 1923.70 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: R Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| STIM | BU-1581 stim.pdf |

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

[6/30/2014, jsa]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 5/30/2014 | *(Company)* |
| By: | Leslie Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 5/30/2014 | | |
| Status: | Approved | Date: | 6/30/2014 |
| Final PDF Date: | 6/30/2014 | | |

ENTERED

BU-1581

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-S38A
Permit #: 4136

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

**COMPLETION REPORT**

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 6/9/99 Total Depth of Well: 1923.7'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** ~~C,SJ2,P1,P2-2,P2-1~~ Formation Stimulated With: 527 MSCF N2, 336 bbl water, 500 sx 16/30

Perforated: 1605 TO 1775 No. of Perforations: 44 Perforation Size: .70" EHD
Formation Broke Down at: 2875 PSIG Average Injection Rate 30 BPM
ISIP 1985 PSIG 5 MIN SIP 1863 PSIG Average Injection Pressure: 2761 PSIG
Date stimulated: 6/9/99 .

**Zone 2:** P3 Formation Stimulated With: 90 MSCF N2, 110 bbl water, 5 sx 16/30

Perforated: 1559 TO 1564 No. of Perforations: 20 Perforation Size: .70" EHD
Formation Broke Down at: 3796 PSIG Average Injection Rate 30 BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: 3465 PSIG
Date stimulated: 6/9/99 .**Well Press Out!**

**Zone 3:** P4-1,P5-1,P6-2,P7-2,P8-2,P8-1 Formation Stimulated With: 411 MSCF N2, 335 bbl water, 506 sx 16/30

Perforated: 1151 TO 1479 No. of Perforations: 48 Perforation Size: .70" EHD
Formation Broke Down at: 1911 PSIG Average Injection Rate 30 BPM
ISIP 1132 PSIG 5 MIN SIP 1022 PSIG Average Injection Pressure: 1571 PSIG
Date stimulated: 6/9/99 .

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

BU-1581

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-S38A
Permit #: 4136

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 6/9/99 Total Depth of Well: 1923.7'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** P9-3,P9-2,P9-1,LH2,P10,P11 Formation Stimulated With: 507 MSCF N2, 419 bbl water, 575 sx 16/30

Perforated: 930 TO 1112 No. of Perforations: 56 Perforation Size: .70" EHD
Formation Broke Down at: 1853 PSIG Average Injection Rate 30 BPM
ISIP 1117 PSIG 5 MIN SIP 834 PSIG Average Injection Pressure: 2058 PSIG
Date stimulated: 6/9/99.

**Zone 5:** MH2,MH1,UH3,UH1,LS3,LS1,S2 Formation Stimulated With: _____

Perforated: 630 TO 892 No. of Perforations: 56 Perforation Size: .70" EHD
Formation Broke Down at: _____ PSIG Average Injection Rate 30 BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: 6/9/99.

**Zone 3:** _____ Formation Stimulated With: _____

Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

RECEIVED
JUN 1999
DIVISION OF GAS & OIL

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 5074 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1581 |
| **Operations Name:** | PGP S38A W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 4/29/1999

Drilling Contractor: Noah Horn Well Drilling

Date drilling completed: 5/6/1999

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 1923.70

Log Total Depth (feet): 0.00

Coal Seam at Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10497182.0100

Final Plat State Plane X: 10497182.0400

Permitted State Plane Y: 3612400.8400

Final Plat State Plane Y: 3612400.8450

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | BU-1581 plat.pdf |

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|
| 70 | ? | |

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|
| 1380 | <1 | |

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| COAL | BU-1581 coal.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS | BU-1581 gs.pdf |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: Gamma/Caliper/Resistivity/Deviation

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|

## 6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|---|---|
| CASING | BU-1581 casing.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By:

List of Attached Items:

| Description | FileName |
|---|---|
| LOG | BU-1581 log.pdf |

## 9. Comments

[6/30/2014, jsa]
Material inserted by DGO [4/28/2014, jhh]

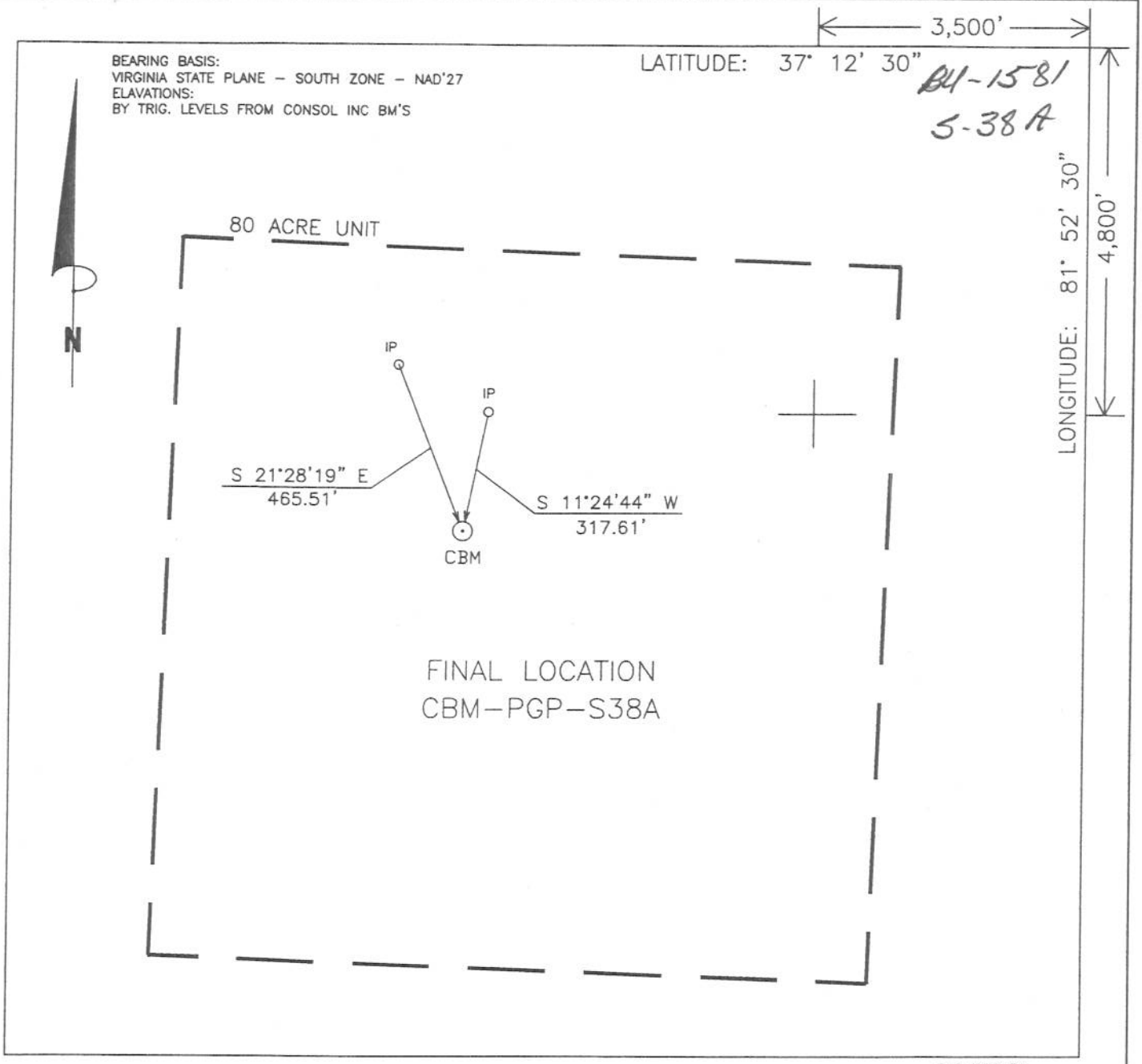
## 10. Signature

Permitee: CNX Gas Company LLC Date: 5/30/2014

Signed By: Leslie Arrington Title: **********

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 5/30/2014 | | |
| Status: | A | Date: | 6/30/2014 |
| Final PDF Date: | 6/30/2014 | | |




PGP S38AFNL
PGP3/64–9802/31

# WELL LOCATION PLAT

COMPANY POCAHONTAS GAS PARTNERSHIP WELL NAME OR NUMBER CBM–PGP–S38A

TRACT NUMBER FRANKS, ETAL QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE N 331,521.20 E 1,014,193.93

ELEVATION: 2034.12 METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 04–30–99

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

D R Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
DRP
LICENSE No.
8540
5/3/99
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

# Exhibit A

Well Name: 99-PGP-S-38A
SURFACE ELEV: 2034.12 EASTING: 1014193.93 NORTHING: 331521.20

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| JB1 | 66.00 | 68.60 | 1968.12 | 2.60 | |
| | 68.60 | 82.70 | 1965.52 | 14.10 | |
| JB2 | 82.70 | 84.60 | 1951.42 | 1.90 | |
| | 84.60 | 99.60 | 1949.52 | 15.00 | |
| JB3 | 99.60 | 101.40 | 1934.52 | 1.80 | |
| | 101.40 | 163.00 | 1932.72 | 61.60 | |
| T2 | 163.00 | 163.70 | 1871.12 | 0.70 | |
| | 163.70 | 164.20 | 1870.42 | 0.50 | |
| T2 | 164.20 | 165.00 | 1869.92 | 0.80 | |
| | 165.00 | 183.50 | 1869.12 | 18.50 | |
| T1 | 183.50 | 184.40 | 1850.62 | 0.90 | |
| | 184.40 | 185.80 | 1849.72 | 1.40 | |
| TI | 185.80 | 186.90 | 1848.32 | 1.10 | |
| | 186.90 | 303.40 | 1847.22 | 116.50 | |
| US1 | 303.40 | 304.10 | 1730.72 | 0.70 | |
| | 304.10 | 592.90 | 1730.02 | 288.80 | |
| SE1 | 592.90 | 594.00 | 1441.22 | 1.10 | |
| | 594.00 | 629.50 | 1440.12 | 35.50 | |
| SE2 | 629.50 | 631.40 | 1404.62 | 1.90 | |
| | 631.40 | 669.00 | 1402.72 | 37.60 | |
| *LS1 | 669.00 | 671.10 | 1365.12 | 2.10 | |
| | 671.10 | 687.50 | 1363.02 | 16.40 | |
| *LS3 | 687.50 | 689.00 | 1346.62 | 1.50 | |
| | 689.00 | 724.80 | 1345.12 | 35.80 | |
| *UH1 | 724.80 | 726.50 | 1309.32 | 1.70 | |
| | 726.50 | 771.50 | 1307.62 | 45.00 | |
| *UH3 | 771.50 | 773.10 | 1262.62 | 1.60 | |
| | 773.10 | 828.00 | 1261.02 | 54.90 | |
| *MH1 | 828.00 | 829.90 | 1206.12 | 1.90 | |
| | 829.90 | 890.00 | 1204.22 | 60.10 | |
| *MH2 | 890.00 | 891.30 | 1144.12 | 1.30 | |
| | 891.30 | 930.00 | 1142.82 | 38.70 | |
| *P11 | 930.00 | 933.50 | 1104.12 | 3.50 | |
| | 933.50 | 950.00 | 1100.62 | 16.50 | |
| *P10 | 950.00 | 951.50 | 1084.12 | 1.50 | |
| | 951.50 | 980.00 | 1082.62 | 28.50 | |
| *LH1 | 980.00 | 980.60 | 1054.12 | 0.60 | |
| | 980.60 | 1009.00 | 1053.52 | 28.40 | |
| *LH2 | 1009.00 | 1010.00 | 1025.12 | 1.00 | |
| | 1010.00 | 1086.80 | 1024.12 | 76.80 | |
| *P91 | 1086.80 | 1088.20 | 947.32 | 1.40 | |
| | 1088.20 | 1106.90 | 945.92 | 18.70 | |
| *P92 | 1106.90 | 1108.00 | 927.22 | 1.10 | |
| | 1108.00 | 1110.60 | 926.12 | 2.60 | |
| *P93 | 1110.60 | 1112.00 | 923.52 | 1.40 | |
| | 1112.00 | 1151.50 | 922.12 | 39.50 | |
| *P81 | 1151.50 | 1152.20 | 882.62 | 0.70 | |
| | 1152.20 | 1181.20 | 881.92 | 29.00 | |
| *P82 | 1181.20 | 1182.70 | 852.92 | 1.50 | |
| | 1182.70 | 1314.10 | 851.42 | 131.40 | |

| | | | | |
|---|---|---|---|---|
| *P72 | 1314.10 | 1315.30 | 720.02 | 1.20 |
| | 1315.30 | 1352.20 | 718.82 | 36.90 |
| *P62 | 1352.20 | 1354.30 | 681.92 | 2.10 |
| | 1354.30 | 1389.30 | 679.82 | 35.00 |
| *P51 | 1389.30 | 1391.50 | 644.82 | 2.20 |
| | 1391.50 | 1476.80 | 642.62 | 85.30 |
| *P41 | 1476.80 | 1478.50 | 557.32 | 1.70 |
| | 1478.50 | 1558.20 | 555.62 | 79.70 |
| *P3 | 1558.20 | 1564.00 | 475.92 | 5.80 |
| | 1564.00 | 1606.20 | 470.12 | 42.20 |
| *P21 | 1606.20 | 1607.20 | 427.92 | 1.00 |
| | 1607.20 | 1646.30 | 426.92 | 39.10 |
| *P22 | 1646.30 | 1647.20 | 387.82 | 0.90 |
| | 1647.20 | 1692.20 | 386.92 | 45.00 |
| *P01 | 1692.20 | 1693.20 | 341.92 | 1.00 |
| | 1693.20 | 1737.20 | 340.92 | 44.00 |
| *SJ2 | 1737.20 | 1738.00 | 296.92 | 0.80 |
| | 1738.00 | 1772.40 | 296.12 | 34.40 |
| *COAL | 1772.40 | 1774.00 | 261.72 | 1.60 |
| | 1774.00 | 1774.50 | 260.12 | 0.50 |
| *COAL | 1774.50 | 1775.00 | 259.62 | 0.50 |
| | 1775.00 | 1926.10 | 259.12 | 151.10 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION.
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO PROXIMITY OF GAS WELL TO HURRICANE BRANCH.
FILE: C:\GAS\S38A.CMP
DATE: 05/12/99

Gas and Oil Shows

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 186.90' | 1923.7' | 1736.8' | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Cuttings or samples: _____ are __X__ are not available for examination by a member of the Virginia Division of Mineral Resources

Cuttings or samples: _____ have __X__ have not been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS

List logs ran on wellbore: Gamma, Caliper, Resistivity, Deviation

Did logs disclose vertical location of a coal seam? __X__ Yes _____ No

SURVEY RESULTS

| Depth Of Survey | Direction/Distance/ Degrees From True Vertical | Depth Of Survey | Direction/Distance Degrees From True Vertical |
|---|---|---|---|
| See Deviation Survey | | | |

Use additional sheets as necessary

## CASING AND TUBING PROGRAM

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0–54' | 15" | | | | | |
| Surface | 13 3/8" | 0–54' | 15" | | | | | |
| Water Protection | 4 ½" | 0–1900.39' | 6 ½" | 190 | X | | 05-06-99 | |
| Coal Protection | 4 ½" | 0–1900.39' | 6 ½" | 190 | X | | 05-06-99 | |
| Other Casing And Tubing Left In Well | 7" | 0–405' | 8 ¾" | 100 | X | | 05-03-99 | Basket at 60' |
| Liners | | | | | | | | |

REMARKS: Shut down fishing jobs, depths and dates, caving, lost circulation, etc.: Basket set at 60'

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Cummings (Signature)

Form DGO-GO-14
Rev. 10/96

# DRILL DATA HOLE -- NOAH HORN WELL DRILLING, INC.

COMPANY: PGP

HOLE NO.: S-38-A

LOCATION: Whitewood

DRILL: Rig #35

DATE STARTED: 04-29-99

ELECTRIC LOGGED: Yes

DATE COMPLETED: 05-06-99

GROUTED: Yes

| DEPTH | | THICKNESS | STRATA | REMARKS |
|---|---|---|---|---|
| FROM | TO | FT. | DESCRIPTION | VOIDS, ETC. |
| 0.00 | 53.00 | 53.00 | OVERBURDEN | 53' OF 8 5/8" CASING |
| 53.00 | 56.00 | 3.00 | SANDSTONE | 6 ½" HOLE |
| 56.00 | 87.00 | 31.00 | SANDY SHALE | |
| 87.00 | 115.00 | 28.00 | SANDSTONE | 54' OF 13 3/8" CASING |
| 115.00 | 145.00 | 30.00 | SANDY SHALE / COAL | |
| 145.00 | 175.00 | 30.00 | SANDY SHALE | |
| 175.00 | 205.00 | 30.00 | SHALE / COAL / SANDSTONE | |
| 205.00 | 235.00 | 30.00 | SANDSTONE | |
| 235.00 | 265.00 | 30.00 | SANDSTONE | |
| 265.00 | 295.00 | 30.00 | SANDY SHALE | |
| 295.00 | 325.00 | 30.00 | SANDY SHALE / COAL | |
| 325.00 | 355.00 | 30.00 | SANDSTONE | |
| 355.00 | 385.00 | 30.00 | SANDSTONE / SHALE | |
| 385.00 | 417.00 | 32.00 | SANDSTONE | 405' OF 7" CASING |
| 417.00 | 420.00 | 3.00 | SANDSTONE | |
| 420.00 | 450.00 | 30.00 | SANDSTONE | |
| 450.00 | 480.00 | 30.00 | SANDY SHALE | |
| 480.00 | 510.00 | 30.00 | SANDY SHALE | |
| 510.00 | 540.00 | 30.00 | SANDY SHALE | |
| 540.00 | 570.00 | 30.00 | SANDSTONE | |
| 570.00 | 600.00 | 30.00 | SANDY SHALE | |
| 600.00 | 630.00 | 30.00 | SANDY SHALE / COAL | |
| 630.00 | 660.00 | 30.00 | SANDSTONE / COAL | |
| 660.00 | 690.00 | 30.00 | SANDY SHALE | |
| 690.00 | 720.00 | 30.00 | SHALE / COAL | |
| 720.00 | 750.00 | 30.00 | SANDSTONE | |
| 750.00 | 780.00 | 30.00 | SANDSTONE | |
| 780.00 | 810.00 | 30.00 | SANDSTONE / COAL | |
| 810.00 | 840.00 | 30.00 | SANDY SHALE | |
| 840.00 | 870.00 | 30.00 | SHALE / COAL | |
| 870.00 | 900.00 | 30.00 | SHALE | |
| 900.00 | 930.00 | 30.00 | SHALE / COAL | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 3449 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3330 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 2/7/2007 |
| **Driller's Total Depth:** | 1900.00 | **Log's Total Depth:** | 1900.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: £ Stimulated R GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|
| None Taken | S38C Final Production.xlsx |

## 4. Comments

*Notes:*

[8/17/2012, jsa]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 8/8/2012 | *(Company)* |
| By: | Rocky Malamisura | Title: | General Manager Drilling | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 8/8/2012 | | |
| Status: | Approved | Date: | 8/17/2012 |
| Final PDF Date: | 8/22/2012 | | |

*Well:* **S38C**

*Final Production*
**NONE TAKEN**

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 3487 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3330 |
| **Operations Name:** | CBM S38C W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 1/13/2007

Drilling Contractor: NOAH HORN

Date drilling completed: 2/7/2007

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 1900.00

Log Total Depth (feet): 1900.00

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10496480.2700

Final Plat State Plane X: 10496473.4390

Permitted State Plane Y: 3611939.3600

Final Plat State Plane Y: 3611935.0660

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| Final Coordinates Conversion | S38C FINAL COORDS CONVERSION.pdf |
| FINAL PLAT | S38C Plat.pdf |

**3. Geological Data**

*Fresh Water At:*

| | | |
|---|---|---|
| | | |

*Salt Water At:*

| | | |
|---|---|---|
| | | |

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| EXHIBIT A | S38C Exhibit A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS SHOW | S38C Gas Show.xls |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|
| DEVIATION | S38C Deviation.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| CASING | S38C Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By:

List of Attached Items:

| | |
|---|---|
| DRILL DATA | S38C Drill Data.doc |

## 9. Comments

[8/17/2012, jsa]

## 10. Signature

Permitee: CNX Gas Company LLC Date: 8/8/2012

Signed By: Rocky Malamisura Title: General Manager Drilling

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 8/8/2012 | | |
| Status: | A | Date: | 8/17/2012 |
| Final PDF Date: | 8/22/2012 | | |

# CNX

## Coords Conversion

8 August 2012

| INPUT | OUTPUT |
|---|---|
| State Plane, NAD27 | State Plane, NAD83 |
| 4502 - Virginia South, U.S. Feet | 4502 - Virginia South, U.S. Feet |

*Accuracies of conversions from NAD 27 to NAD 83 are typically 12 to 18 cm.*

## S38C FINAL

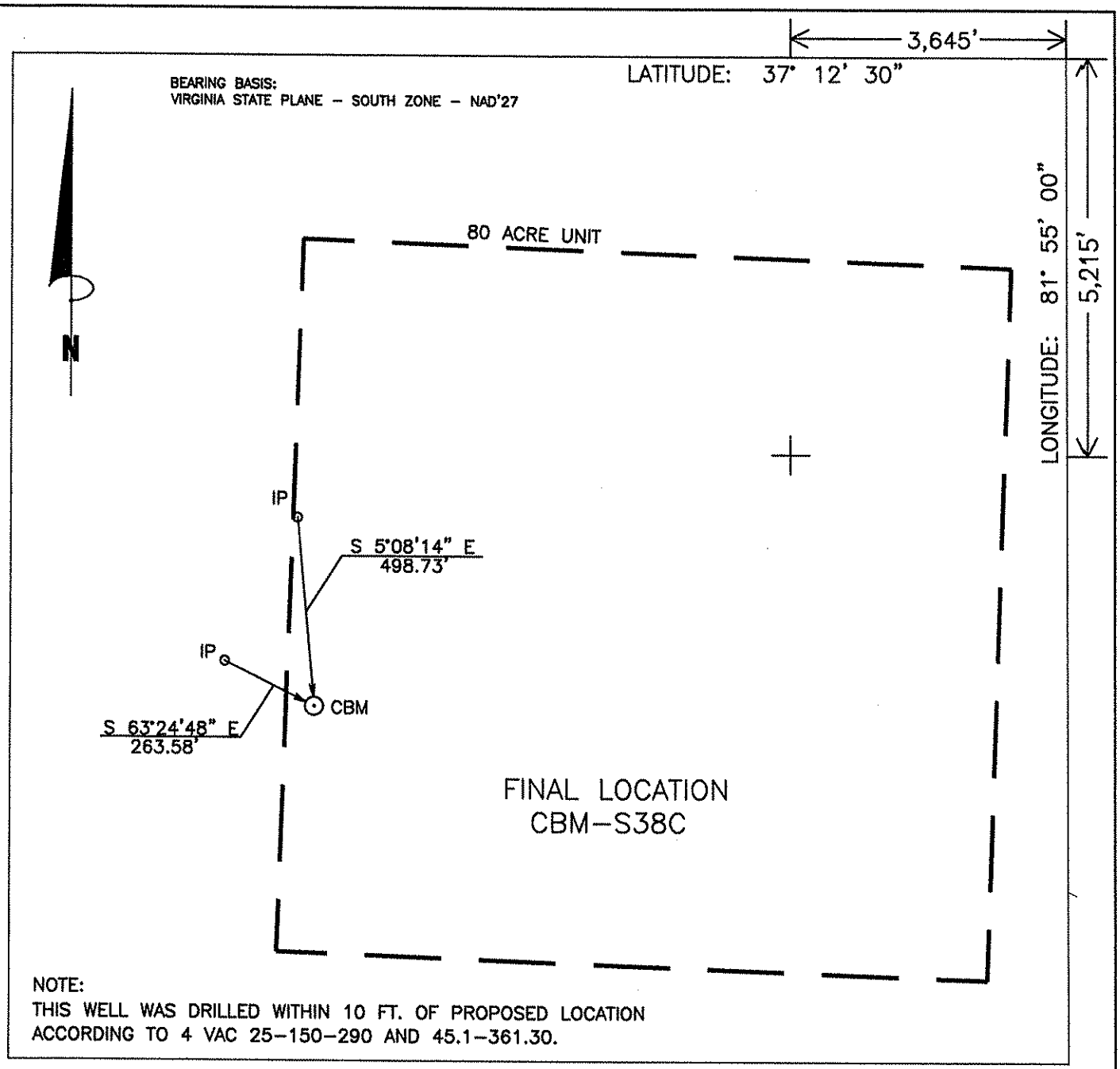
1/1

| | |
|---|---|
| **Northing/Y:** 331055.44 | **Northing/Y:** 3611935.066 |
| **Easting/X:** 1013485.36 | **Easting/X:** 10496473.439 |
| **Convergence:** -2 03 21.52846 | **Convergence:** -2 03 21.18504 |
| **Scale Factor:** 0.999949964 | **Scale Factor:** 0.999949956 |

Grid Shift (U.S. ft.): X/Easting = 9482988.1, Y/Northing = 3280879.6

Datum Shift (m.): Delta Lat. = 12.468, Delta Lon = -13.965

**Remark:**




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

# WELL LOCATION PLAT

S38CFNL
2N24/B4–556/50

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–S38C

TRACT NUMBER R O VANDYKE HEIRS QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 331,055.44 E 1,013,485.36

ELEVATION: 2367.91' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 01–23–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1" to 24,000', latitude and longitude lines being represented by border lines as shown. (Optional)

D R Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No.
8540
1-23-07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM S38C
SURFACE ELEV: 2367.91 EASTING: 1013485.36 NORTHING: 331055.44

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| AL2 | 147.00 | 147.80 | 2220.91 | 0.80 | |
| | 147.80 | 250.00 | 2220.11 | 102.20 | |
| RA1 | 250.00 | 252.10 | 2117.91 | 2.10 | |
| | 252.10 | 279.40 | 2115.81 | 27.30 | |
| RA2 | 279.40 | 281.00 | 2088.51 | 1.60 | |
| | 281.00 | 306.00 | 2086.91 | 25.00 | |
| RA3 | 306.00 | 307.70 | 2061.91 | 1.70 | |
| | 307.70 | 382.10 | 2060.21 | 74.40 | |
| JB1 | 382.10 | 384.00 | 1985.81 | 1.90 | |
| | 384.00 | 429.70 | 1983.91 | 45.70 | |
| JB3 | 429.70 | 431.50 | 1938.21 | 1.80 | |
| | 431.50 | 528.50 | 1936.41 | 97.00 | |
| TI | 528.50 | 529.70 | 1839.41 | 1.20 | |
| | 529.70 | 530.10 | 1838.21 | 0.40 | |
| COAL | 530.10 | 530.50 | 1837.81 | 0.40 | |
| | 530.50 | 640.90 | 1837.41 | 110.40 | |
| *US1 | 640.90 | 641.80 | 1727.01 | 0.90 | |
| | 641.80 | 863.10 | 1726.11 | 221.30 | |
| *COAL | 863.10 | 863.50 | 1504.81 | 0.40 | |
| | 863.50 | 921.50 | 1504.41 | 58.00 | |
| *SE1 | 921.50 | 922.00 | 1446.41 | 0.50 | |
| | 922.00 | 962.00 | 1445.91 | 40.00 | |
| *SE2 | 962.00 | 963.00 | 1405.91 | 1.00 | |
| | 963.00 | 1001.10 | 1404.91 | 38.10 | |
| *LS1 | 1001.10 | 1002.10 | 1366.81 | 1.00 | |
| | 1002.10 | 1057.00 | 1365.81 | 54.90 | |
| *UH1 | 1057.00 | 1058.20 | 1310.91 | 1.20 | |
| | 1058.20 | 1121.90 | 1309.71 | 63.70 | |
| *UH2 | 1121.90 | 1123.50 | 1246.01 | 1.60 | |
| | 1123.50 | 1179.80 | 1244.41 | 56.30 | |
| *MH1 | 1179.80 | 1180.50 | 1188.11 | 0.70 | |
| | 1180.50 | 1247.60 | 1187.41 | 67.10 | |
| *MH2 | 1247.60 | 1249.00 | 1120.31 | 1.40 | |
| | 1249.00 | 1289.20 | 1118.91 | 40.20 | |
| *P11 | 1289.20 | 1290.50 | 1078.71 | 1.30 | |
| | 1290.50 | 1315.80 | 1077.41 | 25.30 | |
| *P10 | 1315.80 | 1317.40 | 1052.11 | 1.60 | |
| | 1317.40 | 1464.60 | 1050.51 | 147.20 | |
| *P91 | 1464.60 | 1466.30 | 903.31 | 1.70 | |
| | 1466.30 | 1475.80 | 901.61 | 9.50 | |
| *P92 | 1475.80 | 1476.70 | 892.11 | 0.90 | |
| | 1476.70 | 1525.50 | 891.21 | 48.80 | |
| *P81 | 1525.50 | 1526.40 | 842.41 | 0.90 | |
| | 1526.40 | 1545.00 | 841.51 | 18.60 | |
| *P82 | 1545.00 | 1546.20 | 822.91 | 1.20 | |
| | 1546.20 | 1678.30 | 821.71 | 132.10 | |
| *P72 | 1678.30 | 1679.50 | 689.61 | 1.20 | |

| | | | | |
|---|---|---|---|---|
| | 1679.50 | 1709.80 | 688.41 | 30.30 |
| *P62 | 1709.80 | 1710.60 | 658.11 | 0.80 |
| | 1710.60 | 1746.40 | 657.31 | 35.80 |
| *P51 | 1746.40 | 1747.30 | 621.51 | 0.90 |
| | 1747.30 | 1844.00 | 620.61 | 96.70 |
| *P42 | 1844.00 | 1846.00 | 523.91 | 2.00 |
| | 1846.00 | 1900.00 | 521.91 | 54.00 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\S38C.CMP
DATE: 04/18/07

Well: S38C

## Oil & Gas Show

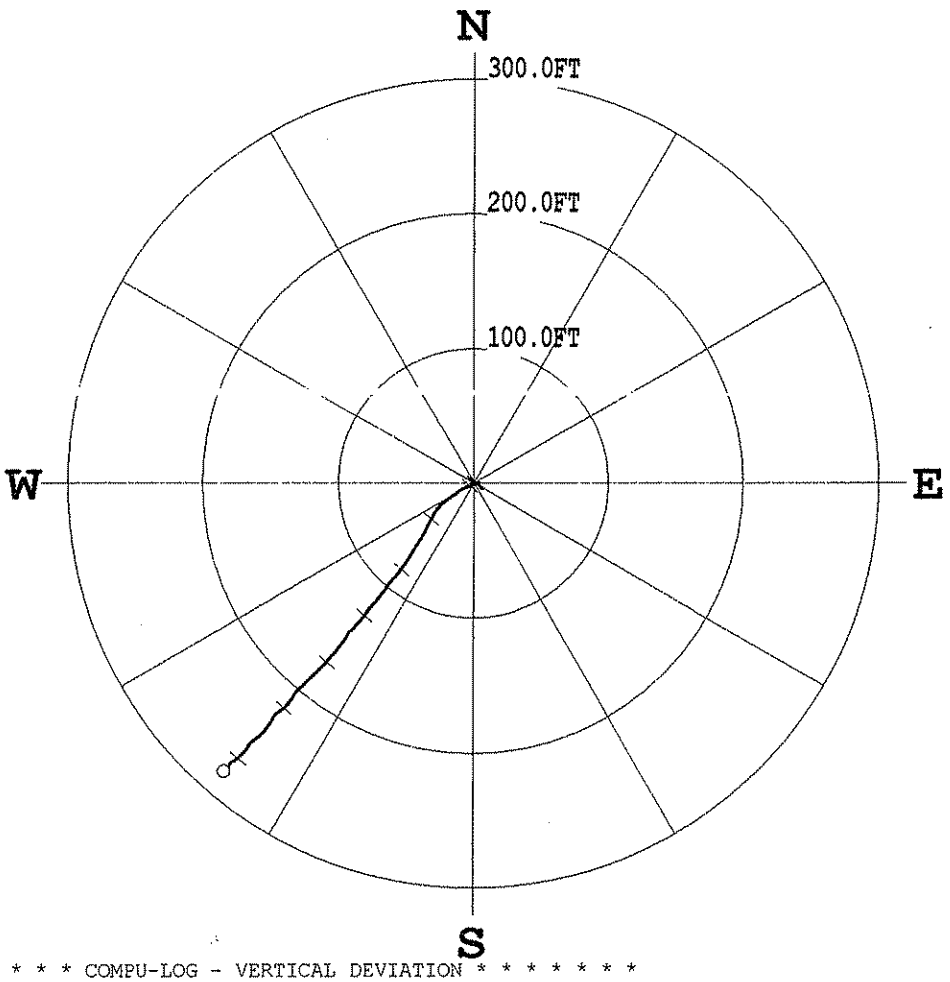
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 962 | 1546 | 584 | | | |
| Pocahontas | 1678 | 1846 | 168 | | | |
| Total IPF | | | | | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: CONSOL ENERGY
LOCATION:
HOLE ID: 07-CNX-S-38C
DATE OF LOG: 02/08/07
PROBE: 0026C 1044

MAG DECL: -7.1

SCALE: 100 FT/IN
TRUE DEPTH: 1840.77 FT
AZIMUTH: 220.8
DISTANCE: 280.8 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CONSOL ENERGY
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
HOLE ID. : 07-CNX-S-38C
DATE OF LOG : 02/08/07
PROBE : 0026C , 1044
DEPTH UNITS : FEET
LOG: 07-CNX-S-38C_02-08-07_14-03_0026C_.10_0.00_1885.70_DEVI.log

| ABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 6.6 | 6.60 | 0.00 | -0.00 | 0.0 | 352.6 | 0.2 | 352.6 |
| 10.0 | 10.00 | -0.01 | 0.00 | 0.0 | 169.9 | 0.3 | 152.0 |
| 20.0 | 20.00 | -0.03 | -0.02 | 0.0 | 210.1 | 0.2 | 280.7 |
| .0 | 30.00 | 0.00 | -0.03 | 0.0 | 274.0 | 0.2 | 356.5 |
| 40.0 | 40.00 | 0.05 | -0.04 | 0.1 | 319.9 | 0.3 | 0.3 |
| 50.0 | 50.00 | 0.09 | -0.03 | 0.1 | 341.7 | 0.2 | 20.6 |
| 60.0 | 60.00 | 0.12 | 0.01 | 0.1 | 4.2 | 0.3 | 45.0 |
| 70.0 | 70.00 | 0.13 | 0.06 | 0.1 | 24.8 | 0.4 | 111.9 |
| 80.0 | 80.00 | 0.12 | 0.12 | 0.2 | 44.7 | 0.3 | 123.7 |
| 90.0 | 90.00 | 0.09 | 0.17 | 0.2 | 61.4 | 0.3 | 150.3 |
| 100.0 | 100.00 | 0.06 | 0.21 | 0.2 | 74.2 | 0.3 | 132.1 |
| 110.0 | 110.00 | 0.03 | 0.25 | 0.2 | 83.7 | 0.3 | 117.7 |
| 120.0 | 120.00 | 0.01 | 0.29 | 0.3 | 88.3 | 0.4 | 110.3 |
| 130.0 | 130.00 | 0.01 | 0.34 | 0.3 | 88.2 | 0.3 | 73.7 |
| 140.0 | 140.00 | 0.02 | 0.39 | 0.4 | 86.9 | 0.3 | 85.8 |
| 150.0 | 150.00 | 0.04 | 0.44 | 0.4 | 84.8 | 0.2 | 66.5 |
| 160.0 | 160.00 | 0.06 | 0.48 | 0.5 | 83.1 | 0.6 | 78.3 |
| 170.0 | 170.00 | 0.07 | 0.55 | 0.6 | 82.6 | 0.2 | 98.2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1410.0 | 1390.57 | -106.72 | -88.01 | 138.3 | 219.5 | 16.4 | 222.8 |
| 1420.0 | 1400.15 | -108.67 | -90.07 | 141.1 | 219.7 | 16.6 | 229.3 |
| 1430.0 | 1409.71 | -110.79 | -92.01 | 144.0 | 219.7 | 16.8 | 211.6 |
| 1440.0 | 1419.30 | -113.33 | -93.20 | 146.7 | 219.4 | 16.2 | 210.6 |
| 1450.0 | 1428.90 | -115.69 | -94.74 | 149.5 | 219.3 | 16.4 | 214.3 |
| 1460.0 | 1438.49 | -117.99 | -96.36 | 152.3 | 219.2 | 16.4 | 216.4 |
| 1470.0 | 1448.09 | -120.23 | -98.05 | 155.1 | 219.2 | 16.6 | 219.8 |
| 1480.0 | 1457.68 | -122.43 | -99.81 | 158.0 | 219.2 | 16.4 | 217.6 |
| 1490.0 | 1467.27 | -124.61 | -101.62 | 160.8 | 219.2 | 16.1 | 219.2 |
| 1500.0 | 1476.87 | -126.76 | -103.45 | 163.6 | 219.2 | 16.4 | 220.8 |
| 1510.0 | 1486.46 | -128.93 | -105.27 | 166.4 | 219.2 | 16.5 | 219.6 |
| 1520.0 | 1496.04 | -131.12 | -107.09 | 169.3 | 219.2 | 16.6 | 220.2 |
| 1530.0 | 1505.63 | -133.26 | -108.97 | 172.1 | 219.3 | 16.7 | 223.3 |
| 1540.0 | 1515.20 | -135.34 | -110.96 | 175.0 | 219.3 | 16.6 | 225.1 |
| 1550.0 | 1524.78 | -137.37 | -112.98 | 177.9 | 219.4 | 16.4 | 228.4 |
| 1560.0 | 1534.36 | -139.45 | -114.98 | 180.7 | 219.5 | 16.7 | 223.0 |
| 1570.0 | 1543.93 | -141.51 | -117.00 | 183.6 | 219.6 | 16.8 | 225.5 |
| 1580.0 | 1553.51 | -143.57 | -119.03 | 186.5 | 219.7 | 17.1 | 224.3 |
| 1590.0 | 1563.07 | -145.63 | -121.10 | 189.4 | 219.7 | 17.0 | 225.5 |
| 1600.0 | 1572.63 | -147.70 | -123.20 | 192.3 | 219.8 | 17.3 | 223.9 |
| 1610.0 | 1582.18 | -149.73 | -125.36 | 195.3 | 219.9 | 17.3 | 228.0 |
| 1620.0 | 1591.71 | -151.49 | -127.80 | 198.2 | 220.2 | 18.0 | 230.4 |
| 1630.0 | 1601.22 | -153.66 | -129.99 | 201.3 | 220.2 | 17.9 | 212.7 |
| 1640.0 | 1610.74 | -156.29 | -131.54 | 204.3 | 220.1 | 17.8 | 202.5 |
| 1650.0 | 1620.27 | -158.90 | -133.04 | 207.2 | 219.9 | 17.6 | 214.7 |
| 1660.0 | 1629.80 | -161.34 | -134.85 | 210.3 | 219.9 | 17.7 | 217.0 |
| 1670.0 | 1639.32 | -163.71 | -136.77 | 213.3 | 219.9 | 18.1 | 225.5 |
| 1680.0 | 1648.83 | -165.96 | -138.88 | 216.4 | 219.9 | 18.2 | 222.8 |
| 1690.0 | 1658.32 | -167.87 | -141.35 | 219.5 | 220.1 | 18.3 | 236.2 |
| 1700.0 | 1667.81 | -169.60 | -143.99 | 222.5 | 220.3 | 18.6 | 236.0 |
| 1710.0 | 1677.29 | -171.84 | -146.21 | 225.6 | 220.4 | 18.4 | 214.2 |
| 1720.0 | 1686.79 | -174.56 | -147.77 | 228.7 | 220.2 | 18.1 | 204.4 |
| 1730.0 | 1696.29 | -177.20 | -149.37 | 231.8 | 220.1 | 18.1 | 214.8 |
| 1740.0 | 1705.79 | -179.71 | -151.23 | 234.9 | 220.1 | 18.2 | 217.2 |
| 1750.0 | 1715.29 | -182.19 | -153.15 | 238.0 | 220.1 | 18.3 | 219.6 |
| 1760.0 | 1724.78 | -184.53 | -155.25 | 241.2 | 220.1 | 18.3 | 226.8 |
| 1770.0 | 1734.27 | -186.66 | -157.59 | 244.3 | 220.2 | 18.6 | 229.0 |
| [illegible].0 | 1743.73 | -188.52 | -160.21 | 247.4 | 220.4 | 19.1 | 236.4 |
| [illegible].0 | 1753.18 | -190.60 | -162.75 | 250.6 | 220.5 | 19.3 | 230.1 |
| 1800.0 | 1762.62 | -193.11 | -164.81 | 253.9 | 220.5 | 19.1 | 215.3 |
| 1810.0 | 1772.08 | -195.85 | -166.51 | 257.1 | 220.4 | 18.6 | 208.6 |
| 1820.0 | 1781.55 | -198.38 | -168.44 | 260.2 | 220.3 | 18.9 | 225.7 |
| 1830.0 | 1791.00 | -200.65 | -170.70 | 263.5 | 220.4 | 19.2 | 226.1 |
| 1840.0 | 1800.45 | -202.83 | -173.23 | 266.7 | 220.5 | 19.2 | 230.9 |
| 1850.0 | 1809.86 | -204.78 | -175.91 | 270.0 | 220.7 | 19.5 | 238.2 |
| 1860.0 | 1819.28 | -206.85 | -178.60 | 273.3 | 220.8 | 19.8 | 218.9 |
| 1870.0 | 1828.71 | -209.70 | -180.31 | 276.6 | 220.7 | 19.2 | 206.6 |
| 1880.0 | 1838.14 | -212.15 | -182.52 | 279.9 | 220.7 | 19.5 | 230.4 |
| 1882.8 | 1840.77 | -212.67 | -183.32 | 280.8 | 220.8 | 20.3 | 233.6 |

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|---|---|---|---|---|---|---|---|
| 980.0 | 977.63 | -10.80 | -17.57 | 20.6 | 238.4 | 15.4 | 233.8 |
| 990.0 | 987.24 | -12.40 | -19.84 | 23.4 | 238.0 | 16.4 | 232.8 |
| 1000.0 | 996.83 | -14.16 | -22.06 | 26.2 | 237.3 | 16.5 | 231.0 |
| 1010.0 | 1006.40 | -16.02 | -24.26 | 29.1 | 236.6 | 16.5 | 225.9 |
| 1020.0 | 1015.99 | -18.18 | -26.10 | 31.8 | 235.1 | 17.0 | 218.0 |
| 1030.0 | 1025.56 | -20.38 | -27.94 | 34.6 | 233.9 | 16.5 | 213.5 |
| 1040.0 | 1035.16 | -22.75 | -29.44 | 37.2 | 232.3 | 16.2 | 209.3 |
| 1050.0 | 1044.77 | -25.23 | -30.72 | 39.7 | 230.6 | 16.2 | 208.6 |
| 1060.0 | 1054.37 | -27.70 | -32.02 | 42.3 | 229.1 | 16.3 | 210.8 |
| 1070.0 | 1063.96 | -30.18 | -33.34 | 45.0 | 227.8 | 16.2 | 204.7 |
| 1080.0 | 1073.56 | -32.72 | -34.50 | 47.5 | 226.5 | 16.4 | 206.4 |
| 1090.0 | 1083.16 | -35.28 | -35.63 | 50.1 | 225.3 | 16.1 | 204.1 |
| 1100.0 | 1092.77 | -37.71 | -36.96 | 52.8 | 224.4 | 16.0 | 209.0 |
| 1110.0 | 1102.38 | -40.14 | -38.27 | 55.5 | 223.6 | 16.0 | 209.6 |
| 1120.0 | 1111.98 | -42.54 | -39.68 | 58.2 | 223.0 | 16.1 | 205.3 |
| 1130.0 | 1121.59 | -44.86 | -41.19 | 60.9 | 222.6 | 16.5 | 212.3 |
| 1140.0 | 1131.18 | -47.21 | -42.72 | 63.7 | 222.1 | 16.2 | 206.0 |
| 1150.0 | 1140.79 | -49.62 | -44.13 | 66.4 | 221.6 | 16.1 | 210.7 |
| 1160.0 | 1150.40 | -51.98 | -45.56 | 69.1 | 221.2 | 15.9 | 211.3 |
| 1170.0 | 1160.01 | -54.36 | -46.96 | 71.8 | 220.8 | 16.0 | 211.5 |
| 1180.0 | 1169.63 | -56.73 | -48.33 | 74.5 | 220.4 | 15.8 | 210.3 |
| 1190.0 | 1179.24 | -59.04 | -49.82 | 77.3 | 220.2 | 15.9 | 213.2 |
| 1200.0 | 1188.85 | -61.32 | -51.37 | 80.0 | 220.0 | 16.0 | 210.4 |
| 1210.0 | 1198.47 | -63.56 | -52.95 | 82.7 | 219.8 | 15.7 | 216.6 |
| 1220.0 | 1208.09 | -65.73 | -54.57 | 85.4 | 219.7 | 15.9 | 219.5 |
| 1230.0 | 1217.72 | -67.84 | -56.29 | 88.2 | 219.7 | 15.8 | 220.7 |
| 1240.0 | 1227.34 | -69.93 | -58.05 | 90.9 | 219.7 | 15.9 | 221.1 |
| 1250.0 | 1236.95 | -71.98 | -59.87 | 93.6 | 219.8 | 16.1 | 223.0 |
| 1260.0 | 1246.56 | -74.09 | -61.68 | 96.4 | 219.8 | 16.3 | 219.9 |
| 1270.0 | 1256.17 | -76.27 | -63.38 | 99.2 | 219.7 | 15.9 | 219.3 |
| 1280.0 | 1265.78 | -78.55 | -64.93 | 101.9 | 219.6 | 16.0 | 212.4 |
| 1290.0 | 1275.39 | -80.81 | -66.50 | 104.7 | 219.5 | 16.3 | 226.4 |
| 1300.0 | 1285.00 | -82.98 | -68.25 | 107.4 | 219.4 | 16.3 | 220.6 |
| 1310.0 | 1294.59 | -85.16 | -70.01 | 110.2 | 219.4 | 16.2 | 219.4 |
| 1320.0 | 1304.20 | -87.29 | -71.81 | 113.0 | 219.4 | 16.4 | 228.0 |
| 1330.0 | 1313.79 | -89.42 | -73.64 | 115.8 | 219.5 | 16.2 | 220.5 |
| 1340.0 | 1323.39 | -91.55 | -75.48 | 118.7 | 219.5 | 16.3 | 220.5 |
| 1350.0 | 1332.99 | -93.72 | -77.24 | 121.4 | 219.5 | 16.2 | 218.9 |
| 1360.0 | 1342.59 | -95.94 | -78.95 | 124.3 | 219.4 | 16.4 | 221.6 |
| 1370.0 | 1352.19 | -98.15 | -80.67 | 127.1 | 219.4 | 16.3 | 216.3 |
| 1380.0 | 1361.79 | -100.39 | -82.36 | 129.9 | 219.4 | 16.3 | 217.3 |
| 1390.0 | 1371.38 | -102.53 | -84.19 | 132.7 | 219.4 | 16.5 | 223.9 |
| 1400.0 | 1380.97 | -104.63 | -86.10 | 135.5 | 219.5 | 16.5 | 222.0 |
| 1410.0 | 1390.57 | -106.72 | -88.01 | 138.3 | 219.5 | 16.4 | 222.8 |
| 1420.0 | 1400.15 | -108.67 | -90.07 | 141.1 | 219.7 | 16.6 | 229.3 |
| 1430.0 | 1409.71 | -110.79 | -92.01 | 144.0 | 219.7 | 16.8 | 211.6 |
| 1440.0 | 1419.30 | -113.33 | -93.20 | 146.7 | 219.4 | 16.2 | 210.6 |
| 1450.0 | 1428.90 | -115.69 | -94.74 | 149.5 | 219.3 | 16.4 | 214.3 |
| 1460.0 | 1438.49 | -117.99 | -96.36 | 152.3 | 219.2 | 16.4 | 216.4 |
| 1470.0 | 1448.09 | -120.23 | -98.05 | 155.1 | 219.2 | 16.6 | 219.8 |
| 1480.0 | 1457.68 | -122.43 | -99.81 | 158.0 | 219.2 | 16.4 | 217.6 |
| 1490.0 | 1467.27 | -124.61 | -101.62 | 160.8 | 219.2 | 16.1 | 219.2 |
| 1500.0 | 1476.87 | -126.76 | -103.45 | 163.6 | 219.2 | 16.4 | 220.8 |
| 1510.0 | 1486.46 | -128.93 | -105.27 | 166.4 | 219.2 | 16.5 | 219.6 |
| 1520.0 | 1496.04 | -131.12 | -107.09 | 169.3 | 219.2 | 16.6 | 220.2 |
| 1530.0 | 1505.63 | -133.26 | -108.97 | 172.1 | 219.3 | 16.7 | 223.3 |
| 1540.0 | 1515.20 | -135.34 | -110.96 | 175.0 | 219.3 | 16.6 | 225.1 |
| 1550.0 | 1524.78 | -137.37 | -112.98 | 177.9 | 219.4 | 16.4 | 228.4 |
| 1560.0 | 1534.36 | -139.45 | -114.98 | 180.7 | 219.5 | 16.7 | 223.0 |
| 1570.0 | 1543.93 | -141.51 | -117.00 | 183.6 | 219.6 | 16.8 | 225.5 |
| 1580.0 | 1553.51 | -143.57 | -119.03 | 186.5 | 219.7 | 17.1 | 224.3 |
| 1590.0 | 1563.07 | -145.63 | -121.10 | 189.4 | 219.7 | 17.0 | 225.5 |
| 1600.0 | 1572.63 | -147.70 | -123.20 | 192.3 | 219.8 | 17.3 | 223.9 |
| 1610.0 | 1582.18 | -149.73 | -125.36 | 195.3 | 219.9 | 17.3 | 228.0 |
| 1620.0 | 1591.71 | -151.49 | -127.80 | 198.2 | 220.2 | 18.0 | 230.4 |
| 1630.0 | 1601.22 | -153.66 | -129.99 | 201.3 | 220.2 | 17.9 | 212.7 |
| 1640.0 | 1610.74 | -156.29 | -131.54 | 204.3 | 220.1 | 17.8 | 202.5 |
| 1650.0 | 1620.27 | -158.90 | -133.04 | 207.2 | 219.9 | 17.6 | 214.7 |
| 1660.0 | 1629.80 | -161.34 | -134.85 | 210.3 | 219.9 | 17.7 | 217.0 |
| 1670.0 | 1639.32 | -163.71 | -136.77 | 213.3 | 219.9 | 18.1 | 225.5 |
| 1680.0 | 1648.83 | -165.96 | -138.88 | 216.4 | 219.9 | 18.2 | 222.8 |
| 1690.0 | 1658.32 | -167.87 | -141.35 | 219.5 | 220.1 | 18.3 | 236.2 |
| 1700.0 | 1667.81 | -169.60 | -143.99 | 222.5 | 220.3 | 18.6 | 236.0 |
| 1710.0 | 1677.29 | -171.84 | -146.21 | 225.6 | 220.4 | 18.4 | 214.2 |
| 1720.0 | 1686.79 | -174.56 | -147.77 | 228.7 | 220.2 | 18.1 | 204.4 |
| 1730.0 | 1696.29 | -177.20 | -149.37 | 231.8 | 220.1 | 18.1 | 214.8 |
| 1740.0 | 1705.79 | -179.71 | -151.23 | 234.9 | 220.1 | 18.2 | 217.2 |
| 1750.0 | 1715.29 | -182.19 | -153.15 | 238.0 | 220.1 | 18.3 | 219.6 |
| 1760.0 | 1724.78 | -184.53 | -155.25 | 241.2 | 220.1 | 18.3 | 226.8 |
| 1770.0 | 1734.27 | -186.66 | -157.59 | 244.3 | 220.2 | 18.6 | 229.0 |
| 1780.0 | 1743.73 | -188.52 | -160.21 | 247.4 | 220.4 | 19.1 | 236.4 |
| 1790.0 | 1753.18 | -190.60 | -162.75 | 250.6 | 220.5 | 19.3 | 230.1 |
| 1800.0 | 1762.62 | -193.11 | -164.81 | 253.9 | 220.5 | 19.1 | 215.3 |
| 1810.0 | 1772.08 | -195.85 | -166.51 | 257.1 | 220.4 | 18.6 | 208.6 |
| 1820.0 | 1781.55 | -198.38 | -168.44 | 260.2 | 220.3 | 18.9 | 225.7 |
| 1830.0 | 1791.00 | -200.65 | -170.78 | 263.5 | 220.4 | 19.3 | 226.1 |
| 1840.0 | 1800.45 | -202.83 | -173.23 | 266.7 | 220.5 | 19.2 | 230.9 |
| 1850.0 | 1809.88 | -204.78 | -175.91 | 270.0 | 220.7 | 19.5 | 238.2 |
| 1860.0 | 1819.28 | -206.85 | -178.60 | 273.3 | 220.8 | 19.8 | 218.9 |
| 1870.0 | 1828.71 | -209.70 | -180.31 | 276.6 | 220.7 | 19.2 | 206.6 |
| 1880.0 | 1838.14 | -212.15 | -182.52 | 279.9 | 220.7 | 19.5 | 230.4 |
| 1882.8 | 1840.77 | -212.67 | -183.32 | 280.8 | 220.8 | 20.3 | 233.6 |

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|---|---|---|---|---|---|---|---|
| 80.0 | 80.00 | 0.12 | 0.12 | 0.2 | 44.7 | 0.3 | 123.7 |
| 90.0 | 90.00 | 0.09 | 0.17 | 0.2 | 61.4 | 0.3 | 150.3 |
| 100.0 | 100.00 | 0.06 | 0.21 | 0.2 | 74.2 | 0.3 | 132.1 |
| 110.0 | 110.00 | 0.03 | 0.25 | 0.2 | 83.7 | 0.3 | 117.7 |
| 120.0 | 120.00 | 0.01 | 0.29 | 0.3 | 88.3 | 0.4 | 110.3 |
| 130.0 | 130.00 | 0.01 | 0.34 | 0.3 | 88.2 | 0.3 | 73.7 |
| 140.0 | 140.00 | 0.02 | 0.39 | 0.4 | 86.9 | 0.3 | 85.8 |
| 150.0 | 150.00 | 0.04 | 0.44 | 0.4 | 84.8 | 0.2 | 66.5 |
| 160.0 | 160.00 | 0.06 | 0.48 | 0.5 | 83.1 | 0.6 | 78.3 |
| 170.0 | 170.00 | 0.07 | 0.55 | 0.6 | 82.6 | 0.2 | 98.2 |
| 180.0 | 180.00 | 0.04 | 0.59 | 0.6 | 86.6 | 0.4 | 183.3 |
| 190.0 | 190.00 | 0.00 | 0.56 | 0.6 | 89.8 | 0.4 | 277.0 |
| 200.0 | 200.00 | 0.02 | 0.52 | 0.5 | 87.6 | 0.2 | 60.1 |
| 210.0 | 210.00 | 0.06 | 0.49 | 0.5 | 82.9 | 0.3 | 341.7 |
| 220.0 | 220.00 | 0.11 | 0.48 | 0.5 | 76.5 | 0.3 | 338.4 |
| 230.0 | 230.00 | 0.16 | 0.47 | 0.5 | 71.5 | 0.4 | 325.8 |
| 240.0 | 240.00 | 0.21 | 0.46 | 0.5 | 65.8 | 0.3 | 2.7 |
| 250.0 | 250.00 | 0.25 | 0.45 | 0.5 | 60.9 | 0.3 | 317.3 |
| 260.0 | 260.00 | 0.29 | 0.43 | 0.5 | 55.7 | 0.3 | 315.3 |
| 270.0 | 270.00 | 0.33 | 0.41 | 0.5 | 50.9 | 0.3 | 341.8 |
| 280.0 | 280.00 | 0.38 | 0.41 | 0.6 | 47.2 | 0.3 | 21.8 |
| 290.0 | 290.00 | 0.42 | 0.43 | 0.6 | 45.4 | 0.3 | 37.3 |
| 300.0 | 300.00 | 0.46 | 0.47 | 0.7 | 45.6 | 0.3 | 64.6 |
| 310.0 | 310.00 | 0.46 | 0.51 | 0.7 | 47.9 | 0.3 | 107.0 |
| 320.0 | 320.00 | 0.43 | 0.55 | 0.7 | 51.9 | 0.3 | 153.4 |
| 330.0 | 330.00 | 0.39 | 0.58 | 0.7 | 56.2 | 0.4 | 106.2 |
| 340.0 | 340.00 | 0.41 | 0.62 | 0.7 | 56.3 | 0.3 | 45.9 |
| 350.0 | 350.00 | 0.44 | 0.66 | 0.8 | 56.0 | 0.2 | 51.9 |
| 360.0 | 360.00 | 0.47 | 0.70 | 0.8 | 56.3 | 0.3 | 63.3 |
| 370.0 | 369.99 | 0.49 | 0.76 | 0.9 | 57.2 | 0.4 | 68.5 |
| 380.0 | 379.99 | 0.49 | 0.80 | 0.9 | 58.4 | 0.3 | 92.0 |
| 390.0 | 389.99 | 0.48 | 0.85 | 1.0 | 60.2 | 0.2 | 114.4 |
| 400.0 | 399.99 | 0.46 | 0.89 | 1.0 | 62.6 | 0.3 | 139.4 |
| 410.0 | 409.99 | 0.43 | 0.93 | 1.0 | 65.2 | 0.4 | 114.3 |
| 420.0 | 419.99 | 0.39 | 0.97 | 1.1 | 68.0 | 0.3 | 130.4 |
| 430.0 | 429.99 | 0.37 | 1.02 | 1.1 | 70.1 | 0.3 | 109.5 |
| 440.0 | 439.99 | 0.35 | 1.08 | 1.1 | 71.8 | 0.3 | 91.1 |
| 450.0 | 449.99 | 0.35 | 1.14 | 1.2 | 72.9 | 0.3 | 90.4 |
| 460.0 | 459.99 | 0.33 | 1.20 | 1.2 | 74.6 | 0.3 | 123.0 |
| 470.0 | 469.99 | 0.29 | 1.23 | 1.3 | 76.6 | 0.3 | 214.8 |
| 480.0 | 479.99 | 0.25 | 1.24 | 1.3 | 78.5 | 0.2 | 127.1 |
| 490.0 | 489.99 | 0.22 | 1.24 | 1.3 | 80.0 | 0.2 | 241.5 |
| 500.0 | 499.99 | 0.19 | 1.23 | 1.2 | 81.3 | 0.3 | 221.2 |
| 510.0 | 509.99 | 0.15 | 1.23 | 1.2 | 82.8 | 0.1 | 197.6 |
| 520.0 | 519.99 | 0.12 | 1.23 | 1.2 | 84.4 | 0.5 | 117.5 |
| 530.0 | 529.99 | 0.10 | 1.23 | 1.2 | 85.4 | 0.1 | 306.0 |
| 540.0 | 539.99 | 0.10 | 1.22 | 1.2 | 85.1 | 0.2 | 357.0 |
| 550.0 | 549.99 | 0.11 | 1.22 | 1.2 | 84.6 | 0.1 | 335.6 |
| 560.0 | 559.99 | 0.12 | 1.21 | 1.2 | 84.5 | 0.1 | 264.2 |
| 570.0 | 569.99 | 0.10 | 1.20 | 1.2 | 85.2 | 0.4 | 116.9 |
| 580.0 | 579.99 | 0.07 | 1.25 | 1.2 | 86.6 | 0.3 | 187.8 |
| 590.0 | 589.99 | 0.05 | 1.31 | 1.3 | 87.6 | 0.4 | 93.4 |
| 600.0 | 599.99 | 0.07 | 1.38 | 1.4 | 87.2 | 0.6 | 54.9 |
| 610.0 | 609.99 | 0.10 | 1.46 | 1.5 | 85.9 | 0.3 | 53.7 |
| 620.0 | 619.99 | 0.15 | 1.54 | 1.5 | 84.4 | 0.5 | 51.5 |
| 630.0 | 629.99 | 0.20 | 1.61 | 1.6 | 83.0 | 0.7 | 73.1 |
| 640.0 | 639.99 | 0.25 | 1.68 | 1.7 | 81.5 | 0.6 | 65.7 |
| 650.0 | 649.99 | 0.30 | 1.77 | 1.8 | 80.3 | 0.8 | 51.1 |
| 660.0 | 659.99 | 0.36 | 1.86 | 1.9 | 79.0 | 0.8 | 56.5 |
| 670.0 | 669.99 | 0.42 | 1.94 | 2.0 | 77.7 | 0.7 | 58.4 |
| 680.0 | 679.99 | 0.46 | 2.01 | 2.1 | 77.1 | 0.2 | 149.0 |
| 690.0 | 689.99 | 0.43 | 2.03 | 2.1 | 78.2 | 0.4 | 159.5 |
| 700.0 | 699.99 | 0.34 | 2.09 | 2.1 | 80.7 | 0.6 | 149.3 |
| 710.0 | 709.99 | 0.27 | 2.20 | 2.2 | 83.0 | 0.8 | 103.3 |
| 720.0 | 719.99 | 0.23 | 2.33 | 2.3 | 84.2 | 0.8 | 98.8 |
| 730.0 | 729.98 | 0.20 | 2.48 | 2.5 | 85.3 | 1.0 | 125.4 |
| 740.0 | 739.98 | 0.14 | 2.63 | 2.6 | 87.0 | 0.8 | 97.0 |
| 750.0 | 749.98 | 0.11 | 2.81 | 2.8 | 87.7 | 1.0 | 103.5 |
| 760.0 | 759.98 | 0.09 | 2.98 | 3.0 | 88.2 | 1.0 | 95.3 |
| 770.0 | 769.98 | 0.08 | 3.16 | 3.2 | 88.5 | 0.9 | 86.3 |
| 780.0 | 779.98 | 0.10 | 3.32 | 3.3 | 88.3 | 0.8 | 82.7 |
| 790.0 | 789.98 | 0.11 | 3.45 | 3.5 | 88.2 | 0.8 | 85.6 |
| 800.0 | 799.97 | 0.10 | 3.55 | 3.6 | 88.4 | 0.3 | 126.4 |
| 810.0 | 809.97 | 0.10 | 3.54 | 3.5 | 88.4 | 0.2 | 322.4 |
| 820.0 | 819.97 | 0.07 | 3.51 | 3.5 | 88.9 | 0.6 | 229.5 |
| 830.0 | 829.97 | -0.02 | 3.42 | 3.4 | 90.3 | 1.1 | 245.9 |
| 840.0 | 839.97 | -0.12 | 3.13 | 3.1 | 92.1 | 2.4 | 259.4 |
| 850.0 | 849.95 | -0.23 | 2.62 | 2.6 | 95.0 | 3.6 | 257.0 |
| 860.0 | 859.93 | -0.40 | 1.88 | 1.9 | 102.1 | 5.1 | 256.7 |
| 870.0 | 869.87 | -0.67 | 0.91 | 1.1 | 126.2 | 6.6 | 253.8 |
| 880.0 | 879.80 | -1.03 | -0.25 | 1.1 | 193.5 | 7.2 | 248.1 |
| 890.0 | 889.71 | -1.48 | -1.51 | 2.1 | 225.6 | 7.8 | 252.6 |
| 900.0 | 899.59 | -2.04 | -2.96 | 3.6 | 235.4 | 9.5 | 249.6 |
| [illegible].0 | 909.44 | -2.68 | -4.52 | 5.3 | 239.3 | 10.1 | 246.4 |
| 920.0 | 919.27 | -3.40 | -6.20 | 7.1 | 241.2 | 11.0 | 270.1 |
| 930.0 | 929.07 | -4.27 | -8.00 | 9.1 | 241.9 | 11.8 | 242.4 |
| 940.0 | 938.84 | -5.33 | -9.85 | 11.2 | 241.6 | 12.7 | 239.4 |
| 950.0 | 948.58 | -6.57 | -11.73 | 13.5 | 240.7 | 13.4 | 236.1 |
| 960.0 | 958.32 | -7.99 | -13.25 | 15.5 | 238.9 | 13.7 | 230.5 |
| 970.0 | 967.99 | -9.36 | -15.38 | 18.0 | 238.7 | 15.6 | 237.0 |
| 980.0 | 977.63 | -10.80 | -17.57 | 20.6 | 238.4 | 15.4 | 233.8 |
| 990.0 | 987.24 | -12.40 | -19.84 | 23.4 | 238.0 | 16.4 | 232.8 |
| 1000.0 | 996.83 | -14.16 | -22.06 | 26.2 | 237.3 | 16.5 | 231.0 |
| 1010.0 | 1006.40 | -16.02 | -24.26 | 29.1 | 236.6 | 16.5 | 225.9 |
| 1020.0 | 1015.99 | -18.18 | -26.10 | 31.8 | 235.1 | 17.0 | 218.0 |
| 1030.0 | 1025.56 | -20.38 | -27.94 | 34.6 | 233.9 | 16.5 | 213.5 |

Well: S38C

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented |
|---|---|---|---|---|---|---|---|
| Conductor | 22" | 21' | 26" | 5.9 | X | | 1/15/2007 |
| Surface | 20" | 31' | 21 3/8" | 5.9 | X | | 1/15/2007 |
| Water Protection | 13 3/8" | 552' | 15" | 221.4 | X | | 1/23/2007 |
| Coal Protection | 13 3/8" | 552' | 15" | 221.4 | X | | 1/23/2007 |
| Other Casing & Tubing | 16" | 320' | 19 3/8" | 423 | X | | 1/20/2007 |
| Other Casing & Tubing | | | | | | | |
| Liners | | | | | | | |

| Packers or Bridge Plugs Kind/Size/Set |
| --- |
| |
| |
| Bkt @ 240' |
| Bkt @ 240' |
| Bkt @ 130' |
| |
| |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** **CNX** **HOLE #: S-38C**

**LOCATION:** **VA** **DRILL RIG #: 93**

**DATE STARTED:01/13/07** **DATED COMPLETED:02/07/07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | | THICKNESS | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 9 | 9 | |
| 9 | 34 | 25 | SAND STONE |
| 34 | 65 | 31 | SAND |
| 65 | 96 | 31 | SAND STONE |
| 96 | 127 | 31 | SAND STONE |
| 127 | 159 | 32 | SAND STONE |
| 159 | 191 | 32 | SAND STONE |
| 191 | 222 | 31 | COAL/SAND STONE |
| 222 | 254 | 32 | SAND STONE |
| 254 | 285 | 31 | COAL/SAND STONE |
| 285 | 317 | 32 | SAND STONE |
| 317 | 348 | 31 | SAND/COAL |
| 348 | 385 | 37 | SAND |
| 385 | 417 | 32 | SAND STONE/COAL |
| 417 | 448 | 31 | SAND STONE |
| 448 | 480 | 32 | SAND |
| 480 | 511 | 31 | SAND |
| 511 | 543 | 32 | SAND |
| 543 | 573 | 30 | SAND STONE |
| 573 | 593 | 20 | SAND STONE |
| 593 | 625 | 32 | SAND |
| 625 | 656 | 31 | SAND |
| 656 | 627 | 29 | SAND STONE |
| 627 | 719 | 92 | SAND STONE |
| 719 | 750 | 31 | SAND |
| 750 | 782 | 32 | SAND |
| 782 | 814 | 32 | SAND |
| 814 | 840 | 26 | SAND STONE |
| 840 | 872 | 32 | SAND |
| 872 | 903 | 31 | SAND STONE/SAND |
| 903 | 935 | 32 | SAND STONE/SAND |
| 935 | 967 | 32 | SAND/COAL/SAND STONE |
| 967 | 998 | 31 | SAND STONE/COAL/SAND STONE |
| 998 | 1046 | 48 | SAND STONE |
| 1046 | 1076 | 30 | SAND STONE/COAL/SAND |

| | | | |
|---|---|---|---|
| 1076 | 1108 | 32 | SAND/COAL/SAND STONE |
| 1108 | 1171 | 63 | SAND STONE |
| 1171 | 1203 | 32 | SAND STONE/COAL/SAND STONE |
| 1203 | 1266 | 63 | SAND STONE |
| 1266 | 1298 | 32 | SAND STONE/COAL/SAND STONE |
| 1298 | 1425 | 127 | SAND |
| 1425 | 1456 | 31 | SAND/COAL/SAND STONE |
| 1456 | 1488 | 32 | SAND STONE |
| 1488 | 1520 | 32 | SAND STONE/COAL/SAND STONE |
| 1520 | 1614 | 94 | SAND |
| 1614 | 1646 | 32 | SAND/COAL/SAND STONE |
| 1646 | 1709 | 63 | SAND STONE |
| 1709 | 1741 | 32 | SAND STONE/COAL/SAND STONE |
| 1741 | 1836 | 95 | SAND STONE |
| 1836 | 1868 | 32 | SAND STONE/COAL/SAND STONE |
| 1868 | 1900 | 32 | SAND STONE |

1900.00 FT. TOTAL DEPTH
21.00 FT. OF 22” CASING
31.00 FT. OF 20” CASING’
319.90 FT. OF 16” CASING
551.40 FT. OF 13 3/8” CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 2392 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3691 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 7/1/2008 |
| **Driller's Total Depth:** | 1941.00 | **Log's Total Depth:** | 1946.40 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: £ Stimulated R GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

[2/26/2010, jsa]

**5. Signature**

Permittee: CNX Gas Company LLC Date: 2/26/2010 *(Company)*

By: Jerry Boothe Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 2/26/2010

Status: Date: 2/26/2010

Final PDF Date: 3/8/2010

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 2444 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3691 |
| **Operations Name:** | CBM S39A W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 6/24/2008

Drilling Contractor: NOAH HORN

Date drilling completed: 7/1/2008

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 1941.00

Log Total Depth (feet): 1946.42

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10499835.7200

Permitted State Plane Y: 3611515.5700

Final Plat State Plane X: 10499837.1610

Final Plat State Plane Y: 3611516.5290

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | S39A Plat.pdf |

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| EXHIBIT A | S39A Exh A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS SHOW | S39A Gas Show.xlsx |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: CALIPER GAMMA DENSITY TEMP DEVIATION

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|
| DEVIATION | S39A Dev.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| CASING | S39A Casing.xlsx |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

Void at 265 ft; 16" casing cemented on backside to surface.

## 8. Drillers Log

Compiled By: NOAH HORN

List of Attached Items:

| Description | |
|---|---|
| DRILL DATA | S39A Drill Data.pdf |

## 9. Comments

[2/26/2010, jsa]

## 10. Signature

Permitee: CNX Gas Company LLC Date: 2/26/2010

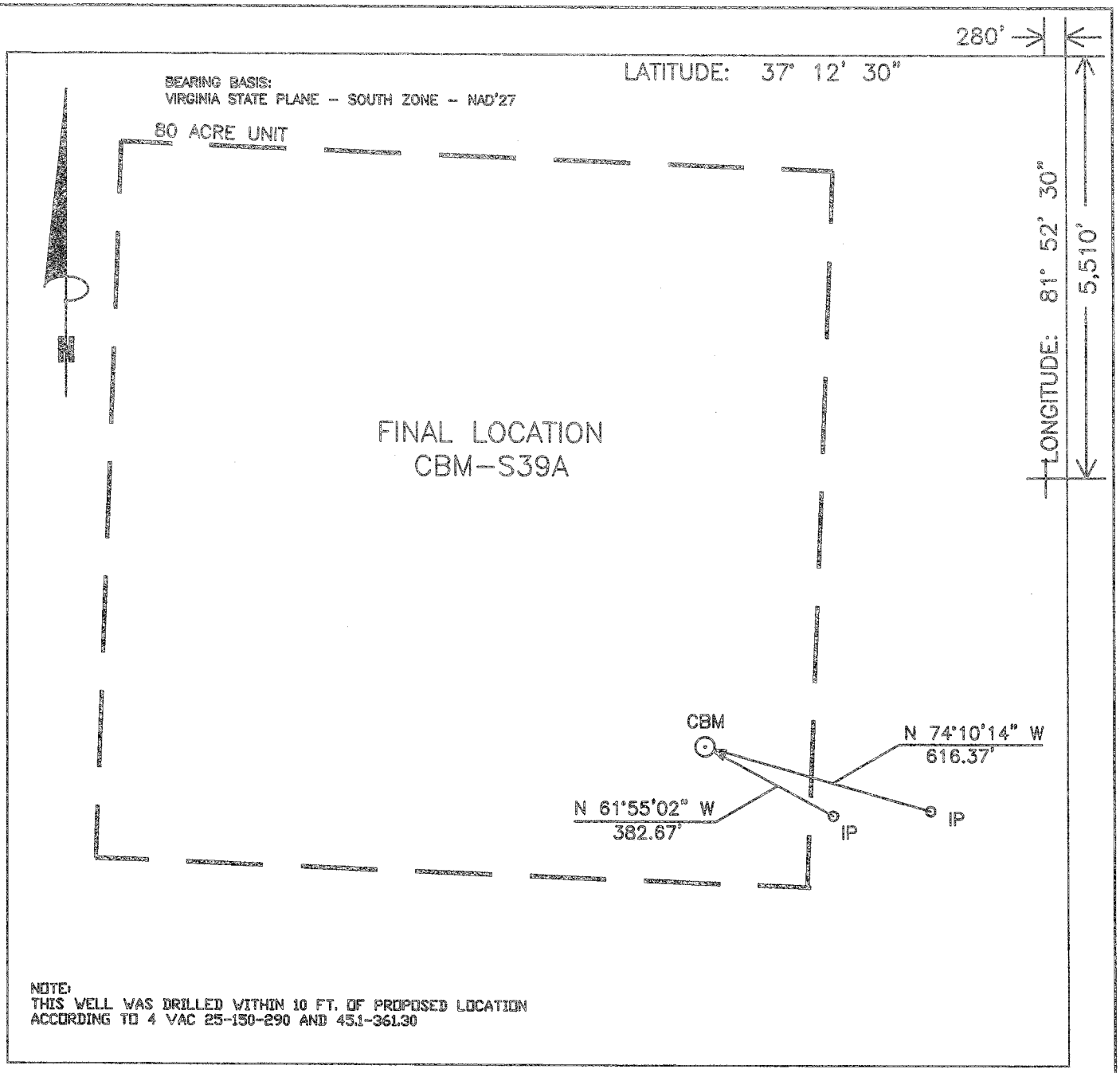
Signed By: Jerry Boothe Title: Manager

## INTERNAL USE ONLY

Submit Date: 2/26/2010

Status: A Date: 2/26/2010

Final PDF Date: 3/2/2010




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25-150-290 AND 45.1-361.30

# WELL LOCATION PLAT

S39APLAT
2N25/12 - 271/50

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-S39A

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): N 330,636.87 E 1,016,848.94

ELEVATION: 2409.07' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 06-30-08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
7-1-08
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 10/96

# CNX

## Coords Conversion

| INPUT | OUTPUT |
| --- | --- |
| State Plane, NAD27 | State Plane, NAD83 |
| 4502 - Virginia South, U.S. Feet | 4502 - Virginia South, U.S. Feet |

*Accuracies of conversions from NAD 27 to NAD 83 are typically 12 to 18 cm.*

## S39A FINAL

1/1

| | |
| --- | --- |
| **Northing/Y:** 330636.87 | **Northing/Y:** 3611516.529 |
| **Easting/X:** 1016848.94 | **Easting/X:** 10499837.161 |
| **Convergence:** -2 02 56.20180 | **Convergence:** -2 02 55.85667 |
| **Scale Factor:** 0.999950007 | **Scale Factor:** 0.999949999 |

Grid Shift (U.S. ft.): X/Easting = 9482988.2, Y/Northing = 3280879.7

Datum Shift (m.): Delta Lat. = 12.480, Delta Lon = -14.036

Remark:

S39A
EXHIBIT A

HOLE NO = 08 CBM S39A

STATE = VIRGINIA COUNTY = BUCHANAN

S ELEV = 2409

N-COOR = 330637 E-COOR = 1016849

| STRATA ELEV (TOP) | STRATA DEPTH FROM | TO | STRATA THICK | SEAM CODE | COMMENTS |
|---|---|---|---|---|---|
| 2317.17 | 91.90 | 92.80 | .90 | COAL | |
| 2316.27 | 92.80 | 142.90 | 50.10 | | |
| 2266.17 | 142.90 | 143.50 | .60 | COAL | |
| 2265.57 | 143.50 | 247.10 | 103.60 | | |
| 2161.97 | 247.10 | 249.10 | 2.00 | RA1 | |
| 2159.97 | 249.10 | 317.20 | 68.10 | | |
| 2091.87 | 317.20 | 319.50 | 2.30 | RA3 | |
| 2089.57 | 319.50 | 320.20 | .70 | | |
| 2088.87 | 320.20 | 321.10 | .90 | RA3 | |
| 2087.97 | 321.10 | 400.30 | 79.20 | | |
| 2008.77 | 400.30 | 402.20 | 1.90 | JB1 | |
| 2006.87 | 402.20 | 447.50 | 45.30 | | |
| 1961.57 | 447.50 | 450.20 | 2.70 | JB3 | |
| 1958.87 | 450.20 | 544.50 | 94.30 | | |
| 1864.57 | 544.50 | 545.50 | 1.00 | TI | |
| 1863.57 | 545.50 | 546.60 | 1.10 | | |
| 1862.47 | 546.60 | 547.00 | .40 | COAL | |
| 1862.07 | 547.00 | 655.30 | 108.30 | | |
| 1753.77 | 655.30 | 655.90 | .60 | *US1 | |
| 1753.17 | 655.90 | 762.10 | 106.20 | | |
| 1646.97 | 762.10 | 762.90 | .80 | *US2 | |
| 1646.17 | 762.90 | 946.10 | 183.20 | | |
| 1462.97 | 946.10 | 947.30 | 1.20 | *SE1 | |
| 1461.77 | 947.30 | 983.00 | 35.70 | | |
| 1426.07 | 983.00 | 985.00 | 2.00 | *SE2 | |
| 1424.07 | 985.00 | 1023.00 | 38.00 | | |
| 1386.07 | 1023.00 | 1024.80 | 1.80 | *LS1 | |
| 1384.27 | 1024.80 | 1040.50 | 15.70 | | |
| 1368.57 | 1040.50 | 1041.00 | .50 | *LS2 | |
| 1368.07 | 1041.00 | 1070.10 | 29.10 | | |
| 1338.97 | 1070.10 | 1071.00 | .90 | *UH1 | |
| 1338.07 | 1071.00 | 1132.70 | 61.70 | | |
| 1276.37 | 1132.70 | 1134.20 | 1.50 | *UH3 | |
| 1274.87 | 1134.20 | 1186.00 | 51.80 | | |
| 1223.07 | 1186.00 | 1187.90 | 1.90 | *MH1 | |
| 1221.17 | 1187.90 | 1287.40 | 99.50 | | |
| 1121.67 | 1287.40 | 1288.60 | 1.20 | *P11 | |
| 1120.47 | 1288.60 | 1376.50 | 87.90 | | |
| 1032.57 | 1376.50 | 1377.00 | .50 | *COAL | |
| 1032.07 | 1377.00 | 1465.80 | 88.80 | | |
| 943.27 | 1465.80 | 1466.40 | .60 | *P92 | |
| 942.67 | 1466.40 | 1698.30 | 231.90 | | |
| 710.77 | 1698.30 | 1699.00 | .70 | *P61 | |
| 710.07 | 1699.00 | 1795.00 | 96.00 | | |
| 614.07 | 1795.00 | 1795.80 | .80 | *P52 | |
| 613.27 | 1795.80 | 1881.90 | 86.10 | | |
| 527.17 | 1881.90 | 1882.90 | 1.00 | *P42 | |
| 526.17 | 1882.90 | 1946.42 | 63.52 | | BOTTOM HOLE |

S39A

GAMMA-CALIPER LOG FROM 0 TO TD
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION

*Well:* **S39A**

## Oil & Gas Show

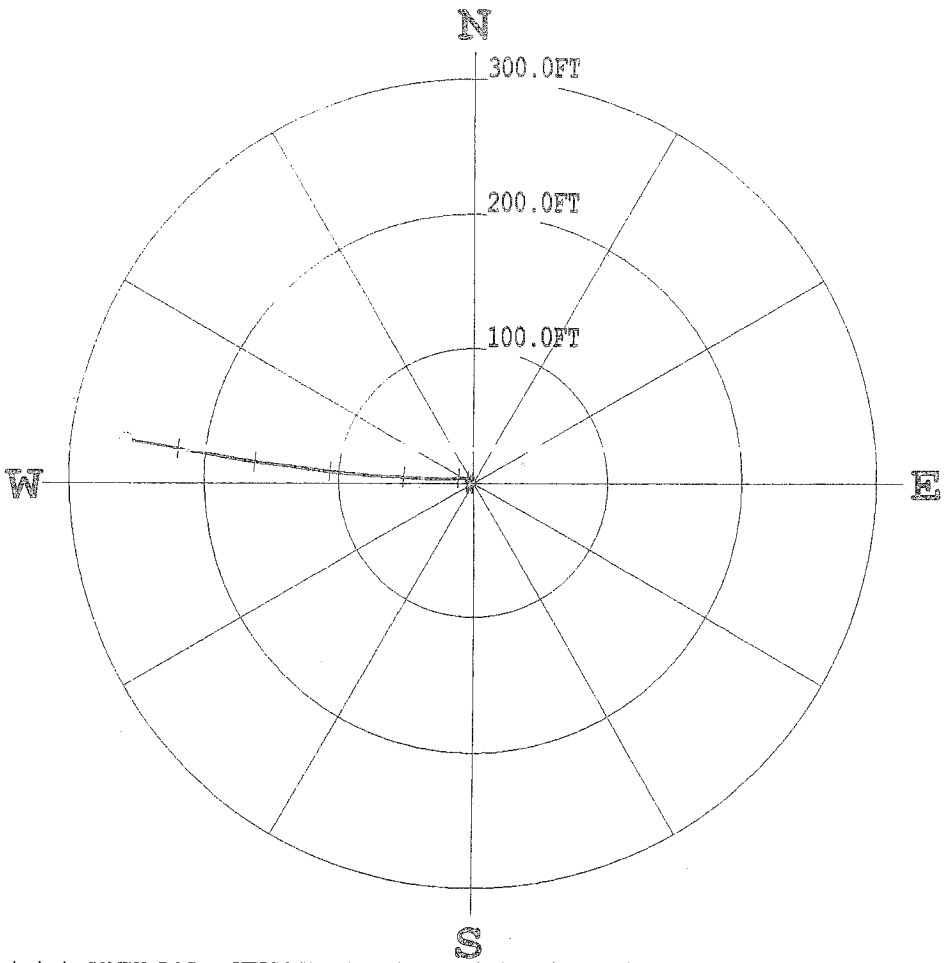
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 946.1 | 1288.6 | 342.5 | | | |
| Pocahontas | 1881.9 | 1882.9 | 1.0 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

:ENT: CNX
:ATION: -
.E ID: 08-CNX-S-39-A
:E OF LOG: 07/02/08
:BE: 0026C 777

MAG DECL: -7.1

SCALE: 100 FT/IN
TRUE DEPTH: 1898.58 FT
AZIMUTH: 277.2
DISTANCE: 259.2 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




: * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

| | | | |
|---|---|---|---|
| :LIENT | : CNX | HOLE ID. | : 08-CNX-S-39-A |
| 'IELD OFFICE | : O'DRISCOLL | DATE OF LOG | : 07/02/08 |
| )ATA FROM | : - | PROBE | : 0026C , 777 |
| MAG. DECL. | : -7.100 | DEPTH UNITS | : FEET |

.OG: 08-CNX-S-39-A_07-02-08_04-38_0026C_.10_-7.90_1946.30_DEVI.log

| .E DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| -1.30 | -1.30 | 0.00 | 0.00 | 0.0 | 0.0 | 1.3 | 39.0 |
| 2.10 | 2.10 | 0.01 | 0.03 | 0.0 | 66.9 | 1.2 | 133.5 |
| 12.10 | 12.10 | -0.03 | -0.06 | 0.1 | 244.7 | 1.3 | 328.5 |
| 22.10 | 22.09 | -0.03 | 0.05 | 0.1 | 119.2 | 1.2 | 55.2 |
| 32.10 | 32.09 | -0.02 | 0.00 | 0.0 | 166.0 | 1.1 | 346.8 |
| 42.10 | 42.09 | 0.18 | -0.02 | 0.2 | 352.5 | 1.2 | 0.3 |
| 52.10 | 52.09 | 0.38 | 0.09 | 0.4 | 13.2 | 1.3 | 356.4 |
| 62.10 | 62.09 | 0.51 | -0.09 | 0.5 | 350.4 | 1.3 | 318.0 |
| 72.10 | 72.08 | 0.72 | -0.08 | 0.7 | 353.6 | 1.3 | 48.0 |
| 82.10 | 82.08 | 0.72 | 0.10 | 0.7 | 7.7 | 1.2 | 150.6 |
| 92.10 | 92.08 | 0.64 | -0.04 | 0.6 | 356.4 | 2.5 | 275.2 |
| 02.10 | 102.08 | 0.52 | -0.17 | 0.5 | 342.4 | 1.3 | 267.5 |
| 12.10 | 112.07 | 0.56 | -0.34 | 0.7 | 328.7 | 1.1 | 185.8 |
| 22.10 | 122.07 | 0.41 | -0.29 | 0.5 | 325.1 | 1.0 | 168.2 |
| 32.10 | 132.07 | 0.27 | -0.36 | 0.4 | 307.4 | 0.8 | 140.0 |
| 42.10 | 142.07 | 0.14 | -0.37 | 0.4 | 290.9 | 0.9 | 235.2 |
| 52.10 | 152.07 | 0.23 | -0.49 | 0.5 | 294.9 | 1.0 | 352.5 |
| 62.10 | 162.07 | 0.21 | -0.39 | 0.4 | 297.8 | 0.9 | 162.9 |
| 72.10 | 172.07 | 0.20 | -0.40 | 0.4 | 295.9 | 1.1 | 19.6 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22.10 | 22.09 | -0.03 | 0.05 | 0.1 | 119.2 | 1.2 | 55.2 |
| 32.10 | 32.09 | -0.02 | 0.00 | 0.0 | 166.0 | 1.1 | 346.8 |
| 42.10 | 42.09 | 0.18 | -0.02 | 0.2 | 352.5 | 1.2 | 0.3 |
| 52.10 | 52.09 | 0.38 | 0.09 | 0.4 | 13.2 | 1.3 | 356.4 |
| 62.10 | 62.09 | 0.51 | -0.09 | 0.5 | 350.4 | 1.3 | 316.0 |
| 72.10 | 72.08 | 0.72 | -0.08 | 0.7 | 353.6 | 1.3 | 48.0 |
| 82.10 | 82.08 | 0.72 | 0.10 | 0.7 | 7.7 | 1.2 | 150.6 |
| 92.10 | 92.08 | 0.64 | -0.04 | 0.6 | 356.4 | 2.5 | 275.2 |
| 102.10 | 102.08 | 0.52 | -0.17 | 0.5 | 342.4 | 1.3 | 267.5 |
| 112.10 | 112.07 | 0.56 | -0.34 | 0.7 | 328.7 | 1.1 | 185.8 |
| 122.10 | 122.07 | 0.41 | -0.29 | 0.5 | 325.1 | 1.0 | 168.2 |
| 132.10 | 132.07 | 0.27 | -0.36 | 0.4 | 307.4 | 0.8 | 140.0 |
| 142.10 | 142.07 | 0.14 | -0.37 | 0.4 | 290.9 | 0.9 | 235.2 |
| 152.10 | 152.07 | 0.23 | -0.49 | 0.5 | 294.9 | 1.0 | 352.5 |
| 162.10 | 162.07 | 0.21 | -0.39 | 0.4 | 297.8 | 0.9 | 162.9 |
| 172.10 | 172.07 | 0.20 | -0.40 | 0.4 | 295.9 | 1.1 | 19.6 |
| 182.10 | 182.06 | 0.20 | -0.51 | 0.5 | 291.6 | 1.3 | 331.7 |
| 192.10 | 192.06 | 0.32 | -0.57 | 0.6 | 299.1 | 0.9 | 59.8 |
| 202.10 | 202.06 | 0.40 | -0.56 | 0.7 | 305.6 | 1.0 | 318.8 |
| 212.10 | 212.06 | 0.54 | -0.59 | 0.8 | 312.6 | 1.1 | 306.0 |
| 222.10 | 222.06 | 0.67 | -0.56 | 0.9 | 320.1 | 1.0 | 24.2 |
| 232.10 | 232.06 | 0.79 | -0.48 | 0.9 | 328.6 | 1.0 | 121.4 |
| 242.10 | 242.05 | 0.76 | -0.39 | 0.9 | 332.9 | 1.1 | 329.6 |
| 252.10 | 252.05 | 0.83 | -0.32 | 0.9 | 338.8 | 1.0 | 173.2 |
| 262.10 | 262.05 | 0.76 | -0.20 | 0.8 | 345.0 | 1.0 | 83.3 |
| 272.10 | 272.05 | 0.63 | -0.16 | 0.6 | 346.1 | 0.1 | 296.2 |
| 282.10 | 282.05 | 0.52 | -0.08 | 0.5 | 351.3 | 0.9 | 161.6 |
| 292.10 | 292.05 | 0.42 | 0.01 | 0.4 | 1.4 | 1.0 | 194.8 |
| 302.10 | 302.05 | 0.40 | -0.04 | 0.4 | 353.7 | 1.0 | 47.6 |
| 312.10 | 312.05 | 0.50 | 0.03 | 0.5 | 2.9 | 1.0 | 278.0 |
| 322.10 | 322.04 | 0.55 | 0.07 | 0.6 | 7.3 | 0.9 | 144.1 |
| 332.10 | 332.04 | 0.58 | 0.18 | 0.6 | 17.3 | 1.0 | 49.1 |
| 342.10 | 342.04 | 0.72 | 0.26 | 0.8 | 19.7 | 1.0 | 359.8 |
| 352.10 | 352.04 | 0.62 | 0.40 | 0.7 | 32.7 | 2.2 | 60.0 |
| 362.10 | 362.03 | 0.96 | 0.60 | 1.1 | 32.0 | 2.3 | 22.7 |
| 372.10 | 372.02 | 0.97 | 0.93 | 1.3 | 43.6 | 2.3 | 155.9 |
| 382.10 | 382.01 | 0.82 | 0.61 | 1.0 | 36.6 | 2.6 | 303.2 |
| 392.10 | 392.00 | 1.20 | 0.42 | 1.3 | 19.2 | 2.6 | 312.6 |
| 402.10 | 401.99 | 1.22 | 0.11 | 1.2 | 5.3 | 2.5 | 286.8 |
| 412.10 | 411.98 | 1.48 | -0.25 | 1.5 | 350.4 | 2.6 | 339.1 |
| 422.10 | 421.97 | 1.60 | -0.24 | 1.6 | 351.5 | 2.4 | 220.6 |
| 432.10 | 431.96 | 1.52 | -0.65 | 1.7 | 336.9 | 2.5 | 275.7 |
| 442.10 | 441.95 | 1.44 | -1.03 | 1.8 | 324.4 | 2.8 | 282.7 |
| 452.10 | 451.94 | 1.43 | -1.26 | 1.9 | 316.6 | 2.0 | 114.0 |
| 462.10 | 461.93 | 1.15 | -1.47 | 1.9 | 308.0 | 2.5 | 219.1 |
| 472.10 | 471.92 | 0.79 | -1.41 | 1.6 | 299.3 | 2.2 | 164.5 |
| 482.10 | 481.92 | 0.63 | -1.53 | 1.7 | 292.2 | 2.5 | 209.4 |
| 492.10 | 491.91 | 0.50 | -1.95 | 2.0 | 284.5 | 2.4 | 222.9 |
| 502.10 | 501.90 | 0.28 | -2.27 | 2.3 | 277.1 | 2.8 | 285.5 |
| 512.10 | 511.89 | 0.20 | -2.54 | 2.5 | 274.5 | 2.6 | 257.3 |
| 522.10 | 521.87 | 0.44 | -2.85 | 2.9 | 278.8 | 2.3 | 49.2 |
| 532.10 | 531.87 | 0.22 | -2.70 | 2.7 | 274.7 | 2.3 | 205.6 |
| 542.10 | 541.86 | 0.16 | -2.70 | 2.7 | 273.4 | 2.6 | 233.6 |
| 552.10 | 551.85 | 0.05 | -2.59 | 2.6 | 271.1 | 2.4 | 216.0 |
| 562.10 | 561.84 | -0.07 | -2.61 | 2.6 | 268.5 | 2.7 | 16.8 |
| 572.10 | 571.83 | 0.03 | -3.01 | 3.0 | 270.7 | 2.5 | 225.4 |
| 582.10 | 581.82 | -0.08 | -3.04 | 3.0 | 268.4 | 2.0 | 157.6 |
| 592.10 | 591.82 | -0.32 | -2.97 | 3.0 | 263.9 | 2.0 | 104.1 |
| 602.10 | 601.81 | -0.53 | -2.99 | 3.0 | 259.9 | 1.8 | 136.9 |
| 612.10 | 611.80 | -0.86 | -3.10 | 3.2 | 254.4 | 2.1 | 194.2 |
| 622.10 | 621.80 | -0.99 | -3.04 | 3.2 | 251.9 | 2.3 | 18.2 |
| 632.10 | 631.79 | -0.56 | -3.03 | 3.1 | 259.6 | 1.5 | 279.6 |
| 642.10 | 641.78 | -0.58 | -3.26 | 3.3 | 260.0 | 1.1 | 188.7 |
| 652.10 | 651.78 | -0.67 | -3.43 | 3.5 | 258.9 | 0.9 | 232.5 |
| 662.10 | 661.78 | -0.78 | -3.48 | 3.6 | 257.3 | 0.5 | 193.8 |
| 672.10 | 671.78 | -0.85 | -3.45 | 3.6 | 256.2 | 0.3 | 94.9 |
| 682.10 | 681.78 | -0.84 | -3.39 | 3.5 | 256.1 | 0.4 | 88.3 |
| 692.10 | 691.78 | -0.82 | -3.32 | 3.4 | 256.1 | 0.4 | 74.9 |
| 702.10 | 701.78 | -0.79 | -3.25 | 3.3 | 256.3 | 0.5 | 56.7 |
| 712.10 | 711.78 | -0.72 | -3.17 | 3.3 | 257.1 | 0.8 | 28.0 |
| 722.10 | 721.78 | -0.53 | -3.16 | 3.2 | 260.5 | 1.4 | 343.0 |
| 732.10 | 731.77 | -0.35 | -3.33 | 3.3 | 264.0 | 1.5 | 282.1 |
| 742.10 | 741.77 | -0.36 | -3.56 | 3.6 | 264.2 | 1.2 | 256.5 |
| 752.10 | 751.77 | -0.42 | -3.77 | 3.8 | 263.7 | 1.2 | 255.7 |
| 762.10 | 761.76 | -0.48 | -3.98 | 4.0 | 263.0 | 1.2 | 248.1 |
| 772.10 | 771.76 | -0.59 | -4.10 | 4.1 | 261.8 | 0.8 | 221.7 |
| 782.10 | 781.76 | -0.65 | -4.09 | 4.1 | 260.9 | 0.5 | 73.4 |
| 792.10 | 791.76 | -0.58 | -3.99 | 4.0 | 261.7 | 0.8 | 52.4 |
| 802.10 | 801.76 | -0.46 | -3.90 | 3.9 | 263.3 | 1.0 | 29.7 |
| 812.10 | 811.76 | -0.25 | -3.89 | 3.9 | 266.4 | 1.5 | 331.6 |
| 822.10 | 821.76 | -0.19 | -4.08 | 4.1 | 267.4 | 1.2 | 253.7 |
| 832.10 | 831.75 | -0.28 | -4.23 | 4.2 | 266.3 | 0.7 | 210.2 |
| 842.10 | 841.75 | -0.38 | -4.28 | 4.3 | 264.9 | 0.5 | 139.1 |
| 852.10 | 851.75 | -0.38 | -4.18 | 4.2 | 264.8 | 0.8 | 51.9 |
| 862.10 | 861.75 | -0.20 | -4.10 | 4.1 | 267.2 | 1.2 | 18.7 |
| 872.10 | 871.75 | 0.03 | -4.08 | 4.1 | 270.5 | 1.3 | 354.2 |
| 882.10 | 881.75 | 0.27 | -4.13 | 4.1 | 273.8 | 1.5 | 336.7 |
| 892.10 | 891.74 | 0.47 | -4.32 | 4.3 | 276.2 | 1.6 | 319.9 |
| 902.10 | 901.74 | 0.65 | -4.51 | 4.6 | 278.2 | 1.5 | 303.1 |
| 912.10 | 911.73 | 0.86 | -4.70 | 4.8 | 280.4 | 1.6 | 321.1 |
| 922.10 | 921.73 | 0.98 | -4.91 | 5.0 | 281.2 | 1.0 | 266.3 |
| 932.10 | 931.73 | 0.95 | -5.07 | 5.2 | 280.6 | 0.8 | 258.0 |
| 942.10 | 941.73 | 0.91 | -5.17 | 5.3 | 280.0 | 0.3 | 226.5 |
| 952.10 | 951.73 | 0.87 | -5.17 | 5.2 | 279.6 | 0.2 | 171.4 |
| 962.10 | 961.73 | 0.90 | -5.08 | 5.2 | 280.1 | 1.0 | 55.3 |
| 972.10 | 971.73 | 0.97 | -4.95 | 5.0 | 281.1 | 0.7 | 85.7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 872.10 | 871.75 | 0.03 | -4.08 | 4.1 | 270.5 | 1.3 | 354.2 |
| 882.10 | 881.75 | 0.27 | -4.13 | 4.1 | 273.6 | 3.5 | 336.7 |
| 892.10 | 891.74 | 0.47 | -4.32 | 4.3 | 276.2 | 1.6 | 319.9 |
| 902.10 | 901.74 | 0.65 | -4.51 | 4.6 | 278.2 | 1.5 | 303.1 |
| 912.10 | 911.73 | 0.86 | -4.70 | 4.8 | 280.4 | 1.6 | 321.1 |
| 922.10 | 921.73 | 0.98 | -4.91 | 5.0 | 281.2 | 1.0 | 266.3 |
| 932.10 | 931.73 | 0.95 | -5.07 | 5.2 | 280.6 | 0.8 | 258.0 |
| 942.10 | 941.73 | 0.91 | -5.17 | 5.3 | 280.0 | 0.3 | 226.5 |
| 952.10 | 951.73 | 0.87 | -5.17 | 5.2 | 279.6 | 0.2 | 171.4 |
| 962.10 | 961.73 | 0.90 | -5.08 | 5.2 | 280.1 | 1.0 | 55.3 |
| 972.10 | 971.73 | 0.97 | -4.95 | 5.0 | 281.1 | 0.7 | 85.7 |
| 982.10 | 981.73 | 0.93 | -4.90 | 5.0 | 280.7 | 0.2 | 166.0 |
| 992.10 | 991.73 | 0.91 | -4.93 | 5.0 | 280.5 | 0.2 | 119.2 |
| 002.10 | 1001.73 | 0.93 | -4.82 | 4.9 | 280.9 | 0.9 | 69.3 |
| 012.10 | 1011.72 | 1.00 | -4.68 | 4.8 | 282.1 | 1.1 | 58.2 |
| 022.10 | 1021.72 | 1.17 | -4.51 | 4.7 | 284.6 | 1.7 | 29.7 |
| 32.10 | 1031.72 | 1.50 | -4.45 | 4.7 | 288.6 | 1.9 | 351.1 |
| 42.10 | 1041.71 | 1.84 | -4.52 | 4.9 | 292.1 | 2.0 | 348.2 |
| 52.10 | 1051.70 | 2.18 | -4.59 | 5.1 | 295.4 | 1.9 | 348.8 |
| 62.10 | 1061.70 | 2.49 | -4.69 | 5.3 | 298.0 | 1.8 | 340.9 |
| 72.10 | 1071.69 | 2.76 | -4.81 | 5.5 | 299.8 | 1.5 | 326.7 |
| 82.10 | 1081.69 | 2.95 | -4.92 | 5.7 | 300.9 | 1.3 | 34.5 |
| 092.10 | 1091.69 | 3.22 | -4.92 | 5.9 | 303.2 | 1.1 | 49.0 |
| 102.10 | 1101.68 | 3.43 | -4.81 | 5.9 | 305.5 | 1.1 | 54.2 |
| 112.10 | 1111.68 | 3.57 | -4.73 | 5.9 | 307.1 | 1.7 | 333.0 |
| 122.10 | 1121.66 | 3.64 | -4.84 | 6.1 | 306.9 | 0.5 | 314.0 |
| 132.10 | 1131.68 | 3.70 | -4.97 | 6.2 | 306.6 | 0.9 | 289.1 |
| 142.10 | 1141.67 | 3.79 | -5.24 | 6.5 | 305.9 | 1.9 | 297.9 |
| 152.10 | 1151.66 | 3.89 | -5.71 | 6.9 | 304.2 | 3.2 | 300.2 |
| 162.10 | 1161.64 | 3.99 | -6.40 | 7.5 | 301.9 | 5.1 | 272.9 |
| 172.10 | 1171.60 | 4.02 | -7.29 | 8.3 | 298.9 | 5.8 | 278.1 |
| 182.10 | 1181.54 | 4.01 | -8.38 | 9.3 | 295.6 | 5.7 | 269.9 |
| 192.10 | 1191.46 | 3.97 | -9.60 | 10.4 | 292.4 | 7.9 | 271.4 |
| 202.10 | 1201.35 | 3.84 | -11.05 | 11.7 | 289.2 | 8.3 | 259.0 |
| 212.10 | 1211.21 | 3.79 | -12.69 | 13.2 | 286.6 | 9.8 | 268.2 |
| 222.10 | 1221.06 | 3.67 | -14.44 | 14.9 | 284.3 | 10.9 | 269.8 |
| 232.10 | 1230.88 | 3.63 | -16.34 | 16.7 | 282.5 | 11.3 | 269.1 |
| 242.10 | 1240.67 | 3.59 | -18.35 | 18.7 | 281.1 | 11.8 | 270.4 |
| 252.10 | 1250.45 | 3.55 | -20.44 | 20.7 | 279.8 | 12.7 | 266.0 |
| 262.10 | 1260.19 | 3.46 | -22.70 | 23.0 | 278.7 | 13.7 | 268.7 |
| 272.10 | 1269.89 | 3.40 | -25.12 | 25.3 | 277.7 | 14.5 | 270.2 |
| 282.10 | 1279.55 | 3.37 | -27.72 | 27.9 | 276.9 | 15.7 | 269.1 |
| 292.10 | 1289.15 | 3.47 | -30.50 | 30.7 | 276.5 | 17.2 | 273.4 |
| 302.10 | 1298.67 | 3.70 | -33.54 | 33.7 | 276.3 | 18.1 | 274.3 |
| 312.10 | 1308.16 | 3.96 | -36.68 | 36.9 | 276.2 | 18.9 | 272.9 |
| 322.10 | 1317.59 | 4.07 | -39.94 | 40.1 | 275.8 | 18.4 | 256.7 |
| 332.10 | 1327.00 | 4.33 | -43.28 | 43.5 | 275.7 | 20.1 | 274.5 |
| 342.10 | 1336.41 | 4.39 | -46.64 | 46.8 | 275.4 | 18.1 | 278.8 |
| 352.10 | 1345.86 | 4.51 | -49.90 | 50.1 | 275.2 | 19.5 | 268.8 |
| 362.10 | 1355.25 | 4.87 | -53.30 | 53.5 | 275.2 | 20.5 | 275.4 |
| 372.10 | 1364.62 | 5.09 | -56.78 | 57.0 | 275.1 | 20.4 | 271.8 |
| 382.10 | 1374.00 | 5.22 | -60.24 | 60.5 | 274.9 | 19.9 | 272.4 |
| 392.10 | 1383.40 | 5.22 | -63.65 | 63.9 | 274.7 | 20.3 | 273.0 |
| 402.10 | 1392.81 | 5.32 | -67.00 | 67.2 | 274.5 | 19.9 | 271.2 |
| 412.10 | 1402.21 | 5.54 | -70.37 | 70.6 | 274.5 | 19.0 | 271.5 |
| 422.10 | 1411.58 | 5.83 | -73.81 | 74.0 | 274.5 | 21.0 | 276.2 |
| 432.10 | 1420.99 | 5.98 | -77.14 | 77.4 | 274.4 | 20.2 | 276.2 |
| 442.10 | 1430.38 | 6.32 | -80.56 | 80.8 | 274.5 | 20.1 | 275.8 |
| 452.10 | 1439.77 | 6.70 | -83.98 | 84.3 | 274.6 | 20.2 | 277.1 |
| 462.10 | 1449.15 | 7.10 | -87.41 | 87.7 | 274.6 | 20.1 | 277.1 |
| 472.10 | 1458.53 | 7.41 | -90.85 | 91.2 | 274.7 | 19.8 | 270.5 |
| 482.10 | 1467.94 | 7.52 | -94.22 | 94.5 | 274.6 | 20.0 | 277.5 |
| 492.10 | 1477.34 | 7.77 | -97.62 | 97.9 | 274.6 | 20.0 | 276.7 |
| 502.10 | 1486.71 | 8.17 | -101.09 | 101.4 | 274.6 | 20.9 | 277.5 |
| 512.10 | 1496.07 | 8.58 | -104.59 | 104.9 | 274.7 | 20.5 | 276.7 |
| 522.10 | 1505.43 | 8.98 | -108.08 | 108.4 | 274.7 | 20.6 | 276.6 |
| 532.10 | 1514.78 | 9.44 | -111.58 | 112.0 | 274.8 | 20.7 | 278.8 |
| 542.10 | 1524.15 | 9.87 | -115.07 | 115.5 | 274.9 | 20.6 | 277.0 |
| 552.10 | 1533.51 | 10.33 | -118.54 | 119.0 | 275.0 | 20.5 | 277.3 |
| 562.10 | 1542.88 | 10.81 | -122.01 | 122.5 | 275.1 | 20.4 | 275.7 |
| 572.10 | 1552.24 | 11.27 | -125.51 | 126.0 | 275.1 | 20.9 | 278.2 |
| 582.10 | 1561.60 | 11.75 | -128.99 | 129.5 | 275.2 | 20.6 | 278.5 |
| 592.10 | 1570.96 | 12.22 | -132.46 | 133.0 | 275.3 | 20.1 | 270.3 |
| 602.10 | 1580.32 | 12.72 | -135.95 | 136.5 | 275.3 | 20.6 | 267.4 |
| 612.10 | 1589.69 | 12.96 | -139.38 | 140.0 | 275.3 | 21.0 | 278.8 |
| 622.10 | 1599.04 | 13.48 | -142.88 | 143.5 | 275.4 | 21.0 | 280.0 |
| 632.10 | 1608.39 | 13.98 | -146.38 | 147.0 | 275.5 | 20.7 | 275.1 |
| 642.10 | 1617.74 | 14.46 | -149.90 | 150.6 | 275.5 | 20.9 | 278.6 |
| 652.10 | 1627.09 | 14.91 | -153.39 | 154.1 | 275.6 | 19.3 | 293.8 |
| 662.10 | 1636.45 | 15.29 | -156.87 | 157.6 | 275.6 | 20.9 | 278.9 |
| 672.10 | 1645.79 | 15.84 | -160.39 | 161.2 | 275.6 | 21.1 | 278.9 |
| 682.10 | 1655.11 | 16.42 | -163.96 | 164.8 | 275.7 | 21.3 | 279.7 |
| 692.10 | 1664.44 | 16.98 | -167.53 | 168.4 | 275.8 | 21.2 | 279.2 |
| 702.10 | 1673.76 | 17.48 | -171.08 | 172.0 | 275.8 | 22.7 | 275.1 |
| 712.10 | 1683.11 | 18.06 | -174.56 | 175.5 | 275.9 | 21.0 | 279.7 |
| 722.10 | 1692.45 | 18.66 | -178.08 | 179.1 | 276.0 | 20.9 | 279.7 |
| 732.10 | 1701.79 | 19.25 | -181.60 | 182.6 | 276.1 | 21.0 | 280.0 |
| 742.10 | 1711.13 | 19.86 | -185.13 | 186.2 | 276.1 | 21.0 | 279.2 |
| 752.10 | 1720.46 | 20.48 | -188.67 | 189.8 | 276.2 | 21.1 | 280.0 |
| 762.10 | 1729.78 | 21.12 | -192.22 | 193.4 | 276.3 | 21.1 | 279.9 |
| 772.10 | 1739.12 | 21.75 | -195.75 | 197.0 | 276.3 | 21.0 | 280.7 |
| 782.10 | 1748.45 | 22.41 | -199.28 | 200.5 | 276.4 | 21.0 | 280.7 |
| 792.10 | 1757.79 | 23.06 | -202.81 | 204.1 | 276.5 | 20.9 | 279.3 |
| 802.10 | 1767.11 | 23.60 | -206.34 | 207.7 | 276.5 | 20.4 | 268.9 |
| 812.10 | 1776.46 | 24.12 | -209.86 | 211.2 | 276.6 | 21.0 | 279.4 |
| 822.10 | 1785.78 | 24.78 | -213.40 | 214.8 | 276.6 | 21.3 | 280.9 |

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|---|---|---|---|---|---|---|---|
| 652.10 | 1627.09 | 14.91 | -153.39 | 154.1 | 275.6 | 19.3 | 293.8 |
| 662.10 | 1636.45 | 15.29 | -156.87 | 157.6 | 275.6 | 20.9 | 278.9 |
| 672.10 | 1645.79 | 15.84 | -160.39 | 161.2 | 275.6 | 21.1 | 278.9 |
| 682.10 | 1655.11 | 16.42 | -163.96 | 164.8 | 275.7 | 21.3 | 279.7 |
| 692.10 | 1664.44 | 16.98 | -167.53 | 168.4 | 275.8 | 21.2 | 279.2 |
| 702.10 | 1673.76 | 17.48 | -171.08 | 172.0 | 275.8 | 22.7 | 275.1 |
| 712.10 | 1683.11 | 18.06 | -174.56 | 175.5 | 275.9 | 21.0 | 279.7 |
| 722.10 | 1692.45 | 18.66 | -178.08 | 179.1 | 276.0 | 20.9 | 279.7 |
| 732.10 | 1701.79 | 19.25 | -181.60 | 182.6 | 276.1 | 21.0 | 280.0 |
| 742.10 | 1711.13 | 19.86 | -185.13 | 186.2 | 276.1 | 21.0 | 279.2 |
| 752.10 | 1720.46 | 20.48 | -188.67 | 189.8 | 276.2 | 21.1 | 280.0 |
| 762.10 | 1729.78 | 21.12 | -192.22 | 193.4 | 276.3 | 21.1 | 279.9 |
| 772.10 | 1739.12 | 21.75 | -195.75 | 197.0 | 276.3 | 21.0 | 280.7 |
| 782.10 | 1748.45 | 22.41 | -199.28 | 200.5 | 276.4 | 21.0 | 280.7 |
| 792.10 | 1757.79 | 23.06 | -202.81 | 204.1 | 276.5 | 20.9 | 279.3 |
| 802.10 | 1767.11 | 23.60 | -206.34 | 207.7 | 276.5 | 20.4 | 268.9 |
| 812.10 | 1776.46 | 24.12 | -209.86 | 211.2 | 276.6 | 21.0 | 279.4 |
| 822.10 | 1785.78 | 24.78 | -213.40 | 214.8 | 276.6 | 21.3 | 280.9 |
| 832.10 | 1795.12 | 25.29 | -216.89 | 218.4 | 276.6 | 21.1 | 279.5 |
| 842.10 | 1804.43 | 25.99 | -220.46 | 222.0 | 276.7 | 21.2 | 280.3 |
| 852.10 | 1813.74 | 26.66 | -224.04 | 225.6 | 276.8 | 21.5 | 280.9 |
| 862.10 | 1823.03 | 27.40 | -227.66 | 229.3 | 276.9 | 22.0 | 279.5 |
| 872.10 | 1832.34 | 27.89 | -231.25 | 232.9 | 276.9 | 20.5 | 277.6 |
| 882.10 | 1841.65 | 28.56 | -234.83 | 236.6 | 276.9 | 22.0 | 278.6 |
| 892.10 | 1850.95 | 29.14 | -238.41 | 240.2 | 277.0 | 21.7 | 286.0 |
| 902.10 | 1860.23 | 29.65 | -242.08 | 243.9 | 277.0 | 21.4 | 277.9 |
| 912.10 | 1869.55 | 30.17 | -245.66 | 247.5 | 277.0 | 21.7 | 280.8 |
| 922.10 | 1878.83 | 30.96 | -249.30 | 251.2 | 277.1 | 22.1 | 283.0 |
| 932.10 | 1888.11 | 31.70 | -252.95 | 254.9 | 277.1 | 21.9 | 280.4 |
| 942.10 | 1897.38 | 32.45 | -256.64 | 258.7 | 277.2 | 22.1 | 281.4 |
| 943.40 | 1898.58 | 32.54 | -257.12 | 259.2 | 277.2 | 22.1 | 281.4 |

*Well:* **S39A**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 31 | 24" | | | X | 6/24/08 | |
| Surface | 16" | 352 | 20" | 456 | X | | 6/25/08 | Basket@210 |
| Water Protection | 13 3/8" | 592.45 | 15 3/8" | 228 | X | | 6/26/08 | |
| Coal Protection | 13 3/8" | 592.45 | 15 3/8" | 228 | X | | 6/26/08 | |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE S-39A

RIG #: 99

LOCATION: BUCH VA

DATE STARTED: 6/24/2008

DATE COMPLETED: 7/1/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. | |
|---|---|---|---|---|
| 0 | 31 | 31 | | |
| 31 | 58 | 27 | SAND | |
| 58 | 89 | 31 | SAND | |
| 89 | 120 | 31 | SAND/SHALE | |
| 120 | 151 | 31 | SAND/SHALE/COAL | |
| 151 | 182 | 31 | SAND | |
| 182 | 213 | 31 | SAND | |
| 213 | 244 | 31 | SAND/SHALE | |
| 244 | 265 | 21 | SAND/SHALE/VOID | |
| 265 | 268 | 3 | VOID | |
| 268 | 276 | 8 | SAND/SHALE | |
| 276 | 308 | 32 | SAND/SHALE | |
| 308 | 339 | 31 | SAND/SHALE/COAL | (300' - 354' CEMENT) |
| 339 | 354 | 15 | SAND/SHALE | |
| 354 | 371 | 17 | SAND | |
| 371 | 401 | 30 | SAND/SHALE | |
| 401 | 432 | 31 | SAND/SHALE | |
| 432 | 464 | 32 | SAND/SHALE/COAL | |
| 464 | 495 | 31 | SAND/SHALE | |
| 495 | 527 | 32 | SAND/SHALE | |
| 527 | 558 | 31 | SAND/SHALE | |
| 558 | 590 | 32 | SAND | |
| 590 | 621 | 31 | SAND/SHALE | (560'-635' CEMENT & SHOE) |
| 621 | 635 | 14 | SHALE | |
| 635 | 680 | 45 | SAND | |
| 680 | 711 | 31 | SAND | |
| 711 | 743 | 32 | SANDSTONE | |
| 743 | 774 | 31 | SAND/COAL | |
| 774 | 806 | 32 | SAND/SHALE | |
| 806 | 837 | 31 | SAND/SHALE | |
| 837 | 869 | 32 | SAND/SHALE | |
| 869 | 900 | 31 | SAND/SHALE | |
| 900 | 932 | 32 | SAND/SHALE | |

| | | | |
|---|---|---|---|
| 932 | 963 | 31 | SAND/SHALE/COAL |
| 963 | 995 | 32 | SAND/COAL |
| 995 | 1026 | 31 | SAND/COAL |
| 1026 | 1058 | 32 | SAND/COAL |
| 1058 | 1090 | 32 | SAND/COAL |
| 1090 | 1100 | 10 | SAND |
| 1102 | 1133 | 31 | SAND/COAL/SHALE |
| 1133 | 1165 | 32 | SAND/SHALE |
| 1165 | 1196 | 31 | SAND/SHALE/COAL |
| 1196 | 1228 | 32 | SAND/SHALE |
| 1228 | 1259 | 31 | SAND/SHALE/COAL |
| 1259 | 1291 | 32 | COAL/SAND |
| 1291 | 1323 | 32 | SAND |
| 1323 | 1329 | 6 | SAND |
| 1329 | 1360 | 31 | SAND/SHALE |
| 1360 | 1392 | 32 | SAND/COAL |
| 1392 | 1423 | 31 | SAND |
| 1423 | 1455 | 32 | SAND/COAL |
| 1455 | 1487 | 32 | |
| 1487 | 1518 | 31 | SAND/SHALE/COAL |
| 1518 | 1550 | 32 | SAND/SHALE |
| 1550 | 1582 | 32 | SAND/SHALE |
| 1582 | 1613 | 31 | SAND/SHALE |
| 1613 | 1645 | 32 | SANDSTONE |
| 1645 | 1677 | 32 | SAND/SHALE |
| 1677 | 1708 | 31 | SANDSTONE/COAL |
| 1708 | 1740 | 32 | SAND/COAL.SHALE |
| 1740 | 1772 | 32 | SAND/COAL/SHALE |
| 1772 | 1803 | 31 | SAND/SHALE |
| 1803 | 1835 | 32 | SAND |
| 1835 | 1866 | 31 | SAND/COAL |
| 1866 | 1898 | 32 | SAND |
| 1898 | 1930 | 32 | SAND/COAL |
| 1930 | 1941 | 11 | SAND |

1941' TOTAL DEPTH
31' OF 22" CASING
336.8' OF 16" CASING
592.45' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1288 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3817 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 4/1/2008 |
| **Driller's Total Depth:** | 1487.00 | **Log's Total Depth:** | 1485.40 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 5/8/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 5/8/2008 | | |
| Status: | | Date: | 5/20/2008 |
| Final PDF Date: | 6/12/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1317 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3817 |
| **Operations Name:** | CBM S39D W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

| | | | |
|---|---|---|---|
| Date drilling commenced: | 3/25/2008 | Drilling Contractor: | Noah Horn |
| Date drilling completed: | 4/1/2008 | Rig Type: | ☑ Rotary ☐ Cable |
| Driller's Total Depth (feet): | 1487.00 | | |
| Log Total Depth (feet): | 1485.36 | Coal Seam at Total Depth: | Pocahontas |

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

| | | | |
|---|---|---|---|
| Permitted State Plane X: | 1015516.10 | Final Plat State Plane X: | 1015518.22 |
| Permitted State Plane Y: | 330884.39 | Final Plat State Plane Y: | 330876.25 |

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | |
|---|---|
| Plat | S39D Plat.pdf |

| | | |
|---|---|---|
| 260 | 25 | GPM |

| | | |
|---|---|---|
| | | |

List of Attached Items:

| | |
|---|---|
| Exhibit A | S39D Exhibit A.pdf |

List of Attached Items:

| | |
|---|---|
| Gas Show | S39D Gas Show.xls |

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑

List of Attached Items:

| | |
|---|---|
| Deviation | S39D Deviation.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | S39D Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| Drill Data | S39D Drill Data.pdf |

## 9. Comments

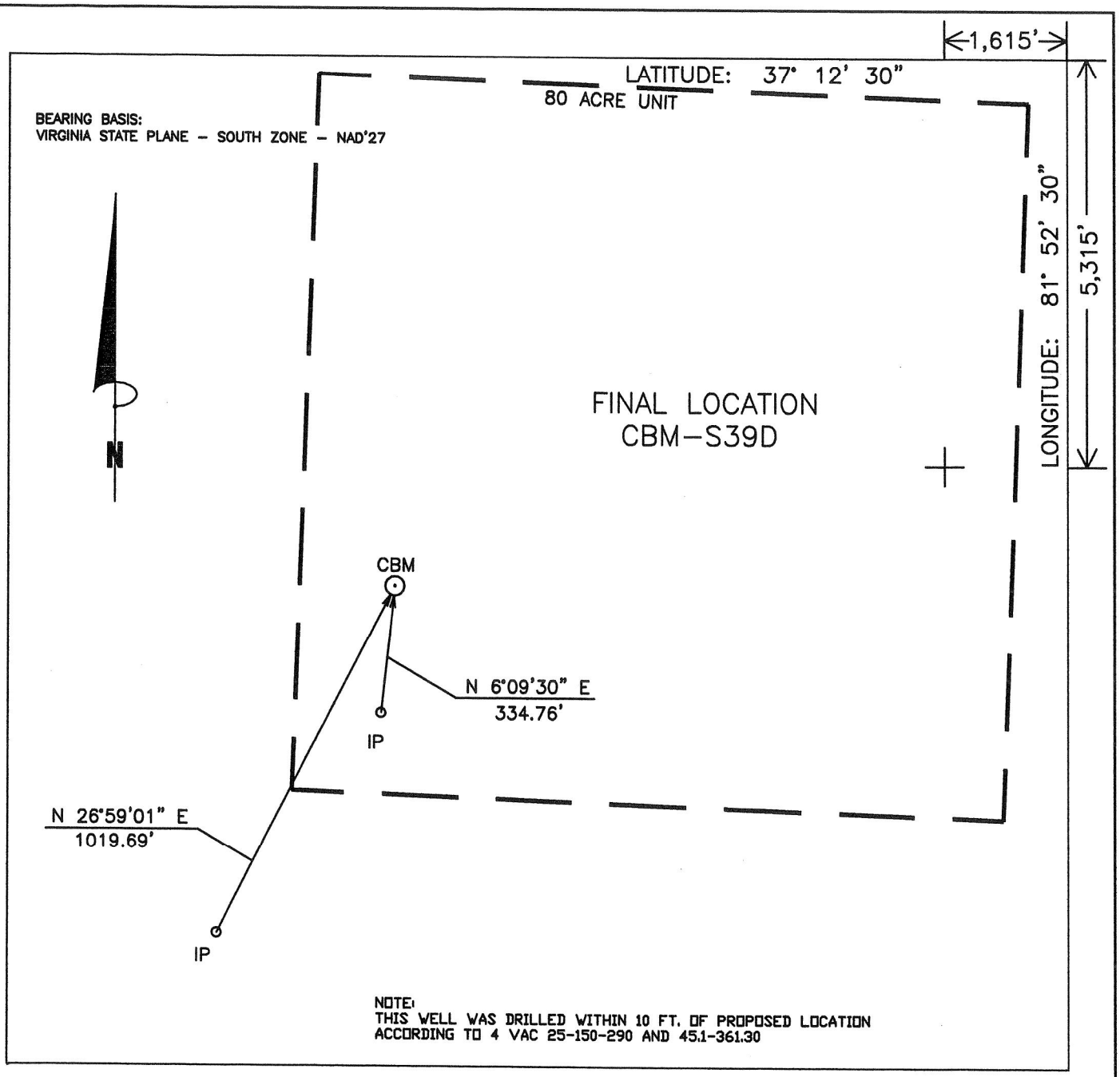
## 10. Signature

Permitee: CNX Gas Company LLC Date: 5/8/2008

Signed By: Leslie Arrington Title: Director Environmental Permitting

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 5/8/2008 | | |
| Status: | A | Date: | 5/20/2008 |
| Final PDF Date: | 6/12/2008 | | |




# WELL LOCATION PLAT

S39DFNL
2N30/119-667/06

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–S39D

TRACT NUMBER COAL MOUNTAIN MINING QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 330,876.25 E 1,015,518.22

ELEVATION: 1960.97' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 04–03–08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DRP
DANNY R. PRICE
Lic. No. 008540
4/4/08
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

S39D.CMP
Exhibit A

Well Name: 08 CBM S39D
SURFACE ELEV: 1960.97 EASTING: 1015518.22 NORTHING: 330876.25

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 95.90 | 96.80 | 1865.07 | 0.90 | |
| | 96.80 | 98.70 | 1864.17 | 1.90 | |
| TI | 98.70 | 99.40 | 1862.27 | 0.70 | |
| | 99.40 | 108.20 | 1861.57 | 8.80 | |
| COAL | 108.20 | 108.90 | 1852.77 | 0.70 | |
| | 108.90 | 161.50 | 1852.07 | 52.60 | |
| US1 | 161.50 | 162.00 | 1799.47 | 0.50 | |
| | 162.00 | 198.90 | 1798.97 | 36.90 | |
| COAL | 198.90 | 199.50 | 1762.07 | 0.60 | |
| | 199.50 | 322.10 | 1761.47 | 122.60 | |
| US2 | 322.10 | 323.00 | 1638.87 | 0.90 | |
| | 323.00 | 507.40 | 1637.97 | 184.40 | |
| *SE1 | 507.40 | 508.80 | 1453.57 | 1.40 | |
| | 508.80 | 541.20 | 1452.17 | 32.40 | |
| *SE2 | 541.20 | 543.90 | 1419.77 | 2.70 | |
| | 543.90 | 580.10 | 1417.07 | 36.20 | |
| *LS1 | 580.10 | 582.20 | 1380.87 | 2.10 | |
| | 582.20 | 626.00 | 1378.77 | 43.80 | |
| *UH1 | 626.00 | 627.00 | 1334.97 | 1.00 | |
| | 627.00 | 682.60 | 1333.97 | 55.60 | |
| *UH2 | 682.60 | 684.00 | 1278.37 | 1.40 | |
| | 684.00 | 801.80 | 1276.97 | 117.80 | |
| *MH2 | 801.80 | 803.00 | 1159.17 | 1.20 | |
| | 803.00 | 844.00 | 1157.97 | 41.00 | |
| *P11 | 844.00 | 845.00 | 1116.97 | 1.00 | |
| | 845.00 | 868.10 | 1115.97 | 23.10 | |
| *P10 | 868.10 | 869.00 | 1092.87 | 0.90 | |
| | 869.00 | 1296.00 | 1091.97 | 427.00 | |
| *P51 | 1296.00 | 1297.00 | 664.97 | 1.00 | |
| | 1297.00 | 1339.90 | 663.97 | 42.90 | |
| *P52 | 1339.90 | 1340.90 | 621.07 | 1.00 | |
| | 1340.90 | 1351.40 | 620.07 | 10.50 | |
| *COAL | 1351.40 | 1351.60 | 609.57 | 0.20 | |
| | 1351.60 | 1383.00 | 609.37 | 31.40 | |
| *P41 | 1383.00 | 1384.80 | 577.97 | 1.80 | |
| | 1384.80 | 1430.90 | 576.17 | 46.10 | |
| *P42 | 1430.90 | 1431.90 | 530.07 | 1.00 | |
| | 1431.90 | 1487.00 | 529.07 | 55.10 | |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\S39D.CMP
DATE: 05/07/08

Well: **S39D**

**Oil & Gas Show**

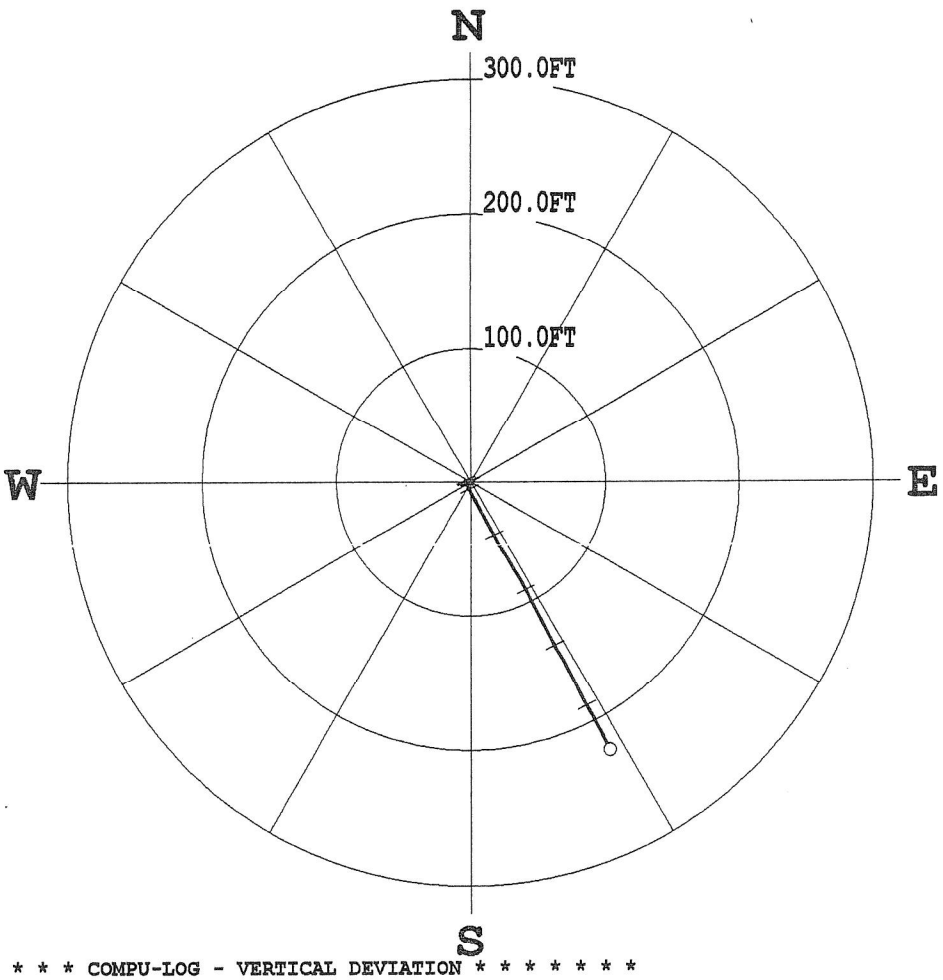
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 507.4 | 845 | 337.6 | | | |
| Pocahontas | 1296 | 1431.9 | 135.9 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

LIENT: CNX GAS
)CATION: -
)LE ID: 08-CNX-S-39D
ATE OF LOG: 03/31/08
ROBE: 0026C 777

MAG DECL: -7.1

SCALE: 100 FT/IN
TRUE DEPTH: 1455.66 FT
AZIMUTH: 152.6
DISTANCE: 224.2 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX GAS
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
HOLE ID. : 08-CNX-S-39D
DATE OF LOG : 03/31/08
PROBE : 0026C , 777
DEPTH UNITS : FEET
LOG: 08-CNX-S-39D_03-31-08_20-46_0026C_.10_-4.40_1493.50_DEVI.log

| ABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 2.20 | 2.20 | -0.00 | 0.00 | 0.0 | 98.5 | 0.7 | 98.5 |
| 5.60 | 5.60 | 0.02 | 0.01 | 0.0 | 28.0 | 0.5 | 31.5 |
| 15.60 | 15.60 | 0.06 | 0.06 | 0.1 | 45.0 | 0.4 | 106.0 |
| 25.60 | 25.60 | 0.09 | 0.02 | 0.1 | 15.0 | 0.5 | 356.1 |
| 35.60 | 35.60 | 0.05 | -0.01 | 0.1 | 352.5 | 0.6 | 224.9 |
| 45.60 | 45.60 | 0.07 | -0.07 | 0.1 | 312.6 | 0.4 | 293.7 |
| 55.60 | 55.60 | 0.13 | -0.09 | 0.2 | 325.8 | 0.4 | 329.4 |
| 65.60 | 65.60 | 0.13 | -0.15 | 0.2 | 311.6 | 0.5 | 336.3 |
| 75.60 | 75.60 | 0.19 | -0.13 | 0.2 | 324.5 | 0.4 | 82.3 |
| 85.60 | 85.60 | 0.18 | -0.15 | 0.2 | 319.7 | 0.5 | 323.3 |
| 95.60 | 95.60 | 0.22 | -0.15 | 0.3 | 326.0 | 0.4 | 105.9 |
| 105.60 | 105.60 | 0.18 | -0.15 | 0.2 | 320.8 | 0.3 | 39.2 |
| 115.60 | 115.60 | 0.18 | -0.23 | 0.3 | 308.4 | 0.6 | 283.7 |
| 125.60 | 125.60 | 0.25 | -0.27 | 0.4 | 313.2 | 0.6 | 281.3 |
| 135.60 | 135.60 | 0.30 | -0.37 | 0.5 | 308.8 | 0.5 | 308.8 |
| 145.60 | 145.59 | 0.30 | -0.39 | 0.5 | 307.5 | 0.6 | 212.1 |
| 155.60 | 155.59 | 0.27 | -0.45 | 0.5 | 300.6 | 0.2 | 120.9 |
| 165.60 | 165.59 | 0.22 | -0.55 | 0.6 | 291.8 | 0.9 | 277.2 |
| 175.60 | 175.59 | 0.28 | -0.66 | 0.7 | 292.7 | 0.3 | 341.5 |
| 185.60 | 185.59 | 0.31 | -0.74 | 0.8 | 292.6 | 0.3 | 15.3 |
| 195.60 | 195.59 | 0.31 | -0.72 | 0.8 | 292.8 | 0.7 | 228.1 |
| 205.60 | 205.59 | 0.29 | -0.78 | 0.8 | 290.2 | 0.3 | 177.7 |
| 215.60 | 215.59 | 0.22 | -0.84 | 0.9 | 284.5 | 1.1 | 238.0 |
| 225.60 | 225.59 | 0.23 | -0.92 | 0.9 | 284.1 | 0.2 | 297.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 35.60 | 35.60 | 0.05 | -0.01 | 0.1 | 352.5 | 0.8 | 224.9 |
| 45.60 | 45.60 | 0.07 | -0.07 | 0.1 | 312.6 | 0.4 | 293.7 |
| 55.60 | 55.60 | 0.13 | -0.09 | 0.2 | 325.8 | 0.4 | 329.4 |
| 65.60 | 65.60 | 0.13 | -0.15 | 0.2 | 311.6 | 0.5 | 336.3 |
| 75.60 | 75.60 | 0.19 | -0.13 | 0.2 | 324.5 | 0.4 | 82.3 |
| 85.60 | 85.60 | 0.18 | -0.15 | 0.2 | 319.7 | 0.5 | 323.3 |
| 95.60 | 95.60 | 0.22 | -0.15 | 0.3 | 326.0 | 0.4 | 105.9 |
| 105.60 | 105.60 | 0.18 | -0.15 | 0.2 | 320.8 | 0.3 | 39.2 |
| 115.60 | 115.60 | 0.18 | -0.23 | 0.3 | 308.4 | 0.6 | 283.7 |
| 125.60 | 125.60 | 0.25 | -0.27 | 0.4 | 313.2 | 0.6 | 281.3 |
| 135.60 | 135.60 | 0.30 | -0.37 | 0.5 | 308.8 | 0.5 | 308.8 |
| 145.60 | 145.59 | 0.30 | -0.39 | 0.5 | 307.5 | 0.6 | 212.1 |
| 155.60 | 155.59 | 0.27 | -0.45 | 0.5 | 300.6 | 0.2 | 120.9 |
| 165.60 | 165.59 | 0.22 | -0.55 | 0.6 | 291.8 | 0.9 | 277.2 |
| 175.60 | 175.59 | 0.28 | -0.66 | 0.7 | 292.7 | 0.3 | 341.5 |
| 185.60 | 185.59 | 0.31 | -0.74 | 0.8 | 292.6 | 0.3 | 15.3 |
| 195.60 | 195.59 | 0.31 | -0.72 | 0.8 | 292.8 | 0.7 | 228.1 |
| 205.60 | 205.59 | 0.29 | -0.78 | 0.8 | 290.2 | 0.3 | 177.7 |
| 215.60 | 215.59 | 0.22 | -0.84 | 0.9 | 284.5 | 1.1 | 238.0 |
| 225.60 | 225.59 | 0.23 | -0.92 | 0.9 | 284.1 | 0.2 | 297.1 |
| 235.60 | 235.59 | 0.27 | -1.00 | 1.0 | 284.9 | 0.5 | 343.7 |
| 245.60 | 245.59 | 0.30 | -1.05 | 1.1 | 286.2 | 0.3 | 241.5 |
| 255.60 | 255.59 | 0.33 | -1.12 | 1.2 | 286.5 | 0.2 | 297.2 |
| 265.60 | 265.59 | 0.30 | -1.15 | 1.2 | 284.6 | 0.1 | 280.6 |
| 275.60 | 275.59 | 0.25 | -1.20 | 1.2 | 281.7 | 0.7 | 221.9 |
| 285.60 | 285.59 | 0.17 | -1.26 | 1.3 | 277.6 | 0.7 | 220.0 |
| 295.60 | 295.59 | 0.10 | -1.44 | 1.4 | 273.9 | 1.2 | 245.4 |
| 305.60 | 305.58 | 0.07 | -1.59 | 1.6 | 272.5 | 0.7 | 206.3 |
| 315.60 | 315.58 | 0.01 | -1.76 | 1.8 | 270.5 | 1.1 | 261.2 |
| 325.60 | 325.58 | 0.02 | -1.94 | 1.9 | 270.5 | 1.0 | 240.0 |
| 335.60 | 335.58 | 0.04 | -2.10 | 2.1 | 271.1 | 1.1 | 281.4 |
| 345.60 | 345.58 | 0.07 | -2.30 | 2.3 | 271.8 | 1.1 | 278.4 |
| 355.60 | 355.58 | 0.06 | -2.47 | 2.5 | 271.5 | 1.1 | 262.2 |
| 365.60 | 365.57 | 0.12 | -2.61 | 2.6 | 272.7 | 0.8 | 311.2 |
| 375.60 | 375.57 | 0.19 | -2.74 | 2.7 | 274.0 | 0.5 | 304.3 |
| 385.60 | 385.57 | 0.12 | -2.84 | 2.8 | 272.5 | 1.3 | 242.0 |
| 395.60 | 395.57 | 0.16 | -2.97 | 3.0 | 273.2 | 0.7 | 309.0 |
| 405.60 | 405.57 | 0.24 | -3.10 | 3.1 | 274.5 | 0.9 | 304.0 |
| 415.60 | 415.57 | 0.33 | -3.21 | 3.2 | 275.8 | 0.7 | 312.8 |
| 425.60 | 425.57 | 0.40 | -3.30 | 3.3 | 276.9 | 0.9 | 268.3 |
| 435.60 | 435.57 | 0.43 | -3.45 | 3.5 | 277.2 | 0.8 | 306.3 |
| 445.60 | 445.57 | 0.51 | -3.51 | 3.6 | 278.2 | 0.6 | 323.1 |
| 455.60 | 455.57 | 0.59 | -3.57 | 3.6 | 279.4 | 0.6 | 320.9 |
| 465.60 | 465.56 | 0.68 | -3.66 | 3.7 | 280.5 | 0.7 | 321.9 |
| 475.60 | 475.56 | 0.76 | -3.72 | 3.8 | 281.6 | 0.5 | 324.4 |
| 485.60 | 485.56 | 0.85 | -3.75 | 3.8 | 282.7 | 0.5 | 339.3 |
| 495.60 | 495.56 | 0.93 | -3.79 | 3.9 | 283.8 | 0.5 | 341.6 |
| 505.60 | 505.56 | 1.01 | -3.80 | 3.9 | 284.9 | 0.4 | 15.4 |
| 515.60 | 515.56 | 1.03 | -3.78 | 3.9 | 285.3 | 0.7 | 208.3 |
| 525.60 | 525.56 | 1.03 | -3.87 | 4.0 | 284.9 | 0.5 | 356.1 |
| 535.60 | 535.56 | 1.08 | -3.98 | 4.1 | 285.2 | 0.6 | 325.7 |
| 545.60 | 545.56 | 1.17 | -4.02 | 4.2 | 286.2 | 0.7 | 305.8 |
| 555.60 | 555.56 | 1.24 | -4.04 | 4.2 | 287.1 | 0.5 | 61.9 |
| 565.60 | 565.56 | 1.30 | -4.00 | 4.2 | 288.0 | 0.6 | 174.9 |
| 575.60 | 575.56 | 1.23 | -3.97 | 4.2 | 287.2 | 0.5 | 169.8 |
| 585.60 | 585.56 | 1.14 | -3.97 | 4.1 | 286.0 | 0.6 | 214.6 |
| 595.60 | 595.56 | 1.17 | -4.00 | 4.2 | 286.3 | 0.5 | 20.4 |
| 605.60 | 605.56 | 1.24 | -3.97 | 4.2 | 287.3 | 0.5 | 121.2 |
| 615.60 | 615.56 | 1.24 | -3.91 | 4.1 | 287.6 | 0.5 | 161.9 |
| 625.60 | 625.56 | 1.20 | -3.89 | 4.1 | 287.2 | 0.7 | 267.7 |
| 635.60 | 635.56 | 1.19 | -3.93 | 4.1 | 286.8 | 0.7 | 303.1 |
| 645.60 | 645.56 | 1.17 | -4.00 | 4.2 | 286.2 | 0.6 | 306.0 |
| 655.60 | 655.55 | 1.20 | -4.10 | 4.3 | 286.3 | 0.6 | 277.5 |
| 665.60 | 665.55 | 1.28 | -4.14 | 4.3 | 287.2 | 0.6 | 15.4 |
| 675.60 | 675.55 | 1.32 | -4.17 | 4.4 | 287.5 | 0.4 | 78.0 |
| 685.60 | 685.55 | 1.05 | -4.10 | 4.2 | 284.4 | 2.9 | 170.1 |
| 695.60 | 695.53 | 0.55 | -3.96 | 4.0 | 277.9 | 2.8 | 153.2 |
| 705.60 | 705.50 | -0.16 | -3.69 | 3.7 | 267.6 | 4.3 | 159.5 |
| 715.60 | 715.46 | -1.04 | -3.29 | 3.5 | 252.5 | 6.8 | 148.1 |
| 725.60 | 725.39 | -2.08 | -2.79 | 3.5 | 233.2 | 7.7 | 146.4 |
| 735.60 | 735.30 | -3.27 | -2.19 | 3.9 | 213.8 | 7.9 | 116.5 |
| 745.60 | 745.18 | -4.60 | -1.56 | 4.9 | 198.8 | 9.2 | 150.8 |
| 755.60 | 755.04 | -6.05 | -0.79 | 6.1 | 187.5 | 10.4 | 158.9 |
| 765.60 | 764.88 | -7.68 | -0.03 | 7.7 | 180.2 | 10.8 | 148.3 |
| 775.60 | 774.68 | -9.41 | 0.86 | 9.4 | 174.8 | 11.6 | 154.7 |
| 785.60 | 784.46 | -11.27 | 1.87 | 11.4 | 170.6 | 13.0 | 151.9 |
| 795.60 | 794.18 | -13.30 | 2.97 | 13.6 | 167.4 | 13.6 | 154.8 |
| 805.60 | 803.86 | -15.46 | 4.24 | 16.0 | 164.7 | 15.4 | 153.7 |
| 815.60 | 813.49 | -17.83 | 5.49 | 18.7 | 162.9 | 15.8 | 153.3 |
| 825.60 | 823.10 | -20.27 | 6.77 | 21.4 | 161.5 | 16.1 | 155.7 |
| 835.60 | 832.71 | -22.71 | 8.07 | 24.1 | 160.4 | 16.1 | 149.9 |
| 845.60 | 842.34 | -25.05 | 9.32 | 26.7 | 159.6 | 16.4 | 148.1 |
| 855.60 | 851.92 | -27.54 | 10.63 | 29.5 | 158.9 | 16.0 | 151.5 |
| 865.60 | 861.53 | -29.97 | 11.96 | 32.3 | 158.2 | 16.1 | 151.5 |
| 875.60 | 871.15 | -32.39 | 13.26 | 35.0 | 157.7 | 16.3 | 145.5 |
| 885.60 | 880.75 | -34.85 | 14.60 | 37.8 | 157.3 | 16.3 | 151.5 |
| 895.60 | 890.35 | -37.30 | 15.94 | 40.6 | 156.9 | 16.3 | 151.5 |
| 905.60 | 899.95 | -39.79 | 17.22 | 43.4 | 156.6 | 16.6 | 150.8 |
| 915.60 | 909.53 | -42.32 | 18.56 | 46.2 | 156.3 | 16.8 | 149.4 |
| 925.60 | 919.11 | -44.87 | 19.75 | 49.0 | 156.2 | 16.4 | 154.1 |
| 935.60 | 928.68 | -47.28 | 21.20 | 51.8 | 155.9 | 17.2 | 141.3 |
| 945.60 | 938.22 | -49.78 | 22.83 | 54.8 | 155.4 | 17.8 | 154.3 |
| 955.60 | 947.74 | -52.32 | 24.47 | 57.8 | 154.9 | 17.8 | 147.7 |
| 965.60 | 957.26 | -54.90 | 26.13 | 60.8 | 154.6 | 17.3 | 148.8 |
| 975.60 | 966.78 | -57.46 | 27.75 | 63.8 | 154.2 | 18.1 | 148.2 |
| 985.60 | 976.32 | -60.07 | 29.18 | 66.8 | 154.1 | 17.3 | 157.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 905.60 | 899.95 | -39.79 | 17.22 | 43.4 | 156.6 | 16.6 | 150.8 |
| 915.60 | 909.53 | -42.32 | 18.56 | 46.2 | 156.3 | 16.8 | 149.4 |
| 925.60 | 919.11 | -44.87 | 19.75 | 49.0 | 156.2 | 16.4 | 154.1 |
| 935.60 | 928.68 | -47.28 | 21.20 | 51.8 | 155.9 | 17.2 | 141.3 |
| 945.60 | 938.22 | -49.78 | 22.83 | 54.8 | 155.4 | 17.8 | 154.3 |
| 955.60 | 947.74 | -52.32 | 24.47 | 57.8 | 154.9 | 17.8 | 147.7 |
| 965.60 | 957.26 | -54.90 | 26.13 | 60.8 | 154.6 | 17.3 | 148.8 |
| 975.60 | 966.78 | -57.46 | 27.75 | 63.8 | 154.2 | 18.1 | 148.2 |
| 985.60 | 976.32 | -60.07 | 29.18 | 66.8 | 154.1 | 17.3 | 157.1 |
| 995.60 | 985.89 | -62.57 | 30.48 | 69.6 | 154.0 | 17.4 | 146.8 |
| 1005.60 | 995.42 | -65.15 | 32.11 | 72.6 | 153.8 | 17.8 | 147.1 |
| 1015.60 | 1004.93 | -67.75 | 33.74 | 75.7 | 153.5 | 18.0 | 146.9 |
| 1025.60 | 1014.46 | -70.29 | 35.35 | 78.7 | 153.3 | 16.4 | 151.4 |
| 1035.60 | 1024.00 | -72.79 | 36.97 | 81.6 | 153.1 | 18.0 | 149.6 |
| 1045.60 | 1033.51 | -75.46 | 38.46 | 84.7 | 153.0 | 17.5 | 153.4 |
| 1055.60 | 1043.06 | -78.10 | 39.83 | 87.7 | 153.0 | 17.2 | 152.4 |
| 1065.60 | 1052.61 | -80.72 | 41.19 | 90.6 | 153.0 | 17.2 | 152.7 |
| 1075.60 | 1062.18 | -83.32 | 42.51 | 93.5 | 153.0 | 16.7 | 154.6 |
| 1085.60 | 1071.75 | -85.88 | 43.83 | 96.4 | 153.0 | 16.9 | 152.3 |
| 1095.60 | 1081.32 | -88.46 | 45.17 | 99.3 | 152.9 | 17.0 | 153.1 |
| 1105.60 | 1090.89 | -91.04 | 46.53 | 102.2 | 152.9 | 17.0 | 151.5 |
| 1115.60 | 1100.45 | -93.63 | 47.90 | 105.2 | 152.9 | 17.0 | 152.3 |
| 1125.60 | 1110.01 | -96.22 | 49.25 | 108.1 | 152.9 | 17.0 | 152.5 |
| 1135.60 | 1119.57 | -98.82 | 50.62 | 111.0 | 152.9 | 17.1 | 152.5 |
| 1145.60 | 1129.13 | -101.43 | 51.98 | 114.0 | 152.9 | 17.2 | 152.1 |
| 1155.60 | 1138.68 | -104.05 | 53.35 | 116.9 | 152.9 | 17.2 | 152.6 |
| 1165.60 | 1148.23 | -106.68 | 54.72 | 119.9 | 152.8 | 17.3 | 152.8 |
| 1175.60 | 1157.77 | -109.34 | 56.08 | 122.9 | 152.8 | 17.4 | 153.4 |
| 1185.60 | 1167.31 | -112.01 | 57.43 | 125.9 | 152.9 | 17.4 | 153.2 |
| 1195.60 | 1176.85 | -114.68 | 58.81 | 128.9 | 152.9 | 17.5 | 152.5 |
| 1205.60 | 1186.38 | -117.36 | 60.21 | 131.9 | 152.8 | 17.7 | 152.2 |
| 1215.60 | 1195.91 | -120.06 | 61.60 | 134.9 | 152.8 | 17.9 | 152.1 |
| 1225.60 | 1205.43 | -122.78 | 62.97 | 138.0 | 152.8 | 17.9 | 160.4 |
| 1235.60 | 1214.93 | -125.32 | 64.43 | 140.9 | 152.8 | 17.1 | 126.8 |
| 1245.60 | 1224.40 | -128.03 | 65.97 | 144.0 | 152.7 | 20.3 | 148.5 |
| 1255.60 | 1233.84 | -130.85 | 67.69 | 147.3 | 152.6 | 19.5 | 152.7 |
| 1265.60 | 1243.28 | -133.67 | 69.29 | 150.6 | 152.6 | 18.6 | 150.4 |
| 1275.60 | 1252.75 | -136.53 | 70.66 | 153.7 | 152.6 | 18.8 | 165.5 |
| 1285.60 | 1262.24 | -139.29 | 72.03 | 156.8 | 152.7 | 15.4 | 76.8 |
| 1295.60 | 1271.68 | -142.18 | 73.62 | 160.1 | 152.6 | 19.8 | 147.6 |
| 1305.60 | 1281.13 | -145.03 | 75.05 | 163.3 | 152.6 | 18.6 | 154.2 |
| 1315.60 | 1290.60 | -147.91 | 76.46 | 166.5 | 152.7 | 18.7 | 153.6 |
| 1325.60 | 1300.07 | -150.81 | 77.88 | 169.7 | 152.7 | 18.9 | 153.5 |
| 1335.60 | 1309.54 | -153.71 | 79.29 | 173.0 | 152.7 | 18.9 | 154.0 |
| 1345.60 | 1319.00 | -156.61 | 80.70 | 176.2 | 152.7 | 18.8 | 153.7 |
| 1355.60 | 1328.47 | -159.49 | 82.10 | 179.4 | 152.8 | 18.5 | 153.4 |
| 1365.60 | 1337.94 | -162.36 | 83.54 | 182.6 | 152.8 | 18.8 | 153.8 |
| 1375.60 | 1347.39 | -165.16 | 85.15 | 185.8 | 152.7 | 19.5 | 151.9 |
| 1385.60 | 1356.79 | -168.07 | 86.87 | 189.2 | 152.7 | 19.6 | 149.2 |
| 1395.60 | 1366.20 | -170.96 | 88.60 | 192.6 | 152.6 | 20.2 | 145.6 |
| 1405.60 | 1375.62 | -173.84 | 90.28 | 195.9 | 152.6 | 20.3 | 149.7 |
| 1415.60 | 1385.02 | -176.81 | 91.87 | 199.3 | 152.5 | 19.5 | 151.7 |
| 1425.60 | 1394.47 | -179.76 | 93.25 | 202.5 | 152.6 | 18.9 | 158.6 |
| 1435.60 | 1403.92 | -182.67 | 94.68 | 205.7 | 152.6 | 19.1 | 149.2 |
| 1445.60 | 1413.33 | -185.56 | 96.31 | 209.1 | 152.6 | 20.9 | 154.1 |
| 1455.60 | 1422.75 | -188.56 | 97.76 | 212.4 | 152.6 | 19.2 | 155.0 |
| 1465.60 | 1432.19 | -191.52 | 99.13 | 215.7 | 152.6 | 19.1 | 155.2 |
| 1475.60 | 1441.62 | -194.38 | 100.71 | 218.9 | 152.6 | 20.1 | 151.3 |
| 1485.60 | 1450.99 | -197.45 | 102.42 | 222.4 | 152.6 | 20.7 | 150.9 |
| 1490.60 | 1455.66 | -199.00 | 103.28 | 224.2 | 152.6 | 20.7 | 150.9 |

Well: **S39D**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 31.25 | 24" | | | X | 03/25/08 | |
| Surface | 16" | | 20" | | X | | | |
| Water Protection | 13 3/8" | 376 | 15 3/8" | 168 | X | | 03/26/08 | Basket@84' |
| Coal Protection | 13 3/8" | 376 | 15 3/8" | 168 | X | | 03/26/08 | Basket@84' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE S-39D

RIG #: 87

LOCATION: HURRICANE BRANCH

DATE STARTED: 3/25/2008

DATE COMPLETED: 4/1/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 24 | 24 | OVER BURDEN |
| 24 | 31 | 7 | SHALE/SAND |
| 31 | 65 | 34 | SHALE/SAND/COAL |
| 65 | 95 | 30 | SHALE/SAND |
| 95 | 125 | 30 | SHALE/SAND |
| 125 | 154 | 29 | SHALE/SAND |
| 154 | 186 | 32 | SANDSTONE/SANDY SH/SLATE OR COAL/SAND: |
| 186 | 218 | 32 | SAND/SANDY SHALE/COAL |
| 218 | 249 | 31 | SAND |
| 249 | 281 | 32 | SAND |
| 281 | 313 | 32 | SAND |
| 313 | 344 | 31 | SAND |
| 344 | 376 | 32 | SANDY SHALE |
| 376 | 401 | 25 | SANDY SHALE/SANDSTONE |
| 401 | 433 | 32 | SANDSTONE/SANDY SH STR |
| 433 | 465 | 32 | SANDY/SHALE |
| 465 | 496 | 31 | SAND/SHALE/COAL |
| 496 | 528 | 32 | SANDY SHALE |
| 528 | 560 | 32 | SAND/SANDY SHALE |
| 560 | 591 | 31 | SANDY SHALE/COAL |
| 591 | 623 | 32 | SAND/SANDY SHALE |
| 623 | 654 | 31 | SANDY SH/COAL/SANDSTONE/SANDY SH |
| 654 | 663 | 9 | SANDSTONE |
| 663 | 695 | 32 | SANDSTONE |
| 695 | 727 | 32 | SANDSTONE |
| 727 | 758 | 31 | SAND/SHALE/COAL |
| 758 | 790 | 32 | SANDSTONE |
| 790 | 822 | 32 | SAND/SHALE/COAL |
| 822 | 837 | 15 | SANDSTONE |
| 837 | 855 | 18 | SAND/SANDY SHALE |
| 855 | 887 | 32 | SAND/COAL |
| 887 | 918 | 31 | SANDSTONE |
| 918 | 950 | 32 | SHALE/SAND |
| 950 | 982 | 32 | SHALE/SAND/COAL |

| | | | |
|---|---|---|---|
| 982 | 1013 | 31 | SHALE/SAND/COAL |
| 1013 | 1045 | 32 | SHALE/SAND/COAL |
| 1045 | 1077 | 32 | SHALE/SAND |
| 1077 | 1108 | 31 | SHALE/SAND/COAL |
| 1108 | 1140 | 32 | SANDSTONE |
| 1140 | 1171 | 31 | SANDSTONE |
| 1171 | 1203 | 32 | SANDSTONE |
| 1203 | 1234 | 31 | SANDSTONE |
| 1234 | 1266 | 32 | SANDSTONE |
| 1266 | 1298 | 32 | SAND/SANDY SHALE |
| 1298 | 1329 | 31 | SAND |
| 1329 | 1392 | 63 | SAND |
| 1392 | 1424 | 32 | SAND/COAL |
| 1424 | 1456 | 32 | SAND |
| 1456 | 1487 | 31 | SANDSTONE/SANDY SH STR |

1487' TOTAL DEPTH
31.25' OF 22" CASING
336' OF 13 3/8" CASING

)STONE

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1762 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3816 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 3/25/2008 |
| **Driller's Total Depth:** | 1493.00 | **Log's Total Depth:** | 1484.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 4/30/2009 *(Company)*

By: Jerry Boothe Title: Manager *(Signature)*

## INTERNAL USE ONLY

Submit Date: 4/30/2009

Status: Date: 5/19/2009

Final PDF Date: 5/20/2009

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1814 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3816 |
| **Operations Name:** | CBM S39E W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 3/18/2008

Drilling Contractor: NOAH HORN

Date drilling completed: 3/25/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1493.00

Log Total Depth (feet): 1484.00

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10498430.5500

Permitted State Plane Y: 3611213.7800

Final Plat State Plane X: 10498430.3700

Final Plat State Plane Y: 3611213.8340

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | |
|---|---|
| PLAT | S39E PLAT.pdf |

**3. Geological Data**

| | | |
|---|---|---|
| 25 | 5 | GPM |

| | | |
|---|---|---|
| | | |

List of Attached Items:

| | |
|---|---|
| EXHIBIT A | S39E EXH A.pdf |

List of Attached Items:

| | |
|---|---|
| GAS SHOW | S39E Gas Show.xls |

List all logs run: CALIPER GAMMA DENSITY TEMP DEVIATION

Did logs disclose vertical locations of a coal seam? ☑

List of Attached Items:

| | |
|---|---|
| DEVIATION | S39E DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| CASING | S39E Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: NOAH HORN

List of Attached Items:

| | |
|---|---|
| DRILL DATA | S39E DRILL DATA.pdf |

## 9. Comments

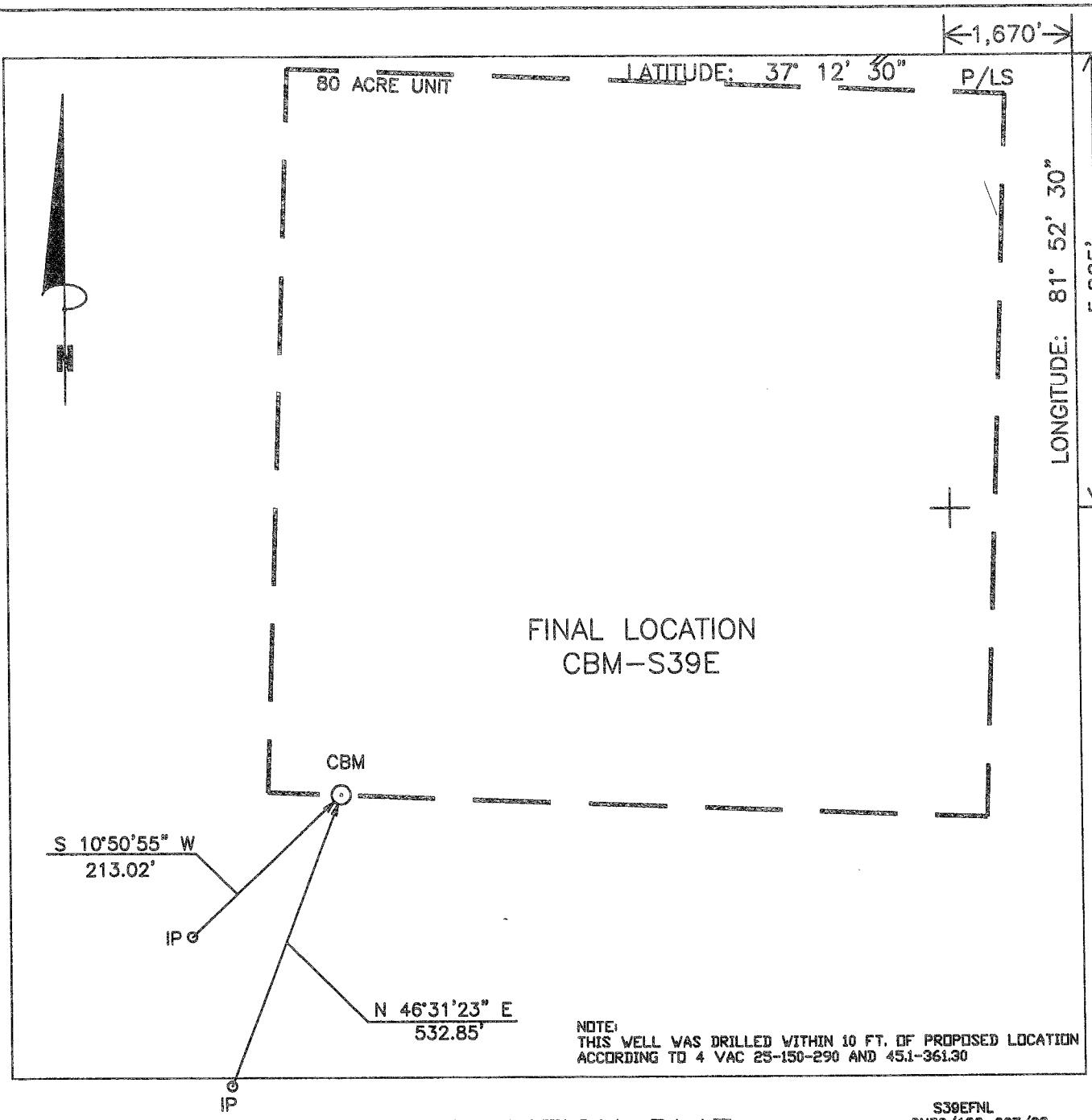
## 10. Signature

Permitee: CNX Gas Company LLC Date: 4/22/2009

Signed By: Ken Kormendy Title: Supervisor

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 4/22/2009 | | |
| Status: | A | Date: | 4/24/2009 |
| Final PDF Date: | 5/8/2009 | | |




# WELL LOCATION PLAT

S39EFNL
2N30/100-667/02

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-S39E

TRACT NUMBER COAL MOUNTAIN MINING QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 330,334.20 E 1,015,442.21

ELEVATION: 1961.89' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 03-21-08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price DRP

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
PROFESSIONAL ENGINEER
3/24/08

Form DGO-GO-7
Rev. 10/96

S39E.CMP
Exhibit A

Well Name: 08 CBM S39E
SURFACE ELEV: 1961.89  EASTING: 1015442.21  NORTHING:  330334.20

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 38.40 | 39.00 | 1923.49 | 0.60 | |
| | 39.00 | 77.20 | 1922.89 | 38.20 | |
| COAL | 77.20 | 77.90 | 1884.69 | 0.70 | |
| | 77.90 | 89.50 | 1883.99 | 11.60 | |
| COAL | 89.50 | 90.00 | 1872.39 | 0.50 | |
| | 90.00 | 101.90 | 1871.89 | 11.90 | |
| TI | 101.90 | 102.20 | 1859.99 | 0.30 | |
| | 102.20 | 113.10 | 1859.69 | 10.90 | |
| COAL | 113.10 | 113.70 | 1848.79 | 0.60 | |
| | 113.70 | 153.00 | 1848.19 | 39.30 | |
| COAL | 153.00 | 153.90 | 1808.89 | 0.90 | |
| | 153.90 | 179.10 | 1807.99 | 25.20 | |
| US1 | 179.10 | 180.10 | 1782.79 | 1.00 | |
| | 180.10 | 218.90 | 1781.79 | 38.80 | |
| COAL | 218.90 | 219.80 | 1742.99 | 0.90 | |
| | 219.80 | 327.00 | 1742.09 | 107.20 | |
| US2 | 327.00 | 327.90 | 1634.89 | 0.90 | |
| | 327.90 | 449.80 | 1633.99 | 121.90 | |
| *COAL | 449.80 | 450.90 | 1512.09 | 1.10 | |
| | 450.90 | 510.40 | 1510.99 | 59.50 | |
| *SE1 | 510.40 | 512.10 | 1451.49 | 1.70 | |
| | 512.10 | 545.90 | 1449.79 | 33.80 | |
| *SE2 | 545.90 | 548.00 | 1415.99 | 2.10 | |
| | 548.00 | 585.80 | 1413.89 | 37.80 | |
| *LS1 | 585.80 | 588.00 | 1376.09 | 2.20 | |
| | 588.00 | 652.20 | 1373.89 | 64.20 | |
| *UH1 | 652.20 | 653.10 | 1309.69 | 0.90 | |
| | 653.10 | 688.00 | 1308.79 | 34.90 | |
| *UH2 | 688.00 | 689.50 | 1273.89 | 1.50 | |
| | 689.50 | 808.00 | 1272.39 | 118.50 | |
| *MH2 | 808.00 | 808.90 | 1153.89 | 0.90 | |
| | 808.90 | 873.60 | 1152.99 | 64.70 | |
| *P10 | 873.60 | 874.10 | 1088.29 | 0.50 | |
| | 874.10 | 930.00 | 1087.79 | 55.90 | |
| *LH3 | 930.00 | 932.90 | 1031.89 | 2.90 | |
| | 932.90 | 965.10 | 1028.99 | 32.20 | |
| *COAL | 965.10 | 966.00 | 996.79 | 0.90 | |
| | 966.00 | 1006.50 | 995.89 | 40.50 | |
| *P91 | 1006.50 | 1007.80 | 955.39 | 1.30 | |
| | 1007.80 | 1050.80 | 954.09 | 43.00 | |
| *P81 | 1050.80 | 1051.60 | 911.09 | 0.80 | |
| | 1051.60 | 1067.20 | 910.29 | 15.60 | |
| *P82 | 1067.20 | 1068.00 | 894.69 | 0.80 | |
| | 1068.00 | 1321.00 | 893.89 | 253.00 | |
| *P52 | 1321.00 | 1322.70 | 640.89 | 1.70 | |
| | 1322.70 | 1368.10 | 639.19 | 45.40 | |
| *P41 | 1368.10 | 1368.90 | 593.79 | 0.80 | |
| | 1368.90 | 1425.30 | 592.99 | 56.40 | |
| *P42 | 1425.30 | 1426.50 | 536.59 | 1.20 | |
| | 1426.50 | 1493.00 | 535.39 | 66.50 | |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\S39E.CMP
DATE: 05/07/08

Well: **S39E**

**Oil & Gas Show**

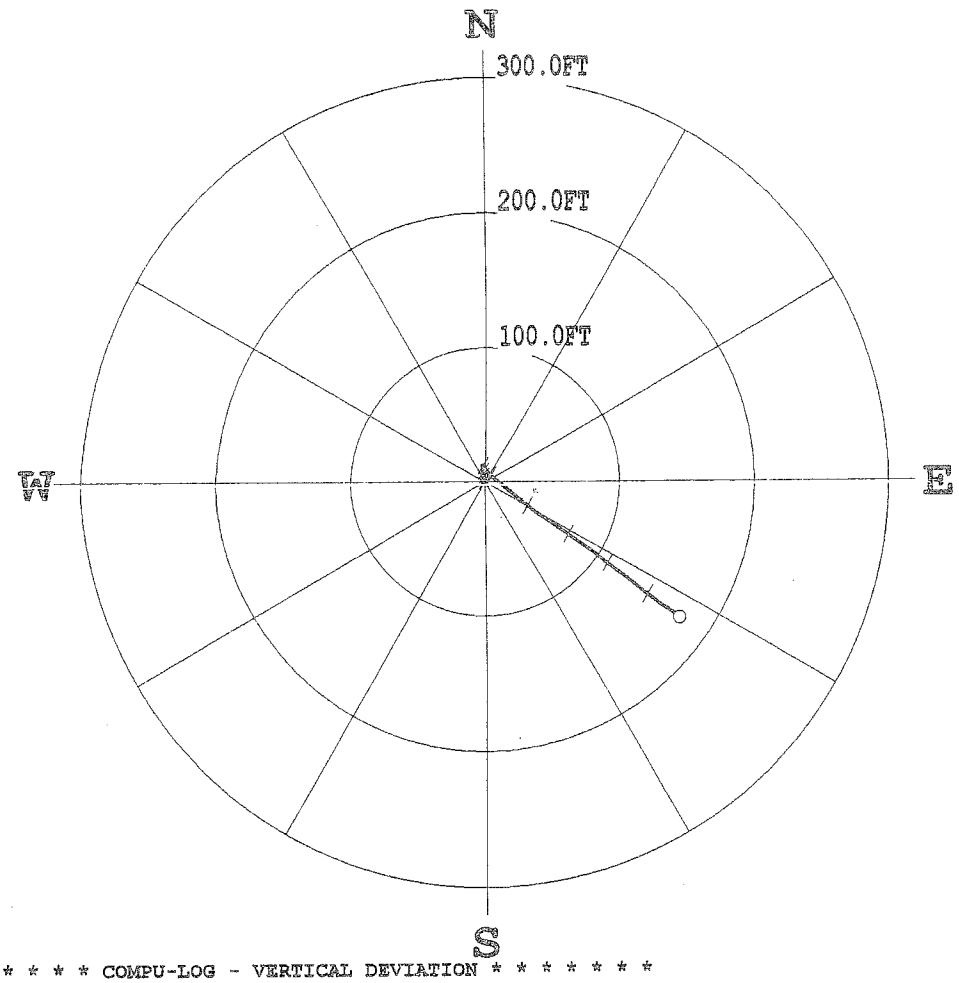
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 449.8 | 1007.8 | 558.0 | | | |
| Pocahontas | 1321.0 | 1426.5 | 105.5 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

LIENT: CNX GAS
OCATION: -
OLE ID: 08-CNX-S-39E
ATE OF LOG: 03/25/08
ROBE: 0026C 777

MAG DECL: -7.1

SCALE: 100 FT/IN
TRUE DEPTH: 1461.53 FT
AZIMUTH: 125.2
DISTANCE: 175.8 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX GAS
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
HOLE ID. : 08-CNX-S-39E
DATE OF LOG : 03/25/08
PROBE : 0026C , 777
DEPTH UNITS : FEET
LOG: 08-CNX-S-39E_03-25-08_01-15_0026C_.10_-3.30_1484.00_DEVI.log

| BLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 3.30 | 3.30 | 0.00 | 0.00 | 0.0 | 58.5 | 0.7 | 58.5 |
| 6.70 | 6.70 | 0.03 | 0.03 | 0.0 | 41.0 | 0.7 | 34.5 |
| 16.70 | 16.70 | 0.04 | 0.10 | 0.1 | 69.4 | 0.6 | 82.7 |
| 26.70 | 26.70 | -0.02 | 0.12 | 0.1 | 97.9 | 0.6 | 224.5 |
| 36.70 | 36.70 | -0.09 | 0.04 | 0.1 | 155.2 | 0.6 | 223.0 |
| 46.70 | 46.70 | -0.17 | 0.09 | 0.2 | 151.6 | 0.6 | 137.4 |
| 56.70 | 56.70 | -0.11 | 0.09 | 0.1 | 138.4 | 0.8 | 359.6 |
| 66.70 | 66.70 | 0.02 | 0.09 | 0.1 | 79.5 | 0.8 | 23.9 |
| 76.70 | 76.69 | 0.03 | 0.09 | 0.1 | 72.8 | 0.6 | 272.7 |
| 86.70 | 86.69 | -0.04 | 0.04 | 0.1 | 135.2 | 0.7 | 223.2 |
| 96.70 | 96.69 | 0.03 | -0.11 | 0.1 | 285.9 | 1.1 | 307.9 |
| 106.70 | 106.69 | 0.12 | -0.13 | 0.2 | 312.7 | 0.8 | 190.8 |
| 116.70 | 116.69 | 0.15 | -0.26 | 0.3 | 300.4 | 1.3 | 306.4 |
| 126.70 | 126.69 | 0.28 | -0.30 | 0.4 | 312.5 | 0.7 | 250.8 |
| 136.70 | 136.69 | 0.40 | -0.39 | 0.6 | 316.3 | 0.2 | 275.6 |
| 146.70 | 146.68 | 0.52 | -0.53 | 0.7 | 314.7 | 1.6 | 329.9 |
| 156.70 | 156.68 | 0.72 | -0.61 | 0.9 | 319.7 | 1.5 | 351.5 |
| 166.70 | 166.68 | 0.93 | -0.59 | 1.1 | 327.5 | 0.9 | 29.8 |
| 176.70 | 176.68 | 1.07 | -0.59 | 1.2 | 331.0 | 1.7 | 341.2 |
| 186.70 | 186.68 | 1.26 | -0.68 | 1.4 | 331.6 | 0.9 | 245.8 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 16.70 | 16.70 | 0.04 | 0.10 | 0.1 | 69.4 | 0.6 | 82.7 |
| 26.70 | 26.70 | -0.02 | 0.12 | 0.1 | 97.9 | 0.6 | 224.5 |
| 36.70 | 36.70 | -0.09 | 0.04 | 0.1 | 155.2 | 0.6 | 223.0 |
| 46.70 | 46.70 | -0.17 | 0.09 | 0.2 | 151.6 | 0.6 | 137.4 |
| 56.70 | 56.70 | -0.11 | 0.09 | 0.1 | 138.4 | 0.8 | 359.6 |
| 66.70 | 66.70 | 0.02 | 0.09 | 0.1 | 79.5 | 0.8 | 23.9 |
| 76.70 | 76.69 | 0.03 | 0.09 | 0.1 | 72.8 | 0.6 | 272.7 |
| 86.70 | 86.69 | -0.04 | 0.04 | 0.1 | 135.2 | 0.7 | 223.2 |
| 96.70 | 96.69 | 0.03 | -0.11 | 0.1 | 285.9 | 1.1 | 307.9 |
| 106.70 | 106.69 | 0.12 | -0.13 | 0.2 | 312.7 | 0.8 | 190.8 |
| 116.70 | 116.69 | 0.15 | -0.26 | 0.3 | 300.4 | 1.3 | 306.4 |
| 126.70 | 126.69 | 0.28 | -0.30 | 0.4 | 312.5 | 0.7 | 250.8 |
| 136.70 | 136.69 | 0.40 | -0.39 | 0.6 | 316.3 | 0.2 | 275.6 |
| 146.70 | 146.68 | 0.52 | -0.53 | 0.7 | 314.7 | 1.6 | 329.9 |
| 156.70 | 156.68 | 0.72 | -0.61 | 0.9 | 319.7 | 1.5 | 351.5 |
| 166.70 | 166.68 | 0.93 | -0.59 | 1.1 | 327.5 | 0.9 | 29.8 |
| 176.70 | 176.68 | 1.07 | -0.59 | 1.2 | 331.0 | 1.7 | 341.2 |
| 186.70 | 186.68 | 1.26 | -0.68 | 1.4 | 331.6 | 0.9 | 245.8 |
| 196.70 | 196.67 | 1.52 | -0.72 | 1.7 | 334.7 | 1.3 | 27.5 |
| 206.70 | 206.67 | 1.75 | -0.76 | 1.9 | 336.6 | 1.1 | 10.4 |
| 216.70 | 216.67 | 1.94 | -0.75 | 2.1 | 338.8 | 1.1 | 19.9 |
| 226.70 | 226.66 | 2.17 | -0.80 | 2.3 | 339.9 | 1.7 | 10.6 |
| 236.70 | 236.66 | 2.35 | -0.74 | 2.5 | 342.5 | 1.1 | 14.6 |
| 246.70 | 246.66 | 2.57 | -0.83 | 2.7 | 342.1 | 1.7 | 320.3 |
| 256.70 | 256.65 | 2.82 | -0.81 | 2.9 | 343.9 | 1.5 | 26.2 |
| 266.70 | 266.65 | 3.00 | -0.88 | 3.1 | 343.7 | 1.2 | 285.3 |
| 276.70 | 276.65 | 3.27 | -0.92 | 3.4 | 344.3 | 1.3 | 15.4 |
| 286.70 | 286.64 | 3.48 | -0.98 | 3.6 | 344.3 | 1.5 | 321.1 |
| 296.70 | 296.64 | 3.77 | -1.06 | 3.9 | 344.3 | 1.6 | 8.4 |
| 306.70 | 306.64 | 3.96 | -1.04 | 4.1 | 345.3 | 1.2 | 305.4 |
| 316.70 | 316.63 | 4.22 | -1.17 | 4.4 | 344.5 | 1.9 | 10.5 |
| 326.70 | 326.63 | 4.45 | -1.14 | 4.6 | 345.6 | 1.8 | 336.1 |
| 336.70 | 336.62 | 4.80 | -1.20 | 4.9 | 345.9 | 1.6 | 15.2 |
| 346.70 | 346.62 | 5.05 | -1.14 | 5.2 | 347.3 | 1.7 | 10.2 |
| 356.70 | 356.61 | 5.40 | -1.25 | 5.5 | 347.0 | 2.1 | 329.4 |
| 366.70 | 366.61 | 5.62 | -1.25 | 5.8 | 347.4 | 1.3 | 352.2 |
| 376.70 | 376.61 | 5.84 | -1.33 | 6.0 | 347.2 | 1.8 | 336.3 |
| 386.70 | 386.60 | 6.09 | -1.34 | 6.2 | 347.5 | 1.1 | 9.4 |
| 396.70 | 396.60 | 6.29 | -1.38 | 6.4 | 347.6 | 1.7 | 329.9 |
| 406.70 | 406.59 | 6.60 | -1.50 | 6.8 | 347.2 | 1.7 | 327.5 |
| 416.70 | 416.59 | 6.90 | -1.63 | 7.1 | 346.7 | 2.0 | 339.3 |
| 426.70 | 426.58 | 7.16 | -1.66 | 7.3 | 347.0 | 0.8 | 0.0 |
| 436.70 | 436.58 | 7.32 | -1.62 | 7.5 | 347.6 | 1.3 | 16.1 |
| 446.70 | 446.58 | 7.52 | -1.56 | 7.7 | 348.3 | 1.5 | 13.2 |
| 456.70 | 456.58 | 7.78 | -1.52 | 7.9 | 349.0 | 1.4 | 355.4 |
| 466.70 | 466.57 | 8.15 | -1.61 | 8.3 | 348.8 | 2.3 | 349.4 |
| 476.70 | 476.56 | 8.55 | -1.64 | 8.7 | 349.1 | 2.0 | 14.7 |
| 486.70 | 486.56 | 8.82 | -1.60 | 9.0 | 349.7 | 1.6 | 4.9 |
| 496.70 | 496.55 | 9.06 | -1.55 | 9.2 | 350.3 | 1.4 | 4.9 |
| 506.70 | 506.55 | 9.37 | -1.50 | 9.5 | 350.9 | 2.0 | 13.6 |
| 516.70 | 516.55 | 9.64 | -1.49 | 9.8 | 351.2 | 1.4 | 358.8 |
| 526.70 | 526.54 | 9.88 | -1.52 | 10.0 | 351.3 | 1.7 | 346.0 |
| 536.70 | 536.54 | 10.22 | -1.58 | 10.3 | 351.2 | 1.2 | 6.5 |
| 546.70 | 546.53 | 10.42 | -1.57 | 10.5 | 351.5 | 1.5 | 4.6 |
| 556.70 | 556.53 | 10.65 | -1.54 | 10.8 | 351.8 | 1.1 | 2.4 |
| 566.70 | 566.53 | 10.86 | -1.60 | 11.0 | 351.6 | 1.7 | 332.8 |
| 576.70 | 576.52 | 11.16 | -1.73 | 11.3 | 351.2 | 2.1 | 338.9 |
| 586.70 | 586.52 | 11.51 | -1.87 | 11.7 | 350.8 | 2.3 | 337.2 |
| 596.70 | 596.51 | 11.83 | -2.01 | 12.0 | 350.4 | 1.6 | 341.8 |
| 606.70 | 606.50 | 12.18 | -2.14 | 12.4 | 350.0 | 2.1 | 344.5 |
| 616.70 | 616.50 | 12.45 | -2.27 | 12.7 | 349.7 | 1.5 | 333.8 |
| 626.70 | 626.50 | 12.62 | -2.31 | 12.8 | 349.6 | 0.8 | 340.1 |
| 636.70 | 636.50 | 12.73 | -2.30 | 12.9 | 349.8 | 0.6 | 19.9 |
| 646.70 | 646.49 | 12.72 | -2.22 | 12.9 | 350.1 | 0.5 | 114.0 |
| 656.70 | 656.49 | 12.73 | -2.14 | 12.9 | 350.5 | 0.8 | 108.5 |
| 666.70 | 666.49 | 12.55 | -1.95 | 12.7 | 351.2 | 2.4 | 153.1 |
| 676.70 | 676.48 | 12.16 | -1.73 | 12.3 | 351.9 | 2.5 | 145.0 |
| 686.70 | 686.46 | 11.60 | -1.37 | 11.7 | 353.3 | 3.9 | 138.6 |
| 696.70 | 696.41 | 10.90 | -0.78 | 10.9 | 355.9 | 6.0 | 139.2 |
| 706.70 | 706.35 | 10.02 | -0.03 | 10.0 | 359.8 | 8.0 | 139.2 |
| 716.70 | 716.26 | 9.00 | 0.71 | 9.0 | 4.5 | 7.8 | 145.7 |
| 726.70 | 726.17 | 7.90 | 1.55 | 8.0 | 11.1 | 8.4 | 138.5 |
| 736.70 | 736.04 | 6.73 | 2.58 | 7.2 | 21.0 | 9.2 | 138.5 |
| 746.70 | 745.90 | 5.55 | 3.73 | 6.7 | 33.9 | 10.4 | 155.7 |
| 756.70 | 755.73 | 4.26 | 5.10 | 6.6 | 50.1 | 11.2 | 133.3 |
| 766.70 | 765.51 | 2.89 | 6.62 | 7.2 | 66.4 | 11.9 | 135.3 |
| 776.70 | 775.27 | 1.51 | 8.28 | 8.4 | 79.7 | 12.9 | 130.1 |
| 786.70 | 785.01 | 0.04 | 10.04 | 10.0 | 89.8 | 13.4 | 132.7 |
| 796.70 | 794.72 | -1.49 | 11.85 | 11.9 | 97.1 | 13.7 | 135.1 |
| 806.70 | 804.43 | -3.03 | 13.69 | 14.0 | 102.5 | 13.9 | 130.4 |
| 816.70 | 814.12 | -4.56 | 15.61 | 16.3 | 106.3 | 13.7 | 133.2 |
| 826.70 | 823.83 | -6.05 | 17.45 | 18.5 | 109.1 | 13.8 | 127.2 |
| 836.70 | 833.55 | -7.50 | 19.26 | 20.7 | 111.3 | 14.1 | 126.8 |
| 846.70 | 843.27 | -9.00 | 21.07 | 22.9 | 113.1 | 15.4 | 124.3 |
| 856.70 | 852.98 | -10.43 | 22.88 | 25.1 | 114.5 | 13.2 | 106.3 |
| 866.70 | 862.71 | -11.90 | 24.68 | 27.4 | 115.8 | 13.5 | 131.6 |
| 876.70 | 872.43 | -13.33 | 26.46 | 29.6 | 116.7 | 14.0 | 128.7 |
| 886.70 | 882.14 | -14.84 | 28.34 | 32.0 | 117.6 | 13.4 | 130.7 |
| 896.70 | 891.87 | -16.30 | 30.13 | 34.3 | 118.4 | 13.3 | 129.1 |
| 906.70 | 901.60 | -17.74 | 31.90 | 36.5 | 119.1 | 13.3 | 128.7 |
| 916.70 | 911.33 | -19.20 | 33.68 | 38.8 | 119.7 | 13.3 | 129.2 |
| 926.70 | 921.07 | -20.65 | 35.47 | 41.0 | 120.2 | 13.3 | 128.9 |
| 936.70 | 930.80 | -22.10 | 37.22 | 43.3 | 120.7 | 13.2 | 129.1 |
| 946.70 | 940.53 | -23.51 | 39.02 | 45.6 | 121.1 | 13.1 | 141.8 |
| 956.70 | 950.23 | -24.85 | 41.07 | 48.0 | 121.2 | 14.3 | 120.4 |
| 966.70 | 959.92 | -26.20 | 43.10 | 50.4 | 121.3 | 14.7 | 121.2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 856.70 | 852.96 | -10.83 | 22.88 | 25.4 | 115.8 | 13.5 | 131.6 |
| 866.70 | 862.71 | -11.90 | 24.68 | 27.4 | 115.8 | 13.5 | 131.6 |
| 876.70 | 872.43 | -13.33 | 26.46 | 29.6 | 116.7 | 14.0 | 128.7 |
| 886.70 | 882.14 | -14.84 | 28.34 | 32.0 | 117.6 | 13.4 | 130.7 |
| 896.70 | 891.87 | -16.30 | 30.13 | 34.3 | 118.4 | 13.3 | 129.1 |
| 906.70 | 901.60 | -17.74 | 31.90 | 36.5 | 119.1 | 13.3 | 128.7 |
| 916.70 | 911.33 | -19.20 | 33.66 | 38.8 | 119.7 | 13.3 | 129.2 |
| 926.70 | 921.07 | -20.65 | 35.47 | 41.0 | 120.2 | 13.3 | 128.9 |
| 936.70 | 930.80 | -22.10 | 37.22 | 43.3 | 120.7 | 13.2 | 129.1 |
| 946.70 | 940.53 | -23.51 | 39.02 | 45.6 | 121.1 | 13.1 | 141.8 |
| 956.70 | 950.23 | -24.85 | 41.07 | 48.0 | 121.2 | 14.3 | 120.4 |
| 966.70 | 959.92 | -26.20 | 43.10 | 50.4 | 121.3 | 14.7 | 121.2 |
| 976.70 | 969.60 | -27.60 | 45.16 | 52.9 | 121.4 | 14.0 | 123.8 |
| 986.70 | 979.30 | -28.95 | 47.17 | 55.3 | 121.5 | 14.4 | 121.8 |
| 996.70 | 989.00 | -30.32 | 49.16 | 57.8 | 121.7 | 14.7 | 125.8 |
| 1006.70 | 998.69 | -31.69 | 51.16 | 60.2 | 121.8 | 14.0 | 129.6 |
| 1016.70 | 1008.41 | -33.02 | 53.10 | 62.5 | 121.9 | 13.6 | 118.5 |
| 1026.70 | 1018.12 | -34.42 | 55.06 | 64.9 | 122.0 | 13.8 | 138.2 |
| 1036.70 | 1027.83 | -35.76 | 57.02 | 67.3 | 122.1 | 13.8 | 124.5 |
| 1046.70 | 1037.54 | -37.11 | 58.98 | 69.7 | 122.2 | 13.7 | 125.3 |
| 1056.70 | 1047.25 | -38.44 | 60.94 | 72.0 | 122.2 | 14.4 | 119.1 |
| 1066.70 | 1056.96 | -39.81 | 62.90 | 74.4 | 122.3 | 14.0 | 119.9 |
| 1076.70 | 1066.68 | -41.17 | 64.80 | 76.8 | 122.4 | 13.6 | 123.7 |
| 1086.70 | 1076.41 | -42.49 | 66.68 | 79.1 | 122.5 | 13.2 | 125.1 |
| 1096.70 | 1086.15 | -43.81 | 68.53 | 81.3 | 122.6 | 13.6 | 125.0 |
| 1106.70 | 1095.85 | -45.21 | 70.49 | 83.7 | 122.7 | 13.9 | 125.4 |
| 1116.70 | 1105.57 | -46.55 | 72.44 | 86.1 | 122.7 | 13.3 | 125.2 |
| 1126.70 | 1115.29 | -47.88 | 74.35 | 88.4 | 122.8 | 12.0 | 131.6 |
| 1136.70 | 1125.00 | -49.26 | 76.31 | 90.8 | 122.8 | 13.9 | 120.7 |
| 1146.70 | 1134.71 | -50.62 | 78.22 | 93.2 | 122.9 | 14.4 | 117.2 |
| 1156.70 | 1144.42 | -52.12 | 80.04 | 95.5 | 123.1 | 13.3 | 130.3 |
| 1166.70 | 1154.16 | -53.63 | 81.77 | 97.8 | 123.3 | 13.3 | 132.0 |
| 1176.70 | 1163.89 | -55.16 | 83.49 | 100.1 | 123.5 | 13.3 | 132.8 |
| 1186.70 | 1173.62 | -56.69 | 85.23 | 102.4 | 123.6 | 13.4 | 131.6 |
| 1196.70 | 1183.34 | -58.22 | 86.99 | 104.7 | 123.8 | 13.6 | 133.3 |
| 1206.70 | 1193.07 | -59.71 | 88.76 | 107.0 | 123.9 | 13.3 | 131.5 |
| 1216.70 | 1202.79 | -61.11 | 90.53 | 109.2 | 124.0 | 14.2 | 125.0 |
| 1226.70 | 1212.47 | -62.52 | 92.58 | 111.7 | 124.0 | 15.1 | 128.6 |
| 1236.70 | 1222.17 | -64.06 | 94.44 | 114.1 | 124.1 | 14.0 | 129.4 |
| 1246.70 | 1231.87 | -65.49 | 96.32 | 116.5 | 124.2 | 14.6 | 127.0 |
| 1256.70 | 1241.54 | -66.94 | 98.43 | 119.0 | 124.2 | 15.1 | 124.9 |
| 1266.70 | 1251.20 | -68.38 | 100.54 | 121.6 | 124.2 | 13.9 | 125.7 |
| 1276.70 | 1260.88 | -69.84 | 102.53 | 124.1 | 124.3 | 13.9 | 118.8 |
| 1286.70 | 1270.59 | -71.40 | 104.37 | 126.5 | 124.4 | 13.9 | 131.2 |
| 1296.70 | 1280.29 | -72.94 | 106.23 | 128.9 | 124.5 | 13.9 | 124.3 |
| 1306.70 | 1289.99 | -74.49 | 108.10 | 131.3 | 124.6 | 14.1 | 130.1 |
| 1316.70 | 1299.69 | -76.03 | 110.00 | 133.7 | 124.7 | 14.2 | 129.3 |
| 1326.70 | 1309.39 | -77.57 | 111.85 | 136.1 | 124.7 | 14.2 | 133.1 |
| 1336.70 | 1319.10 | -79.07 | 113.70 | 138.5 | 124.8 | 13.9 | 127.8 |
| 1346.70 | 1328.81 | -80.54 | 115.57 | 140.9 | 124.9 | 14.3 | 126.2 |
| 1356.70 | 1338.51 | -82.05 | 117.45 | 143.3 | 124.9 | 13.9 | 127.9 |
| 1366.70 | 1348.21 | -83.56 | 119.35 | 145.7 | 125.0 | 13.8 | 104.6 |
| 1376.70 | 1357.91 | -85.06 | 121.25 | 148.1 | 125.1 | 14.2 | 124.5 |
| 1386.70 | 1367.61 | -86.55 | 123.18 | 150.5 | 125.1 | 14.1 | 128.3 |
| 1396.70 | 1377.30 | -88.02 | 125.16 | 153.0 | 125.1 | 14.3 | 129.8 |
| 1406.70 | 1386.98 | -89.59 | 127.11 | 155.5 | 125.2 | 14.7 | 126.9 |
| 1416.70 | 1396.66 | -91.11 | 129.11 | 158.0 | 125.2 | 14.4 | 111.9 |
| 1426.70 | 1406.32 | -92.54 | 131.24 | 160.6 | 125.2 | 15.1 | 124.8 |
| 1436.70 | 1415.95 | -93.99 | 133.49 | 163.3 | 125.1 | 15.9 | 125.2 |
| 1446.70 | 1425.58 | -95.45 | 135.72 | 165.9 | 125.1 | 15.9 | 128.2 |
| 1456.70 | 1435.19 | -96.99 | 138.00 | 168.7 | 125.1 | 16.1 | 119.6 |
| 1466.70 | 1444.83 | -98.61 | 140.09 | 171.3 | 125.1 | 15.2 | 126.3 |
| 1476.70 | 1454.50 | -100.18 | 142.12 | 173.9 | 125.2 | 14.8 | 127.0 |
| 1484.00 | 1461.53 | -101.37 | 143.65 | 175.8 | 125.2 | 16.0 | 126.7 |

Well: **S39E**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 20 | 24" | | | X | 3/17/08 | |
| Surface | 16" | | 20" | | X | | | |
| Water Protection | 13 3/8" | 336 | 15 3/8" | 153.4 | X | | 3/19/08 | Basket@88 |
| Coal Protection | 13 3/8" | 336 | 15 3/8" | 153.4 | X | | 3/19/08 | Basket@88 |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE S-39E

RIG #: 87

LOCATION: LITTLE HURRICANE BR., VA

DATE STARTED: 3/18/2008

DATE COMPLETED: 3/25/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 20 | 20 | SHALE/SAND |
| 20 | 35 | 15 | SANDY SHALE/SAND |
| 35 | 65 | 30 | SHALE/SAND |
| 65 | 95 | 30 | SHALE/SAND |
| 95 | 125 | 30 | SHALE/SAND/COAL |
| 125 | 155 | 30 | SANDSTONE/SANDY SHALE |
| 155 | 185 | 30 | SANDY SHALE |
| 185 | 368 | 183 | SAND |
| 368 | 372 | 4 | |
| 372 | 401 | 29 | SHALE/SAND |
| 401 | 433 | 32 | SHALE/SAND |
| 433 | 465 | 32 | SANDSTONE |
| 465 | 496 | 31 | SANDSTONE |
| 496 | 528 | 32 | SANDSTONE/COAL/SANDY SHALE |
| 528 | 560 | 32 | SAND/SHALE |
| 560 | 591 | 31 | SAND/SHALE |
| 591 | 623 | 32 | SAND/SANDY SHALE |
| 623 | 632 | 9 | SANDY SHALE |
| 632 | 663 | 31 | SAND/COAL/SANDY SHALE |
| 663 | 695 | 32 | SANDY SHALE/SANDSTONE |
| 695 | 727 | 32 | SAND/SHALE/COAL |
| 727 | 758 | 31 | SAND/SHALE/COAL |
| 758 | 790 | 32 | SAND/SHALE |
| 790 | 805 | 15 | SHALE |
| 805 | 826 | 21 | SANDY SHALE |
| 826 | 858 | 32 | SANDY SHALE |
| 858 | 890 | 32 | SANDY SHALE |
| 890 | 921 | 31 | SANDY SHALE |
| 921 | 953 | 32 | SAND/SANDY SHALE/COAL |
| 953 | 984 | 31 | SAND/SHALE |
| 984 | 1016 | 32 | SHALE/SAND |
| 1016 | 1047 | 31 | SANDY SHALE/COAL |
| 1047 | 1079 | 32 | SANDY SHALE/COAL/SANDSTONE/COAL |
| 1079 | 1111 | 32 | SANDY SHALE/SANDSTONE/SANDY SH/ |

| | | | |
|---|---|---|---|
| 1111 | 1142 | 31 | SANDY SHALE STREAK/SANDSTONE |
| 1142 | 1174 | 32 | SANDSTONE/SANDY SHALE STREAK |
| 1174 | 1206 | 32 | SANDSTONE |
| 1206 | 1237 | 31 | SANDSTONE |
| 1237 | 1269 | 32 | SANDSTONE/SANDY SHALE STREAK |
| 1269 | 1300 | 31 | SANDSTONE STREAK/COAL/SANDY SHA |
| 1300 | 1332 | 32 | SANDY SHALE/SANDSTONE/SANDY SHA |
| 1332 | 1364 | 32 | SANDY SHALE/SANDSTONE |
| 1364 | 1395 | 31 | SANDY SHALE/SANDSTONE |
| 1395 | 1427 | 32 | SANDSTONE |
| 1427 | 1458 | 31 | SANDSTONE |
| 1458 | 1490 | 32 | SANDSTONE |
| 1490 | 1493 | 3 | SANDSTONE |

1493' TOTAL DEPTH
20' OF 22" CASING
335.95' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1324 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3822 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 4/10/2008 |
| **Driller's Total Depth:** | 1508.00 | **Log's Total Depth:** | 1513.40 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/10/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 6/10/2008 | | |
| Status: | | Date: | 6/12/2008 |
| Final PDF Date: | 6/12/2008 | | |

Commonwealth of Virginia
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Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1367 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3822 |
| **Operations Name:** | CBM S39F W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 4/1/2008

Drilling Contractor: Noah Horn

Date drilling completed: 4/10/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1508.00

Log Total Depth (feet): 1513.40

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1015757.90

Permitted State Plane Y: 331530.70

Final Plat State Plane X: 1015766.72

Final Plat State Plane Y: 331528.98

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | |
|---|---|
| Plat | S39F PLAT.pdf |

| | | |
|---|---|---|
| 60 | 25 | GPM |

| | | |
|---|---|---|
| | | |

List of Attached Items:

| | |
|---|---|
| Exhibit A | S39F EXHIBIT A.pdf |

List of Attached Items:

| | |
|---|---|
| Gas Show | S39F Gas Show.xls |

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑

List of Attached Items:

| | |
|---|---|
| Deviation | S39F DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | S39F Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| Drill Data | S39F DRILL DATA.pdf |

## 9. Comments

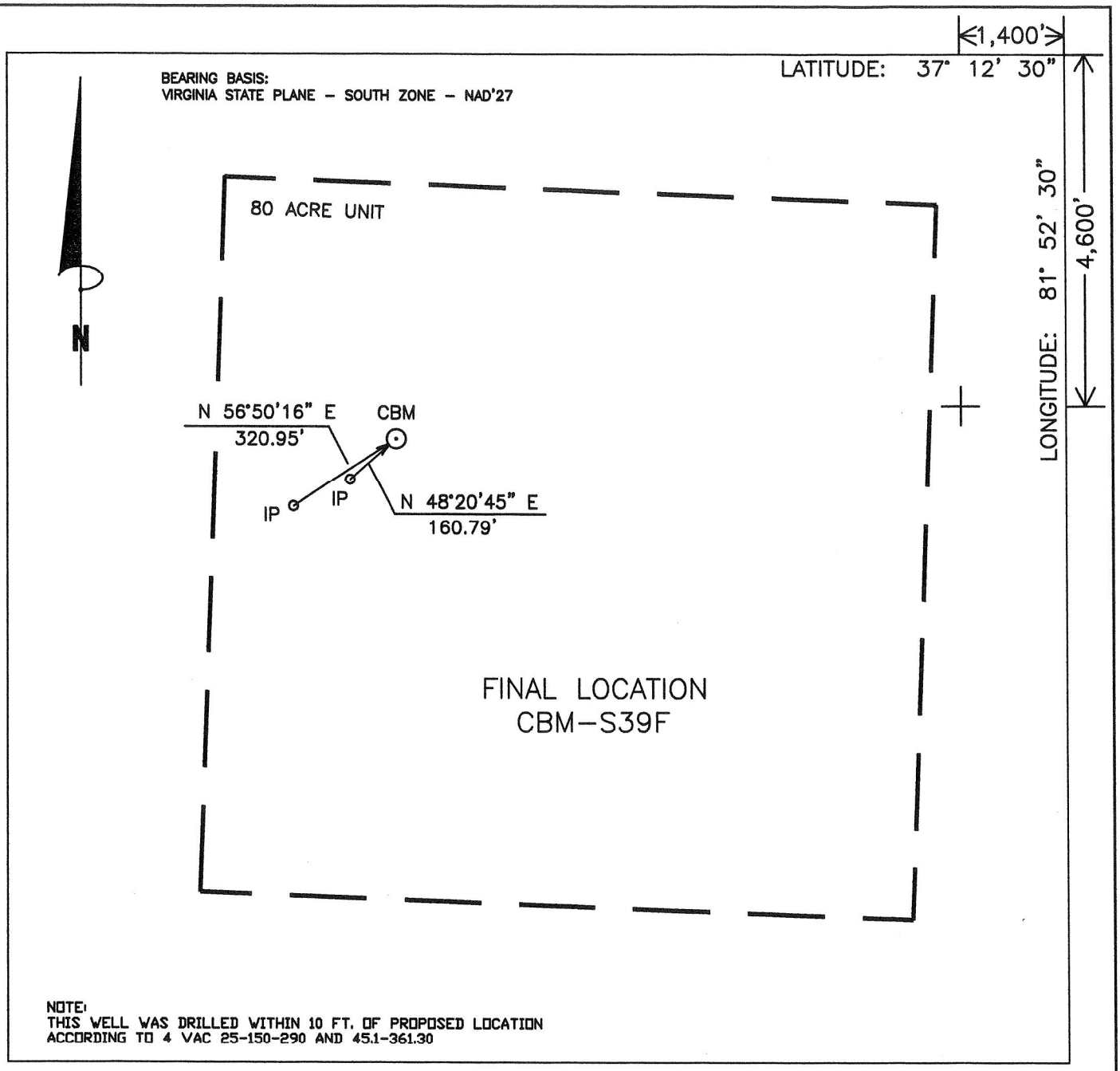
## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/10/2008

Signed By: Leslie Arrington Title: Director Environmental Permitting

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/10/2008 | | |
| Status: | A | Date: | 6/12/2008 |
| Final PDF Date: | 6/12/2008 | | |




S39FFNL
2N30/127-667/10

# WELL LOCATION PLAT

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–S39F

TRACT NUMBER CMMC QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 331,528.98 E 1,015,766.72

ELEVATION: 1948.41' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 04–08–08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DRP
DANNY R. PRICE
Lic. No. 008540
4/8/08
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

S39F.CMP
Exhibit A

Well Name: 08 CBM S39F
SURFACE ELEV: 1948.41 EASTING: 1015766.72 NORTHING: 331528.98

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 44.10 | 45.00 | 1904.31 | 0.90 | |
| | 45.00 | 67.50 | 1903.41 | 22.50 | |
| TI | 67.50 | 68.80 | 1880.91 | 1.30 | |
| | 68.80 | 71.80 | 1879.61 | 3.00 | |
| COAL | 71.80 | 72.10 | 1876.61 | 0.30 | |
| | 72.10 | 90.10 | 1876.31 | 18.00 | |
| COAL | 90.10 | 90.90 | 1858.31 | 0.80 | |
| | 90.90 | 93.90 | 1857.51 | 3.00 | |
| COAL | 93.90 | 94.10 | 1854.51 | 0.20 | |
| | 94.10 | 150.90 | 1854.31 | 56.80 | |
| US1 | 150.90 | 152.10 | 1797.51 | 1.20 | |
| | 152.10 | 198.10 | 1796.31 | 46.00 | |
| COAL | 198.10 | 199.00 | 1750.31 | 0.90 | |
| | 199.00 | 240.00 | 1749.41 | 41.00 | |
| COAL | 240.00 | 240.90 | 1708.41 | 0.90 | |
| | 240.90 | 308.80 | 1707.51 | 67.90 | |
| US2 | 308.80 | 309.50 | 1639.61 | 0.70 | |
| | 309.50 | 465.00 | 1638.91 | 155.50 | |
| *COAL | 465.00 | 465.90 | 1483.41 | 0.90 | |
| | 465.90 | 527.90 | 1482.51 | 62.00 | |
| *SE2 | 527.90 | 528.80 | 1420.51 | 0.90 | |
| | 528.80 | 564.80 | 1419.61 | 36.00 | |
| *LS1 | 564.80 | 566.90 | 1383.61 | 2.10 | |
| | 566.90 | 653.10 | 1381.51 | 86.20 | |
| *COAL | 653.10 | 654.90 | 1295.31 | 1.80 | |
| | 654.90 | 676.90 | 1293.51 | 22.00 | |
| *UH2 | 676.90 | 677.90 | 1271.51 | 1.00 | |
| | 677.90 | 684.90 | 1270.51 | 7.00 | |
| *UH3 | 684.90 | 686.00 | 1263.51 | 1.10 | |
| | 686.00 | 733.90 | 1262.41 | 47.90 | |
| *MH1 | 733.90 | 735.70 | 1214.51 | 1.80 | |
| | 735.70 | 843.00 | 1212.71 | 107.30 | |
| *P11 | 843.00 | 845.90 | 1105.41 | 2.90 | |
| | 845.90 | 867.80 | 1102.51 | 21.90 | |
| *P10 | 867.80 | 869.00 | 1080.61 | 1.20 | |
| | 869.00 | 931.00 | 1079.41 | 62.00 | |
| *LH3 | 931.00 | 932.10 | 1017.41 | 1.10 | |
| | 932.10 | 994.90 | 1016.31 | 62.80 | |
| *COAL | 994.90 | 996.20 | 953.51 | 1.30 | |
| | 996.20 | 1040.00 | 952.21 | 43.80 | |
| *P81 | 1040.00 | 1041.00 | 908.41 | 1.00 | |
| | 1041.00 | 1064.80 | 907.41 | 23.80 | |
| *P82 | 1064.80 | 1065.90 | 883.61 | 1.10 | |
| | 1065.90 | 1250.00 | 882.51 | 184.10 | |
| *COAL | 1250.00 | 1250.90 | 698.41 | 0.90 | |
| | 1250.90 | 1343.90 | 697.51 | 93.00 | |
| *P41 | 1343.90 | 1345.90 | 604.51 | 2.00 | |
| | 1345.90 | 1392.20 | 602.51 | 46.30 | |
| *P42 | 1392.20 | 1393.80 | 556.21 | 1.60 | |
| | 1393.80 | 1440.90 | 554.61 | 47.10 | |
| *COAL | 1440.90 | 1441.90 | 507.51 | 1.00 | |
| | 1441.90 | 1513.40 | 506.51 | 71.50 | |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\S39F.CMP

DATE: 05/07/08

Well: **S39F**

## Oil & Gas Show

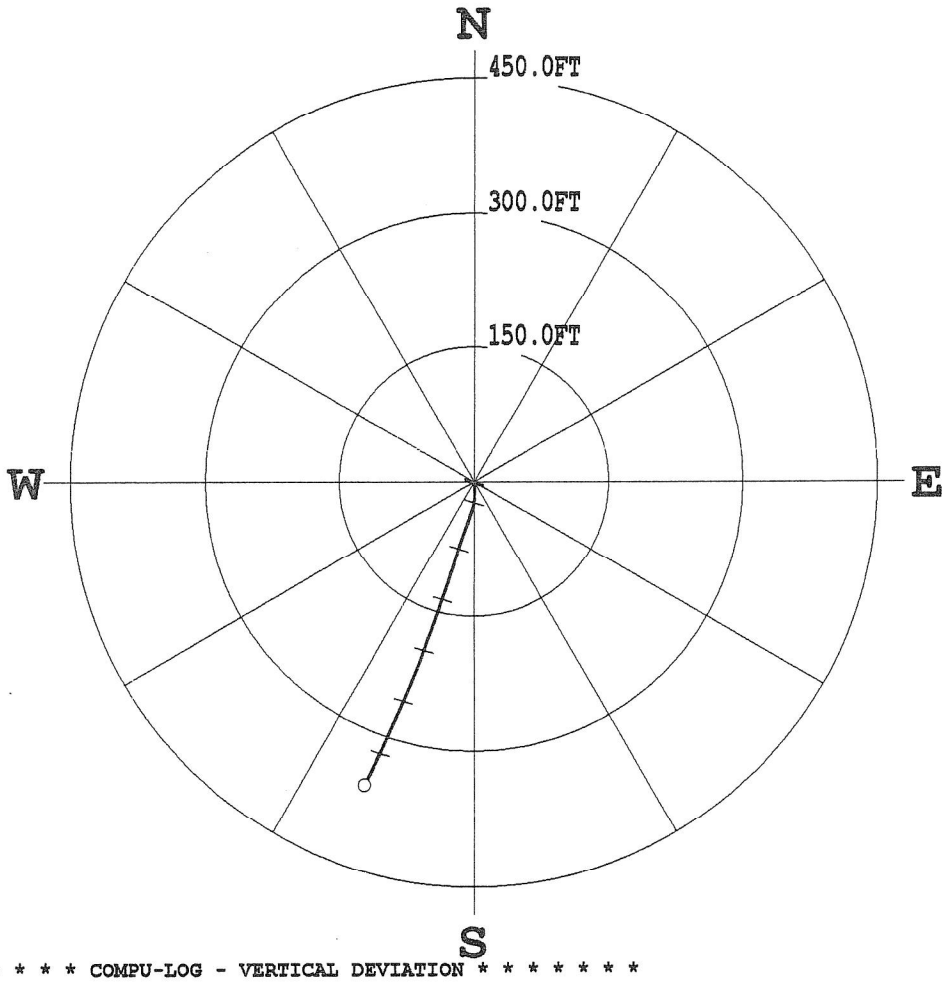
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 564.8 | 1065.9 | 501.1 | | | |
| Pocahontas | 1343.9 | 1441.9 | 98 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

.IENT: CNX GAS
)CATION: -
)LE ID: 08-CNX-S-39F
.TE OF LOG: 04/10/08
:OBE: 0026C 777

MAG DECL: -7.1

SCALE: 150 FT/IN
TRUE DEPTH: 1442.45 FT
AZIMUTH: 199.9
DISTANCE: 358.1 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX GAS
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
HOLE ID. : 08-CNX-S-39F
DATE OF LOG : 04/10/08
PROBE : 0026C , 777
DEPTH UNITS : FEET
LOG: 08-CNX-S-39F_04-10-08_09-07_0026C_.10_-4.40_1513.20_DEVI.log

| BLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 2.20 | 2.20 | 0.00 | 0.00 | 0.0 | 13.5 | 1.1 | 13.5 |
| 5.60 | 5.60 | 0.00 | 0.03 | 0.0 | 85.7 | 0.6 | 143.3 |
| 15.60 | 15.60 | -0.01 | 0.05 | 0.1 | 95.7 | 0.5 | 3.1 |
| 25.60 | 25.60 | 0.06 | 0.07 | 0.1 | 49.9 | 0.6 | 338.5 |
| 35.60 | 35.60 | 0.12 | 0.04 | 0.1 | 18.5 | 0.5 | 284.0 |
| 45.60 | 45.60 | 0.20 | 0.01 | 0.2 | 3.9 | 0.5 | 22.3 |
| 55.60 | 55.60 | 0.23 | 0.08 | 0.2 | 18.8 | 0.5 | 142.1 |
| 65.60 | 65.60 | 0.22 | 0.04 | 0.2 | 10.3 | 0.6 | 348.9 |
| 75.60 | 75.60 | 0.29 | 0.10 | 0.3 | 18.2 | 0.5 | 69.7 |
| 85.60 | 85.60 | 0.32 | 0.05 | 0.3 | 8.8 | 0.5 | 358.6 |
| 95.60 | 95.60 | 0.33 | 0.10 | 0.3 | 17.5 | 0.6 | 177.1 |
| 105.60 | 105.59 | 0.28 | 0.05 | 0.3 | 10.0 | 0.7 | 8.3 |
| 115.60 | 115.59 | 0.24 | 0.03 | 0.2 | 6.9 | 0.7 | 279.8 |
| 125.60 | 125.59 | 0.26 | 0.01 | 0.3 | 1.3 | 0.7 | 205.3 |
| 135.60 | 135.59 | 0.24 | -0.06 | 0.3 | 345.2 | 0.5 | 35.7 |
| 145.60 | 145.59 | 0.23 | -0.00 | 0.2 | 360.0 | 0.8 | 162.6 |
| 155.60 | 155.59 | 0.20 | 0.02 | 0.2 | 6.0 | 0.4 | 97.9 |
| 165.60 | 165.59 | 0.08 | 0.04 | 0.1 | 23.8 | 0.9 | 215.7 |

LOG: 08-CNX-S-39F_04-10-08_09-07_0026C_.10_-4.40_1513.20_DEV1.log

| BLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 2.20 | 2.20 | 0.00 | 0.00 | 0.0 | 13.5 | 1.1 | 13.5 |
| 5.60 | 5.60 | 0.00 | 0.03 | 0.0 | 85.7 | 0.6 | 143.3 |
| 15.60 | 15.60 | -0.01 | 0.05 | 0.1 | 95.7 | 0.5 | 3.1 |
| 25.60 | 25.60 | 0.06 | 0.07 | 0.1 | 49.9 | 0.6 | 338.5 |
| 35.60 | 35.60 | 0.12 | 0.04 | 0.1 | 18.5 | 0.5 | 284.0 |
| 45.60 | 45.60 | 0.20 | 0.01 | 0.2 | 3.9 | 0.5 | 22.3 |
| 55.60 | 55.60 | 0.23 | 0.08 | 0.2 | 18.8 | 0.5 | 142.1 |
| 65.60 | 65.60 | 0.22 | 0.04 | 0.2 | 10.3 | 0.6 | 348.9 |
| 75.60 | 75.60 | 0.29 | 0.10 | 0.3 | 18.2 | 0.5 | 69.7 |
| 85.60 | 85.60 | 0.32 | 0.05 | 0.3 | 8.8 | 0.5 | 358.6 |
| 95.60 | 95.60 | 0.33 | 0.10 | 0.3 | 17.5 | 0.6 | 177.1 |
| 105.60 | 105.59 | 0.28 | 0.05 | 0.3 | 10.0 | 0.7 | 8.3 |
| 115.60 | 115.59 | 0.24 | 0.03 | 0.2 | 6.9 | 0.7 | 279.8 |
| 125.60 | 125.59 | 0.26 | 0.01 | 0.3 | 1.3 | 0.7 | 205.3 |
| 135.60 | 135.59 | 0.24 | -0.06 | 0.3 | 345.2 | 0.5 | 35.7 |
| 145.60 | 145.59 | 0.23 | -0.00 | 0.2 | 360.0 | 0.8 | 162.6 |
| 155.60 | 155.59 | 0.20 | 0.02 | 0.2 | 6.0 | 0.4 | 97.9 |
| 165.60 | 165.59 | 0.08 | 0.04 | 0.1 | 23.8 | 0.9 | 215.7 |
| 175.60 | 175.59 | 0.06 | -0.03 | 0.1 | 329.4 | 0.3 | 73.1 |
| 185.60 | 185.59 | 0.02 | -0.07 | 0.1 | 283.1 | 0.1 | 272.0 |
| 195.60 | 195.59 | -0.03 | -0.00 | 0.0 | 185.7 | 0.7 | 130.8 |
| 205.60 | 205.59 | -0.12 | 0.04 | 0.1 | 160.5 | 0.2 | 122.2 |
| 215.60 | 215.59 | -0.26 | 0.07 | 0.3 | 164.7 | 0.9 | 196.1 |
| 225.60 | 225.59 | -0.40 | 0.01 | 0.4 | 177.9 | 0.9 | 171.7 |
| 235.60 | 235.58 | -0.52 | -0.05 | 0.5 | 185.8 | 0.3 | 317.8 |
| 245.60 | 245.58 | -0.51 | -0.09 | 0.5 | 190.1 | 0.2 | 13.3 |
| 255.60 | 255.58 | -0.53 | -0.11 | 0.5 | 191.3 | 0.1 | 156.0 |
| 265.60 | 265.58 | -0.58 | -0.08 | 0.6 | 187.7 | 0.8 | 145.9 |
| 275.60 | 275.58 | -0.62 | -0.02 | 0.6 | 182.0 | 0.7 | 137.5 |
| 285.60 | 285.58 | -0.74 | -0.06 | 0.7 | 184.4 | 0.2 | 131.2 |
| 295.60 | 295.58 | -0.78 | -0.03 | 0.8 | 182.0 | 0.4 | 131.3 |
| 305.60 | 305.58 | -0.83 | 0.01 | 0.8 | 179.5 | 0.7 | 259.8 |
| 315.60 | 315.58 | -0.88 | 0.04 | 0.9 | 177.4 | 0.9 | 151.1 |
| 325.60 | 325.58 | -1.02 | 0.10 | 1.0 | 174.5 | 0.8 | 146.2 |
| 335.60 | 335.58 | -1.18 | 0.14 | 1.2 | 173.2 | 0.9 | 162.8 |
| 345.60 | 345.58 | -1.33 | 0.19 | 1.3 | 172.0 | 0.8 | 153.8 |
| 355.60 | 355.58 | -1.43 | 0.25 | 1.5 | 170.1 | 0.5 | 131.1 |
| 365.60 | 365.58 | -1.55 | 0.25 | 1.6 | 170.8 | 0.4 | 218.1 |
| 375.60 | 375.58 | -1.57 | 0.26 | 1.6 | 170.7 | 0.4 | 114.9 |
| 385.60 | 385.57 | -1.73 | 0.26 | 1.7 | 171.5 | 1.1 | 232.1 |
| 395.60 | 395.57 | -1.76 | 0.21 | 1.8 | 173.3 | 0.5 | 174.2 |
| 405.60 | 405.57 | -1.85 | 0.20 | 1.9 | 173.8 | 0.4 | 202.8 |
| 415.60 | 415.57 | -1.91 | 0.19 | 1.9 | 174.3 | 0.4 | 183.0 |
| 425.60 | 425.57 | -2.01 | 0.20 | 2.0 | 174.4 | 0.6 | 172.6 |
| 435.60 | 435.57 | -2.09 | 0.21 | 2.1 | 174.3 | 0.6 | 175.7 |
| 445.60 | 445.57 | -2.17 | 0.22 | 2.2 | 174.2 | 0.5 | 169.7 |
| 455.60 | 455.57 | -2.36 | 0.19 | 2.4 | 175.3 | 1.3 | 195.3 |
| 465.60 | 465.57 | -2.56 | 0.16 | 2.6 | 176.4 | 1.2 | 163.0 |
| 475.60 | 475.56 | -2.82 | 0.16 | 2.8 | 176.8 | 1.5 | 185.9 |
| 485.60 | 485.55 | -3.31 | 0.22 | 3.3 | 176.2 | 3.2 | 178.8 |
| 495.60 | 495.52 | -4.05 | 0.29 | 4.1 | 175.9 | 5.5 | 183.3 |
| 505.60 | 505.47 | -5.03 | 0.42 | 5.0 | 175.3 | 6.3 | 173.0 |
| 515.60 | 515.40 | -6.22 | 0.55 | 6.2 | 175.0 | 7.5 | 173.5 |
| 525.60 | 525.30 | -7.62 | 0.67 | 7.6 | 175.0 | 8.7 | 177.5 |
| 535.60 | 535.18 | -9.16 | 0.78 | 9.2 | 175.1 | 9.6 | 176.5 |
| 545.60 | 545.03 | -10.86 | 0.85 | 10.9 | 175.5 | 10.1 | 188.1 |
| 555.60 | 554.86 | -12.68 | 0.89 | 12.7 | 176.0 | 10.9 | 177.2 |
| 565.60 | 564.67 | -14.64 | 0.85 | 14.7 | 176.7 | 11.8 | 184.5 |
| 575.60 | 574.43 | -16.78 | 0.70 | 16.8 | 177.6 | 12.8 | 182.5 |
| 585.60 | 584.18 | -19.01 | 0.47 | 19.0 | 178.6 | 13.4 | 184.9 |
| 595.60 | 593.89 | -21.37 | 0.14 | 21.4 | 179.6 | 14.1 | 185.5 |
| 605.60 | 603.57 | -23.84 | -0.33 | 23.8 | 180.8 | 15.0 | 191.2 |
| 615.60 | 613.21 | -26.41 | -0.91 | 26.4 | 182.0 | 15.6 | 199.1 |
| 625.60 | 622.81 | -29.09 | -1.63 | 29.1 | 183.2 | 16.8 | 192.9 |
| 635.60 | 632.36 | -31.91 | -2.50 | 32.0 | 184.5 | 17.7 | 196.0 |
| 645.60 | 641.88 | -34.80 | -3.49 | 35.0 | 185.7 | 18.1 | 202.3 |
| 655.60 | 651.34 | -37.83 | -4.50 | 38.1 | 186.8 | 19.4 | 195.3 |
| 665.60 | 660.72 | -41.06 | -5.55 | 41.4 | 187.7 | 20.7 | 191.8 |
| 675.60 | 670.06 | -44.42 | -6.61 | 44.9 | 188.5 | 21.3 | 204.4 |
| 685.60 | 679.35 | -47.88 | -7.69 | 48.5 | 189.1 | 21.7 | 202.4 |
| 695.60 | 688.63 | -51.37 | -8.95 | 52.1 | 189.9 | 21.7 | 199.9 |
| 705.60 | 697.92 | -54.83 | -10.14 | 55.8 | 190.5 | 21.5 | 207.1 |
| 715.60 | 707.21 | -58.32 | -11.40 | 59.4 | 191.1 | 21.7 | 199.3 |
| 725.60 | 716.50 | -61.82 | -12.60 | 63.1 | 191.5 | 21.7 | 199.5 |
| 735.60 | 725.79 | -65.30 | -13.81 | 66.7 | 191.9 | 21.4 | 199.6 |
| 745.60 | 735.10 | -68.75 | -14.99 | 70.4 | 192.3 | 21.8 | 186.0 |
| 755.60 | 744.40 | -72.19 | -16.07 | 74.0 | 192.5 | 22.1 | 193.7 |
| 765.60 | 753.70 | -75.65 | -17.20 | 77.6 | 192.8 | 26.1 | 185.2 |
| 775.60 | 763.01 | -79.12 | -18.26 | 81.2 | 193.0 | 21.2 | 196.9 |
| 785.60 | 772.34 | -82.56 | -19.31 | 84.8 | 193.2 | 21.6 | 191.1 |
| 795.60 | 781.65 | -86.00 | -20.41 | 88.4 | 193.4 | 21.1 | 188.4 |
| 805.60 | 790.97 | -89.47 | -21.45 | 92.0 | 193.5 | 21.6 | 195.8 |
| 815.60 | 800.26 | -92.98 | -22.53 | 95.7 | 193.6 | 21.5 | 197.0 |
| 825.60 | 809.56 | -96.47 | -23.69 | 99.3 | 193.8 | 21.5 | 198.2 |
| 835.60 | 818.86 | -99.96 | -24.87 | 103.0 | 194.0 | 21.6 | 198.4 |
| 845.60 | 828.16 | -103.40 | -26.01 | 106.6 | 194.1 | 21.3 | 202.8 |
| 855.60 | 837.46 | -106.88 | -27.14 | 110.3 | 194.2 | 21.6 | 199.8 |
| 865.60 | 846.76 | -110.36 | -28.34 | 113.9 | 194.4 | 21.6 | 198.8 |
| 875.60 | 856.07 | -113.84 | -29.49 | 117.6 | 194.5 | 21.4 | 190.9 |
| 885.60 | 865.36 | -117.33 | -30.63 | 121.3 | 194.6 | 21.8 | 197.8 |
| 895.60 | 874.65 | -120.84 | -31.81 | 125.0 | 194.7 | 21.8 | 190.2 |
| 905.60 | 883.94 | -124.34 | -32.99 | 128.6 | 194.9 | 21.7 | 194.1 |
| 915.60 | 893.22 | -127.84 | -34.23 | 132.3 | 195.0 | 21.8 | 196.2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 825.60 | 809.56 | -96.47 | -23.69 | 99.3 | 193.8 | 21.5 | 198.2 |
| 835.60 | 818.86 | -99.96 | -24.87 | 103.0 | 194.0 | 21.6 | 198.4 |
| 845.60 | 828.16 | -103.40 | -26.01 | 106.6 | 194.1 | 21.3 | 202.8 |
| 855.60 | 837.46 | -106.88 | -27.14 | 110.3 | 194.2 | 21.6 | 199.8 |
| 865.60 | 846.76 | -110.36 | -28.34 | 113.9 | 194.4 | 21.6 | 198.8 |
| 875.60 | 856.07 | -113.84 | -29.49 | 117.6 | 194.5 | 21.4 | 190.9 |
| 885.60 | 865.36 | -117.33 | -30.63 | 121.3 | 194.6 | 21.8 | 197.8 |
| 895.60 | 874.65 | -120.84 | -31.81 | 125.0 | 194.7 | 21.8 | 190.2 |
| 905.60 | 883.94 | -124.34 | -32.99 | 128.6 | 194.9 | 21.7 | 194.1 |
| 915.60 | 893.22 | -127.84 | -34.23 | 132.3 | 195.0 | 21.8 | 196.2 |
| 925.60 | 902.51 | -131.33 | -35.49 | 136.0 | 195.1 | 22.0 | 199.7 |
| 935.60 | 911.79 | -134.81 | -36.73 | 139.7 | 195.2 | 21.4 | 173.4 |
| 945.60 | 921.06 | -138.36 | -37.89 | 143.5 | 195.3 | 22.1 | 197.0 |
| 955.60 | 930.32 | -141.96 | -39.06 | 147.2 | 195.4 | 22.3 | 198.0 |
| 965.60 | 939.57 | -145.56 | -40.24 | 151.0 | 195.5 | 22.2 | 198.3 |
| 975.60 | 948.84 | -149.11 | -41.39 | 154.8 | 195.5 | 22.7 | 207.6 |
| 985.60 | 958.12 | -152.51 | -42.60 | 158.3 | 195.6 | 21.9 | 194.7 |
| 995.60 | 967.40 | -155.89 | -43.79 | 161.9 | 195.7 | 21.6 | 153.8 |
| 1005.60 | 976.70 | -159.25 | -45.03 | 165.5 | 195.8 | 22.0 | 197.5 |
| 1015.60 | 985.98 | -162.78 | -46.18 | 169.2 | 195.8 | 22.0 | 214.5 |
| 1025.60 | 995.25 | -166.26 | -47.51 | 172.9 | 195.9 | 22.1 | 202.5 |
| 1035.60 | 1004.52 | -169.73 | -48.90 | 176.6 | 196.1 | 21.9 | 201.9 |
| 1045.60 | 1013.80 | -173.19 | -50.30 | 180.3 | 196.2 | 22.1 | 202.1 |
| 1055.60 | 1023.07 | -176.63 | -51.70 | 184.0 | 196.3 | 21.6 | 210.8 |
| 1065.60 | 1032.35 | -180.12 | -52.87 | 187.7 | 196.4 | 22.0 | 199.0 |
| 1075.60 | 1041.62 | -183.65 | -54.08 | 191.4 | 196.4 | 19.1 | 168.5 |
| 1085.60 | 1050.91 | -187.03 | -55.43 | 195.1 | 196.5 | 22.1 | 219.3 |
| 1095.60 | 1060.20 | -190.46 | -56.61 | 198.7 | 196.6 | 22.1 | 199.6 |
| 1105.60 | 1069.49 | -193.92 | -57.90 | 202.4 | 196.6 | 21.2 | 205.6 |
| 1115.60 | 1078.76 | -197.45 | -59.13 | 206.1 | 196.7 | 22.0 | 200.2 |
| 1125.60 | 1088.04 | -200.89 | -60.40 | 209.8 | 196.7 | 22.0 | 201.2 |
| 1135.60 | 1097.31 | -204.39 | -61.77 | 213.5 | 196.8 | 22.0 | 201.4 |
| 1145.60 | 1106.57 | -207.89 | -63.15 | 217.3 | 196.9 | 22.1 | 201.8 |
| 1155.60 | 1115.83 | -211.39 | -64.55 | 221.0 | 197.0 | 22.2 | 201.4 |
| 1165.60 | 1125.09 | -214.91 | -65.96 | 224.8 | 197.1 | 22.3 | 201.9 |
| 1175.60 | 1134.34 | -218.43 | -67.39 | 228.6 | 197.1 | 22.4 | 202.2 |
| 1185.60 | 1143.58 | -221.95 | -68.84 | 232.4 | 197.2 | 22.4 | 202.3 |
| 1195.60 | 1152.82 | -225.48 | -70.31 | 236.2 | 197.3 | 22.5 | 203.3 |
| 1205.60 | 1162.06 | -229.00 | -71.81 | 240.0 | 197.4 | 22.6 | 202.9 |
| 1215.60 | 1171.29 | -232.56 | -73.30 | 243.8 | 197.5 | 22.7 | 203.1 |
| 1225.60 | 1180.51 | -236.10 | -74.85 | 247.7 | 197.6 | 22.7 | 205.6 |
| 1235.60 | 1189.72 | -239.64 | -76.43 | 251.5 | 197.7 | 22.9 | 205.4 |
| 1245.60 | 1198.93 | -243.18 | -78.08 | 255.4 | 197.8 | 23.2 | 205.6 |
| 1255.60 | 1208.12 | -246.70 | -79.69 | 259.3 | 197.9 | 22.5 | 207.3 |
| 1265.60 | 1217.32 | -250.30 | -81.23 | 263.1 | 198.0 | 23.1 | 205.4 |
| 1275.60 | 1226.50 | -253.92 | -82.76 | 267.1 | 198.1 | 23.3 | 194.7 |
| 1285.60 | 1235.67 | -257.51 | -84.41 | 271.0 | 198.1 | 23.3 | 207.3 |
| 1295.60 | 1244.88 | -261.01 | -86.01 | 274.8 | 198.2 | 21.5 | 210.3 |
| 1305.60 | 1254.09 | -264.56 | -87.61 | 278.7 | 198.3 | 23.0 | 203.6 |
| 1315.60 | 1263.30 | -268.10 | -89.24 | 282.6 | 198.4 | 23.0 | 205.3 |
| 1325.60 | 1272.51 | -271.66 | -90.85 | 286.5 | 198.5 | 23.0 | 204.2 |
| 1335.60 | 1281.72 | -275.21 | -92.46 | 290.3 | 198.6 | 22.9 | 204.7 |
| 1345.60 | 1290.93 | -278.73 | -94.10 | 294.2 | 198.7 | 22.9 | 204.5 |
| 1355.60 | 1300.15 | -282.25 | -95.73 | 298.0 | 198.7 | 22.7 | 206.7 |
| 1365.60 | 1309.36 | -285.77 | -97.35 | 301.9 | 198.8 | 22.9 | 204.9 |
| 1375.60 | 1318.58 | -289.30 | -98.98 | 305.8 | 198.9 | 22.8 | 204.2 |
| 1385.60 | 1327.79 | -292.82 | -100.62 | 309.6 | 199.0 | 22.9 | 204.2 |
| 1395.60 | 1337.01 | -296.33 | -102.28 | 313.5 | 199.0 | 21.9 | 189.4 |
| 1405.60 | 1346.22 | -299.86 | -103.89 | 317.3 | 199.1 | 23.1 | 204.0 |
| 1415.60 | 1355.43 | -303.39 | -105.54 | 321.2 | 199.2 | 23.1 | 205.4 |
| 1425.60 | 1364.64 | -306.88 | -107.25 | 325.1 | 199.3 | 22.5 | 209.4 |
| 1435.60 | 1373.84 | -310.42 | -108.92 | 329.0 | 199.3 | 23.2 | 201.6 |
| 1445.60 | 1383.04 | -313.95 | -110.57 | 332.9 | 199.4 | 23.1 | 204.4 |
| 1455.60 | 1392.24 | -317.47 | -112.19 | 336.7 | 199.5 | 22.8 | 211.4 |
| 1465.60 | 1401.41 | -321.00 | -113.99 | 340.6 | 199.6 | 23.4 | 210.8 |
| 1475.60 | 1410.60 | -324.47 | -115.71 | 344.5 | 199.6 | 22.9 | 219.0 |
| 1485.60 | 1419.78 | -327.99 | -117.51 | 348.4 | 199.7 | 23.4 | 212.2 |
| 1495.60 | 1428.96 | -331.51 | -119.32 | 352.3 | 199.8 | 22.9 | 206.6 |
| 1505.60 | 1438.15 | -335.04 | -121.09 | 356.3 | 199.9 | 23.4 | 205.4 |
| 1510.30 | 1442.45 | -336.74 | -121.91 | 358.1 | 199.9 | 23.8 | 205.5 |

Well: **S39F**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 22 | 24" | | | X | 4/2/2008 | |
| Surface | 16" | | 20" | | | | | |
| Water Protection | 13 3/8" | 376.4 | 15 3/8" | | X | | 4/3/2008 | Basket @ 85' |
| Coal Protection | 13 3/8" | 376.4 | 15 3/8" | | X | | 4/3/2008 | Basket @ 85' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE S-39F

RIG #: 87

LOCATION: HURRICANE BRANCH, VA

DATE STARTED: 4/1/2008

DATE COMPLETED: 4/10/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 22 | 22 | SHALE/SAND |
| 22 | 35 | 13 | SANDSTONE |
| 35 | 65 | 30 | SHALE/SAND/COAL |
| 65 | 95 | 30 | SHALE/SAND/COAL |
| 95 | 125 | 30 | SHALE/SAND |
| 125 | 154 | 29 | SHALE/SAND |
| 154 | 186 | 32 | SHALE/SAND/COAL |
| 186 | 218 | 32 | SHALE/SAND |
| 218 | 249 | 31 | SHALE/SAND |
| 249 | 281 | 32 | SANDSTONE |
| 281 | 312 | 31 | SAND |
| 312 | 344 | 32 | SAND/COAL/SHALE |
| 344 | 375 | 31 | SAND/SHALE |
| 375 | 407 | 32 | SANDY SHALE |
| 407 | 434 | 27 | SANDY SHALE/SANDSTONE |
| 434 | 450 | 16 | SANDSTONE/SANDY SHALE |
| 450 | 474 | 24 | SANDSTONE/SANDY SHALE |
| 474 | 505 | 31 | SAND/COAL |
| 505 | 537 | 32 | SANDY SHALE/COAL |
| 537 | 568 | 31 | SAND/SANDY SHALE |
| 568 | 632 | 64 | SAND/SHALE |
| 632 | 663 | 31 | SAND |
| 663 | 695 | 32 | SAND |
| 695 | 698 | 3 | SAND/SHALE |
| 698 | 729 | 31 | SAND/SHALE |
| 729 | 761 | 32 | SAND/SHALE |
| 761 | 793 | 32 | SAND/SHALE |
| 793 | 824 | 31 | SAND/SHALE |
| 824 | 856 | 32 | SAND/COAL |
| 856 | 888 | 32 | SAND |
| 888 | 919 | 31 | SAND |
| 919 | 951 | 32 | SAND/COAL |
| 951 | 983 | 32 | SAND |
| 983 | 1014 | 31 | SAND/SANDY SHALE |

| | | | |
|---|---|---|---|
| 1014 | 1046 | 32 | SAND/SANDY SHALE |
| 1046 | 1077 | 31 | SAND/SANDY SHALE |
| 1077 | 1109 | 32 | SAND/SHALE/COAL |
| 1109 | 1140 | 31 | SAND/SHALE OR COAL |
| 1140 | 1172 | 32 | SAND/SANDY SHALE |
| 1172 | 1204 | 32 | SAND |
| 1204 | 1235 | 31 | SAND |
| 1235 | 1267 | 32 | SAND |
| 1267 | 1299 | 32 | SAND |
| 1299 | 1330 | 31 | SAND/SHALE |
| 1330 | 1362 | 32 | SAND/SHALE/COAL |
| 1362 | 1394 | 32 | SAND/SHALE |
| 1394 | 1425 | 31 | SHALE/COAL |
| 1425 | 1457 | 32 | SANDSTONE |
| 1457 | 1488 | 31 | SHALE/COAL/SAND |
| 1488 | 1508 | 20 | SANDSTONE |

1508' TOTAL DEPTH
22' OF 22" CASING
376.4' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1323 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3823 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 4/18/2008 |
| **Driller's Total Depth:** | 1620.00 | **Log's Total Depth:** | 1625.40 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/10/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 6/10/2008 | | |
| Status: | | Date: | 6/13/2008 |
| Final PDF Date: | 6/13/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1366 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3823 |
| **Operations Name:** | CBM S39G W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 4/10/2008

Drilling Contractor: Noah Horn

Date drilling completed: 4/18/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1620.00

Log Total Depth (feet): 1625.37

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1015522.00

Permitted State Plane Y: 331733.48

Final Plat State Plane X: 1015516.52

Final Plat State Plane Y: 331728.37

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | |
|---|---|
| Plat | S39G PLAT.pdf |

**3. Geological Data**

| | | |
|---|---|---|
| 50-60 | 15 +/- | GPM |

| | | |
|---|---|---|
| | | |

List of Attached Items:

| | |
|---|---|
| Exhibit A | S39G EXHIBIT A.pdf |

List of Attached Items:

| | |
|---|---|
| Gas Show | S39G Gas Show.xls |

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑

List of Attached Items:

| | |
|---|---|
| Deviation | S39G DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | S39G Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| Drill Data | S39G DRILL DATA.pdf |

## 9. Comments

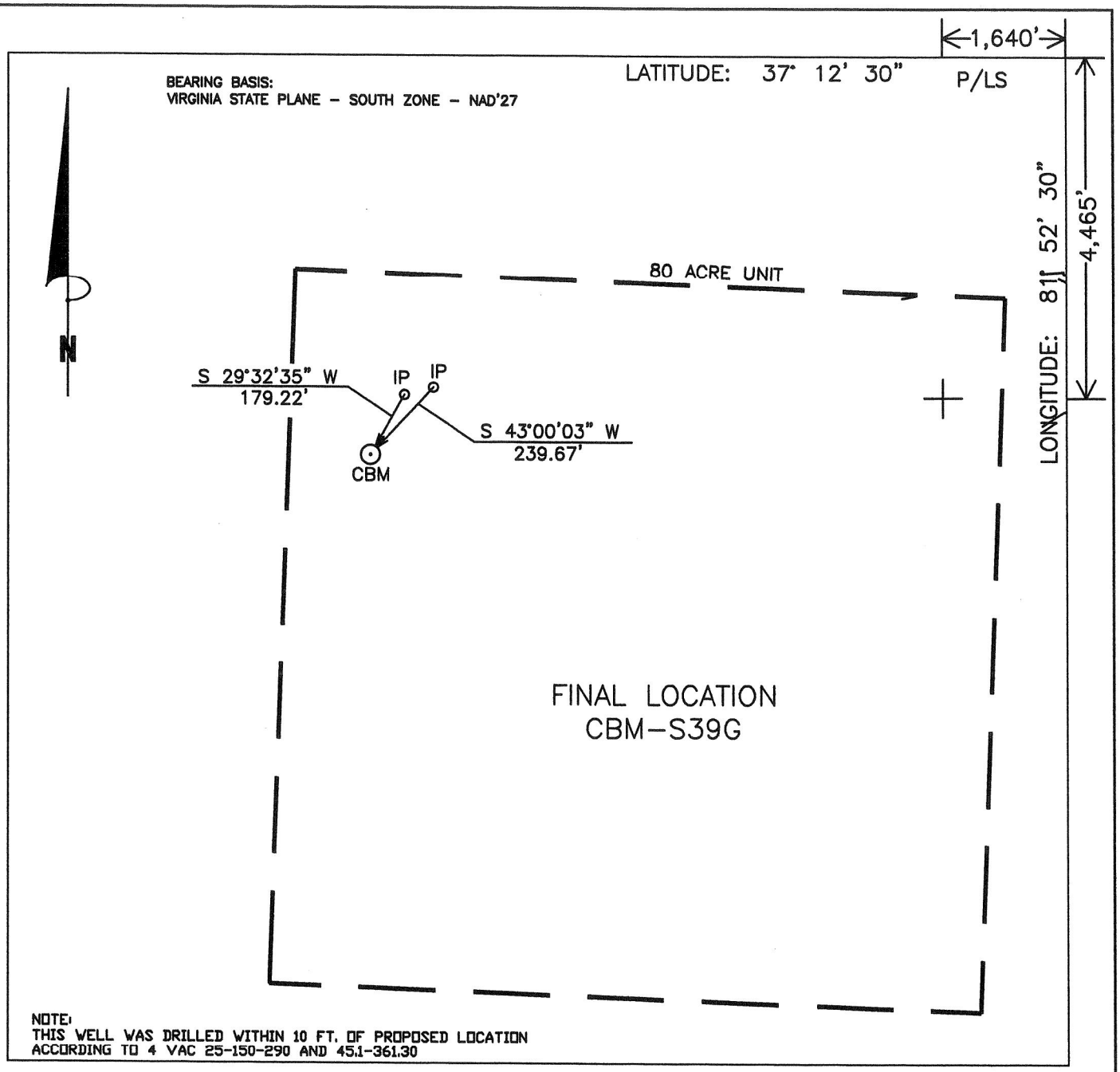
## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/10/2008

Signed By: Leslie Arrington Title: Director Environmental Permitting

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/10/2008 | | |
| Status: | A | Date: | 6/13/2008 |
| Final PDF Date: | 6/13/2008 | | |




# WELL LOCATION PLAT

S39GFNL
2N29/160 – 394/32

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–S39G

TRACT NUMBER CMMC LLP QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 331,728.37 E 1,015,516.52

ELEVATION: 2112.43' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 04–18–08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown. (optional)

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
4/18/08
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

S39G.CMP
Exhibit A

Well Name: 08 CBM S39G
SURFACE ELEV: 2112.43 EASTING: 1015516.52 NORTHING: 331728.37

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 49.00 | 50.90 | 2063.43 | 1.90 | |
| | 50.90 | 64.80 | 2061.53 | 13.90 | |
| COAL | 64.80 | 65.50 | 2047.63 | 0.70 | |
| | 65.50 | 126.90 | 2046.93 | 61.40 | |
| JB1 | 126.90 | 128.30 | 1985.53 | 1.40 | |
| | 128.30 | 132.10 | 1984.13 | 3.80 | |
| COAL | 132.10 | 133.10 | 1980.33 | 1.00 | |
| | 133.10 | 179.90 | 1979.33 | 46.80 | |
| JB3 | 179.90 | 183.90 | 1932.53 | 4.00 | |
| | 183.90 | 184.90 | 1928.53 | 1.00 | |
| COAL | 184.90 | 185.80 | 1927.53 | 0.90 | |
| | 185.80 | 217.10 | 1926.63 | 31.30 | |
| COAL | 217.10 | 218.10 | 1895.33 | 1.00 | |
| | 218.10 | 230.20 | 1894.33 | 12.10 | |
| COAL | 230.20 | 230.80 | 1882.23 | 0.60 | |
| | 230.80 | 232.10 | 1881.63 | 1.30 | |
| TI | 232.10 | 232.80 | 1880.33 | 0.70 | |
| | 232.80 | 260.20 | 1879.63 | 27.40 | |
| COAL | 260.20 | 260.90 | 1852.23 | 0.70 | |
| | 260.90 | 318.80 | 1851.53 | 57.90 | |
| US1 | 318.80 | 319.10 | 1793.63 | 0.30 | |
| | 319.10 | 363.90 | 1793.33 | 44.80 | |
| COAL | 363.90 | 364.50 | 1748.53 | 0.60 | |
| | 364.50 | 474.10 | 1747.93 | 109.60 | |
| *US2 | 474.10 | 475.00 | 1638.33 | 0.90 | |
| | 475.00 | 657.00 | 1637.43 | 182.00 | |
| *SE1 | 657.00 | 658.60 | 1455.43 | 1.60 | |
| | 658.60 | 690.80 | 1453.83 | 32.20 | |
| *SE2 | 690.80 | 692.90 | 1421.63 | 2.10 | |
| | 692.90 | 729.80 | 1419.53 | 36.90 | |
| *LS1 | 729.80 | 731.80 | 1382.63 | 2.00 | |
| | 731.80 | 747.20 | 1380.63 | 15.40 | |
| *COAL | 747.20 | 747.90 | 1365.23 | 0.70 | |
| | 747.90 | 778.90 | 1364.53 | 31.00 | |
| *UH1 | 778.90 | 780.10 | 1333.53 | 1.20 | |
| | 780.10 | 837.70 | 1332.33 | 57.60 | |
| *UH2 | 837.70 | 839.80 | 1274.73 | 2.10 | |
| | 839.80 | 889.20 | 1272.63 | 49.40 | |
| *MH1 | 889.20 | 891.10 | 1223.23 | 1.90 | |
| | 891.10 | 954.10 | 1221.33 | 63.00 | |
| *MH2 | 954.10 | 955.00 | 1158.33 | 0.90 | |
| | 955.00 | 992.80 | 1157.43 | 37.80 | |
| *P11 | 992.80 | 995.90 | 1119.63 | 3.10 | |
| | 995.90 | 1016.80 | 1116.53 | 20.90 | |
| *P10 | 1016.80 | 1018.10 | 1095.63 | 1.30 | |
| | 1018.10 | 1070.90 | 1094.33 | 52.80 | |
| *LH2 | 1070.90 | 1073.80 | 1041.53 | 2.90 | |
| | 1073.80 | 1130.00 | 1038.63 | 56.20 | |
| *COAL | 1130.00 | 1131.00 | 982.43 | 1.00 | |
| | 1131.00 | 1142.00 | 981.43 | 11.00 | |
| *P91 | 1142.00 | 1143.90 | 970.43 | 1.90 | |
| | 1143.90 | 1193.00 | 968.53 | 49.10 | |
| *P81 | 1193.00 | 1194.20 | 919.43 | 1.20 | |
| | 1194.20 | 1215.00 | 918.23 | 20.80 | |
| *P82 | 1215.00 | 1215.90 | 897.43 | 0.90 | |
| | 1215.90 | 1224.90 | 896.53 | 9.00 | |
| *COAL | 1224.90 | 1226.00 | 887.53 | 1.10 | |

| | | | | |
|---|---|---|---|---|
| | 1226.00 | 1240.90 | 886.43 | 14.90 |
| *COAL | 1240.90 | 1242.00 | 871.53 | 1.10 |
| | 1242.00 | 1425.90 | 870.43 | 183.90 |
| *P51 | 1425.90 | 1426.10 | 686.53 | 0.20 |
| | 1426.10 | 1467.50 | 686.33 | 41.40 |
| *P52 | 1467.50 | 1468.90 | 644.93 | 1.40 |
| | 1468.90 | 1507.90 | 643.53 | 39.00 |
| *P41 | 1507.90 | 1508.90 | 604.53 | 1.00 |
| | 1508.90 | 1550.90 | 603.53 | 42.00 |
| *P42 | 1550.90 | 1556.70 | 561.53 | 5.80 |
| | 1556.70 | 1583.80 | 555.73 | 27.10 |
| *COAL | 1583.80 | 1585.00 | 528.63 | 1.20 |
| | 1585.00 | 1625.37 | 527.43 | 40.37 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\S39G.CMP
DATE: 05/07/08

Well: **S39G**

## Oil & Gas Show

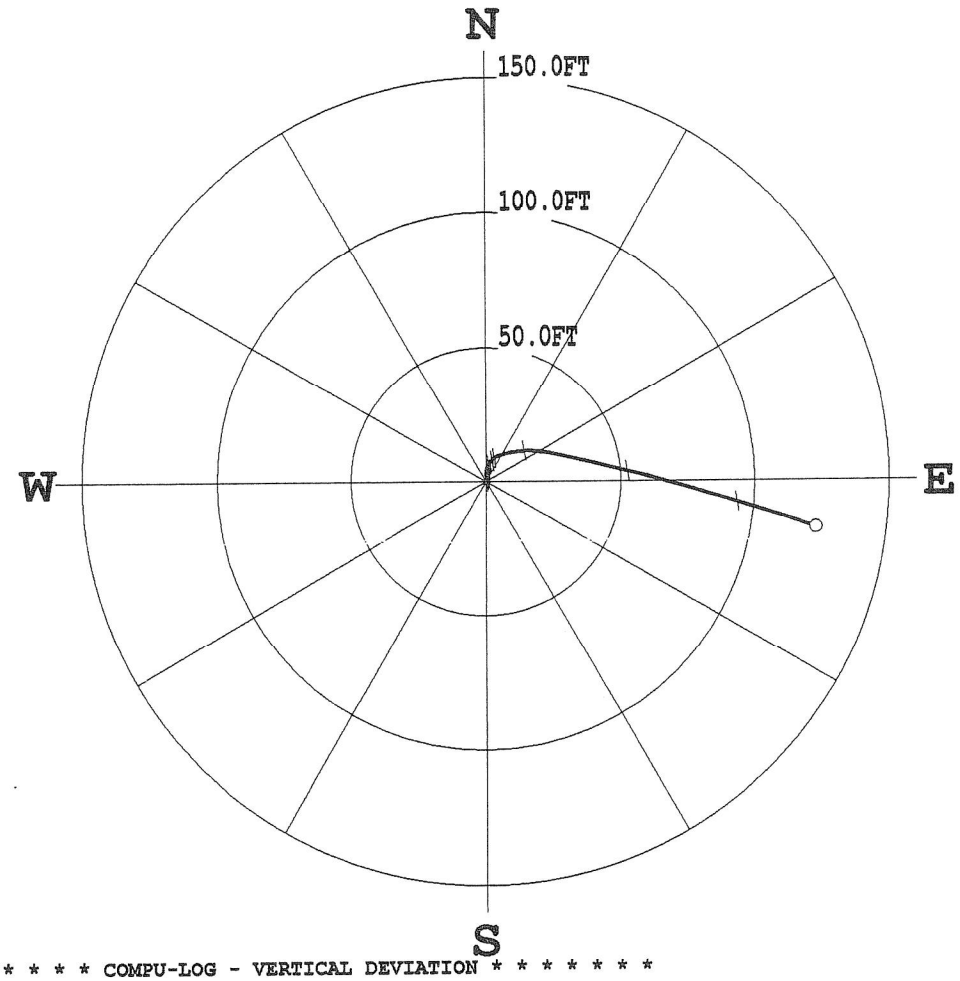
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 657 | 1194.2 | 537.2 | | | |
| Pocahontas | 1224.9 | 1585 | 360.1 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

IENT: CNX GAS
CATION: -
LE ID: 08-CNX-S-39G
TE OF LOG: 04/17/08
OBE: 0026C 777

MAG DECL: -7.1

SCALE: 50 FT/IN
TRUE DEPTH: 1605.96 FT
AZIMUTH: 98.2
DISTANCE: 123.8 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX GAS
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
LOG: 08-CNX-S-39G_04-17-08_22-02_0026C_.10_-3.90_1625.30_DEVI.log

HOLE ID. : 08-CNX-S-39G
DATE OF LOG : 04/17/08
PROBE : 0026C , 777
DEPTH UNITS : FEET

| BLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 2.70 | 2.70 | 0.00 | -0.00 | 0.0 | 280.5 | 0.3 | 280.5 |
| 6.10 | 6.10 | -0.01 | -0.01 | 0.0 | 224.0 | 0.3 | 233.5 |
| 16.10 | 16.10 | 0.02 | -0.03 | 0.0 | 306.7 | 0.4 | 326.6 |
| 26.10 | 26.10 | 0.14 | 0.00 | 0.1 | 1.9 | 0.6 | 40.5 |
| 36.10 | 36.10 | 0.18 | 0.01 | 0.2 | 4.2 | 0.6 | 2.4 |
| 46.10 | 46.10 | 0.30 | 0.03 | 0.3 | 5.9 | 0.6 | 18.4 |
| 56.10 | 56.10 | 0.35 | 0.07 | 0.4 | 10.7 | 0.3 | 52.5 |
| 66.10 | 66.10 | 0.42 | 0.12 | 0.4 | 15.7 | 0.4 | 55.0 |
| 76.10 | 76.10 | 0.46 | 0.15 | 0.5 | 17.6 | 0.3 | 348.8 |
| 86.10 | 86.09 | 0.54 | 0.15 | 0.6 | 15.4 | 0.6 | 348.5 |
| 96.10 | 96.09 | 0.60 | 0.14 | 0.6 | 13.5 | 0.5 | 25.2 |
| 106.10 | 106.09 | 0.67 | 0.20 | 0.7 | 16.7 | 0.7 | 20.6 |
| 116.10 | 116.09 | 0.72 | 0.25 | 0.8 | 19.0 | 0.2 | 126.2 |
| 126.10 | 126.09 | 0.73 | 0.24 | 0.8 | 17.9 | 0.1 | 140.8 |
| 136.10 | 136.09 | 0.73 | 0.24 | 0.8 | 18.3 | 0.2 | 300.2 |
| 146.10 | 146.09 | 0.79 | 0.25 | 0.8 | 17.8 | 0.3 | 49.1 |
| 156.10 | 156.09 | 0.81 | 0.26 | 0.8 | 18.1 | 0.2 | 351.6 |
| 166.10 | 166.09 | 0.86 | 0.29 | 0.9 | 18.7 | 0.3 | 64.8 |
| 176.10 | 176.09 | 0.85 | 0.32 | 0.9 | 20.6 | 0.4 | 58.0 |
| 186.10 | 186.09 | 0.86 | 0.33 | 0.9 | 20.9 | 0.2 | 323.7 |
| 196.10 | 196.09 | 0.91 | 0.31 | 1.0 | 19.1 | 0.5 | 354.5 |
| 206.10 | 206.09 | 0.97 | 0.31 | 1.0 | 17.9 | 0.3 | 330.7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 16.10 | 16.10 | 0.02 | -0.05 | 0.0 | 360.7 | 0.4 | 320.9 |
| 26.10 | 26.10 | 0.14 | 0.00 | 0.1 | 1.9 | 0.6 | 40.5 |
| 36.10 | 36.10 | 0.18 | 0.01 | 0.2 | 4.2 | 0.6 | 2.4 |
| 46.10 | 46.10 | 0.30 | 0.03 | 0.3 | 5.9 | 0.6 | 18.4 |
| 56.10 | 56.10 | 0.35 | 0.07 | 0.4 | 10.7 | 0.3 | 52.5 |
| 66.10 | 66.10 | 0.42 | 0.12 | 0.4 | 15.7 | 0.4 | 55.0 |
| 76.10 | 76.10 | 0.46 | 0.15 | 0.5 | 17.6 | 0.3 | 348.8 |
| 86.10 | 86.09 | 0.54 | 0.15 | 0.6 | 15.4 | 0.6 | 348.5 |
| 96.10 | 96.09 | 0.60 | 0.14 | 0.6 | 13.5 | 0.5 | 25.2 |
| 106.10 | 106.09 | 0.67 | 0.20 | 0.7 | 16.7 | 0.7 | 20.6 |
| 116.10 | 116.09 | 0.72 | 0.25 | 0.8 | 19.0 | 0.2 | 126.2 |
| 126.10 | 126.09 | 0.73 | 0.24 | 0.8 | 17.9 | 0.1 | 140.8 |
| 136.10 | 136.09 | 0.73 | 0.24 | 0.8 | 18.3 | 0.2 | 300.2 |
| 146.10 | 146.09 | 0.79 | 0.25 | 0.8 | 17.8 | 0.3 | 49.1 |
| 156.10 | 156.09 | 0.81 | 0.26 | 0.8 | 18.1 | 0.2 | 351.6 |
| 166.10 | 166.09 | 0.86 | 0.29 | 0.9 | 18.7 | 0.3 | 64.8 |
| 176.10 | 176.09 | 0.85 | 0.32 | 0.9 | 20.6 | 0.4 | 58.0 |
| 186.10 | 186.09 | 0.86 | 0.33 | 0.9 | 20.9 | 0.2 | 323.7 |
| 196.10 | 196.09 | 0.91 | 0.31 | 1.0 | 19.1 | 0.5 | 354.5 |
| 206.10 | 206.09 | 0.97 | 0.31 | 1.0 | 17.9 | 0.3 | 330.7 |
| 216.10 | 216.09 | 1.03 | 0.33 | 1.1 | 18.0 | 0.4 | 48.3 |
| 226.10 | 226.09 | 1.09 | 0.37 | 1.2 | 18.9 | 0.5 | 42.2 |
| 236.10 | 236.09 | 1.13 | 0.41 | 1.2 | 19.8 | 0.2 | 41.7 |
| 246.10 | 246.09 | 1.17 | 0.40 | 1.2 | 19.0 | 0.7 | 350.6 |
| 256.10 | 256.09 | 1.21 | 0.40 | 1.3 | 18.5 | 0.1 | 305.0 |
| 266.10 | 266.09 | 1.28 | 0.38 | 1.3 | 16.7 | 0.5 | 346.0 |
| 276.10 | 276.09 | 1.37 | 0.38 | 1.4 | 15.3 | 0.6 | 357.7 |
| 286.10 | 286.09 | 1.50 | 0.38 | 1.5 | 14.4 | 0.5 | 26.2 |
| 296.10 | 296.09 | 1.60 | 0.42 | 1.7 | 14.6 | 0.5 | 24.4 |
| 306.10 | 306.09 | 1.67 | 0.43 | 1.7 | 14.6 | 0.5 | 340.1 |
| 316.10 | 316.09 | 1.76 | 0.46 | 1.8 | 14.5 | 0.6 | 36.5 |
| 326.10 | 326.09 | 1.82 | 0.46 | 1.9 | 14.1 | 0.7 | 355.6 |
| 336.10 | 336.09 | 1.93 | 0.50 | 2.0 | 14.6 | 0.8 | 25.0 |
| 346.10 | 346.09 | 2.05 | 0.55 | 2.1 | 15.1 | 0.6 | 27.8 |
| 356.10 | 356.09 | 2.17 | 0.57 | 2.2 | 14.6 | 0.7 | 11.3 |
| 366.10 | 366.09 | 2.27 | 0.59 | 2.3 | 14.6 | 1.0 | 352.4 |
| 376.10 | 376.08 | 2.35 | 0.57 | 2.4 | 13.7 | 0.6 | 0.8 |
| 386.10 | 386.08 | 2.49 | 0.60 | 2.6 | 13.5 | 0.5 | 353.6 |
| 396.10 | 396.08 | 2.60 | 0.60 | 2.7 | 13.0 | 0.7 | 22.3 |
| 406.10 | 406.08 | 2.71 | 0.65 | 2.8 | 13.5 | 0.6 | 22.5 |
| 416.10 | 416.08 | 2.82 | 0.70 | 2.9 | 13.9 | 0.8 | 25.7 |
| 426.10 | 426.08 | 2.96 | 0.74 | 3.1 | 14.1 | 0.7 | 352.0 |
| 436.10 | 436.08 | 3.03 | 0.73 | 3.1 | 13.6 | 0.0 | 0.0 |
| 446.10 | 446.08 | 3.25 | 0.84 | 3.4 | 14.4 | 1.6 | 21.7 |
| 456.10 | 456.07 | 3.50 | 0.97 | 3.6 | 15.5 | 1.7 | 31.1 |
| 466.10 | 466.07 | 3.75 | 0.94 | 3.9 | 14.0 | 1.5 | 352.5 |
| 476.10 | 476.07 | 4.00 | 0.91 | 4.1 | 12.8 | 1.5 | 350.4 |
| 486.10 | 486.06 | 4.20 | 1.03 | 4.3 | 13.8 | 1.3 | 38.6 |
| 496.10 | 496.06 | 4.36 | 1.17 | 4.5 | 15.0 | 0.9 | 106.0 |
| 506.10 | 506.06 | 4.46 | 1.33 | 4.7 | 16.6 | 1.1 | 74.0 |
| 516.10 | 516.06 | 4.41 | 1.43 | 4.6 | 18.0 | 0.7 | 131.8 |
| 526.10 | 526.06 | 4.33 | 1.49 | 4.6 | 19.1 | 0.7 | 243.0 |
| 536.10 | 536.05 | 4.36 | 1.37 | 4.6 | 17.5 | 0.7 | 259.0 |
| 546.10 | 546.05 | 4.43 | 1.27 | 4.6 | 16.0 | 0.5 | 160.5 |
| 556.10 | 556.05 | 4.43 | 1.22 | 4.6 | 15.4 | 0.8 | 296.2 |
| 566.10 | 566.05 | 4.52 | 1.09 | 4.6 | 13.6 | 1.0 | 320.1 |
| 576.10 | 576.05 | 4.68 | 0.99 | 4.8 | 11.9 | 1.0 | 321.3 |
| 586.10 | 586.05 | 4.85 | 0.89 | 4.9 | 10.3 | 1.1 | 322.1 |
| 596.10 | 596.05 | 4.99 | 0.78 | 5.1 | 8.9 | 0.9 | 307.6 |
| 606.10 | 606.04 | 5.14 | 0.72 | 5.2 | 8.0 | 1.4 | 357.7 |
| 616.10 | 616.04 | 5.39 | 0.74 | 5.4 | 7.8 | 1.6 | 18.0 |
| 626.10 | 626.04 | 5.56 | 0.88 | 5.6 | 9.0 | 0.8 | 94.1 |
| 636.10 | 636.04 | 5.55 | 1.04 | 5.6 | 10.6 | 1.0 | 91.5 |
| 646.10 | 646.03 | 5.51 | 1.18 | 5.6 | 12.1 | 1.0 | 99.0 |
| 656.10 | 656.03 | 5.60 | 1.36 | 5.8 | 13.7 | 1.4 | 12.9 |
| 666.10 | 666.03 | 5.80 | 1.30 | 5.9 | 12.6 | 0.9 | 310.6 |
| 676.10 | 676.03 | 5.93 | 1.19 | 6.0 | 11.3 | 0.9 | 304.4 |
| 686.10 | 686.03 | 6.05 | 1.09 | 6.1 | 10.2 | 1.5 | 4.1 |
| 696.10 | 696.03 | 6.20 | 1.02 | 6.3 | 9.4 | 1.1 | 329.4 |
| 706.10 | 706.02 | 6.29 | 0.91 | 6.4 | 8.2 | 0.8 | 304.8 |
| 716.10 | 716.02 | 6.37 | 0.78 | 6.4 | 7.0 | 0.8 | 305.2 |
| 726.10 | 726.02 | 6.45 | 0.67 | 6.5 | 5.9 | 0.8 | 309.4 |
| 736.10 | 736.02 | 6.44 | 0.72 | 6.5 | 6.4 | 0.9 | 84.0 |
| 746.10 | 746.02 | 6.52 | 0.90 | 6.6 | 7.8 | 0.8 | 96.4 |
| 756.10 | 756.02 | 6.68 | 1.05 | 6.8 | 8.9 | 1.2 | 53.4 |
| 766.10 | 766.01 | 6.83 | 1.21 | 6.9 | 10.0 | 1.4 | 30.3 |
| 776.10 | 776.01 | 7.06 | 1.31 | 7.2 | 10.5 | 1.3 | 1.3 |
| 786.10 | 786.01 | 7.28 | 1.30 | 7.4 | 10.1 | 1.1 | 332.3 |
| 796.10 | 796.01 | 7.41 | 1.28 | 7.5 | 9.8 | 0.6 | 132.9 |
| 806.10 | 806.00 | 7.44 | 1.20 | 7.5 | 9.1 | 0.5 | 270.1 |
| 816.10 | 816.00 | 7.46 | 1.28 | 7.6 | 9.7 | 1.4 | 66.2 |
| 826.10 | 826.00 | 7.48 | 1.46 | 7.6 | 11.1 | 1.1 | 85.4 |
| 836.10 | 836.00 | 7.57 | 1.64 | 7.7 | 12.2 | 1.4 | 34.3 |
| 846.10 | 846.00 | 7.56 | 1.61 | 7.7 | 12.0 | 0.7 | 144.9 |
| 856.10 | 856.00 | 7.52 | 1.76 | 7.7 | 13.1 | 0.8 | 117.2 |
| 866.10 | 866.00 | 7.59 | 1.72 | 7.8 | 12.8 | 0.8 | 146.9 |
| 876.10 | 875.99 | 7.54 | 1.86 | 7.8 | 13.9 | 0.8 | 121.7 |
| 886.10 | 885.99 | 7.52 | 2.04 | 7.8 | 15.2 | 1.2 | 80.2 |
| 896.10 | 895.99 | 7.62 | 2.22 | 7.9 | 16.3 | 1.1 | 15.6 |
| 906.10 | 905.99 | 7.81 | 2.28 | 8.1 | 16.3 | 1.3 | 34.0 |
| 916.10 | 915.99 | 7.96 | 2.45 | 8.3 | 17.1 | 1.3 | 20.5 |
| 926.10 | 925.98 | 8.08 | 2.38 | 8.4 | 16.4 | 0.7 | 302.2 |
| 936.10 | 935.98 | 8.22 | 2.31 | 8.5 | 15.7 | 0.9 | 342.1 |
| 946.10 | 945.98 | 8.38 | 2.33 | 8.7 | 15.5 | 1.2 | 57.3 |
| 956.10 | 955.98 | 8.32 | 2.42 | 8.7 | 16.2 | 0.8 | 228.2 |
| 966.10 | 965.98 | 8.24 | 2.39 | 8.6 | 16.2 | 0.8 | 160.4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 926.10 | 925.98 | 8.08 | 2.38 | 8.4 | 16.4 | 0.7 | 302.2 |
| 936.10 | 935.98 | 8.22 | 2.31 | 8.5 | 15.7 | 0.9 | 342.1 |
| 946.10 | 945.98 | 8.38 | 2.33 | 8.7 | 15.5 | 1.2 | 57.3 |
| 956.10 | 955.98 | 8.32 | 2.42 | 8.7 | 16.2 | 0.8 | 228.2 |
| 966.10 | 965.98 | 8.24 | 2.39 | 8.6 | 16.2 | 0.8 | 160.4 |
| 976.10 | 975.98 | 8.11 | 2.46 | 8.5 | 16.9 | 0.8 | 164.6 |
| 986.10 | 985.98 | 8.17 | 2.42 | 8.5 | 16.5 | 1.1 | 356.9 |
| 996.10 | 995.98 | 8.36 | 2.46 | 8.7 | 16.4 | 1.5 | 42.6 |
| 1006.10 | 1005.97 | 8.54 | 2.56 | 8.9 | 16.7 | 1.4 | 37.6 |
| 1016.10 | 1015.97 | 8.63 | 2.73 | 9.1 | 17.5 | 1.0 | 116.9 |
| 1026.10 | 1025.97 | 8.74 | 2.90 | 9.2 | 18.3 | 1.4 | 33.9 |
| 1036.10 | 1035.97 | 8.73 | 3.04 | 9.2 | 19.2 | 0.7 | 182.5 |
| 1046.10 | 1045.97 | 8.64 | 3.05 | 9.2 | 19.4 | 0.9 | 118.4 |
| 1056.10 | 1055.96 | 8.67 | 3.03 | 9.2 | 19.2 | 1.3 | 15.8 |
| 1066.10 | 1065.96 | 8.87 | 3.08 | 9.4 | 19.1 | 0.6 | 348.1 |
| 1076.10 | 1075.96 | 8.97 | 3.05 | 9.5 | 18.8 | 1.3 | 8.0 |
| 1086.10 | 1085.96 | 9.01 | 3.09 | 9.5 | 18.9 | 0.4 | 52.3 |
| 1096.10 | 1095.96 | 9.07 | 3.18 | 9.6 | 19.3 | 0.9 | 58.6 |
| 1106.10 | 1105.96 | 9.15 | 3.32 | 9.7 | 19.9 | 1.3 | 61.4 |
| 1116.10 | 1115.95 | 9.28 | 3.55 | 9.9 | 20.9 | 2.0 | 63.5 |
| 1126.10 | 1125.94 | 9.45 | 4.00 | 10.3 | 23.0 | 3.6 | 69.0 |
| 1136.10 | 1135.92 | 9.69 | 4.67 | 10.8 | 25.8 | 4.8 | 71.1 |
| 1146.10 | 1145.87 | 9.97 | 5.55 | 11.4 | 29.1 | 5.7 | 72.4 |
| 1156.10 | 1155.80 | 10.29 | 6.67 | 12.3 | 33.0 | 7.2 | 75.5 |
| 1166.10 | 1165.71 | 10.60 | 8.00 | 13.3 | 37.0 | 8.6 | 78.0 |
| 1176.10 | 1175.59 | 10.93 | 9.51 | 14.5 | 41.0 | 9.5 | 80.4 |
| 1186.10 | 1185.44 | 11.21 | 11.21 | 15.9 | 45.0 | 10.3 | 82.2 |
| 1196.10 | 1195.26 | 11.39 | 13.06 | 17.3 | 48.9 | 11.0 | 85.0 |
| 1206.10 | 1205.07 | 11.49 | 15.01 | 18.9 | 52.6 | 11.5 | 89.5 |
| 1216.10 | 1214.87 | 11.46 | 17.03 | 20.5 | 56.0 | 11.7 | 94.1 |
| 1226.10 | 1224.64 | 11.29 | 19.12 | 22.2 | 59.4 | 12.7 | 92.0 |
| 1236.10 | 1234.39 | 11.04 | 21.35 | 24.0 | 62.7 | 13.4 | 95.3 |
| 1246.10 | 1244.09 | 10.64 | 23.73 | 26.0 | 65.9 | 14.6 | 109.7 |
| 1256.10 | 1253.75 | 10.15 | 26.24 | 28.1 | 68.9 | 14.8 | 103.8 |
| 1266.10 | 1263.41 | 9.57 | 28.77 | 30.3 | 71.6 | 15.2 | 102.8 |
| 1276.10 | 1273.06 | 8.96 | 31.32 | 32.6 | 74.0 | 15.3 | 102.7 |
| 1286.10 | 1282.71 | 8.35 | 33.89 | 34.9 | 76.2 | 15.4 | 103.0 |
| 1296.10 | 1292.35 | 7.71 | 36.47 | 37.3 | 78.1 | 15.4 | 102.9 |
| 1306.10 | 1301.99 | 7.10 | 39.06 | 39.7 | 79.7 | 15.5 | 103.0 |
| 1316.10 | 1311.62 | 6.46 | 41.66 | 42.2 | 81.2 | 15.6 | 104.4 |
| 1326.10 | 1321.26 | 5.81 | 44.26 | 44.6 | 82.5 | 15.6 | 104.1 |
| 1336.10 | 1330.88 | 5.16 | 46.88 | 47.2 | 83.7 | 15.7 | 107.2 |
| 1346.10 | 1340.50 | 4.49 | 49.52 | 49.7 | 84.8 | 16.0 | 103.1 |
| 1356.10 | 1350.12 | 3.83 | 52.19 | 52.3 | 85.8 | 16.2 | 99.8 |
| 1366.10 | 1359.72 | 3.12 | 54.87 | 55.0 | 86.7 | 16.0 | 105.2 |
| 1376.10 | 1369.33 | 2.45 | 57.56 | 57.6 | 87.6 | 16.3 | 105.6 |
| 1386.10 | 1378.92 | 1.76 | 60.29 | 60.3 | 88.3 | 16.5 | 110.6 |
| 1396.10 | 1388.53 | 1.01 | 62.95 | 63.0 | 89.1 | 15.5 | 105.5 |
| 1406.10 | 1398.16 | 0.28 | 65.50 | 65.5 | 89.8 | 15.7 | 106.6 |
| 1416.10 | 1407.79 | -0.45 | 68.11 | 68.1 | 90.4 | 15.6 | 106.3 |
| 1426.10 | 1417.41 | -1.20 | 70.72 | 70.7 | 91.0 | 15.7 | 107.4 |
| 1436.10 | 1427.03 | -1.96 | 73.34 | 73.4 | 91.5 | 15.9 | 106.5 |
| 1446.10 | 1436.65 | -2.73 | 75.96 | 76.0 | 92.1 | 16.1 | 106.5 |
| 1456.10 | 1446.27 | -3.52 | 78.57 | 78.7 | 92.6 | 15.8 | 106.2 |
| 1466.10 | 1455.89 | -4.30 | 81.18 | 81.3 | 93.0 | 15.8 | 106.9 |
| 1476.10 | 1465.51 | -5.09 | 83.80 | 84.0 | 93.5 | 15.9 | 106.3 |
| 1486.10 | 1475.13 | -5.87 | 86.43 | 86.6 | 93.9 | 16.0 | 104.6 |
| 1496.10 | 1484.74 | -6.67 | 89.06 | 89.3 | 94.3 | 15.9 | 107.1 |
| 1506.10 | 1494.36 | -7.49 | 91.68 | 92.0 | 94.7 | 16.1 | 106.0 |
| 1516.10 | 1503.97 | -8.31 | 94.32 | 94.7 | 95.0 | 16.2 | 108.2 |
| 1526.10 | 1513.57 | -9.13 | 96.97 | 97.4 | 95.4 | 16.2 | 104.8 |
| 1536.10 | 1523.17 | -9.94 | 99.65 | 100.1 | 95.7 | 16.3 | 104.9 |
| 1546.10 | 1532.76 | -10.79 | 102.35 | 102.9 | 96.0 | 15.4 | 117.3 |
| 1556.10 | 1542.36 | -11.61 | 105.00 | 105.6 | 96.3 | 16.0 | 109.2 |
| 1566.10 | 1551.97 | -12.48 | 107.58 | 108.3 | 96.6 | 16.1 | 106.0 |
| 1576.10 | 1561.57 | -13.36 | 110.22 | 111.0 | 96.9 | 16.3 | 106.3 |
| 1586.10 | 1571.16 | -14.24 | 112.87 | 113.8 | 97.2 | 16.3 | 108.8 |
| 1596.10 | 1580.75 | -15.13 | 115.52 | 116.5 | 97.5 | 16.4 | 102.8 |
| 1606.10 | 1590.35 | -16.05 | 118.18 | 119.3 | 97.7 | 15.9 | 96.3 |
| 1616.10 | 1599.93 | -16.98 | 120.87 | 122.1 | 98.0 | 16.9 | 109.6 |
| 1622.40 | 1605.96 | -17.59 | 122.59 | 123.8 | 98.2 | 16.8 | 109.5 |

Well: **S39G**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 14 | 24" | | | X | 4/10/2008 | |
| Surface | 16" | | 20" | | | | | |
| Water Protection | 13 3/8" | 420.35 | 15 3/8" | 162 | X | | 4/14/2008 | Basket @ 85' |
| Coal Protection | 13 3/8" | 420.35 | 15 3/8" | 162 | X | | 4/14/2008 | Basket @ 85' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE S-39G

RIG #: 87

LOCATION: HURRICANE BRANCH, VA

DATE STARTED: 4/10/2008

DATE COMPLETED: 4/18/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 14 | 14 | SHALE/SAND |
| 14 | 35 | 21 | SANDSTONE |
| 35 | 65 | 30 | SHALE/SAND |
| 65 | 95 | 30 | SAND/SHALE |
| 95 | 125 | 30 | SAND/SHALE/COAL |
| 125 | 154 | 29 | SAND/SHALE |
| 154 | 186 | 32 | SAND/SHALE/COAL |
| 186 | 218 | 32 | SAND/COAL |
| 218 | 248 | 30 | SANDSTONE |
| 248 | 281 | 33 | SAND/SHALE |
| 281 | 312 | 31 | SHALE/SAND |
| 312 | 344 | 32 | SHALE/SAND/SANDY SHALE |
| 344 | 375 | 31 | SHALE/SAND |
| 375 | 407 | 32 | SAND |
| 407 | 439 | 32 | SAND |
| 439 | 454 | 15 | SAND |
| 454 | 465 | 11 | SANDSTONE |
| 465 | 497 | 32 | SANDSTONE |
| 497 | 529 | 32 | SAND/SHALE/COAL |
| 529 | 560 | 31 | SAND/SHALE |
| 560 | 592 | 32 | SAND/SHALE |
| 592 | 623 | 31 | SAND/SHALE |
| 623 | 655 | 32 | SAND/SHALE |
| 655 | 687 | 32 | SAND/SHALE |
| 687 | 718 | 31 | SAND/SHALE |
| 718 | 750 | 32 | SAND/SHALE/COAL |
| 750 | 781 | 31 | SANDSTONE |
| 781 | 813 | 32 | SAND |
| 813 | 845 | 32 | SAND/COAL |
| 845 | 876 | 31 | SAND |
| 876 | 908 | 32 | SAND/SANDY SHALE |
| 908 | 939 | 31 | SAND/SHALE |
| 939 | 971 | 32 | SAND/SHALE |
| 971 | 1003 | 32 | SAND/SANDY SHALE |

| | | | |
|---|---|---|---|
| 1003 | 1034 | 31 | SAND |
| 1034 | 1066 | 32 | SAND |
| 1066 | 1097 | 31 | SHALE/COAL |
| 1097 | 1105 | 8 | SAND |
| 1105 | 1137 | 32 | SAND |
| 1137 | 1168 | 31 | SAND/COAL |
| 1168 | 1200 | 32 | SAND |
| 1200 | 1232 | 32 | SAND |
| 1232 | 1263 | 31 | SAND |
| 1263 | 1265 | 2 | SAND |
| 1265 | 1296 | 31 | SAND |
| 1296 | 1328 | 32 | SAND/SHALE/COAL |
| 1328 | 1359 | 31 | SAND/COAL |
| 1359 | 1391 | 32 | SAND/SHALE |
| 1391 | 1423 | 32 | SAND/SHALE |
| 1423 | 1455 | 32 | SANDY SHALE/SANDSTONE/SANDY SHALE |
| 1455 | 1487 | 32 | SAND/SHALE/COAL |
| 1487 | 1518 | 31 | SAND & SANDY SHALE |
| 1518 | 1549 | 31 | SAND |
| 1549 | 1580 | 31 | SAND |
| 1580 | 1612 | 32 | SAND |
| 1612 | 1620 | 8 | SAND |

1620' TOTAL DEPTH
14' OF 22" CASING
420.35' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 4639 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1300 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 3/26/1998 |
| **Driller's Total Depth:** | 2267.60 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: R Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| STIM | BU-1300 stim.pdf |

## 3. Final Production

| Description | FileName |
|---|---|
| FINAL | BU-1300 stim.pdf |

## 4. Comments

*Notes:*

[1/29/2014, jsa]
Material inserted by DGO [1/3/2014, jhh]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 1/6/2014 | *(Company)* |
| By: | L. Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 1/6/2014 | | |
| Status: | Approved | Date: | 1/29/2014 |
| Final PDF Date: | 1/29/2014 | | |

BU1300

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T37
Permit #: 3592

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 03/26/98 Total Depth of Well: 2267.60'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 539 MSCF N2, 386 bbls water
456 sx 20/40 and 144 sx 12/20
Perforated: 2099 TO 2103 No. of Perforations: OH Perforation Size: NA
Formation Broke Down at: 1358 PSIG Average Injection Rate 30 BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: 1961 PSIG
Date stimulated: 03/26/98. (SCREENOUT)

**Zone 2:** P4, P5, P6, P8 Formation Stimulated With: 397 MSCF N2, 281 bbls water
25 sx 20/40 and 130 sx 12/20
Perforated: 1733 TO 2029 No. of Perforations: 32 Perforation Size: .70" EHD
Formation Broke Down at: 3805 PSIG Average Injection Rate 30 BPM
ISIP 1583 PSIG 5 MIN SIP 1197 PSIG Average Injection Pressure: 3088 PSIG
Date stimulated: 03/26/98.

**Zone 3:** P9, P10, P11, LH3 Formation Stimulated With: 343 MSCF N2, 296 bbls water
350 sx 20/40 and 177 sx 12/20
Perforated: 1471 TO 1673 No. of Perforations: 68 Perforation Size: .70" EHD
Formation Broke Down at: _____ PSIG Average Injection Rate 30 BPM
ISIP 1197 PSIG 5 MIN SIP 1088 PSIG Average Injection Pressure: 1961 PSIG
Date stimulated: 03/26/98.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | NA | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: POCAHONTAS GAS PARTNERSHIP (Company)

By: Leslie K. Arrington (Signature)

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Form DGO-GO-15
Rev 9/91

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T37
Permit #: 3592

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 03/26/98 Total Depth of Well: 2267.60'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** MH1, MH2, UH1, UH2, LS1, S2 Formation Stimulated With: 486 MSCF N2, 339 bbls water 110 sx 20/40
Perforated: 1153 TO 1427 No. of Perforations: 52 Perforation Size: .70"EHD
Formation Broke Down at: 1841 PSIG Average Injection Rate 30 BPM
ISIP 2762 PSIG 5 MIN SIP 2187 PSIG Average Injection Pressure: 2913 PSIG
Date stimulated: 03/26/98.

**Zone 5:** _____ Formation Stimulated With: _____
Perforated: __ TO ____ No. ofPerforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG __ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

**Zone 6:** _____ Formation Stimulated With: _____
Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ____ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (4) | | | | | |
| Zone (5) | | | | | |
| Zone (6) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: POCAHONTAS GAS PARTNERSHIP (Company)
By: Leslie K. Cummings (Signature)

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BU1300

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T37
Permit #: 3592

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 03/26/98 Total Depth of Well: 2267.60'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

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456 sx 20/40 and 144 sx 12/20
Perforated: 2099 TO 2103 No. of Perforations: OH Perforation Size: NA
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ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: 1961 PSIG
Date stimulated: 03/26/98. (SCREENOUT)

**Zone 2:** P4, P5, P6, P8 Formation Stimulated With: 397 MSCF N2, 281 bbls water
25 sx 20/40 and 130 sx 12/20
Perforated: 1733 TO 2029 No. of Perforations: 32 Perforation Size: .70" EHD
Formation Broke Down at: 3805 PSIG Average Injection Rate 30 BPM
ISIP 1583 PSIG 5 MIN SIP 1197 PSIG Average Injection Pressure: 3088 PSIG
Date stimulated: 03/26/98.

**Zone 3:** P9, P10, P11, LH3 Formation Stimulated With: 343 MSCF N2, 296 bbls water
350 sx 20/40 and 177 sx 12/20
Perforated: 1471 TO 1673 No. of Perforations: 68 Perforation Size: .70" EHD
Formation Broke Down at: _____ PSIG Average Injection Rate 30 BPM
ISIP 1197 PSIG 5 MIN SIP 1088 PSIG Average Injection Pressure: 1961 PSIG
Date stimulated: 03/26/98.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | NA | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: POCAHONTAS GAS PARTNERSHIP (Company)

By: Leslie K. Arrington (Signature)

APR 1998
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DIVISION OF
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Form DGO-GO-15
Rev 9/91

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T37
Permit #: 3592

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 03/26/98 Total Depth of Well: 2267.60'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** MH1, MH2, UH1, UH2, LS1, S2 Formation Stimulated With: 486 MSCF N2, 339 bbls water 110 sx 20/40
Perforated: 1153 TO 1427 No. of Perforations: 52 Perforation Size: .70"EHD
Formation Broke Down at: 1841 PSIG Average Injection Rate 30 BPM
ISIP 2762 PSIG 5 MIN SIP 2187 PSIG Average Injection Pressure: 2913 PSIG
Date stimulated: 03/26/98.

**Zone 5:** _____ Formation Stimulated With: _____
Perforated: __ TO ____ No. ofPerforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG __ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

**Zone 6:** _____ Formation Stimulated With: _____
Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ____ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (4) | | | | | |
| Zone (5) | | | | | |
| Zone (6) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: POCAHONTAS GAS PARTNERSHIP (Company)
By: Leslie K. Cummings (Signature)

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Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 4635 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1300 |
| **Operations Name:** | PGP T37 W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 12/17/1997

Drilling Contractor: Noah Horn

Date drilling completed: 12/20/1997

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 2267.60

Log Total Depth (feet): 0.00

Coal Seam at Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10494969.2100

Permitted State Plane Y: 3610607.5600

Final Plat State Plane X: 10494969.3010

Final Plat State Plane Y: 3610607.7360

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | BU-1300 plat.pdf |

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| COAL | BU-1300 coal.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS | BU-1300 gs.pdf |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: Deviation/Gamma/Calipier

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| CASING | BU-1300 casing.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: _____

List of Attached Items:

| Description | FileName |
|---|---|
| LOG | BU-1300 log.pdf |

## 9. Comments

[1/29/2014, jsa]
Material inserted by DGO [1/3/2014, jhh]

## 10. Signature

Permitee: CNX Gas Company LLC Date: 1/6/2014

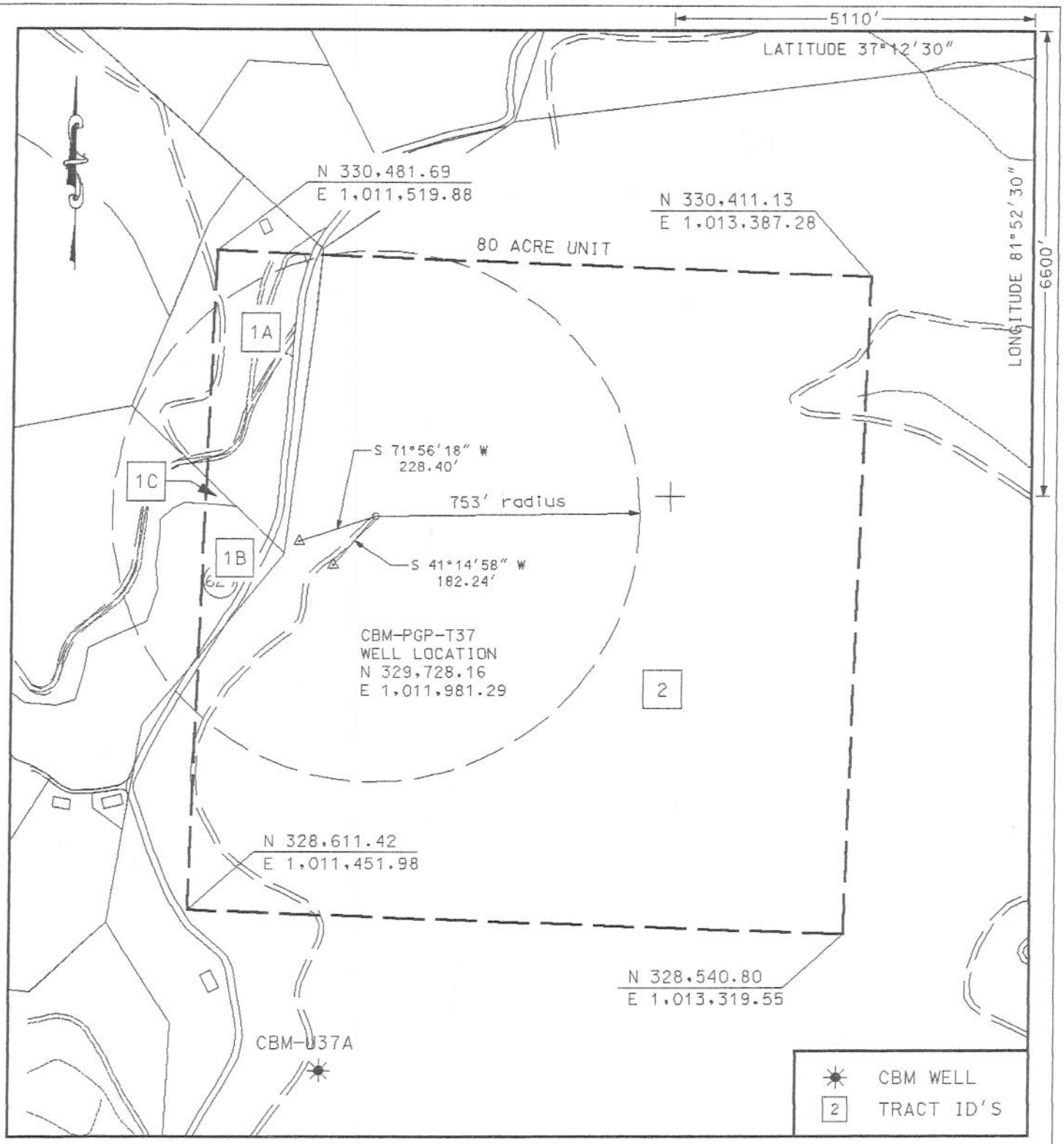
Signed By: L. Arrington Title: *********

## INTERNAL USE ONLY

Submit Date: 1/6/2014

Status: A Date: 1/29/2014

Final PDF Date: 1/29/2014




# WELL LOCATION PLAT

Company Pocahontas Gas Partnership Well Name and Number CBM-PGP-T37

Tract No. Coal Mountain Elevation 2568.16' Quadrangle Keen Mountain

County Buchanan District Garden Scale: 1" = 400' Date 2/13/98

This plat is a new plat ____ ; an updated plat ____ ; or a final plat X

\+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

Form DGO-GO-7
Rev. 9/91

Licensed Professional Engineer or Licensed Land Surveyor

(Affix Seal)

2200 FT

# Exhibit A

**Well Name:** 97-PGP-T37
**Elevation:** 2568.16

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| LB1 | 42.10 | 43.10 | 2526.06 | 1.00 | |
| | 43.10 | 225.00 | 2525.06 | 181.90 | |
| KN2 | 225.00 | 225.90 | 2343.16 | 0.90 | |
| | 225.90 | 338.50 | 2342.26 | 112.60 | |
| AL1 | 338.50 | 339.20 | 2229.66 | 0.70 | |
| | 339.20 | 355.40 | 2228.96 | 16.20 | |
| AL2 | 355.40 | 355.90 | 2212.76 | 0.50 | |
| | 355.90 | 461.60 | 2212.26 | 105.70 | |
| RA1 | 461.60 | 463.50 | 2106.56 | 1.90 | |
| | 463.50 | 493.00 | 2104.66 | 29.50 | |
| RA2 | 493.00 | 496.30 | 2075.16 | 3.30 | MINE VOID |
| | 496.30 | 511.40 | 2071.86 | 15.10 | |
| RA3 | 511.40 | 513.30 | 2056.76 | 1.90 | |
| | 513.30 | 604.90 | 2054.86 | 91.60 | |
| JB1 | 604.90 | 606.20 | 1963.26 | 1.30 | |
| | 606.20 | 647.80 | 1961.96 | 41.60 | |
| JB3 | 647.80 | 650.90 | 1920.36 | 3.10 | |
| | 650.90 | 728.00 | 1917.26 | 77.10 | |
| T1 | 728.00 | 728.50 | 1840.16 | 0.50 | |
| | 728.50 | 744.10 | 1839.66 | 15.60 | |
| TI | 744.10 | 744.70 | 1824.06 | 0.60 | |
| | 744.70 | 1153.70 | 1823.46 | 409.00 | |
| SE2 | 1153.70 | 1154.30 | 1414.46 | 0.60 | |
| | 1154.30 | 1194.10 | 1413.86 | 39.80 | |
| LS1 | 1194.10 | 1196.90 | 1374.06 | 2.80 | |
| | 1196.90 | 1253.00 | 1371.26 | 56.10 | |
| UH1 | 1253.00 | 1254.00 | 1315.16 | 1.00 | |
| | 1254.00 | 1308.70 | 1314.16 | 54.70 | |
| UH2 | 1308.70 | 1309.80 | 1259.46 | 1.10 | |
| | 1309.80 | 1361.00 | 1258.36 | 51.20 | |
| MH1 | 1361.00 | 1362.60 | 1207.16 | 1.60 | |
| | 1362.60 | 1425.80 | 1205.56 | 63.20 | |
| MH2 | 1425.80 | 1426.80 | 1142.36 | 1.00 | |
| | 1426.80 | 1471.10 | 1141.36 | 44.30 | |
| P11 | 1471.10 | 1473.80 | 1097.06 | 2.70 | |
| | 1473.80 | 1493.10 | 1094.36 | 19.30 | |
| P10 | 1493.10 | 1493.90 | 1075.06 | 0.80 | |
| | 1493.90 | 1551.20 | 1074.26 | 57.30 | |
| LH3 | 1551.20 | 1552.50 | 1016.96 | 1.30 | |
| | 1552.50 | 1625.70 | 1015.66 | 73.20 | |
| P91 | 1625.70 | 1626.70 | 942.46 | 1.00 | |
| | 1626.70 | 1665.80 | 941.46 | 39.10 | |
| P92 | 1665.80 | 1666.80 | 902.36 | 1.00 | |
| | 1666.80 | 1668.60 | 901.36 | 1.80 | |
| P92 | 1668.60 | 1669.40 | 899.56 | 0.80 | |
| | 1669.40 | 1670.70 | 898.76 | 1.30 | |
| P93 | 1670.70 | 1671.80 | 897.46 | 1.10 | |
| | 1671.80 | 1723.90 | 896.36 | 52.10 | |
| P82 | 1723.90 | 1724.60 | 844.26 | 0.70 | |

| | | | | |
|---|---|---|---|---|
| | 1724.60 | 1877.90 | 843.56 | 153.30 |
| P61 | 1877.90 | 1878.20 | 690.26 | 0.30 |
| | 1878.20 | 1920.90 | 689.96 | 42.70 |
| P51 | 1920.90 | 1921.90 | 647.26 | 1.00 |
| | 1921.90 | 2026.90 | 646.26 | 105.00 |
| P41 | 2026.90 | 2027.60 | 541.26 | 0.70 |
| | 2027.60 | 2098.50 | 540.56 | 70.90 |
| P3 | 2098.50 | 2103.10 | 469.66 | 4.60 |
| | 2103.10 | 2149.00 | 465.06 | 45.90 |
| COAL | 2149.00 | 2149.40 | 419.16 | 0.40 |
| | 2149.40 | 2185.60 | 418.76 | 36.20 |
| COAL | 2185.60 | 2185.90 | 382.56 | 0.30 |
| | 2185.90 | 2270.00 | 382.26 | 84.10 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION

BU1300

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP-T37
Permit #: 3592

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## DRILLING REPORT

Pursuant to VR-480-05-22.1, s 1.36, the undersigned Permittee submits this report on Well CBM-PGP-T37 in the Garden District of the Buchanan City/County, Virginia on this 18th day, February month, 19 98 .

LOCATION

City/County: Buchanan District: Garden
Surface Elevation: 2568.16' Elevation of Kelly Bushing: _____ Quadrangle: Keen Mountain
----- Ft. S. of Latitude ------ and ----- Ft. W. of Longitude -----

or, State Plane Coordinates: Zone 5 N 329,728.16 E 1,011,981.29

Attach a final location plat as required by VR 480-05-22.1, s 1.36.

DRILLING DATA

Date Drilling Commenced: December 17, 1997 Drilling Contractor: Noah Horn
Date Drilling Completed: December 20, 1997 Rig Type: x Rotary __ Cable Tool
Total Depth of Well: 2267.60'

RECEIVED FEB 1998 DIVISION OF GAS & OIL

GEOLOGICAL DATA

Fresh Water at: N/R Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM

Salt Water at: ____ Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM

COAL SEAMS:

| NAME | TOP | BOTTOM | THICKNESS | MINING IN AREA YES | NO | MINED OUT |
|---|---|---|---|---|---|---|
| See DGO-GO-14, Exhibit A | | | | | | |

GAS AND OIL SHOWS:

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 804.77' | 2267.60' | 1462.83' | | | |

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T37
Permit #: 3592

Cuttings or samples are __ are not x available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have __ have not x been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes x No _____

SURVEY RESULTS*:

* See Deviation Survey

CASING AND TUBING

| | SIZE | TOP | BOTTOM | CEMENT USED LENGTH | IN CU/FT | DATE CEMENTED | PACKERS OR BRIDGE PLUGS KIND | SIZE | SET AT |
|---|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0 | 19.00' | 19.00' | | | | | |
| Surface | 13 3/8" | 0 | 19.00 | 19.00' | | | | | |
| Water Protection | 8 5/8" | 0 | 804.77' | 804.77' | | 12/18/97 | 85 Std 35 H.L. | Cement to Surface | |
| Coal Protection | 8 5/8" | 0 | 804.77' | 804.77 | | | | | |
| Other Casing and Tubing Left In Well | 5 1/2" | 0 | 2087.90' | 2087.90' | | 1/26/98 | 120 Std 195 H.L. | Cement to Surface | |
| Liners | | | | | | | | | |

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.
Basket at 163.36'
Mine Void at 493'

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T37
Permit #: 3592

# DRILLER'S LOG

Compiled by - NOAH HORN

| Geologic Age | Formation | General Lithology | Color | Depth Top | Depth Bottom | Thickness | Remarks |
|---|---|---|---|---|---|---|---|
| | | OVERBURDEN | | 0 | 10 | | 15" HOLE |
| | | SHALE | | 10 | 176 | | 13 3/8" CASING |
| | | SANDSTONE | | 176 | 236 | | 11" HOLE |
| | | SAND | | 236 | 326 | | |
| | | SAND W/SANDY SHL | | 326 | 356 | | |
| | | SAND | | 356 | 416 | | |
| Pennsylvanian | Pocahontas | SANDY SHALE | | 416 | 446 | | |
| | | SAND | | 446 | 498 | | |
| | | VOID | | 498 | 500 | | |
| | | SANDY SHALE | | 500 | 506 | | |
| | | SANDSTONE | | 506 | 566 | | |
| | | SANDY SHL W/SAND | | 566 | 626 | | |
| | | SANDSTONE | | 626 | 746 | | |
| | | SANDY SHALE | | 746 | 776 | | |
| | | SANDSTONE | | 776 | 806 | | |
| | | SANDY SHALE | | 806 | 821 | | 8 5/8" CASING |
| | | SANDSTONE | | 821 | 983 | | 7 7/8" HOLE |
| | | SANDSTONE W/SSH | | 983 | 1013 | | |
| | | SANDY SHALE | | 1013 | 1103 | | |
| | | SANDSTONE | | 1103 | 1163 | | |
| | | SANDY SHALE | | 1163 | 2063 | | |
| | | SHALE | | 2063 | 2100 | | |
| | | COAL | | 2100 | 2106 | | |
| | | SHALE | | 2106 | 2153 | | |
| | | SANDY SHALE | | 2153 | 2213 | | |
| | | SANDSTONE | | 2213 | 2273 | | |

Permittee: POCAHONTAS GAS PARTNERSHIP (Company)

By: Leslie K. Arrington (Signature)



Form DGO-GO-14
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 3495 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-2853 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 7/29/2006 |
| **Driller's Total Depth:** | 2125.00 | **Log's Total Depth:** | 2128.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: £ Stimulated R GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

[10/11/2012, jsa]

**5. Signature**

Permittee: CNX Gas Company LLC Date: 10/9/2012 *(Company)*

By: Rocky Malamisura Title: General Manager Drilling *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 10/9/2012

Status: Approved Date: 10/11/2012

Final PDF Date: 10/11/2012

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 512 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-2853 |
| **Operations Name:** | CBM T37C W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 7/21/2006
Drilling Contractor: NOAH HORN
Date drilling completed: 7/29/2006
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 2,125
Log Total Depth (feet): 2,128
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,011,976
Final Plat State Plane X: 1,011,978
Permitted State Plane Y: 329,743
Final Plat State Plane Y: 329,747
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| T37C PLAT | T37CPLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| T37C SURVEY | T37CSURVEY.pdf |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| T37C GAS & OIL SHOWS | T37CSHOWS.pdf |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: CALIPER, GAMMA, DEVIATION

Did logs disclose vertical locations of a coal seam? ☑ Yes ☐ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| T37C EXHIBIT A | T37CEXHIBITA.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| T37A CASING | T37CCASING.pdf |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

**8. Drillers Log**

Compiled By: _____

List of Attached Items:

| Description | FileName |
|---|---|
| T37C DRILLER'S LOG | T37CDRILLERSLOG.pdf |

## 9. Comments

PREVIOUSLY APPROVED BY DGO R. COOPER ON 9/14/06

## 10. Signature

Permitee: CNX Gas Company LLC Date: 7/13/2007 *(Company)*

Signed By: Les Arrington Title: Mgr Environmental/Permitting *(Signature)*

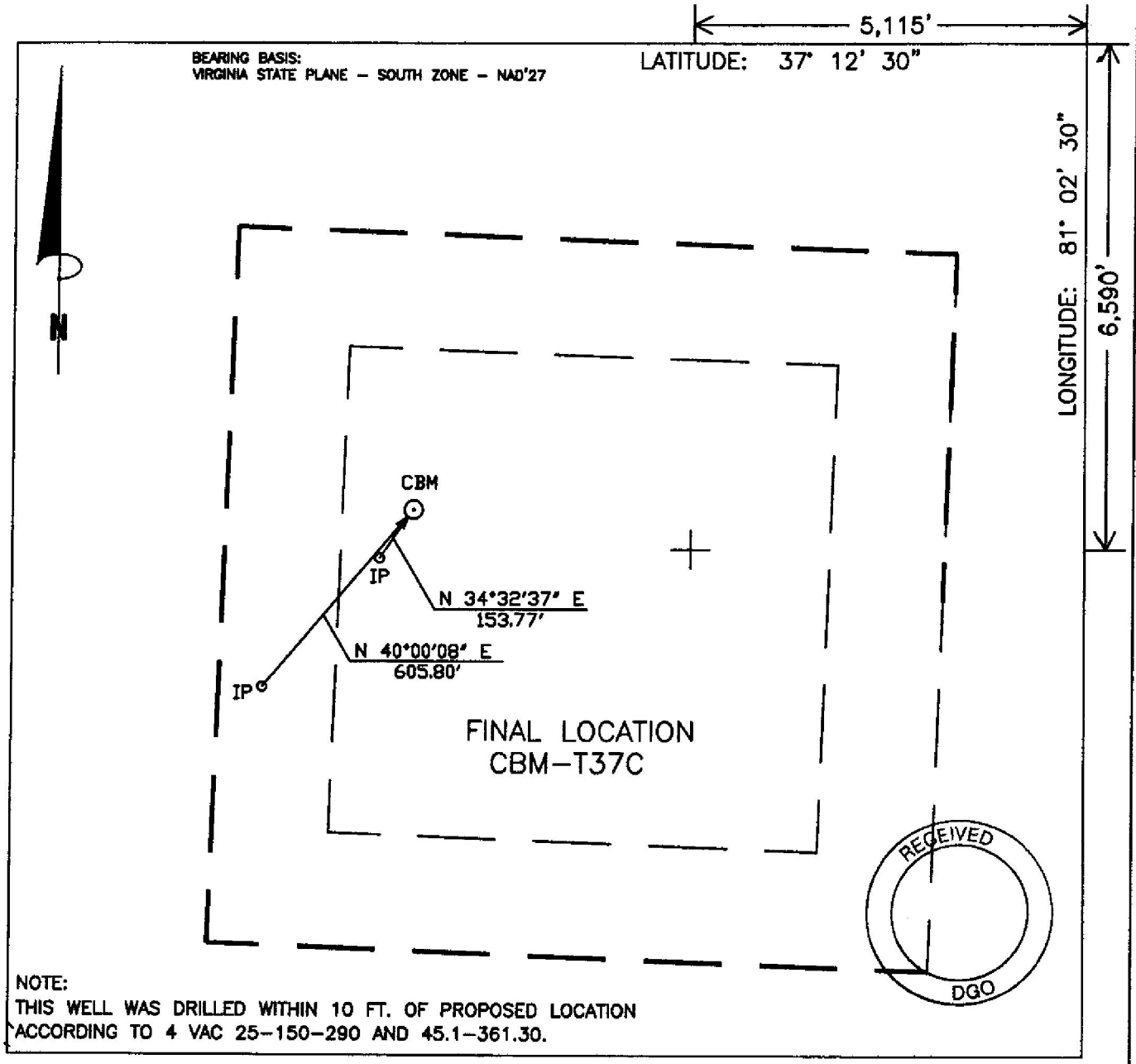
**INTERNAL USE ONLY**

Submit Date: 7/13/2007

Status: Inspr Approved Date: 7/23/2007

Final PDF Date: 7/24/2007

BU-2853




# WELL LOCATION PLAT

T37CFNL
2N23/20-0501/70

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T37C

TRACT NUMBER COAL MOUNTAIN MINING LIMITED PARTNERSHIP LLP QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 329,743.91 E 1,011,977.93

ELEVATION: 2569.92' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 07–25–06

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PL X

+ Denotes the location of a well on United States Topographic Maps, scale 1 24,000, latitude and longitude lines being represented by border lines as shown (original)

D. R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No.
6540
7/25/06
PROFESSIONAL ENGINEER

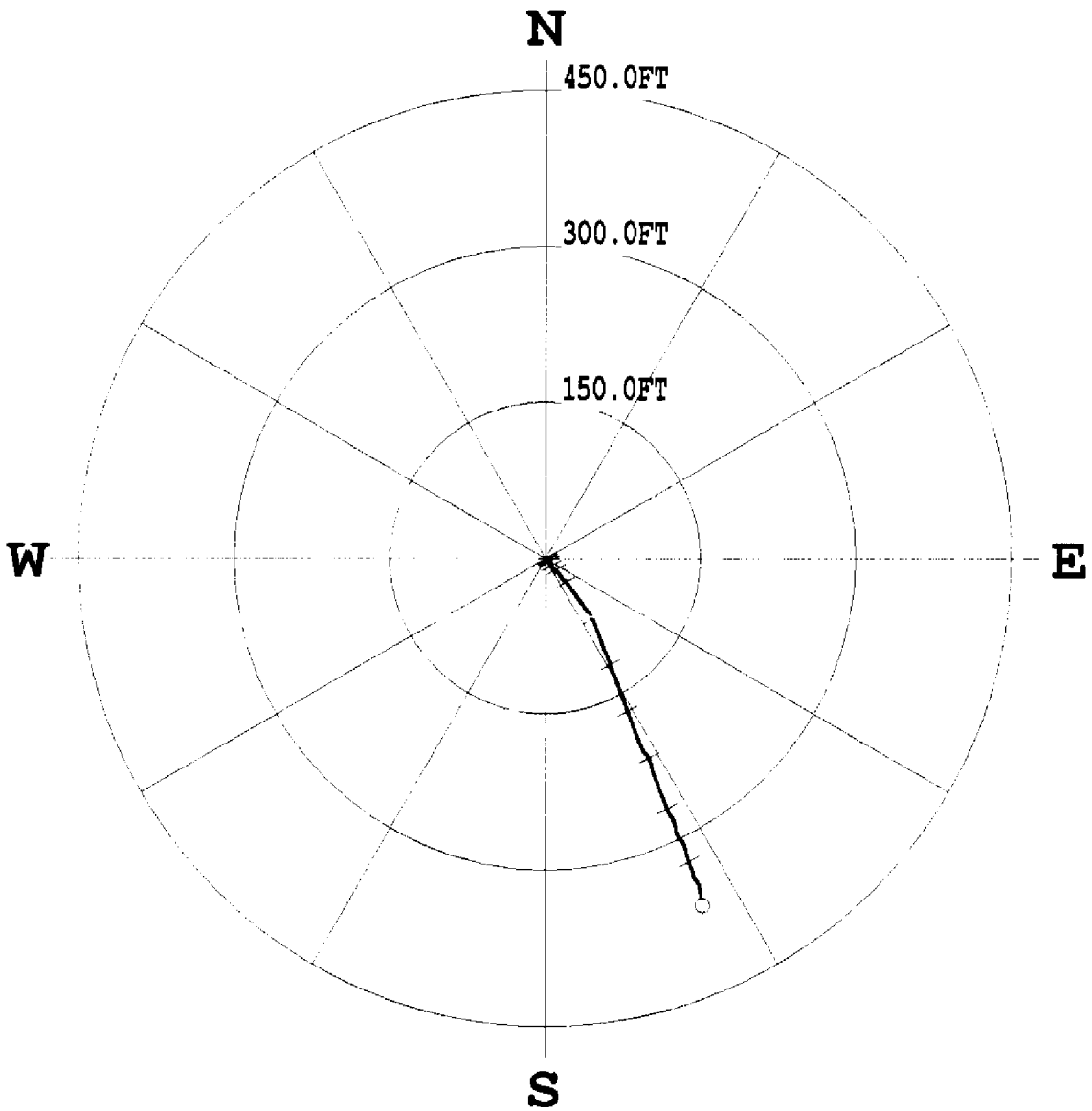
Form DGO–GO–7
Rev. 10/96

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: CONSOL ENERGY
LOCATION: -
HOLE ID: 06-CNX-T-37C
DATE OF LOG: 07/29/06
PROBE: 0026C 1044

MAG DECL: -7.1

SCALE: 150 FT/IN
TRUE DEPTH: 2065.91 FT
AZIMUTH: 155.4
DISTANCE: 366.4 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CONSOL ENERGY
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.10
LOG: 06-CNX-T-37C_07-29-06_06-29_0026C_.10_0.00_2126.90_DEVI.log

HOLE ID. : 06-CNX-T-37C
DATE OF LOG : 07/29/06
PROBE : 0026C , 1044
DEPTH UNITS : FEET

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 0.0 | 0.20 | -0.00 | -0.00 | 0.0 | 225.3 | 0.3 | 225.3 |
| 10.0 | 10.00 | -0.00 | 0.00 | 0.0 | 141.5 | 0.2 | 55.0 |
| 20.0 | 20.00 | -0.00 | 0.02 | 0.0 | 97.3 | 0.1 | 86.6 |
| 30.0 | 30.00 | -0.01 | 0.03 | 0.0 | 110.4 | 0.1 | 107.8 |
| 40.0 | 40.00 | -0.03 | 0.04 | 0.0 | 125.9 | 0.1 | 154.8 |
| 50.0 | 50.00 | -0.04 | 0.03 | 0.1 | 140.9 | 0.0 | 254.8 |
| 60.0 | 60.00 | -0.05 | 0.03 | 0.1 | 151.1 | 0.1 | 152.0 |
| 70.0 | 70.00 | -0.06 | 0.04 | 0.1 | 147.4 | 0.0 | 114.9 |
| 80.0 | 80.00 | -0.07 | 0.05 | 0.1 | 145.8 | 0.1 | 131.5 |

DATA FROM : -
PROBE : 0026C , 1044
MAG. DECL. : -7.100
DEPTH UNITS : FEET
LOG: 06-CNX-T-37C_07-29-06_06-29_0026C_.10_0.00_2126.90_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 0.0 | 0.20 | -0.00 | -0.00 | 0.0 | 225.3 | 0.3 | 225.3 |
| 10.0 | 10.00 | -0.00 | 0.00 | 0.0 | 141.5 | 0.2 | 55.0 |
| 20.0 | 20.00 | -0.00 | 0.02 | 0.0 | 97.3 | 0.1 | 86.6 |
| 30.0 | 30.00 | -0.01 | 0.03 | 0.0 | 110.4 | 0.1 | 107.8 |
| 40.0 | 40.00 | -0.03 | 0.04 | 0.0 | 125.9 | 0.1 | 154.8 |
| 50.0 | 50.00 | -0.04 | 0.03 | 0.1 | 140.9 | 0.0 | 254.8 |
| 60.0 | 60.00 | -0.05 | 0.03 | 0.1 | 151.1 | 0.1 | 152.0 |
| 70.0 | 70.00 | -0.06 | 0.04 | 0.1 | 147.4 | 0.0 | 114.9 |
| 80.0 | 80.00 | -0.07 | 0.05 | 0.1 | 145.8 | 0.1 | 131.5 |
| 90.0 | 90.00 | -0.07 | 0.06 | 0.1 | 143.0 | 0.1 | 156.5 |
| 100.0 | 100.00 | -0.08 | 0.06 | 0.1 | 141.2 | 0.1 | 138.6 |
| 110.0 | 110.00 | -0.09 | 0.07 | 0.1 | 141.3 | 0.1 | 130.8 |
| 120.0 | 120.00 | -0.10 | 0.08 | 0.1 | 143.5 | 0.1 | 176.4 |
| 130.0 | 130.00 | -0.11 | 0.07 | 0.1 | 148.3 | 0.1 | 232.5 |
| 140.0 | 140.00 | -0.12 | 0.06 | 0.1 | 154.3 | 0.1 | 254.0 |
| 150.0 | 150.00 | -0.11 | 0.04 | 0.1 | 158.4 | 0.1 | 358.2 |
| 160.0 | 160.00 | -0.11 | 0.06 | 0.1 | 152.7 | 0.1 | 124.4 |
| 170.0 | 170.00 | -0.10 | 0.06 | 0.1 | 148.5 | 0.0 | 63.1 |
| 180.0 | 180.00 | -0.08 | 0.07 | 0.1 | 140.8 | 0.3 | 77.6 |
| 190.0 | 190.00 | -0.06 | 0.10 | 0.1 | 120.3 | 0.3 | 70.5 |
| 200.0 | 200.00 | -0.05 | 0.15 | 0.2 | 106.9 | 0.3 | 88.6 |
| 210.0 | 210.00 | -0.08 | 0.18 | 0.2 | 114.1 | 0.1 | 203.1 |
| 220.0 | 220.00 | -0.11 | 0.14 | 0.2 | 128.0 | 0.4 | 293.7 |
| 230.0 | 230.00 | -0.09 | 0.12 | 0.1 | 128.8 | 0.5 | 118.9 |
| 240.0 | 240.00 | -0.08 | 0.11 | 0.1 | 124.7 | 0.5 | 326.6 |
| 250.0 | 250.00 | -0.07 | 0.11 | 0.1 | 124.2 | 0.2 | 323.3 |
| 260.0 | 260.00 | -0.08 | 0.11 | 0.1 | 126.9 | 0.4 | 308.9 |
| 270.0 | 270.00 | -0.07 | 0.10 | 0.1 | 125.2 | 0.1 | 25.2 |
| 280.0 | 280.00 | -0.08 | 0.10 | 0.1 | 126.7 | 0.1 | 279.5 |
| 290.0 | 290.00 | -0.11 | 0.10 | 0.1 | 135.3 | 0.3 | 188.0 |
| 300.0 | 300.00 | -0.12 | 0.11 | 0.2 | 138.2 | 0.1 | 5.8 |
| 310.0 | 310.00 | -0.14 | 0.13 | 0.2 | 138.0 | 0.3 | 150.0 |
| 320.0 | 320.00 | -0.17 | 0.17 | 0.2 | 133.6 | 0.3 | 47.7 |
| 330.0 | 330.00 | -0.19 | 0.26 | 0.3 | 126.8 | 0.3 | 65.8 |
| 340.0 | 340.00 | -0.25 | 0.38 | 0.5 | 122.7 | 0.9 | 121.2 |
| 350.0 | 350.00 | -0.27 | 0.47 | 0.5 | 119.3 | 0.7 | 109.5 |
| 360.0 | 359.99 | -0.32 | 0.60 | 0.7 | 117.7 | 0.8 | 125.9 |
| 370.0 | 369.99 | -0.37 | 0.74 | 0.8 | 116.9 | 0.6 | 97.1 |
| 380.0 | 379.99 | -0.41 | 0.85 | 0.9 | 115.8 | 0.7 | 119.1 |
| 390.0 | 389.99 | -0.47 | 0.96 | 1.1 | 116.1 | 0.8 | 121.1 |
| 400.0 | 399.99 | -0.56 | 1.10 | 1.2 | 116.9 | 0.7 | 129.9 |
| 410.0 | 409.99 | -0.64 | 1.24 | 1.4 | 117.3 | 1.0 | 114.5 |
| 420.0 | 419.99 | -0.76 | 1.39 | 1.6 | 118.8 | 1.1 | 140.9 |
| 430.0 | 429.99 | -0.87 | 1.53 | 1.8 | 119.7 | 0.7 | 133.4 |
| 440.0 | 439.98 | -0.99 | 1.63 | 1.9 | 121.2 | 1.3 | 125.0 |
| 450.0 | 449.98 | -1.13 | 1.75 | 2.1 | 122.8 | 0.7 | 149.3 |
| 460.0 | 459.98 | -1.27 | 1.85 | 2.2 | 124.6 | 1.1 | 138.3 |
| 470.0 | 469.98 | -1.45 | 1.95 | 2.4 | 126.6 | 1.0 | 144.7 |
| 480.0 | 479.98 | -1.54 | 2.08 | 2.6 | 126.6 | 0.3 | 170.7 |
| 490.0 | 489.98 | -1.61 | 2.10 | 2.6 | 127.5 | 0.5 | 151.5 |
| 500.0 | 499.98 | -1.67 | 2.17 | 2.7 | 127.6 | 1.1 | 121.8 |
| 510.0 | 509.97 | -1.74 | 2.30 | 2.9 | 127.1 | 1.2 | 131.6 |
| 520.0 | 519.97 | -1.82 | 2.43 | 3.0 | 126.7 | 1.2 | 109.1 |
| 530.0 | 529.97 | -1.89 | 2.57 | 3.2 | 126.3 | 0.7 | 116.3 |
| 540.0 | 539.97 | -1.98 | 2.71 | 3.4 | 126.1 | 0.0 | 0.0 |
| 550.0 | 549.97 | -1.96 | 2.80 | 3.4 | 125.1 | 1.2 | 135.4 |
| 560.0 | 559.97 | -2.10 | 2.98 | 3.6 | 125.2 | 1.3 | 118.8 |
| 570.0 | 569.96 | -2.24 | 3.10 | 3.8 | 125.9 | 1.1 | 178.2 |
| 580.0 | 579.96 | -2.45 | 3.12 | 4.0 | 128.2 | 1.3 | 167.9 |
| 590.0 | 589.96 | -2.67 | 3.17 | 4.1 | 130.1 | 1.4 | 165.3 |
| 600.0 | 599.96 | -2.91 | 3.24 | 4.4 | 132.0 | 1.5 | 162.6 |
| 610.0 | 609.95 | -3.15 | 3.31 | 4.6 | 133.5 | 1.2 | 165.3 |
| 620.0 | 619.95 | -3.40 | 3.37 | 4.8 | 135.3 | 1.6 | 154.8 |
| 630.0 | 629.94 | -3.65 | 3.46 | 5.0 | 136.5 | 1.7 | 159.7 |
| 640.0 | 639.94 | -3.89 | 3.57 | 5.3 | 137.4 | 1.3 | 148.8 |
| 650.0 | 649.94 | -4.13 | 3.71 | 5.6 | 138.1 | 1.7 | 148.0 |
| 660.0 | 659.93 | -4.35 | 3.89 | 5.8 | 138.2 | 1.7 | 155.5 |
| 670.0 | 669.93 | -4.62 | 4.06 | 6.1 | 138.7 | 2.1 | 143.2 |
| 680.0 | 679.92 | -4.87 | 4.23 | 6.5 | 139.0 | 1.8 | 153.7 |
| 690.0 | 689.92 | -5.15 | 4.35 | 6.7 | 139.8 | 1.9 | 162.0 |
| 700.0 | 699.91 | -5.44 | 4.45 | 7.0 | 140.7 | 1.6 | 163.2 |
| 710.0 | 709.91 | -5.69 | 4.55 | 7.3 | 141.4 | 1.6 | 170.2 |
| 720.0 | 719.91 | -5.99 | 4.60 | 7.5 | 142.5 | 1.5 | 179.3 |
| 730.0 | 729.90 | -6.28 | 4.67 | 7.8 | 143.3 | 2.1 | 157.8 |
| 740.0 | 739.89 | -6.58 | 4.85 | 8.2 | 143.6 | 2.1 | 152.3 |
| 750.0 | 749.89 | -6.86 | 5.10 | 8.5 | 143.3 | 2.1 | 134.9 |
| 760.0 | 759.88 | -7.12 | 5.34 | 8.9 | 143.1 | 2.2 | 147.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 470.0 | 469.98 | -1.45 | 1.95 | 2.4 | 126.6 | 1.0 | 144.7 |
| 480.0 | 479.98 | -1.54 | 2.08 | 2.6 | 126.6 | 0.3 | 170.7 |
| 490.0 | 489.98 | -1.61 | 2.10 | 2.6 | 127.5 | 0.5 | 151.5 |
| 500.0 | 499.96 | -1.67 | 2.17 | 2.7 | 127.6 | 1.1 | 121.8 |
| 510.0 | 509.97 | -1.74 | 2.30 | 2.9 | 127.1 | 1.2 | 131.6 |
| 520.0 | 519.97 | -1.82 | 2.43 | 3.0 | 126.7 | 1.2 | 109.1 |
| 530.0 | 529.97 | -1.89 | 2.57 | 3.2 | 126.3 | 0.7 | 116.3 |
| 540.0 | 539.97 | -1.98 | 2.71 | 3.4 | 126.1 | 0.0 | 0.0 |
| 550.0 | 549.97 | -1.96 | 2.80 | 3.4 | 125.1 | 1.2 | 135.4 |
| 560.0 | 559.97 | -2.10 | 2.98 | 3.6 | 125.2 | 1.3 | 118.8 |
| 570.0 | 569.96 | -2.24 | 3.10 | 3.8 | 125.9 | 1.1 | 178.2 |
| 580.0 | 579.96 | -2.45 | 3.12 | 4.0 | 126.2 | 1.3 | 167.8 |
| 590.0 | 589.96 | -2.67 | 3.17 | 4.1 | 130.1 | 1.4 | 165.3 |
| 600.0 | 599.96 | -2.91 | 3.24 | 4.4 | 132.0 | 1.5 | 162.6 |
| 610.0 | 609.95 | -3.15 | 3.31 | 4.6 | 133.5 | 1.2 | 165.3 |
| 620.0 | 619.95 | -3.40 | 3.37 | 4.8 | 135.3 | 1.6 | 154.8 |
| 630.0 | 629.94 | -3.65 | 3.46 | 5.0 | 136.5 | 1.7 | 159.7 |
| 640.0 | 639.94 | -3.89 | 3.57 | 5.3 | 137.4 | 1.3 | 148.8 |
| 650.0 | 649.94 | -4.13 | 3.71 | 5.6 | 138.1 | 1.7 | 148.0 |
| 660.0 | 659.93 | -4.35 | 3.89 | 5.8 | 138.2 | 1.7 | 155.5 |
| 670.0 | 669.93 | -4.62 | 4.06 | 6.1 | 138.7 | 2.1 | 143.2 |
| 680.0 | 679.92 | -4.87 | 4.23 | 6.5 | 139.0 | 1.8 | 153.7 |
| 690.0 | 689.92 | -5.15 | 4.35 | 6.7 | 139.8 | 1.9 | 162.0 |
| 700.0 | 699.91 | -5.44 | 4.45 | 7.0 | 140.7 | 1.6 | 163.2 |
| 710.0 | 709.91 | -5.69 | 4.55 | 7.3 | 141.4 | 1.6 | 170.2 |
| 720.0 | 719.91 | -5.99 | 4.60 | 7.5 | 142.5 | 1.5 | 179.3 |
| 730.0 | 729.90 | -6.28 | 4.67 | 7.8 | 143.3 | 2.1 | 157.8 |
| 740.0 | 739.89 | -6.58 | 4.85 | 8.2 | 143.6 | 2.1 | 152.3 |
| 750.0 | 749.89 | -6.86 | 5.10 | 8.5 | 143.3 | 2.1 | 134.9 |
| 760.0 | 759.88 | -7.12 | 5.34 | 8.9 | 143.1 | 2.2 | 147.5 |
| 770.0 | 769.87 | -7.40 | 5.59 | 9.3 | 142.9 | 1.9 | 139.4 |
| 780.0 | 779.87 | -7.68 | 5.84 | 9.6 | 142.8 | 2.5 | 139.5 |
| 790.0 | 789.86 | -7.91 | 6.13 | 10.0 | 142.2 | 2.3 | 129.0 |
| 800.0 | 799.85 | -8.17 | 6.43 | 10.4 | 141.8 | 2.2 | 128.1 |
| 810.0 | 809.84 | -8.40 | 6.73 | 10.8 | 141.3 | 2.3 | 126.5 |
| 820.0 | 819.83 | -8.68 | 7.06 | 11.2 | 140.9 | 2.5 | 131.0 |
| 830.0 | 829.83 | -8.92 | 7.36 | 11.6 | 140.5 | 2.4 | 127.1 |
| 840.0 | 839.82 | -9.18 | 7.63 | 11.9 | 140.3 | 0.0 | 0.0 |
| 850.0 | 849.81 | -9.38 | 7.87 | 12.2 | 140.0 | 2.0 | 132.5 |
| 860.0 | 859.81 | -9.62 | 8.15 | 12.6 | 139.7 | 2.2 | 134.6 |
| 870.0 | 869.80 | -9.90 | 8.46 | 13.0 | 139.5 | 2.4 | 131.3 |
| 880.0 | 879.79 | -10.19 | 8.77 | 13.4 | 139.3 | 2.5 | 133.8 |
| 890.0 | 889.78 | -10.49 | 9.06 | 13.9 | 139.2 | 2.4 | 143.8 |
| 900.0 | 899.77 | -10.81 | 9.31 | 14.3 | 139.3 | 2.4 | 136.9 |
| 910.0 | 909.76 | -11.16 | 9.55 | 14.7 | 139.4 | 2.5 | 140.5 |
| 920.0 | 919.75 | -11.51 | 9.81 | 15.1 | 139.5 | 2.5 | 131.2 |
| 930.0 | 929.74 | -11.80 | 10.14 | 15.6 | 139.3 | 2.3 | 129.6 |
| 940.0 | 939.73 | -12.11 | 10.49 | 16.0 | 139.1 | 3.6 | 125.2 |
| 950.0 | 949.71 | -12.52 | 10.97 | 16.6 | 138.8 | 3.7 | 132.9 |
| 960.0 | 959.68 | -12.99 | 11.52 | 17.4 | 138.4 | 4.7 | 128.6 |
| 970.0 | 969.65 | -13.52 | 12.11 | 18.1 | 138.1 | 4.5 | 135.0 |
| 980.0 | 979.61 | -14.17 | 12.74 | 19.1 | 138.0 | 5.4 | 140.5 |
| 990.0 | 989.56 | -14.97 | 13.42 | 20.1 | 138.1 | 6.5 | 143.9 |
| 1000.0 | 999.48 | -15.93 | 14.14 | 21.3 | 138.4 | 7.4 | 144.5 |
| 1010.0 | 1009.38 | -17.08 | 14.95 | 22.7 | 138.8 | 8.6 | 145.2 |
| 1020.0 | 1019.26 | -18.37 | 15.84 | 24.3 | 139.2 | 9.3 | 145.3 |
| 1030.0 | 1029.12 | -19.74 | 16.81 | 25.9 | 139.6 | 10.0 | 142.2 |
| 1040.0 | 1038.95 | -20.75 | 18.30 | 27.7 | 138.6 | 11.0 | 113.2 |
| 1050.0 | 1048.75 | -21.93 | 19.86 | 29.6 | 137.8 | 11.8 | 137.6 |
| 1060.0 | 1058.53 | -23.60 | 21.12 | 31.7 | 138.2 | 12.6 | 145.3 |
| 1070.0 | 1068.28 | -25.42 | 22.35 | 33.8 | 138.7 | 13.3 | 143.7 |
| 1080.0 | 1077.99 | -27.34 | 23.67 | 36.2 | 139.1 | 14.7 | 140.3 |
| 1090.0 | 1087.66 | -29.38 | 25.12 | 38.7 | 139.5 | 13.8 | 152.7 |
| 1100.0 | 1097.29 | -31.47 | 26.73 | 41.3 | 139.7 | 15.8 | 143.4 |
| 1110.0 | 1106.89 | -33.77 | 28.37 | 44.1 | 140.0 | 17.0 | 142.1 |
| 1120.0 | 1116.43 | -36.13 | 30.22 | 47.1 | 140.1 | 17.3 | 145.9 |
| 1130.0 | 1125.96 | -38.57 | 31.97 | 50.1 | 140.3 | 17.5 | 149.6 |
| 1140.0 | 1135.50 | -41.03 | 33.68 | 53.1 | 140.6 | 17.6 | 144.4 |
| 1150.0 | 1145.02 | -43.46 | 35.54 | 56.1 | 140.7 | 17.6 | 151.3 |
| 1160.0 | 1154.54 | -45.99 | 37.23 | 59.2 | 141.0 | 17.6 | 139.9 |
| 1170.0 | 1164.06 | -48.43 | 39.07 | 62.2 | 141.1 | 17.4 | 150.8 |
| 1180.0 | 1173.58 | -50.87 | 40.90 | 65.3 | 141.2 | 17.3 | 150.7 |
| 1190.0 | 1183.11 | -53.33 | 42.69 | 68.3 | 141.3 | 17.6 | 153.5 |
| 1200.0 | 1192.64 | -55.91 | 44.28 | 71.3 | 141.6 | 17.7 | 147.4 |
| 1210.0 | 1202.16 | -58.54 | 45.77 | 74.3 | 142.0 | 17.3 | 145.8 |
| 1220.0 | 1211.70 | -61.21 | 47.16 | 77.3 | 142.4 | 17.5 | 148.4 |
| 1230.0 | 1221.22 | -64.08 | 48.09 | 80.1 | 143.1 | 17.7 | 158.1 |
| 1240.0 | 1230.75 | -66.91 | 49.18 | 83.0 | 143.7 | 17.6 | 156.4 |
| 1250.0 | 1240.30 | -69.70 | 50.22 | 85.9 | 144.2 | 17.5 | 165.3 |
| 1260.0 | 1249.83 | -72.51 | 51.28 | 88.8 | 144.7 | 17.5 | 161.1 |
| 1270.0 | 1259.37 | -75.34 | 52.24 | 91.7 | 145.3 | 17.7 | 152.6 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1340.0 | 1326.03 | -95.89 | | 112.1 | | | |
| 1350.0 | 1335.55 | -97.92 | 61.04 | 115.4 | 148.1 | 18.2 | 156.3 |
| 1360.0 | 1345.08 | -100.75 | 62.13 | 118.4 | 148.3 | 17.8 | 166.3 |
| 1370.0 | 1354.60 | -103.63 | 63.12 | 121.3 | 148.7 | 17.7 | 159.5 |
| 1380.0 | 1364.13 | -106.44 | 64.27 | 124.3 | 148.9 | 17.5 | 154.1 |
| 1390.0 | 1373.66 | -109.27 | 65.33 | 127.3 | 149.1 | 17.9 | 156.2 |
| 1400.0 | 1383.19 | -112.12 | 66.34 | 130.3 | 149.4 | 17.6 | 154.7 |
| 1410.0 | 1392.73 | -114.87 | 67.49 | 133.2 | 149.6 | 17.3 | 157.0 |
| 1420.0 | 1402.28 | -117.65 | 68.52 | 136.2 | 149.8 | 17.3 | 162.6 |
| 1430.0 | 1411.82 | -120.43 | 69.61 | 139.1 | 150.0 | 17.4 | 164.7 |
| 1440.0 | 1421.37 | -123.20 | 70.68 | 142.0 | 150.2 | 17.4 | 161.0 |
| 1450.0 | 1430.90 | -126.07 | 71.57 | 145.0 | 150.4 | 17.7 | 162.7 |
| 1460.0 | 1440.43 | -128.87 | 72.68 | 148.0 | 150.6 | 17.5 | 160.7 |
| 1470.0 | 1449.97 | -131.69 | 73.76 | 150.9 | 150.7 | 17.6 | 160.6 |
| 1480.0 | 1459.50 | -134.53 | 74.84 | 153.9 | 150.9 | 17.4 | 159.7 |
| 1490.0 | 1469.03 | -137.36 | 75.88 | 156.9 | 151.1 | 17.7 | 165.5 |
| 1500.0 | 1478.55 | -140.18 | 76.96 | 159.9 | 151.2 | 17.8 | 161.8 |
| 1510.0 | 1488.07 | -143.05 | 78.02 | 162.9 | 151.4 | 17.9 | 157.8 |
| 1520.0 | 1497.59 | -145.90 | 79.07 | 166.0 | 151.5 | 17.8 | 170.9 |
| 1530.0 | 1507.10 | -148.79 | 80.16 | 169.0 | 151.7 | 18.0 | 155.4 |
| 1540.0 | 1516.61 | -151.69 | 81.20 | 172.1 | 151.8 | 18.0 | 159.8 |
| 1550.0 | 1526.12 | -154.55 | 82.38 | 175.1 | 151.9 | 18.1 | 169.0 |
| 1560.0 | 1535.62 | -157.49 | 83.39 | 178.2 | 152.1 | 18.1 | 157.2 |
| 1570.0 | 1545.11 | -160.41 | 84.52 | 181.3 | 152.2 | 18.2 | 169.8 |
| 1580.0 | 1554.61 | -163.29 | 85.70 | 184.4 | 152.3 | 18.0 | 155.8 |
| 1590.0 | 1564.10 | -166.25 | 86.78 | 187.5 | 152.4 | 18.3 | 167.7 |
| 1600.0 | 1573.58 | -169.19 | 87.89 | 190.7 | 152.5 | 18.8 | 165.0 |
| 1610.0 | 1583.07 | -172.04 | 89.09 | 193.7 | 152.6 | 18.5 | 153.4 |
| 1620.0 | 1592.55 | -175.01 | 90.23 | 196.9 | 152.7 | 18.8 | 162.4 |
| 1630.0 | 1602.02 | -177.89 | 91.55 | 200.1 | 152.8 | 18.5 | 161.1 |
| 1640.0 | 1611.50 | -180.79 | 92.82 | 203.2 | 152.8 | 18.9 | 159.8 |
| 1650.0 | 1620.97 | -183.68 | 94.10 | 206.4 | 152.9 | 17.8 | 142.0 |
| 1660.0 | 1630.45 | -186.23 | 96.01 | 209.5 | 152.7 | 19.0 | 138.6 |
| 1670.0 | 1639.90 | -188.77 | 98.06 | 212.7 | 152.6 | 19.2 | 144.7 |
| 1680.0 | 1649.34 | -191.53 | 99.85 | 216.0 | 152.5 | 19.3 | 152.7 |
| 1690.0 | 1658.78 | -194.54 | 101.08 | 219.2 | 152.5 | 19.0 | 167.9 |
| 1700.0 | 1668.21 | -197.66 | 102.09 | 222.5 | 152.7 | 19.3 | 175.2 |
| 1710.0 | 1677.66 | -200.86 | 102.60 | 225.5 | 152.9 | 18.6 | 158.4 |
| 1720.0 | 1687.12 | -203.98 | 103.40 | 228.7 | 153.1 | 18.9 | 157.7 |
| 1730.0 | 1696.58 | -207.03 | 104.52 | 231.9 | 153.2 | 19.1 | 157.3 |
| 1740.0 | 1706.03 | -210.05 | 105.74 | 235.2 | 153.3 | 18.9 | 163.6 |
| 1750.0 | 1715.49 | -213.00 | 107.09 | 238.4 | 153.3 | 18.9 | 152.8 |
| 1760.0 | 1724.93 | -216.02 | 108.35 | 241.7 | 153.4 | 19.2 | 157.9 |
| 1770.0 | 1734.37 | -219.11 | 109.51 | 244.9 | 153.4 | 19.3 | 159.6 |
| 1780.0 | 1743.81 | -222.19 | 110.69 | 248.2 | 153.5 | 19.2 | 157.7 |
| 1790.0 | 1753.24 | -225.29 | 111.86 | 251.5 | 153.6 | 19.5 | 159.4 |
| 1800.0 | 1762.67 | -228.37 | 113.12 | 254.9 | 153.6 | 19.4 | 157.4 |
| 1810.0 | 1772.10 | -231.48 | 114.31 | 258.2 | 153.7 | 19.5 | 161.8 |
| 1820.0 | 1781.53 | -234.58 | 115.52 | 261.5 | 153.8 | 19.5 | 159.1 |
| 1830.0 | 1790.96 | -237.70 | 116.71 | 264.8 | 153.8 | 19.6 | 158.0 |
| 1840.0 | 1800.38 | -240.80 | 117.96 | 268.1 | 153.9 | 19.6 | 158.9 |
| .0 | 1809.80 | -243.88 | 119.25 | 271.5 | 153.9 | 19.4 | 148.5 |
| 1860.0 | 1819.21 | -246.82 | 120.82 | 274.8 | 153.9 | 19.6 | 145.5 |
| 1870.0 | 1828.61 | -249.50 | 122.85 | 278.1 | 153.8 | 20.3 | 163.2 |
| 1880.0 | 1837.99 | -252.68 | 124.18 | 281.5 | 153.8 | 20.5 | 160.0 |
| 1890.0 | 1847.36 | -256.00 | 125.18 | 285.0 | 153.9 | 20.4 | 173.1 |
| 1900.0 | 1856.74 | -259.42 | 125.77 | 288.3 | 154.1 | 20.3 | 167.7 |
| 1910.0 | 1866.12 | -262.79 | 126.28 | 291.6 | 154.3 | 19.8 | 167.4 |
| 1920.0 | 1875.52 | -265.90 | 127.64 | 294.9 | 154.4 | 20.2 | 154.2 |
| 1930.0 | 1884.92 | -268.64 | 129.63 | 298.3 | 154.2 | 20.1 | 140.5 |
| 1940.0 | 1894.30 | -271.28 | 131.88 | 301.6 | 154.1 | 20.6 | 145.5 |
| 1950.0 | 1903.66 | -274.30 | 133.64 | 305.1 | 154.0 | 20.0 | 153.1 |
| 1960.0 | 1913.01 | -277.58 | 134.88 | 308.6 | 154.1 | 20.6 | 164.8 |
| 1970.0 | 1922.36 | -280.97 | 135.87 | 312.1 | 154.2 | 20.8 | 161.3 |
| 1980.0 | 1931.71 | -284.36 | 136.87 | 315.6 | 154.3 | 20.8 | 168.3 |
| 1990.0 | 1941.05 | -287.78 | 137.84 | 319.1 | 154.4 | 20.9 | 161.1 |
| 2000.0 | 1950.39 | -291.19 | 138.97 | 322.7 | 154.5 | 21.1 | 162.0 |
| 2010.0 | 1959.71 | -294.62 | 140.09 | 326.2 | 154.6 | 21.1 | 169.2 |
| 2020.0 | 1969.03 | -297.83 | 141.72 | 329.8 | 154.6 | 21.1 | 148.8 |
| 2030.0 | 1978.35 | -301.23 | 142.84 | 333.4 | 154.6 | 21.4 | 160.4 |
| 2040.0 | 1987.68 | -304.68 | 143.52 | 336.8 | 154.8 | 20.7 | 166.3 |
| 2050.0 | 1997.03 | -307.89 | 144.96 | 340.3 | 154.8 | 21.1 | 145.3 |
| 2060.0 | 2006.34 | -310.72 | 147.15 | 343.8 | 154.7 | 21.8 | 148.4 |
| 2070.0 | 2015.64 | -314.02 | 148.59 | 347.4 | 154.7 | 21.6 | 179.2 |
| 2080.0 | 2024.95 | -317.55 | 149.38 | 350.9 | 154.8 | 21.3 | 156.8 |
| 2090.0 | 2034.26 | -321.13 | 149.99 | 354.4 | 155.0 | 21.4 | 176.7 |
| 2100.0 | 2043.57 | -324.67 | 150.57 | 357.9 | 155.1 | 21.1 | 170.3 |
| 2110.0 | 2052.90 | -328.15 | 151.46 | 361.4 | 155.2 | 21.4 | 164.7 |
| 2120.0 | 2062.20 | -331.75 | 152.14 | 365.0 | 155.4 | 21.7 | 173.7 |
| 2126.9 | 2068.81 | -333.22 | 152.30 | 366.4 | 155.4 | 0.0 | 0.0 |

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Lee/Norton | 1157 | 1515 | 358 | Not Taken | | |
| Pocahontas | 1942 | 1943 | 1 | Not Taken | | |
| | | | | | | |
| | | | | | | |

Exhibit A

Well Name: CBM-T37C
SURFACE ELEV: 2569.92 EASTING: 1011977.93 NORTHING: 329743.91

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| | 1.00 | 223.70 | 2568.92 | 222.70 | |
| KN2 | 223.70 | 224.30 | 2346.22 | 0.60 | |
| | 224.30 | 225.00 | 2345.62 | 0.70 | |
| COAL | 225.00 | 225.40 | 2344.92 | 0.40 | |
| | 225.40 | 233.20 | 2344.52 | 7.80 | |
| COAL | 233.20 | 233.40 | 2336.72 | 0.20 | |
| | 233.40 | 334.70 | 2336.52 | 101.30 | |
| AL1 | 334.70 | 334.80 | 2235.22 | 0.10 | |
| | 334.80 | 339.10 | 2235.12 | 4.30 | |
| COAL | 339.10 | 339.30 | 2230.82 | 0.20 | |
| | 339.30 | 355.30 | 2230.62 | 16.00 | |
| AL2 | 355.30 | 356.10 | 2214.62 | 0.80 | |
| | 356.10 | 461.30 | 2213.82 | 105.20 | |
| RA1 | 461.30 | 462.10 | 2108.62 | 0.80 | |
| | 462.10 | 491.80 | 2107.82 | 29.70 | |
| RA2 | 491.80 | 495.70 | 2078.12 | 3.90 | MINED OUT |
| | 495.70 | 510.50 | 2074.22 | 14.80 | |
| RA3 | 510.50 | 511.00 | 2059.42 | 0.50 | |
| | 511.00 | 512.10 | 2058.92 | 1.10 | |
| COAL | 512.10 | 512.50 | 2057.82 | 0.40 | |
| | 512.50 | 604.00 | 2057.42 | 91.50 | |
| JB1 | 604.00 | 605.80 | 1965.92 | 1.80 | |
| | 605.80 | 647.20 | 1964.12 | 41.40 | |
| JB3 | 647.20 | 649.30 | 1922.72 | 2.10 | |
| | 649.30 | 728.70 | 1920.62 | 79.40 | |
| T1 | 728.70 | 728.90 | 1841.22 | 0.20 | |
| | 728.90 | 1157.20 | 1841.02 | 428.30 | |
| *SE2 | 1157.20 | 1158.70 | 1412.72 | 1.50 | |
| | 1158.70 | 1200.30 | 1411.22 | 41.60 | |
| *LS1 | 1200.30 | 1202.00 | 1369.62 | 1.70 | |
| | 1202.00 | 1319.00 | 1367.92 | 117.00 | |
| *UH2 | 1319.00 | 1319.80 | 1250.92 | 0.80 | |
| | 1319.80 | 1376.00 | 1250.12 | 56.20 | |
| *MH1 | 1376.00 | 1377.90 | 1193.92 | 1.90 | |
| | 1377.90 | 1493.00 | 1192.02 | 115.10 | |
| *P11 | 1493.00 | 1494.80 | 1076.92 | 1.80 | |
| | 1494.80 | 1513.90 | 1075.12 | 19.10 | |
| *P10 | 1513.90 | 1515.00 | 1056.02 | 1.10 | |
| | 1515.00 | 1576.20 | 1054.92 | 61.20 | |
| *LH2 | 1576.20 | 1576.40 | 993.72 | 0.20 | |
| | 1576.40 | 1649.00 | 993.52 | 72.60 | |
| *P92 | 1649.00 | 1649.40 | 920.92 | 0.40 | |
| | 1649.40 | 1685.80 | 920.52 | 36.40 | |
| *P81 | 1685.80 | 1686.50 | 884.12 | 0.70 | |
| | 1686.50 | 1690.40 | 883.42 | 3.90 | |
| *COAL | 1690.40 | 1691.00 | 879.52 | 0.60 | |
| | 1691.00 | 1711.90 | 878.92 | 20.90 | |
| *P82 | 1711.90 | 1712.10 | 858.02 | 0.20 | |
| | 1712.10 | 1877.50 | 857.82 | 165.40 | |
| *P61 | 1877.50 | 1878.30 | 692.42 | 0.80 | |
| | 1878.30 | 1942.00 | 691.62 | 63.70 | |
| *P51 | 1942.00 | 1943.00 | 627.92 | 1.00 | |
| | 1943.00 | 2127.87 | 626.92 | 184.87 | |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
GAMMA-CALIPER LOG FROM 0 TO TD.
FILE: C:\VP\APPS\T37C.CMP
DATE: 08/09/06

## CASING AND TUBING PROGRAM

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | Cemented To Surface No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 17.45' | 24" | | | X | 7-21-06 | |
| Surface | 16" | 550' | 19 3/8" | 337 Cu/ft | | X | 7-22-06 | |
| Water Protection | 13 3/8" | 817' | 15 3/8" | 587 Cu/ft | X | | 7-23-06 | |
| Coal Protection | 13 3/8" | 817' | 15 3/8" | 587 Cu/ft | X | | 7-23-06 | |
| Other Casing And Tubing Left In Well | | | | | ☐ | ☐ | | |
| Liners | | | | | ☐ | ☐ | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** CNX **HOLE #: T-37C**

**LOCATION:** OSBORNE MTN **DRILL RIG #: 87**

**DATE STARTED: 07-20-06** **DATED COMPLETED: 07-29-06**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | THICKNESS | | STRATA REMARKS |
|---|---|---|---|
| **FROM** | **TO** | **FT** | **DESCRIPTION,VOIDS ETC** |
| 0 | 5 | 5 | OVERBURDEN |
| 5 | 17.45 | 12.45 | SANDY SHALE |
| 17.45 | 36.00 | 18.55 | SAND |
| 36.00 | 65.20 | 29.20 | SAND/COAL/SANDY SHALE |
| 65.20 | 95.10 | 29.90 | SAND STONE/SANDY SHALE/COAL |
| 95.10 | 124.30 | 29.20 | SANDY SHALE/SAND STONE |
| 124.30 | 155.95 | 31.65 | SAND STONE |
| 155.95 | 186.45 | 30.50 | SAND STONE/SANDY SHALE STR |
| 186.45 | 217.80 | 31.35 | SAND STONE |
| 217.80 | 249.60 | 31.80 | SAND STONE/POSS COAL STR/OR SANDY SHALE STR |
| 249.60 | 310.75 | 61.15 | SAND STONE |
| 310.75 | 342.25 | 31.50 | SAND STONE/POSS COAL/SANDY SHALE |
| 342.25 | 373.55 | 31.30 | SANDY SHALE/COAL/SAND STONE |
| 373.55 | 404.75 | 31.20 | SAND STONE |
| 404.75 | 434.95 | 30.20 | SAND |
| 434.95 | 466.60 | 31.65 | SAND/SANDY SHALE/COAL |
| 466.60 | 498 | 31.40 | COAL/SANDY SHALE |
| 498 | 529 | 31 | SANDY SHALE/VOID @501-504 |
| 529 | 550 | 21 | SANDY SHALE |
| 550 | 560 | 10 | SAND |
| 560 | 590.70 | 30.70 | SAND/SANDY SHALE |
| 590.70 | 621.70 | 31.00 | SANDY SHALE |
| 621.70 | 653.05 | 31.35 | SANDY SHALE |
| 653.05 | 684.10 | 31.05 | COAL/SANDY SHALE |
| 684.10 | 715.00 | 30.90 | SAND |
| 715.00 | 746.05 | 31.05 | SAND/COAL/SANDY SHALE |
| 746.05 | 777.20 | 31.15 | SANDY SHALE/SAND |
| 777.20 | 808.60 | 31.40 | SAND |
| 808.60 | 839.50 | 30.90 | SAND/SANDY SHALE |
| 839.50 | 850 | 10.50 | SAND |
| 850 | 940 | 90 | SAND |
| 940 | 983.10 | 43.10 | SAND |
| 983.10 | 1014.25 | 31.15 | SAND/SANDY SHALE |
| 1014.25 | 1045.65 | 31.40 | SANDY SHALE/COAL/SAND STONE |
| 1045.65 | 1076.55 | 30.90 | SAND STONE/SANDY SHALE STR/COAL STR |
| 1076.55 | 1108.25 | 31.70 | SAND STONE/SANDY SHALE |
| 1108.25 | 1138.95 | 30.70 | SANDY SHALE/COAL/SANDY SHALE/SAND STONE |
| 1138.95 | 1169.95 | 31.00 | SAND STONE/SANDY SHALE/COAL STR |
| 1169.95 | 1185.15 | 15.20 | SANDY SHALE/COAL |

| | | | |
|---|---|---|---|
| 1185.15 | 1214.95 | 29.80 | SANDY SHALE |
| 1214.95 | 1245.95 | 31.00 | SAND |
| 1245.95 | 1277.55 | 31.60 | SANDY SHALE/COAL |
| 1277.55 | 1307.45 | 29.90 | SAND |
| 1307.45 | 1338.25 | 30.80 | SAND/COAL/SANDY SHALE |
| 1338.25 | 1369.50 | 31.25 | SAND/SANDY SHALE |
| 1369.50 | 1431.80 | 62.30 | SANDY SHALE |
| 1431.80 | 1462.80 | 31.00 | SANDY SHALE/COAL |
| 1462.80 | 1493.80 | 31.00 | SANDY SHALE/SAND STONE |
| 1493.80 | 1525.70 | 31.90 | SAND STONE/SANDY SHALE/COAL/SANDY SHALE |
| 1525.70 | 1619.60 | 93.90 | SANDY SHALE |
| 1619.60 | 1651.30 | 31.70 | SANDY SHALE/COAL/SAND STONE/SANDY SHALE |
| 1651.30 | 1682.20 | 30.90 | SHALE |
| 1682.20 | 1713.20 | 31.00 | SANDY SHALE/COAL/SAND STONE |
| 1713.20 | 1743.55 | 30.35 | SANDY SHALE/SAND STONE |
| 1743.55 | 1868.30 | 124.75 | SAND STONE |
| 1868.30 | 1899.75 | 31.45 | SAND STONE/SANDY SHALE |
| 1899.75 | 1930.25 | 30.50 | SANDY SHALE |
| 1930.25 | 1992.20 | 61.95 | SANDY SHALE/COAL |
| 1992.20 | 2054.40 | 62.20 | SAND |
| 2054.40 | 2086.20 | 31.80 | SAND/COAL |
| 2086.20 | 2125 | 38.80 | SAND |

2125.00 FT. TOTAL DEPTH
17.45 FT. OF 22" CASING
552.55 FT. OF 16" CASING
816.85 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 763
**Company:** CNX Gas Company LLC
**File Number:** BU-3198
**Operations Name:** CBM T37F W/PL
**Operation Type:** Coalbed/Pipeline
**Completion Report Type:** Original

# COMPLETION REPORT (DGO-GO-15)

**Well Type:** Coalbed/Pipeline **Date Well Completed:** 2/1/2007
**Driller's Total Depth:** 1,630 **Log's Total Depth:** 1,643

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

☐ Stimulated ☐ Not Stimulated ☑ Gob

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 11/3/2007 11:40:15 AM *(Company)*

By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 11/3/2007

Status: Inspr Approved Date: 11/7/2007

Final PDF Date: 11/13/2007

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 697
**Company:** CNX Gas Company LLC
**File Number:** BU-3198
**Operations Name:** CBM T37F W/PL
**Operation Type:** Coalbed/Pipeline
**Drilling Report Type:** Original

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 1/23/2007
Date drilling completed: 2/1/2007
Driller's Total Depth (feet): 1,630
Log Total Depth (feet): 1,643
Drilling Contractor: Noah Horn
Rig Type: ☑ Rotary ☐ Cable Tool
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,013,215
Permitted State Plane Y: 329,985
Final Plat State Plane X: 1,013,217
Final Plat State Plane Y: 329,994
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T37F Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T37F Exhibit A.pdf |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | T37F Gas Show.xls |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper,gamma,density,temp,deviation

Did logs disclose vertical locations of a coal seam? ☐ Yes ☑ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T37F Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casting | T37F Casing.xls |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | T37F Drill Data.pdf |

## 9. Comments

it appears the wrong info was uploaded as the deviation and the drill data; please correct and resubmit [ljs 10/11/07]
still need correct "Drill Data" uploaded [ljs 10/15/07]
correct information was uploaded [ljs 10/16/07]

## 10. Signature

Permitee: CNX Gas Company LLC Date: 10/15/2007 *(Company)*

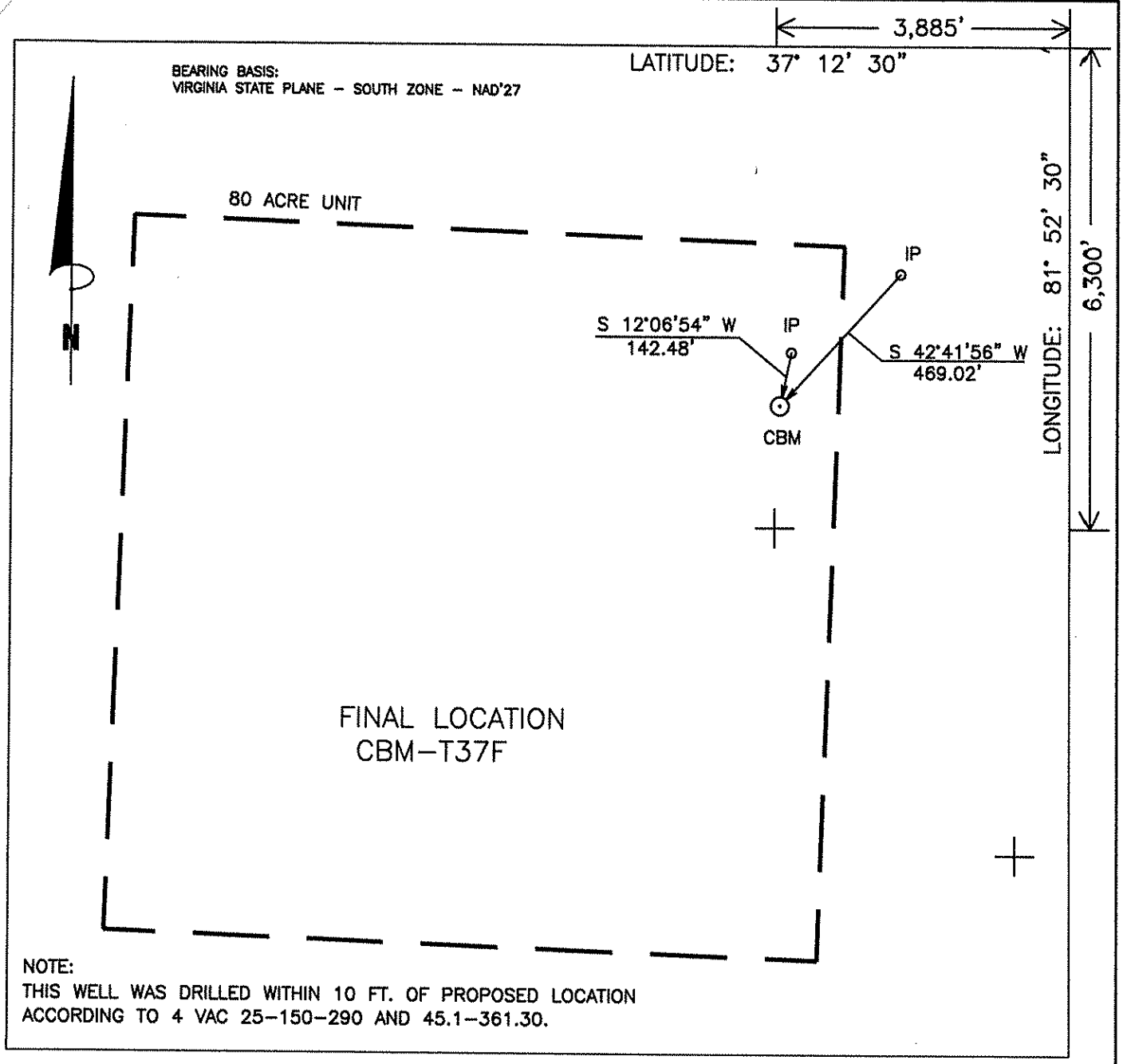
Signed By: Leslie K. Arrington Title: Manager *(Signature)*

## INTERNAL USE ONLY

Submit Date: 10/15/2007

Status: Inspr Approved Date: 10/16/2007

Final PDF Date: 10/16/2007




# WELL LOCATION PLAT

T37FFNL
2N24/89–556/52

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T37F

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 329,993.91 E 1,013,217.48

ELEVATION: 2110.22' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 01–30–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (Stations).

D R Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No.
8540
1-31-07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM T37F
SURFACE ELEV: 2110.22 EASTING: 1013217.48 NORTHING: 329993.91

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| JB1 | 129.00 | 131.50 | 1981.22 | 2.50 | |
| | 131.50 | 177.90 | 1978.72 | 46.40 | |
| JB3 | 177.90 | 181.70 | 1932.32 | 3.80 | |
| | 181.70 | 261.00 | 1928.52 | 79.30 | |
| T1 | 261.00 | 262.80 | 1849.22 | 1.80 | |
| | 262.80 | 274.80 | 1847.42 | 12.00 | |
| TI | 274.80 | 275.50 | 1835.42 | 0.70 | |
| | 275.50 | 379.00 | 1834.72 | 103.50 | |
| *US1 | 379.00 | 380.00 | 1731.22 | 1.00 | |
| | 380.00 | 477.20 | 1730.22 | 97.20 | |
| *US2 | 477.20 | 478.30 | 1633.02 | 1.10 | |
| | 478.30 | 545.00 | 1631.92 | 66.70 | |
| *COAL | 545.00 | 546.00 | 1565.22 | 1.00 | |
| | 546.00 | 654.00 | 1564.22 | 108.00 | |
| *SE1 | 654.00 | 654.90 | 1456.22 | 0.90 | |
| | 654.90 | 688.30 | 1455.32 | 33.40 | |
| *SE2 | 688.30 | 690.20 | 1421.92 | 1.90 | |
| | 690.20 | 727.20 | 1420.02 | 37.00 | |
| *LS1 | 727.20 | 729.50 | 1383.02 | 2.30 | |
| | 729.50 | 741.10 | 1380.72 | 11.60 | |
| *LS2 | 741.10 | 742.00 | 1369.12 | 0.90 | |
| | 742.00 | 784.20 | 1368.22 | 42.20 | |
| *UH1 | 784.20 | 784.90 | 1326.02 | 0.70 | |
| | 784.90 | 841.90 | 1325.32 | 57.00 | |
| *UH3 | 841.90 | 843.80 | 1268.32 | 1.90 | |
| | 843.80 | 897.00 | 1266.42 | 53.20 | |
| *MH1 | 897.00 | 899.00 | 1213.22 | 2.00 | |
| | 899.00 | 962.50 | 1211.22 | 63.50 | |
| *MH2 | 962.50 | 963.70 | 1147.72 | 1.20 | |
| | 963.70 | 1006.00 | 1146.52 | 42.30 | |
| *P11 | 1006.00 | 1008.70 | 1104.22 | 2.70 | |
| | 1008.70 | 1028.90 | 1101.52 | 20.20 | |
| *P10 | 1028.90 | 1030.20 | 1081.32 | 1.30 | |
| | 1030.20 | 1090.20 | 1080.02 | 60.00 | |
| *LH1 | 1090.20 | 1091.20 | 1020.02 | 1.00 | |
| | 1091.20 | 1159.20 | 1019.02 | 68.00 | |
| *P91 | 1159.20 | 1160.00 | 951.02 | 0.80 | |
| | 1160.00 | 1178.00 | 950.22 | 18.00 | |
| *P92 | 1178.00 | 1179.00 | 932.22 | 1.00 | |
| | 1179.00 | 1219.00 | 931.22 | 40.00 | |
| *P81 | 1219.00 | 1219.60 | 891.22 | 0.60 | |
| | 1219.60 | 1250.30 | 890.62 | 30.70 | |
| *P82 | 1250.30 | 1250.90 | 859.92 | 0.60 | |
| | 1250.90 | 1285.00 | 859.32 | 34.10 | |
| *COAL | 1285.00 | 1285.20 | 825.22 | 0.20 | |
| | 1285.20 | 1434.10 | 825.02 | 148.90 | |
| *P61 | 1434.10 | 1435.10 | 676.12 | 1.00 | |

| | | | | |
|---|---|---|---|---|
| | 1435.10 | 1446.90 | 675.12 | 11.80 |
| *P62 | 1446.90 | 1447.80 | 663.32 | 0.90 |
| | 1447.80 | 1473.80 | 662.42 | 26.00 |
| *P51 | 1473.80 | 1475.90 | 636.42 | 2.10 |
| | 1475.90 | 1570.20 | 634.32 | 94.30 |
| *P42 | 1570.20 | 1571.00 | 540.02 | 0.80 |
| | 1571.00 | 1643.24 | 539.22 | 72.24 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\T37F.CMP
DATE: 04/17/07

## Oil & Gas Show

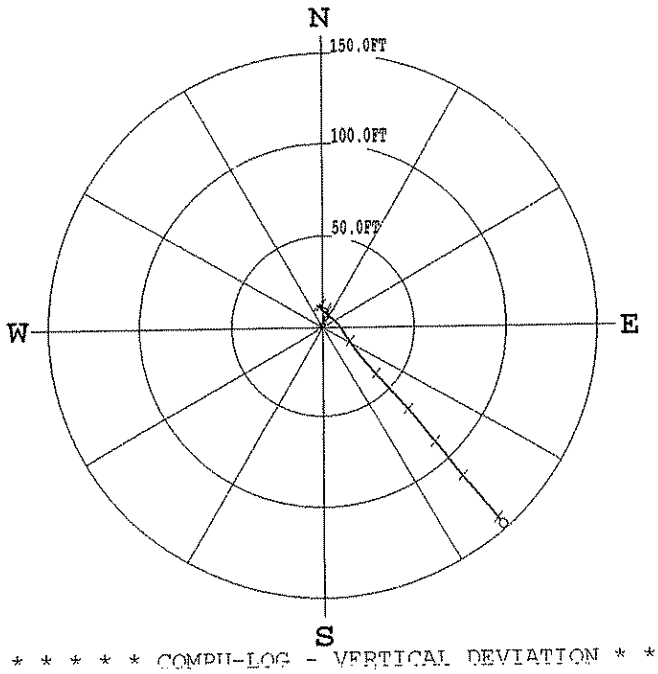
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 727 | 1179 | 452 | | | |
| Pocahontas | 1434 | 1476 | 42 | | | |
| | | | | | | |
| | | | | | | |

COMPU-LOG DEVIATION

CLIENT: CNX Gas
LOCATION:
HOLE ID: 07-CNX-T-37-F
DATE OF LOG: 02/01/07
PROBE: 0019C 732

MAG DECL: -6.9

SCALE: 50 FT/IN
TRUE DEPTH: 1615.02 FT
AZIMUTH: 138.3
DISTANCE: 146.9 FT
+ = 100 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX Gas
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900

HOLE ID. : 07-CNX-T-37-F
DATE OF LOG : 02/01/07
PROBE : 0019C , 732
DEPTH UNITS : FEET

LOG: 07-CNX-T-37-F_02-01-07_15-12_0019C_.02_-9.17_1634.75_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SAN |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | -0.19 | -0.49 | 0.5 | 248.7 | 1.9 | 229 |
| 60.0 | 59.98 | -0.44 | -0.68 | 0.8 | 237.1 | 1.9 | 211 |
| 70.0 | 69.98 | -0.71 | -0.82 | 1.1 | 229.1 | 1.6 | 188 |
| 80.0 | 79.97 | -0.68 | -0.57 | 0.9 | 220.0 | 1.9 | 48 |
| 90.0 | 89.97 | -0.43 | -0.34 | 0.5 | 218.4 | 2.1 | 34 |
| 100.0 | 99.96 | -0.10 | -0.17 | 0.2 | 238.8 | 2.2 | 21 |
| 110.0 | 109.95 | 0.26 | -0.07 | 0.3 | 345.2 | 2.2 | 10 |
| 120.0 | 119.94 | 0.66 | -0.07 | 0.7 | 354.2 | 2.3 | 350 |
| 130.0 | 129.94 | 1.03 | -0.21 | 1.1 | 348.7 | 2.2 | 328 |
| 140.0 | 139.93 | 1.37 | -0.42 | 1.4 | 342.8 | 2.4 | 321 |
| 150.0 | 149.92 | 1.63 | -0.73 | 1.8 | 335.8 | 2.2 | 295 |
| 160.0 | 159.91 | 1.75 | -1.08 | 2.1 | 328.3 | 2.0 | 279 |
| 170.0 | 169.91 | 1.69 | -1.37 | 2.2 | 321.0 | 1.4 | 241 |
| 180.0 | 179.91 | 1.53 | -1.52 | 2.2 | 315.2 | 1.0 | 215 |
| 190.0 | 189.90 | 1.36 | -1.56 | 2.1 | 311.3 | 0.9 | 171 |
| 200.0 | 199.90 | 1.23 | -1.46 | 1.9 | 310.0 | 1.0 | 127 |
| 210.0 | 209.90 | 1.11 | -1.32 | 1.7 | 310.1 | 1.1 | 127 |
| 220.0 | 219.90 | 1.02 | -1.16 | 1.5 | 311.4 | 1.2 | 106 |
| 230.0 | 229.90 | 0.95 | -0.99 | 1.4 | 313.8 | 1.2 | 102 |
| 240.0 | 239.89 | 0.95 | -0.76 | 1.2 | 321.3 | 1.6 | 80 |
| 250.0 | 249.89 | 1.05 | -0.47 | 1.2 | 335.9 | 2.0 | 60 |
| 260.0 | 259.88 | 1.29 | -0.19 | 1.3 | 351.5 | 2.3 | 36 |
| 270.0 | 269.87 | 1.63 | 0.04 | 1.6 | 1.5 | 2.4 | 35 |
| 280.0 | 279.87 | 1.95 | 0.30 | 2.0 | 8.8 | 2.2 | 43 |
| 290.0 | 289.86 | 2.28 | 0.55 | 2.3 | 13.6 | 2.5 | 30 |
| 300.0 | 299.85 | 2.69 | 0.73 | 2.8 | 15.1 | 2.7 | 16 |
| 310.0 | 309.84 | 3.16 | 0.81 | 3.3 | 14.4 | 2.8 | 7 |
| 320.0 | 319.82 | 3.65 | 0.88 | 3.8 | 13.5 | 2.9 | 8 |
| 330.0 | 329.81 | 4.16 | 0.91 | 4.3 | 12.3 | 3.0 | 355 |
| 340.0 | 339.80 | 4.68 | 0.83 | 4.8 | 10.0 | 3.1 | 347 |
| 350.0 | 349.78 | 5.17 | 0.74 | 5.2 | 8.1 | 1.6 | 57 |
| 360.0 | 359.78 | 5.34 | 0.99 | 5.4 | 10.4 | 2.2 | 54 |
| 370.0 | 369.77 | 5.38 | 1.20 | 5.5 | 12.6 | 1.4 | 79 |
| 380.0 | 379.77 | 5.47 | 1.45 | 5.7 | 14.9 | 1.4 | 75 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 360.0 | 359.78 | 5.34 | 0.99 | 5.4 | 10.4 | 2.2 | 54.7 |
| 370.0 | 369.77 | 5.38 | 1.20 | 5.5 | 12.6 | 1.4 | 79.5 |
| 380.0 | 379.77 | 5.47 | 1.45 | 5.7 | 14.9 | 1.4 | 75.9 |
| 390.0 | 389.77 | 5.50 | 1.68 | 5.8 | 17.0 | 1.3 | 84.8 |
| 400.0 | 399.77 | 5.55 | 1.91 | 5.9 | 18.9 | 1.4 | 84.1 |
| 410.0 | 409.76 | 5.61 | 2.13 | 6.0 | 20.8 | 1.1 | 84.4 |
| 420.0 | 419.76 | 5.61 | 2.32 | 6.1 | 22.5 | 1.2 | 94.6 |
| 430.0 | 429.76 | 5.69 | 2.55 | 6.2 | 24.2 | 1.2 | 76.2 |
| 440.0 | 439.76 | 5.75 | 2.76 | 6.4 | 25.7 | 0.9 | 96.4 |
| 450.0 | 449.75 | 5.71 | 2.93 | 6.4 | 27.1 | 1.2 | 90.8 |
| 460.0 | 459.75 | 5.71 | 3.12 | 6.5 | 28.6 | 1.1 | 89.4 |
| 470.0 | 469.75 | 5.81 | 3.35 | 6.7 | 30.0 | 1.8 | 58.8 |
| 480.0 | 479.74 | 5.97 | 3.62 | 7.0 | 31.2 | 2.3 | 30.5 |
| 490.0 | 489.73 | 6.39 | 3.69 | 7.4 | 30.0 | 2.6 | 340.3 |
| 500.0 | 499.72 | 6.80 | 3.54 | 7.7 | 27.5 | 2.6 | 347.0 |
| 510.0 | 509.71 | 7.18 | 3.33 | 7.9 | 24.9 | 2.5 | 328.8 |
| 520.0 | 519.70 | 7.57 | 3.12 | 8.2 | 22.4 | 2.6 | 335.3 |
| 530.0 | 529.69 | 7.95 | 2.87 | 8.5 | 19.9 | 2.6 | 316.5 |
| 540.0 | 539.68 | 8.26 | 2.56 | 8.7 | 17.2 | 2.4 | 308.7 |
| 550.0 | 549.68 | 8.45 | 2.23 | 8.7 | 14.8 | 1.8 | 283.2 |
| 560.0 | 559.67 | 8.51 | 1.91 | 8.7 | 12.7 | 1.6 | 269.1 |
| 570.0 | 569.67 | 8.44 | 1.84 | 8.6 | 12.3 | 0.4 | 184.7 |
| 580.0 | 579.67 | 8.36 | 1.84 | 8.6 | 12.4 | 0.6 | 207.3 |
| 590.0 | 589.67 | 8.25 | 1.76 | 8.4 | 12.1 | 0.7 | 166.7 |
| 600.0 | 599.67 | 8.17 | 1.81 | 8.4 | 12.5 | 1.3 | 71.1 |
| 610.0 | 609.66 | 8.22 | 2.01 | 8.5 | 13.7 | 1.1 | 84.6 |
| 620.0 | 619.66 | 8.23 | 2.20 | 8.5 | 15.0 | 1.1 | 87.7 |
| 630.0 | 629.66 | 8.28 | 2.43 | 8.6 | 16.3 | 1.6 | 64.5 |
| 640.0 | 639.66 | 8.34 | 2.66 | 8.8 | 17.7 | 1.4 | 72.2 |
| 650.0 | 649.65 | 8.52 | 2.90 | 9.0 | 18.8 | 1.9 | 31.7 |
| 660.0 | 659.64 | 8.92 | 2.97 | 9.4 | 18.4 | 2.5 | 6.4 |
| 670.0 | 669.64 | 9.29 | 2.81 | 9.7 | 16.8 | 2.5 | 316.3 |
| 680.0 | 679.63 | 9.43 | 2.47 | 9.8 | 14.7 | 1.8 | 263.8 |
| 690.0 | 689.62 | 9.48 | 2.14 | 9.7 | 12.7 | 1.8 | 302.3 |
| 700.0 | 699.61 | 9.74 | 1.78 | 9.9 | 10.4 | 2.2 | 282.7 |
| 710.0 | 709.61 | 9.79 | 1.42 | 9.9 | 8.3 | 2.5 | 286.2 |
| 720.0 | 719.59 | 10.11 | 1.04 | 10.2 | 5.9 | 3.5 | 326.7 |
| 730.0 | 729.58 | 10.38 | 0.66 | 10.4 | 3.7 | 1.6 | 258.2 |
| 740.0 | 739.57 | 10.36 | 0.33 | 10.4 | 1.8 | 1.6 | 252.9 |
| 750.0 | 749.57 | 10.39 | -0.04 | 10.4 | 359.8 | 2.6 | 291.2 |
| 760.0 | 759.55 | 10.61 | -0.46 | 10.6 | 357.5 | 2.8 | 296.4 |
| 770.0 | 769.54 | 10.84 | -0.88 | 10.9 | 355.3 | 2.8 | 302.1 |
| 780.0 | 779.53 | 11.16 | -1.25 | 11.2 | 353.6 | 2.8 | 328.0 |
| 790.0 | 789.52 | 11.61 | -1.38 | 11.7 | 353.2 | 3.0 | 0.3 |
| 800.0 | 799.51 | 11.92 | -1.26 | 12.0 | 354.0 | 1.4 | 47.9 |
| 810.0 | 809.51 | 11.89 | -1.18 | 11.9 | 354.3 | 0.7 | 176.9 |
| 820.0 | 819.51 | 11.80 | -1.13 | 11.9 | 354.5 | 0.8 | 188.7 |
| 830.0 | 829.51 | 11.70 | -1.13 | 11.8 | 354.5 | 0.4 | 151.1 |
| 840.0 | 839.51 | 11.63 | -1.11 | 11.7 | 354.6 | 0.7 | 198.8 |
| 850.0 | 849.51 | 11.50 | -1.20 | 11.6 | 354.0 | 1.1 | 226.1 |
| 860.0 | 859.51 | 11.34 | -1.37 | 11.4 | 353.1 | 2.0 | 254.1 |
| 870.0 | 869.50 | 11.30 | -1.75 | 11.4 | 351.2 | 2.1 | 255.6 |
| 880.0 | 879.49 | 11.21 | -2.08 | 11.4 | 349.5 | 2.2 | 268.6 |
| 890.0 | 889.49 | 11.28 | -2.48 | 11.6 | 347.6 | 2.5 | 282.7 |
| 900.0 | 899.48 | 11.25 | -2.84 | 11.6 | 345.8 | 1.7 | 230.4 |
| 910.0 | 909.47 | 11.27 | -3.02 | 11.7 | 345.0 | 1.6 | 328.6 |
| 920.0 | 919.47 | 11.54 | -3.04 | 11.9 | 345.2 | 1.6 | 356.4 |
| 930.0 | 929.47 | 11.73 | -2.86 | 12.1 | 346.3 | 2.2 | 110.4 |
| 940.0 | 939.45 | 11.46 | -2.48 | 11.7 | 347.8 | 3.2 | 132. |
| 950.0 | 949.43 | 11.01 | -2.02 | 11.2 | 349.6 | 4.5 | 137. |
| 960.0 | 959.40 | 10.38 | -1.45 | 10.5 | 352.1 | 5.6 | 138. |
| 970.0 | 969.34 | 9.60 | -0.72 | 9.6 | 355.7 | 6.9 | 137. |
| 980.0 | 979.26 | 8.69 | 0.18 | 8.7 | 1.2 | 7.8 | 132. |
| 990.0 | 989.15 | 7.70 | 1.22 | 7.8 | 9.0 | 8.8 | 131. |
| 1000.0 | 999.03 | 6.65 | 2.39 | 7.1 | 19.8 | 9.7 | 130. |
| 1010.0 | 1008.88 | 5.54 | 3.70 | 6.7 | 33.8 | 10.7 | 130. |
| 1020.0 | 1018.69 | 4.38 | 5.22 | 6.8 | 50.0 | 11.2 | 129. |
| 1030.0 | 1028.53 | 3.26 | 6.61 | 7.4 | 63.7 | 8.4 | 156. |
| 1040.0 | 1038.41 | 2.25 | 7.68 | 8.0 | 73.7 | 8.3 | 127. |
| 1050.0 | 1048.29 | 1.12 | 8.71 | 8.8 | 82.7 | 9.1 | 139. |
| 1060.0 | 1058.17 | -0.15 | 9.64 | 9.6 | 90.9 | 10.7 | 142. |
| 1070.0 | 1067.98 | -1.78 | 10.67 | 10.8 | 99.5 | 11.0 | 149. |
| 1080.0 | 1077.77 | -3.52 | 11.70 | 12.2 | 106.7 | 12.1 | 174. |
| 1090.0 | 1087.53 | -5.40 | 12.80 | 13.9 | 112.9 | 12.9 | 148. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1090.0 | 1087.53 | -5.40 | 12.80 | 13.9 | 112.9 | 12.9 | 14 |
| 1100.0 | 1097.28 | -7.23 | 14.07 | 15.8 | 117.2 | 13.7 | 14 |
| 1110.0 | 1107.03 | -9.03 | 15.29 | 17.8 | 120.6 | 12.4 | 14 |
| 1120.0 | 1116.81 | -10.80 | 16.42 | 19.7 | 123.3 | 11.4 | 13 |
| 1130.0 | 1126.61 | -12.43 | 17.55 | 21.5 | 125.3 | 11.4 | 13 |
| 1140.0 | 1136.40 | -14.06 | 18.70 | 23.4 | 127.0 | 12.0 | 14 |
| 1150.0 | 1146.14 | -15.83 | 20.07 | 25.6 | 128.3 | 13.2 | 14 |
| 1160.0 | 1155.88 | -17.64 | 21.45 | 27.8 | 129.4 | 12.8 | 14 |
| 1170.0 | 1165.63 | -19.39 | 22.85 | 30.0 | 130.3 | 13.0 | 14 |
| 1180.0 | 1175.34 | -21.24 | 24.34 | 32.3 | 131.1 | 14.6 | 14 |
| 1190.0 | 1185.02 | -23.13 | 25.97 | 34.8 | 131.7 | 14.4 | 14 |
| 1200.0 | 1194.70 | -25.04 | 27.62 | 37.3 | 132.2 | 14.3 | 13 |
| 1210.0 | 1204.38 | -26.91 | 29.27 | 39.8 | 132.6 | 14.6 | 13 |
| 1220.0 | 1214.06 | -28.80 | 30.95 | 42.3 | 132.9 | 15.5 | 14 |
| 1230.0 | 1223.73 | -30.68 | 32.61 | 44.8 | 133.3 | 14.7 | 13 |
| 1240.0 | 1233.41 | -32.56 | 34.29 | 47.3 | 133.5 | 14.6 | 13 |
| 1250.0 | 1243.08 | -34.48 | 35.99 | 49.8 | 133.8 | 14.7 | 13 |
| 1260.0 | 1252.75 | -36.39 | 37.65 | 52.4 | 134.0 | 14.9 | 13 |
| 1270.0 | 1262.41 | -38.32 | 39.35 | 54.9 | 134.2 | 15.1 | 13 |
| 1280.0 | 1272.07 | -40.29 | 41.07 | 57.5 | 134.4 | 15.2 | 13 |
| 1290.0 | 1281.71 | -42.25 | 42.81 | 60.2 | 134.6 | 15.3 | 13 |
| 1300.0 | 1291.36 | -44.23 | 44.56 | 62.8 | 134.8 | 15.2 | 13 |
| 1310.0 | 1301.01 | -46.20 | 46.28 | 65.4 | 134.9 | 13.1 | 15 |
| 1320.0 | 1310.78 | -47.89 | 47.54 | 67.5 | 135.2 | 12.1 | 14 |
| 1330.0 | 1320.55 | -49.57 | 48.86 | 69.6 | 135.4 | 13.0 | 14 |
| 1340.0 | 1330.28 | -51.34 | 50.32 | 71.9 | 135.6 | 14.0 | 14 |
| 1350.0 | 1339.96 | -53.27 | 51.92 | 74.4 | 135.7 | 15.7 | 14 |
| 1360.0 | 1349.60 | -55.28 | 53.58 | 77.0 | 135.9 | 13.3 | 14 |
| 1370.0 | 1359.36 | -57.03 | 54.89 | 79.2 | 136.1 | 12.5 | 15 |
| 1380.0 | 1369.12 | -58.75 | 56.23 | 81.3 | 136.3 | 12.7 | 14 |
| 1390.0 | 1378.87 | -60.48 | 57.55 | 83.5 | 136.4 | 12.9 | 16 |
| 1400.0 | 1388.61 | -62.21 | 58.95 | 85.7 | 136.5 | 13.0 | 14 |
| 1410.0 | 1398.34 | -63.99 | 60.42 | 88.0 | 136.6 | 13.5 | 13 |
| 1420.0 | 1408.02 | -65.90 | 62.03 | 90.5 | 136.7 | 15.1 | 14 |
| 1430.0 | 1417.65 | -67.94 | 63.74 | 93.2 | 136.8 | 13.7 | 14 |
| 1440.0 | 1427.39 | -69.72 | 65.14 | 95.4 | 136.9 | 13.2 | 13 |
| 1450.0 | 1437.12 | -71.50 | 66.55 | 97.7 | 137.1 | 13.2 | 14 |
| 1460.0 | 1446.86 | -73.29 | 67.97 | 100.0 | 137.2 | 13.2 | 14 |
| 1470.0 | 1456.59 | -75.07 | 69.40 | 102.2 | 137.2 | 13.2 | 14 |
| 1480.0 | 1466.33 | -76.88 | 70.81 | 104.5 | 137.4 | 13.3 | 14 |
| 1490.0 | 1476.06 | -78.69 | 72.23 | 106.8 | 137.5 | 13.3 | 14 |
| 1500.0 | 1485.78 | -80.53 | 73.63 | 109.1 | 137.6 | 14.1 | 13 |
| 1510.0 | 1495.49 | -82.40 | 75.13 | 111.5 | 137.6 | 13.6 | 14 |
| 1520.0 | 1505.18 | -84.32 | 76.66 | 114.0 | 137.7 | 15.2 | 13 |
| 1530.0 | 1514.78 | -86.45 | 78.43 | 116.7 | 137.8 | 17.0 | 14 |
| 1540.0 | 1524.35 | -88.68 | 80.34 | 119.7 | 137.8 | 17.0 | 13 |
| 1550.0 | 1533.90 | -90.90 | 82.26 | 122.6 | 137.9 | 17.0 | 13 |
| 1560.0 | 1543.45 | -93.14 | 84.18 | 125.5 | 137.9 | 17.4 | 14 |
| 1570.0 | 1553.04 | -95.30 | 85.94 | 128.3 | 138.0 | 14.4 | 15 |
| 1580.0 | 1562.71 | -97.28 | 87.50 | 130.8 | 138.0 | 15.4 | 14 |
| 1590.0 | 1572.30 | -99.51 | 89.28 | 133.7 | 138.1 | 16.9 | 14 |
| 1600.0 | 1581.85 | -101.76 | 91.15 | 136.6 | 138.1 | 17.3 | 14 |
| 1610.0 | 1591.40 | -104.04 | 93.05 | 139.6 | 138.2 | 16.9 | 14 |
| 1620.0 | 1600.96 | -106.33 | 94.90 | 142.5 | 138.2 | 17.4 | 14 |
| 1630.0 | 1610.49 | -108.64 | 96.86 | 145.5 | 138.3 | 18.2 | 14 |
| 1634.8 | 1615.04 | -109.70 | 97.73 | 146.9 | 138.3 | 0.0 | |

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | No | Date Cemented |
|---|---|---|---|---|---|---|---|
| Conductor | 22" | 22" | 24" | 5.9 | X | | 1/24/2007 |
| Surface | 13 3/8" | 332.6' | 15 3/8" | 135.7 | X | | 1/26/2007 |
| Water Protection | 13 3/8" | 332.6' | 15 3/8" | 135.7 | X | | 1/26/2007 |
| Coal Protection | 13 3/8" | 332.6' | 15 3/8" | 135.7 | X | | 1/26/2007 |
| Other Casing & Tubing | | | | | | | |
| Other Casing & Tubing | | | | | | | |
| Liners | | | | | | | |

| Packers or Bridge Plugs Kind/Size/Set |
| --- |
| |
| bskt @ 88' |
| bskt @ 88' |
| bskt @ 88' |
| |
| |
| |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** CNX **HOLE #: T-37F**

**LOCATION:** GARDEN OF EDEN, VA **DRILL RIG #: 87**

**DATE STARTED: 01-23-07** **DATED COMPLETED: 02-01-07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | THICKNESS | | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 35 | 35 | |
| 35 | 64 | 29 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 64 | 93 | 29 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 93 | 124 | 31 | SAND STONE/SANDY SHALE/SAND STONE |
| 124 | 155 | 31 | SAND STONE/COAL & SANDY SHALE/SAND STONE |
| 155 | 187 | 32 | COAL/SANDY SHALE/SAND STONE |
| 187 | 219 | 32 | SAND STONE |
| 219 | 250 | 31 | SAND STONE/COAL/SANDY SHALE |
| 250 | 282 | 32 | SANDY SHALE/COAL/SAND STONE STR |
| 282 | 314 | 32 | SAND STONE |
| 314 | 345 | 31 | SAND STONE/SANDY SHALE/SAND STONE |
| 345 | 360 | 15 | SAND STONE/SANDY SHALE STR |
| 360 | 367 | 7 | |
| 367 | 398 | 31 | SAND STONE/SANDY SHALE/SAND STONE/SANDY SHALE |
| 398 | 420 | 22 | SANDY SHALE/SAND STONE |
| 420 | 452 | 32 | SAND STONE |
| 452 | 484 | 32 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE |
| 484 | 515 | 31 | SANDY SHALE |
| 515 | 547 | 32 | SAND STONE/SANDY SHALE |
| 547 | 579 | 32 | SANDY SHALE/SAND STONE |
| 579 | 610 | 31 | SAND STONE/SANDY SHALE/SAND STONE |
| 610 | 642 | 32 | SAND STONE/SANDY SHALE |
| 642 | 673 | 31 | SANDY SHALE/COAL STR/SAND STONE |
| 673 | 705 | 32 | SAND STONE/SANDY SHALE |
| 705 | 737 | 32 | SANDY SHALE/COAL/SAND STONE/SANDY SHALE |
| 737 | 768 | 31 | SANDY SHALE/COAL/SAND STONE/SANDY SHALE |
| 768 | 800 | 32 | SANDY SHALE/COAL/SANDY SHALE/COAL/SAND STONE |
| 800 | 831 | 31 | SAND STONE |
| 831 | 863 | 32 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 863 | 895 | 32 | SAND STONE/SANDY SHALE |
| 895 | 926 | 31 | SANDY SHALE/COAL/SAND STONE/SANDY SHALE |
| 926 | 958 | 32 | SANDY SHALE |
| 958 | 989 | 31 | SANDY SHALE/COAL STR/SAND STONE |

| | | | |
|---|---|---|---|
| 989 | 1021 | 32 | SAND STONE/SANDY SHALE STR |
| 1021 | 1052 | 31 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE |
| 1052 | 1084 | 32 | SANDY SHALE/SAND STONE |
| 1084 | 1115 | 31 | SAND STONE/SANDY SHALE/SAND STONE |
| 1100 | 1125 | 25 | SAND STONE/SANDY SHALE |
| 1125 | 1154 | 29 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1154 | 1186 | 32 | SANDY SHALE/COAL/SANDY SHALE/COAL/SANDY SHALE |
| 1186 | 1218 | 32 | SANDY SHALE/SAND STONE/COAL STR/SANDY SHALE |
| 1218 | 1249 | 31 | SANDY SHALE/COAL/SAND STONE |
| 1249 | 1281 | 32 | SANDY SHALE |
| 1281 | 1312 | 31 | SANDY SHALE/SAND STONE/SANDY SHALE/SAND STONE |
| 1312 | 1344 | 76 | SAND STONE |
| 1344 | 1376 | 32 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE |
| 1376 | 1407 | 31 | SAND STONE |
| 1407 | 1439 | 32 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE |
| 1439 | 1471 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 1471 | 1502 | 31 | SANDY SHALE/COAL/SANDY SHALE |
| 1502 | 1534 | 32 | SANDY SHALE/COAL/SANDY SHALE /SAND STONE/SANDY SHALE |
| 1534 | 1566 | 32 | SANDY SHALE/SAND STONE/SANDY SHALE/POSS COAL OR SHALE |
| 1566 | 1597 | 31 | SHALE OR COAL/SAND STONE /SANDY SHALE |
| 1597 | 1630 | 33 | SAND STONE |

1630.00 FT. TOTAL DEPTH
22.00 FT. OF 22" CASING
332.60 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 3885 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1177 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coal Bed | **Date Well Completed:** | 8/7/1997 |
| **Driller's Total Depth:** | 1755.60 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: £ Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| T38 | BU-1177 STIM.pdf |

## 3. Final Production

| Description | FileName |
|---|---|
| T38 | BU-1177 STIM.pdf |

## 4. Comments

*Notes:*

[7/2/2013, jsa]
Information inserted by DGO [6/25/2013, jhh]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/28/2013 | *(Company)* |
| By: | Leslie Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/28/2013 | | |
| Status: | Approved | Date: | 7/2/2013 |
| Final PDF Date: | 7/2/2013 | | |

BU-1177

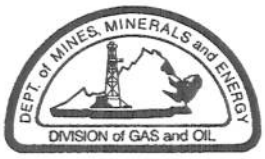
T-38

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38
Permit #: 3411

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423






**COMPLETION REPORT**

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 8/7/97 Total Depth of Well: 1755.62'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 830 MSCF, 500 bbl water
558 sx 20/40 and 298 sx 12/20
Perforated: 1635 TO 1640 No. of Perforations: OH Perforation Size: NA
Formation Broke Down at: 1700 PSIG Average Injection Rate 30 BPM
ISIP N/A PSIG 5 MIN SIP N/A PSIG Average Injection Pressure: 1714 PSIG
Date stimulated: 8/6. (Screenout)

**Zone 2:** P4, P5, P7, P8, P9 Formation Stimulated With: 673 MSCF N2, 422 bbl water
300 sx 20/40 and 256 sx 12/20
Perforated: 1138 TO 1555 No. ofPerforations: 48 Perforation Size: .70" EHD
Formation Broke Down at: 1794 PSIG Average Injection Rate 30 BPM
ISIP N/A PSIG 5 MIN SIP N/A PSIG Average Injection Pressure: 2137 PSIG
Date stimulated: 8/07.

**Zone 3:** LH3, P10, P11, MH Formation Stimulated With: 471 MSCF N2, 337 bbl water
354 sx 20/40 and 185 sx 12/20
Perforated: 952 TO 1078 No. of Perforations: 36 Perforation Size: .70" EHD
Formation Broke Down at: 1540 PSIG Average Injection Rate 30 BPM
ISIP 1016 PSIG 5 MIN SIP 968 PSIG Average Injection Pressure: 1935 PSIG
Date stimulated: 8/07.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

ENTERED

Permittee: Pocahontas Gas Partnership (Company)
By: Leslie K. Arrington Jr. (Signature)

Form DGO-GO-15
Rev 9/91

ENTERED

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38
Permit #: 3411

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

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Date Well Completed: 8/07/97 Total Depth of Well: 1755.62'

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STIMULATION RECORD*

Zone 4: MH, UH, LS, S Formation Stimulated With: 404 MSCF N2, 318 bbl water 190 sx 20/40 and 195 sx 12/20
Perforated: 694 TO 893 No. of Perforations: 52 Perforation Size: .70"EHD
Formation Broke Down at: 1752 PSIG Average Injection Rate 30 BPM
ISIP 1972 PSIG 5 MIN SIP 943 PSIG Average Injection Pressure: ---- PSIG
Date stimulated: 8/07.

Zone 5: _____ Formation Stimulated With: _____
Perforated: __ TO ____ No. ofPerforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG __ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

Zone 6: _____ Formation Stimulated With: _____
Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ____ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (4) | | | | | |
| Zone (5) | | | | | |
| Zone (6) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

BU-1177

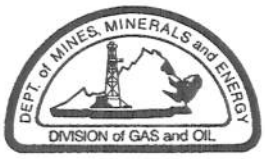
T-38

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38
Permit #: 3411

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423






**COMPLETION REPORT**

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

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Formation Broke Down at: 1540 PSIG Average Injection Rate 30 BPM
ISIP 1016 PSIG 5 MIN SIP 968 PSIG Average Injection Pressure: 1935 PSIG
Date stimulated: 8/07.

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| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

ENTERED

Permittee: Pocahontas Gas Partnership (Company)
By: Leslie K. Arrington Jr. (Signature)

Form DGO-GO-15
Rev 9/91

ENTERED

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38
Permit #: 3411

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

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Formation Broke Down at: 1752 PSIG Average Injection Rate 30 BPM
ISIP 1972 PSIG 5 MIN SIP 943 PSIG Average Injection Pressure: ---- PSIG
Date stimulated: 8/07.

Zone 5: _____ Formation Stimulated With: _____
Perforated: __ TO ____ No. ofPerforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG __ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

Zone 6: _____ Formation Stimulated With: _____
Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ____ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (4) | | | | | |
| Zone (5) | | | | | |
| Zone (6) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 3885 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1177 |
| **Operations Name:** | PGP T38 |
| **Operation Type:** | Coal Bed |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 7/9/1997

Drilling Contractor: Noah Horn

Date drilling completed: 7/11/1997

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 1755.62

Log Total Depth (feet): 0.00

Coal Seam At Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10497520.1690

Permitted State Plane Y: 3610432.2800

Final Plat State Plane X: 10497520.1690

Final Plat State Plane Y: 3610432.2450

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| T38 | BU-1177 PLAT.pdf |

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| T38 | BU-1177 COAL.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| T38 | BU-1177 GS.pdf |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: Deviation/Gamma/Calipier

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|
| T38 | BU-1177 CASING.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|---|---|
| T38 | BU-1177 CASING.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By:

List of Attached Items:

| Description | FileName |
|---|---|
| T38 | BU-1177 LOG.pdf |

## 9. Comments

[7/2/2013, jsa]
Information inserted by DGO [6/25/2013, jhh]

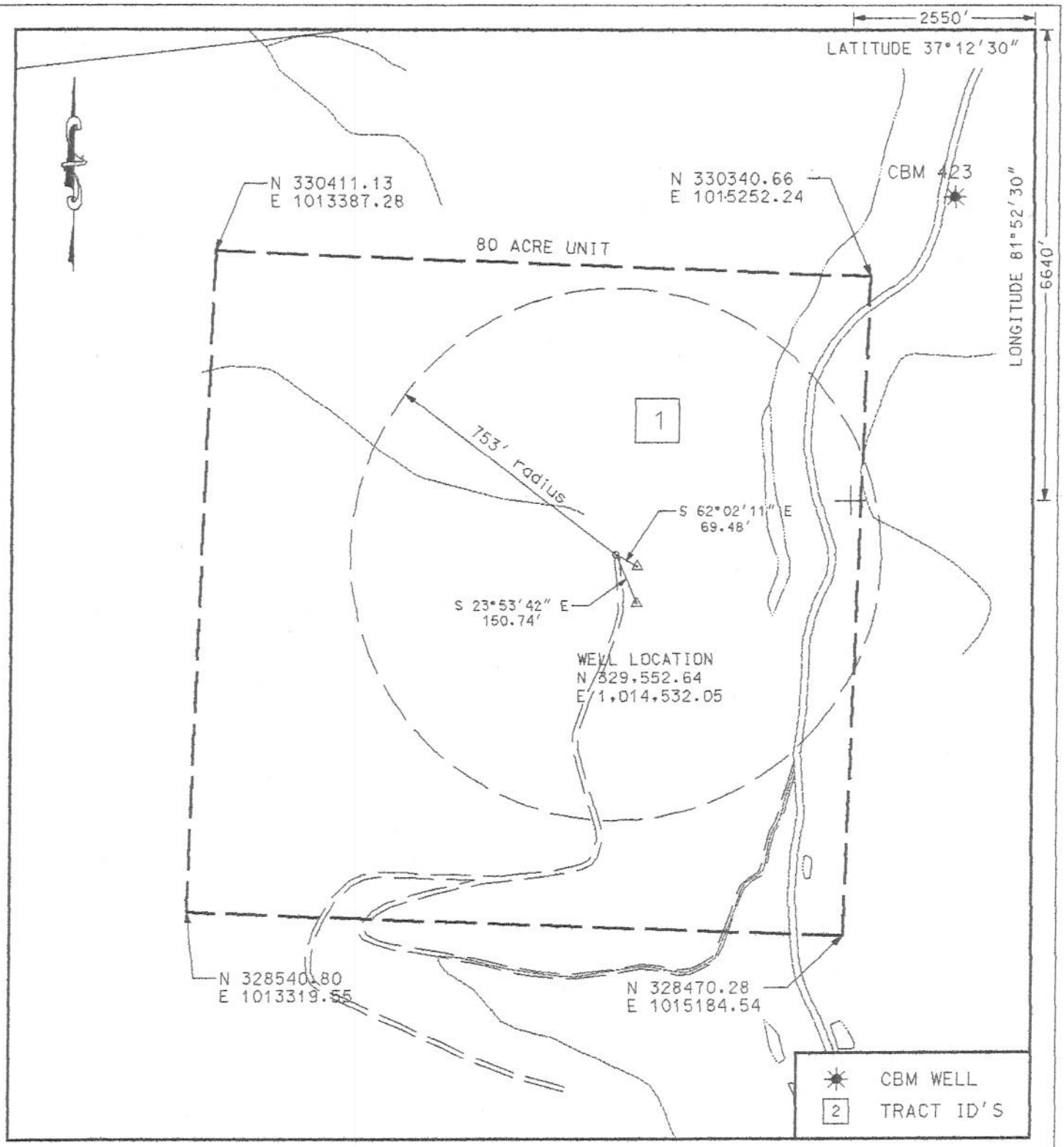
## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/28/2013

Signed By: Leslie Arrington Title: **********

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/28/2013 | | |
| Status: | A | Date: | 7/2/2013 |
| Final PDF Date: | 11/8/2013 | | |




# WELL LOCATION PLAT

Company Pocahontas Gas Partnership Well Name and Number CBM-PGP-T38

Tract No. Coal Mountain Elevation 2113.43' Quadrangle Keen Mountain

County Buchanan District Garden Scale: 1" = 400' Date 5/14/97

This plat is a new plat ____ ; an updated plat ____ ; or a final plat X

\+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

Form DGO-GO-7
Rev. 9/91

Claude D. Morgan
Licensed Professional Engineer or Licensed Land Surveyor

CLAUDE D. MORGAN
10359
PROFESSIONAL ENGINEER
(Affix Seal)

Exhibit A

Well Name: 97-PGP-T38
Elevation: 2113.43

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA3 | 42.00 | 43.20 | 2071.43 | 1.20 | MINED IN AREA |
| | 43.20 | 124.00 | 2070.23 | 80.80 | |
| JB1 | 124.00 | 126.00 | 1989.43 | 2.00 | |
| | 126.00 | 164.90 | 1987.43 | 38.90 | |
| JB3 | 164.90 | 171.10 | 1948.53 | 6.20 | |
| | 171.10 | 256.40 | 1942.33 | 85.30 | |
| TI | 256.40 | 258.30 | 1857.03 | 1.90 | |
| | 258.30 | 424.30 | 1855.13 | 166.00 | |
| COAL | 424.30 | 425.70 | 1689.13 | 1.40 | |
| | 425.70 | 478.50 | 1687.73 | 52.80 | |
| US2 | 478.50 | 479.10 | 1634.93 | 0.60 | |
| | 479.10 | 655.90 | 1634.33 | 176.80 | |
| SE1 | 655.90 | 657.00 | 1457.53 | 1.10 | |
| | 657.00 | 693.50 | 1456.43 | 36.50 | |
| SE2 | 693.50 | 695.30 | 1419.93 | 1.80 | |
| | 695.30 | 737.40 | 1418.13 | 42.10 | |
| LS1 | 737.40 | 739.10 | 1376.03 | 1.70 | |
| | 739.10 | 754.00 | 1374.33 | 14.90 | |
| LS2 | 754.00 | 754.60 | 1359.43 | 0.60 | |
| | 754.60 | 783.90 | 1358.83 | 29.30 | |
| UH1 | 783.90 | 784.90 | 1329.53 | 1.00 | |
| | 784.90 | 837.20 | 1328.53 | 52.30 | |
| UH3 | 837.20 | 839.00 | 1276.23 | 1.80 | |
| | 839.00 | 890.40 | 1274.43 | 51.40 | |
| MH1 | 890.40 | 892.40 | 1223.03 | 2.00 | |
| | 892.40 | 952.10 | 1221.03 | 59.70 | |
| MH2 | 952.10 | 953.60 | 1161.33 | 1.50 | |
| | 953.60 | 997.90 | 1159.83 | 44.30 | |
| P11 | 997.90 | 1000.40 | 1115.53 | 2.50 | |
| | 1000.40 | 1023.30 | 1113.03 | 22.90 | |
| P10 | 1023.30 | 1024.10 | 1090.13 | 0.80 | |
| | 1024.10 | 1076.50 | 1089.33 | 52.40 | |
| LH3 | 1076.50 | 1077.30 | 1036.93 | 0.80 | |
| | 1077.30 | 1138.50 | 1036.13 | 61.20 | |
| P91 | 1138.50 | 1139.20 | 974.93 | 0.70 | |
| | 1139.20 | 1168.70 | 974.23 | 29.50 | |
| P92 | 1168.70 | 1170.00 | 944.73 | 1.30 | |
| | 1170.00 | 1207.00 | 943.43 | 37.00 | |
| P81 | 1207.00 | 1207.70 | 906.43 | 0.70 | |
| | 1207.70 | 1239.30 | 905.73 | 31.60 | |
| P71 | 1239.30 | 1239.60 | 874.13 | 0.30 | |
| | 1239.60 | 1463.20 | 873.83 | 223.60 | |
| P51 | 1463.20 | 1465.10 | 650.23 | 1.90 | |
| | 1465.10 | 1553.00 | 648.33 | 87.90 | |
| P42 | 1553.00 | 1554.20 | 560.43 | 1.20 | |
| | 1554.20 | 1634.50 | 559.23 | 80.30 | |
| P3 | 1634.50 | 1639.70 | 478.93 | 5.20 | |
| | 1639.70 | 1759.00 | 473.73 | 119.30 | |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION

BU-1177

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38
Permit #: 3411

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

SEP 19[illegible]
RECEIVED
DIVISION OF
GAS & OIL

## DRILLING REPORT

Pursuant to VR-480-05-22.1, s 1.36, the undersigned Permittee submits this report on Well CBM-PGP-T38 in the Garden District of the Buchanan City/County, Virginia on this 9th day, September month, 19 97.

### LOCATION

City/County: Buchanan District: Garden
Surface Elevation: 2113.43 Elevation of Kelly Bushing: _____ Quadrangle: Keen Mountain
----- Ft. S. of Latitude ------ and ----- Ft. W. of Longitude -----
or, State Plane Coordinates: Zone 5 N 329,552.64 E 1,014,532.05

Attach a final location plat as required by VR 480-05-22.1, s 1.36.

### DRILLING DATA

Date Drilling Commenced: 7/09/97 Drilling Contractor: Noah Horn
Date Drilling Completed: 7/11/97 Rig Type: x Rotary __ Cable Tool
Total Depth of Well: 1755.62

### GEOLOGICAL DATA

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Fresh Water at: | N/R | Feet | GPM | | Feet | | GPM |
| | | Feet | GPM | | Feet | | GPM |
| | | Feet | GPM | | Feet | | GPM |
| Salt Water at: | | Feet | GPM | | Feet | | GPM |
| | | Feet | GPM | | Feet | | GPM |
| | | Feet | GPM | | Feet | | GPM |

COAL SEAMS:

| NAME | TOP | BOTTOM | THICKNESS | MINING IN AREA YES | NO | MINED OUT |
|---|---|---|---|---|---|---|
| See DGO-GO-14, Exhibit A | | | | | | |

GAS AND OIL SHOWS:

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 404.90 | 1755.62 | 1350.72 | | | |

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38
Permit #: 3411

Cuttings or samples are ___ are not _x_ available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have ___ have not _x_ been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes _x_ No _____

SURVEY RESULTS*:

* See Deviation Survey

CASING AND TUBING

| | SIZE | TOP | CEMENT USED BOTTOM | CEMENT USED LENGTH | DATE IN CU/FT | PACKERS OR BRIDGE PLUGS CEMENTED | KIND | SIZE | SET AT | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0 | 20.0' | 20.0' | | | | | | |
| Surface | 13 3/8" | 0 | 20.0' | 20.0' | | | | | | |
| Water Protection | 8 5/8" | 0 | 404.90' | 404.90' | 7/10/97 | 130 SACKS 110 H.L. | STD. | | | Cement to Surface |
| Coal Protection | 8 5/8" | 0 | 404.90' | 404.90' | 7/10/97 | 130 SACKS 110 H.L. | STD. | | | Cement to Surface |
| Other Casing and Tubing Left In Well | 5 1/2" | 0 | 1622.85' | 1622.85' | 7/28/97 | 120 SACKS 120 H.L. | STD. | | | Cement to Surface |

Liners

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.
Basket Location 63.6'

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38
Permit #: 3411

Cuttings or samples are ___ are not _x_ available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have ___ have not _x_ been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes _x_ No _____

SURVEY RESULTS*:

* See Deviation Survey

CASING AND TUBING

| | SIZE | TOP | CEMENT USED BOTTOM | CEMENT USED LENGTH | DATE IN CU/FT | PACKERS OR BRIDGE PLUGS CEMENTED | KIND | SIZE | SET AT | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0 | 20.0' | 20.0' | | | | | | |
| Surface | 13 3/8" | 0 | 20.0' | 20.0' | | | | | | |
| Water Protection | 8 5/8" | 0 | 404.90' | 404.90' | 7/10/97 | 130 SACKS 110 H.L. | STD. | | | Cement to Surface |
| Coal Protection | 8 5/8" | 0 | 404.90' | 404.90' | 7/10/97 | 130 SACKS 110 H.L. | STD. | | | Cement to Surface |
| Other Casing and Tubing Left In Well | 5 1/2" | 0 | 1622.85' | 1622.85' | 7/28/97 | 120 SACKS 120 H.L. | STD. | | | Cement to Surface |

Liners

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.
Basket Location 63.6'

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38
Permit #: 3411

# DRILLER'S LOG

Compiled by - Noah Horn

| Geologic Age | Formation | General Lithology | Color | Depth Top | Depth Bottom | Thickness | Remarks |
|---|---|---|---|---|---|---|---|
| | | OVERBURDEN | | 0 | 10 | | |
| | | BROWN SANDSTONE | | 10 | 40 | | |
| | | SHALE | | 40 | 130 | | |
| | | COAL | | 130 | 131 | | |
| | | SANDY SHALE | | 131 | 140 | | |
| | | SAND | | 140 | 160 | | |
| Pennsylvanian | Pocahontas | COAL | | 160 | 161 | | |
| | | SAND | | 161 | 190 | | |
| | | SAND | | 190 | 220 | | |
| | | SAND W/ SHALE | | 220 | 250 | | |
| | | SHALE W/ SAND | | 250 | 280 | | |
| | | SAND | | 280 | 310 | | |
| | | SANDY SHALE | | 310 | 340 | | |
| | | SHALE | | 340 | 370 | | |
| | | SAND | | 370 | 400 | | |
| | | SNADY SHALE | | 400 | 415 | | |
| | | SAND | | 415 | 510 | | |
| | | SANDY SHALE | | 510 | 600 | | |
| | | SAND | | 600 | 710 | | |
| | | COAL | | 710 | 711 | | |
| | | SAND SHALE | | 711 | 750 | | |
| | | SAND | | 750 | 780 | | |
| | | SHALE W/ SAND | | 780 | 810 | | |
| | | SAND | | 810 | 870 | | |
| | | SHALE | | 870 | 900 | | |
| | | COAL | | 900 | 901 | | |
| | | SHALE | | 901 | 930 | | |
| | | SHALE | | 930 | 960 | | |
| | | SANDY SHALE | | 960 | 1020 | | |
| | | SAND | | 1020 | 1050 | | |
| | | SAND | | 1050 | 1140 | | |
| | | SAND | | 1140 | 1200 | | |
| | | SHALE | | 1200 | 1230 | | |
| | | SANDY SHALE | | 1230 | 1290 | | |
| | | SAND | | 1290 | 1440 | | |
| | | SANDY SHALE | | 1440 | 1470 | | |
| | | SHALE | | 1470 | 1530 | | |
| | | SANDY SHALE | | 1530 | 1630 | | |
| | | SHALE | | 1630 | 1641 | | |
| | | COAL | | 1641 | 1645 | | |
| | | SANDY SHALE | | 1645 | 1650 | | |
| | | SAND | | 1650 | 1680 | | |
| | | SANDY SHALE | | 1680 | 1770 | | |

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)



Form DGO-GO-14
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 4975 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1543 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 6/23/1999 |
| **Driller's Total Depth:** | 2338.30 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: R Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| STIM | BU-1543 stim.pdf |

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

[4/28/2014, jsa]
Material inserted by DGO [3/24/2014, jhh]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 3/28/2014 | *(Company)* |
| By: | Leslie Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

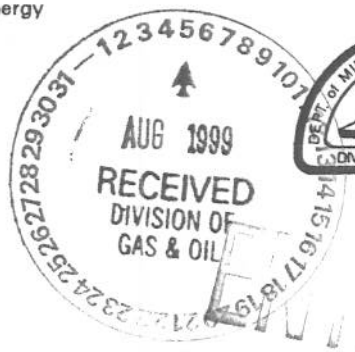
| | | | |
|---|---|---|---|
| Submit Date: | 3/28/2014 | | |
| Status: | Approved | Date: | 4/28/2014 |
| Final PDF Date: | 4/28/2014 | | |

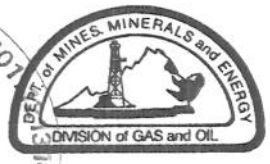
BU-1543

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38A
Permit #: 4083

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423




**COMPLETION REPORT**

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 6/22-23/99 Total Depth of Well: 2338.3'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 460 MSCF N2, 318 bbl water, 510 sx 16/30

Perforated: 1934 TO 1939 No. of Perforations: 20 Perforation Size: .70" EHD
Formation Broke Down at: 3406 PSIG Average Injection Rate 30 BPM
ISIP 1966 PSIG 5 MIN SIP 1824 PSIG Average Injection Pressure: 2830 PSIG
Date stimulated: 6/22-23/99.

**Zone 2:** P4-1,P5-1,P6-2,P8-2,P8-1,P9-3,P9-2,P9-1 Formation Stimulated With: 465 MSCF N2, 341 bbl water, 405 sx 16/30

Perforated: 1445 TO 1851 No. of Perforations: 64 Perforation Size: .70" EHD
Formation Broke Down at: 3175 PSIG Average Injection Rate 30 BPM
ISIP 1311 PSIG 5 MIN SIP 1471 PSIG Average Injection Pressure: 2769 PSIG
Date stimulated: 6/22-23/99.

**Zone 3:** LH2,LH1,P10,P11,MH2,MH1 Formation Stimulated With: 308 MSCF N2, 260 bbl water, 475 sx 16/30

Perforated: 1189 TO 1375 No. of Perforations: 52 Perforation Size: .70" EHD
Formation Broke Down at: 3009 PSIG Average Injection Rate 30 BPM
ISIP 1762 PSIG 5 MIN SIP 1291 PSIG Average Injection Pressure: 2279 PSIG
Date stimulated: 6/22-23/99.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Sheila K. Cumpton (Signature)

Form DGO-GO-15
Rev 9/91

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38A
Permit #: 4083

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

RECEIVED
DIVISION OF
GAS & OIL

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 6/22-23/98 Total Depth of Well: 2338.3'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** UH2,UH1,LS2,LS1,S2,S1 Formation Stimulated With: 311 MSCF N2, 271 bbl water, 409 sx 16/30

Perforated: 948 TO 1136 No. of Perforations: 48 Perforation Size: .70" EHD
Formation Broke Down at: 2214 PSIG Average Injection Rate 30 BPM
ISIP 1607 PSIG 5 MIN SIP 1099 PSIG Average Injection Pressure: 2270 PSIG
Date stimulated: 6/22-23/99 .

**Zone 2:** _____ Formation Stimulated With: _____

Perforated: ____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

**Zone 3:** _____ Formation Stimulated With: _____

Perforated: ____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Keith K. Cunningham (Signature)

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 4973 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1543 |
| **Operations Name:** | PGP T38A W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 5/27/1999

Drilling Contractor: Noah Horn Well Drilling

Date drilling completed: 6/3/1999

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 2338.30

Log Total Depth (feet): 0.00

Coal Seam at Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10496402.6700

Final Plat State Plane X: 10496400.6110

Permitted State Plane Y: 3610106.9800

Final Plat State Plane Y: 3610107.4430

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | BU-1543 plat.pdf |

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|
| 1620 | <1 | GPM |

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| COAL | BU-1543 coal.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS | BU-1543 gs.pdf |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: Gamma/Caliper/Deviation/Resistivity

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|

## 6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|---|---|
| CASING | BU-1543 casing.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By:

List of Attached Items:

| Description | FileName |
|---|---|
| LOG | BU-1543 log.pdf |

## 9. Comments

[4/28/2014, jsa]
Material inserted by DGO [3/24/2014, jhh]

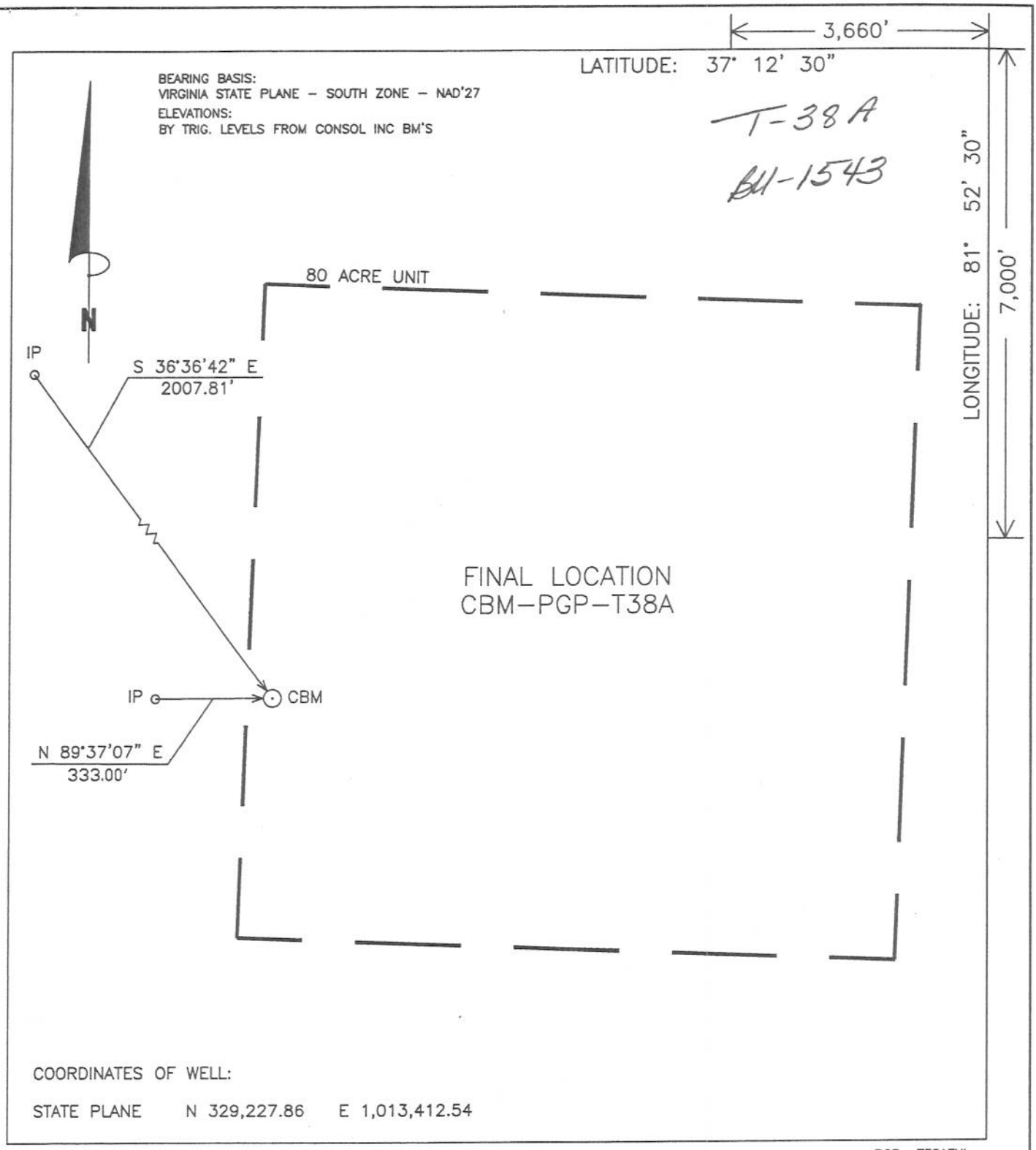
## 10. Signature

Permitee: CNX Gas Company LLC Date: 3/28/2014

Signed By: Leslie Arrington Title: **********

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 3/28/2014 | | |
| Status: | A | Date: | 4/28/2014 |
| Final PDF Date: | 4/28/2014 | | |




COORDINATES OF WELL:

STATE PLANE N 329,227.86 E 1,013,412.54

# WELL LOCATION PLAT

PGP T38AFNL
PGP3/84– 9801/03

Company POCAHONTAS GAS PARTNERSHIP Well Name and Number CBM–PGP–T38A

Tract No. COAL MTN. MINING CO. Elevation 2407.59 Quadrangle KEEN MOUNTAIN

County BUCHANAN District GARDEN Scale: 1" = 400' Date 06-01-99

This Plat is a new plat _____; an updated plat _____; or a final location plat X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

DRPrice

Licensed Professional Engineer or Licensed Land Surveyor

COMMONWEALTH OF VIRGINIA
D. R. PRICE
(Affix Seal)
LICENSE No. 8540
6/3/99
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 9/91

# Exhibit A

Well Name: 99-PGP-T-38-A
SURFACE ELEV: 2407.59 EASTING: 1013412.54 NORTHING: 329227.86

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| KN1 | 38.20 | 39.40 | 2369.39 | 1.20 | |
| | 39.40 | 51.00 | 2368.19 | 11.60 | |
| KN2 | 51.00 | 52.50 | 2356.59 | 1.50 | |
| | 52.50 | 140.70 | 2355.09 | 88.20 | |
| AL1 | 140.70 | 141.50 | 2266.89 | 0.80 | |
| | 141.50 | 172.00 | 2266.09 | 30.50 | |
| AL2 | 172.00 | 172.30 | 2235.59 | 0.30 | |
| | 172.30 | 280.00 | 2235.29 | 107.70 | |
| RA1 | 280.00 | 282.80 | 2127.59 | 2.80 | |
| | 282.80 | 299.90 | 2124.79 | 17.10 | |
| RA2 | 299.90 | 303.90 | 2107.69 | 4.00 | MINED OUT |
| | 303.90 | 330.00 | 2103.69 | 26.10 | |
| RA3 | 330.00 | 331.60 | 2077.59 | 1.60 | |
| | 331.60 | 334.20 | 2075.99 | 2.60 | |
| COAL | 334.20 | 335.30 | 2073.39 | 1.10 | |
| | 335.30 | 347.70 | 2072.29 | 12.40 | |
| COAL | 347.70 | 349.00 | 2059.89 | 1.30 | |
| | 349.00 | 420.00 | 2058.59 | 71.00 | |
| JB1 | 420.00 | 422.90 | 1987.59 | 2.90 | |
| | 422.90 | 457.00 | 1984.69 | 34.10 | |
| JB3 | 457.00 | 459.40 | 1950.59 | 2.40 | |
| | 459.40 | 492.00 | 1948.19 | 32.60 | |
| COAL | 492.00 | 493.00 | 1915.59 | 1.00 | |
| | 493.00 | 554.00 | 1914.59 | 61.00 | |
| TI | 554.00 | 556.00 | 1853.59 | 2.00 | |
| | 556.00 | 669.00 | 1851.59 | 113.00 | |
| US1 | 669.00 | 670.00 | 1738.59 | 1.00 | |
| | 670.00 | 771.00 | 1737.59 | 101.00 | |
| US2 | 771.00 | 772.00 | 1636.59 | 1.00 | |
| | 772.00 | 948.30 | 1635.59 | 176.30 | |
| *SE1 | 948.30 | 949.50 | 1459.29 | 1.20 | |
| | 949.50 | 982.80 | 1458.09 | 33.30 | |
| *SE2 | 982.80 | 984.10 | 1424.79 | 1.30 | |
| | 984.10 | 1022.00 | 1423.49 | 37.90 | |
| *LS1 | 1022.00 | 1023.50 | 1385.59 | 1.50 | |
| | 1023.50 | 1038.10 | 1384.09 | 14.60 | |
| *LS2 | 1038.10 | 1039.00 | 1369.49 | 0.90 | |
| | 1039.00 | 1086.90 | 1368.59 | 47.90 | |
| *UH1 | 1086.90 | 1088.10 | 1320.69 | 1.20 | |
| | 1088.10 | 1134.00 | 1319.49 | 45.90 | |
| *UH2 | 1134.00 | 1135.90 | 1273.59 | 1.90 | |
| | 1135.90 | 1189.90 | 1271.69 | 54.00 | |
| *MH1 | 1189.90 | 1191.00 | 1217.69 | 1.10 | |
| | 1191.00 | 1251.40 | 1216.59 | 60.40 | |
| *MH2 | 1251.40 | 1252.40 | 1156.19 | 1.00 | |
| | 1252.40 | 1294.70 | 1155.19 | 42.30 | |
| *P11 | 1294.70 | 1296.90 | 1112.89 | 2.20 | |
| | 1296.90 | 1322.70 | 1110.69 | 25.80 | |
| *P10 | 1322.70 | 1323.90 | 1084.89 | 1.20 | |
| | 1323.90 | 1355.30 | 1083.69 | 31.40 | |

| | | | | |
|---|---|---|---|---|
| *LH1 | 1355.30 | 1356.40 | 1052.29 | 1.10 |
| | 1356.40 | 1373.00 | 1051.19 | 16.60 |
| *LH2 | 1373.00 | 1373.90 | 1034.59 | 0.90 |
| | 1373.90 | 1445.00 | 1033.69 | 71.10 |
| *P91 | 1445.00 | 1446.20 | 962.59 | 1.20 |
| | 1446.20 | 1472.30 | 961.39 | 26.10 |
| *P92 | 1472.30 | 1473.00 | 935.29 | 0.70 |
| | 1473.00 | 1475.90 | 934.59 | 2.90 |
| *P93 | 1475.90 | 1476.90 | 931.69 | 1.00 |
| | 1476.90 | 1510.10 | 930.69 | 33.20 |
| *P81 | 1510.10 | 1511.00 | 897.49 | 0.90 |
| | 1511.00 | 1539.40 | 896.59 | 28.40 |
| *P82 | 1539.40 | 1540.00 | 868.19 | 0.60 |
| | 1540.00 | 1725.10 | 867.59 | 185.10 |
| *P62 | 1725.10 | 1726.20 | 682.49 | 1.10 |
| | 1726.20 | 1757.00 | 681.39 | 30.80 |
| *P51 | 1757.00 | 1758.10 | 650.59 | 1.10 |
| | 1758.10 | 1850.00 | 649.49 | 91.90 |
| *P41 | 1850.00 | 1851.00 | 557.59 | 1.00 |
| | 1851.00 | 1933.00 | 556.59 | 82.00 |
| *P3 | 1933.00 | 1938.50 | 474.59 | 5.50 |
| | 1938.50 | 1977.00 | 469.09 | 38.50 |
| *P21 | 1977.00 | 1978.50 | 430.59 | 1.50 |
| | 1978.50 | 2117.90 | 429.09 | 139.40 |
| *SJ3 | 2117.90 | 2118.50 | 289.69 | 0.60 |
| | 2118.50 | 2119.00 | 289.09 | 0.50 |
| *SJ2 | 2119.00 | 2121.20 | 288.59 | 2.20 |
| | 2121.20 | 2340.00 | 286.39 | 218.80 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION.
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO GAS WELL'S PROXIMITY TO HURRICANE BRANCH.
FILE: C:\GAS\T38A.CMP
DATE: 06/07/99

Gas and Oil Shows

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 556.00' | 2338.3' | 1782.3' | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Cuttings or samples: _____ are __X__ are not available for examination by a member of the Virginia Division of Mineral Resources

Cuttings or samples: _____ have __X__ have not been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS

List logs ran on wellbore: Gamma, Caliper, Resistivity, Deviation

Did logs disclose vertical location of a coal seam? __X__ Yes _____ No

SURVEY RESULTS

| Depth Of Survey | Direction/Distance/ Degrees From True Vertical | Depth Of Survey | Direction/Distance Degrees From True Vertical |
|---|---|---|---|
| See Deviation Survey | | | |

Use additional sheets as necessary

## CASING AND TUBING PROGRAM

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | Cemented To Surface No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0–18' | | | | | | |
| Surface | 13 3/8" | 0–18' | | | | | | |
| Water Protection | 4 ½" | 0–2315.59' | 6 ½" | 220 | X | | 06-03-99 | |
| Coal Protection | 4 ½" | 0–2315.59' | 6 ½" | 220 | X | | 06-03-99 | |
| Other Casing And Tubing Left In Well | 7" | 0-408.20 | 8 ¾" | 60 | X | | 05/28/99 | Basket at 295' |
| Liners | | | | | | | | |

REMARKS: Shut down fishing jobs, depths and dates, caving, lost circulation, etc.: Basket set at 295', void at303'.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie L. Arrington (Signature)

Form DGO-GO-14
Rev. 10/96

# DRILL DATA HOLE -- NOAH HORN WELL DRILLING, INC.

COMPANY: PGP

HOLE NO.: T-38-A

LOCATION:

DRILL:Rig #35

DATE STARTED: 05-27-99

ELECTRIC LOGGED: Yes

DATE COMPLETED: 06-03-99

GROUTED: Yes

| DEPTH FROM | DEPTH TO | THICKNESS FT. | STRATA DESCRIPTION | REMARKS VOIDS, ETC. |
|---|---|---|---|---|
| 0.00 | 18.00 | 18.00 | OVERBURDEN | 18' OF 13 3/8" CASING |
| 18.00 | 25.00 | 7.00 | SANDSTONE | |
| 25.00 | 55.00 | 30.00 | SANDY SHALE | |
| 55.00 | 85.00 | 30.00 | SANDY SHALE | |
| 85.00 | 115.00 | 30.00 | SANDSTONE | |
| 115.00 | 145.00 | 30.00 | SANDSTONE | |
| 145.00 | 175.00 | 30.00 | SANDY SHALE | |
| 175.00 | 205.00 | 30.00 | SANDY SHALE | |
| 205.00 | 235.00 | 30.00 | SANDSTONE | |
| 235.00 | 265.00 | 30.00 | SANDY SHALE | |
| 265.00 | 295.00 | 30.00 | SANDYSHALE / COAL | |
| 295.00 | 300.00 | 5.00 | SANDSTONE | |
| 300.00 | 303.00 | 3.00 | VOID | |
| 303.00 | 325.00 | 22.00 | SANDY SHALE | |
| 325.00 | 355.00 | 30.00 | SHALE | |
| 355.00 | 385.00 | 30.00 | SANDY SHALE | |
| 385.00 | 415.00 | 30.00 | SANDY SHALE | |
| 415.00 | 420.00 | 5.00 | SANDSTONE | 408.20' OF 7" CASING |
| 420.00 | 450.00 | 30.00 | SANDY SHALE | 6 ½" HOLE |
| 450.00 | 480.00 | 30.00 | SANDY SHALE | |
| 480.00 | 510.00 | 30.00 | SANDY SHALE | |
| 510.00 | 540.00 | 30.00 | SANDSTONE | |
| 540.00 | 570.00 | 30.00 | SANDY SHALE | |
| 570.00 | 600.00 | 30.00 | SANDSTONE | |
| 600.00 | 630.00 | 30.00 | SANDY SHALE | |
| 630.00 | 660.00 | 30.00 | SANDY SHALE | |
| 660.00 | 690.00 | 30.00 | SANDSTONE | |
| 690.00 | 720.00 | 30.00 | SANDSTONE | |
| 720.00 | 750.00 | 30.00 | SANDSTONE | |
| 750.00 | 780.00 | 30.00 | SANDSTONE | |
| 780.00 | 810.00 | 30.00 | SANDY SHALE | |
| 810.00 | 840.00 | 30.00 | SANDY SHALE | |

| FR | TO | FT. | DESCRIPTION | |
|---|---|---|---|---|
| 840.00 | 870.00 | 30.00 | SANDY SHALE | |
| 870.00 | 900.00 | 30.00 | SANDSTONE | |
| 900.00 | 930.00 | 30.00 | SANDSTONE | |
| 930.00 | 960.00 | 30.00 | SANDSTONE | |
| 960.00 | 990.00 | 30.00 | SANDSTONE | |
| 990.00 | 1020.00 | 30.00 | SANDY SHALE | |
| 1020.00 | 1050.00 | 30.00 | SANDY SHALE | |
| 1050.00 | 1080.00 | 30.00 | SANDSTONE | |
| 1080.00 | 1110.00 | 30.00 | SANDSTONE | |
| 1110.00 | 1140.00 | 30.00 | SANDY SHALE | |
| 1140.00 | 1170.00 | 30.00 | SANDSTONE | |
| 1170.00 | 1200.00 | 30.00 | SANDSTONE | |
| 1200.00 | 1230.00 | 30.00 | SANDY SHALE | |
| 1230.00 | 1260.00 | 30.00 | SANDY SHALE | |
| 1260.00 | 1290.00 | 30.00 | SANDY SHALE | |
| 1290.00 | 1320.00 | 30.00 | SANDY SHALE | |
| 1320.00 | 1350.00 | 30.00 | SANDY SHALE | |
| 1350.00 | 1380.00 | 30.00 | SANDSTONE | |
| 1380.00 | 1410.00 | 30.00 | SANDSTONE | |
| 1410.00 | 1440.00 | 30.00 | SANDSTONE | |
| 1440.00 | 1470.00 | 30.00 | SANDY SHALE | |
| 1470.00 | 1500.00 | 30.00 | SANDY SHALE | |
| 1500.00 | 1530.00 | 30.00 | SANDY SHALE | |
| 1530.00 | 1560.00 | 30.00 | SANDY SHALE | |
| 1560.00 | 1590.00 | 30.00 | SANDSTONE | |
| 1590.00 | 1620.00 | 30.00 | SANDY SHALE | |
| 1620.00 | 1650.00 | 30.00 | SANDSTONE | |
| 1650.00 | 1680.00 | 30.00 | SANDSTONE | |
| 1680.00 | 1710.00 | 30.00 | SANDSTONE | 6 ¼" HOLE |
| 1710.00 | 1740.00 | 30.00 | SANDY SHALE | |
| 1740.00 | 1770.00 | 30.00 | SANDY SHALE | |
| 1770.00 | 1800.00 | 30.00 | SANDSTONE | |
| 1800.00 | 1830.00 | 30.00 | SANDSTONE | |
| 1830.00 | 1860.00 | 30.00 | SANDY SHALE | |
| 1860.00 | 1890.00 | 30.00 | SANDY SHALE | |
| 1890.00 | 1920.00 | 30.00 | SANDSTONE | |
| 1920.00 | 1930.00 | 10.00 | SHALE | |
| 1930.00 | 1935.00 | 5.00 | COAL P-3 | |
| 1935.00 | 1950.00 | 15.00 | SANDY SHALE | |
| 1950.00 | 1980.00 | 30.00 | SANDSTONE | |
| 1980.00 | 2010.00 | 30.00 | SANDSTONE | |
| 2010.00 | 2040.00 | 30.00 | SANDSTONE | |
| 2040.00 | 2070.00 | 30.00 | SANDSTONE | |
| 2070.00 | 2100.00 | 30.00 | SANDY SHALE | |
| 2100.00 | 2130.00 | 30.00 | SANDY SHALE | |
| 2130.00 | 2160.00 | 30.00 | SANDY SHALE | |
| 2160.00 | 2190.00 | 30.00 | SANDY SHALE | |
| 2190.00 | 2220.00 | 30.00 | SANDY SHALE | |
| 2220.00 | 2250.00 | 30.00 | SANDSTONE | |
| 2250.00 | 2280.00 | 30.00 | SANDY SHALE | 2317.59' OF 4 ½" Casing |
| 2280.00 | 2310.00 | 30.00 | SANDY SHALE / RED SHALE | |
| 2310.00 | 2340.00 | 30.00 | SANDY SHALE / RED SHALE | |

2340.00 FT. TOTAL DEPTH
18.00 FT. OF 13 3/8" CASING
408.20 FT. OF 7" CASING
2317.59 FT. OF 4 ½" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 4978 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1540 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 6/8/1999 |
| **Driller's Total Depth:** | 1953.20 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: R Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| STIM | BU-1540 stim.pdf |
| STIM | BU-1540 stim_0328201412101000.pdf |

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

[4/28/2014, jsa]
Material inserted by DGO [3/24/2014, jhh]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 3/28/2014 | *(Company)* |
| By: | Leslie Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 3/28/2014 | | |
| Status: | Approved | Date: | 4/28/2014 |
| Final PDF Date: | 4/28/2014 | | |

BM.154U

ENTERED

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38B
Permit #: 4080-01

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 6/8/99 Total Depth of Well: 1953.2'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 417 MSCF N2, 279 bbl water, 416 sx 16/30
Perforated: 1618 TO 1623 No. of Perforations: 20 Perforation Size: .70" EHD
Formation Broke Down at: 3257 PSIG Average Injection Rate 30 BPM
ISIP ____ PSIG ___ MIN SIP ____ PSIG Average Injection Pressure: 3387 PSIG
Date stimulated: 6/8/99 .**Well sanded off!**

**Zone 2:** P4-1,P5-1,P6-2,P6-1,P8-2 Formation Stimulated With: 364 MSCF N2, 235 bbl water, 103 sx 16/30
Perforated: 1231 TO 1537 No. of Perforations: 40 Perforation Size: .70" EHD
Formation Broke Down at: 2656 PSIG Average Injection Rate 30 BPM
ISIP 1843 PSIG 5 MIN SIP 1769 PSIG Average Injection Pressure: 3122 PSIG
Date stimulated: 6/8/99 .

**Zone 3:** P9-3,P9-2,P9-1 Formation Stimulated With: 446 MSCF N2, 305 bbl water, 275 sx 16/30
Perforated: 1149 TO 1175 No. of Perforations: 24 Perforation Size: .70" EHD
Formation Broke Down at: 2041 PSIG Average Injection Rate 30 BPM
ISIP 2184 PSIG 5 MIN SIP 1753 PSIG Average Injection Pressure: 2692 PSIG
Date stimulated: 6/8/99 .

FINAL PRODUCTION: __ Natural ___ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Preston K. Denny Jr (Signature)

RECEIVED
JUN 1999
DIVISION OF
GAS & OIL

Form DGO-GO-15
Rev 9/91

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T38B
Permit #: 4080-01

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 6/8/99 Total Depth of Well: 1953.2'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** C,LH2,P10,P11,MH2 Formation Stimulated With: 326 MSCF N2, 266 bbl water, 425 sx 16/30

Perforated: 946 TO 1105 No. of Perforations: 44 Perforation Size: .70" EHD
Formation Broke Down at: 2129 PSIG Average Injection Rate 30 BPM
ISIP 1158 PSIG 5 MIN SIP 989 PSIG Average Injection Pressure: 1746 PSIG
Date stimulated: 6/8/99.

**Zone 5:** MH1,UH2,UH1,LS2,LS1,S2 Formation Stimulated With: 418 MSCF N2, 319 bbl water, 523 sx 16/30

Perforated: 679 TO 887 No. of Perforations: 48 Perforation Size: .70" EHD
Formation Broke Down at: 2285 PSIG Average Injection Rate 30 BPM
ISIP 1234 PSIG 5 MIN SIP 928 PSIG Average Injection Pressure: 2143 PSIG
Date stimulated: 6/8/99.

**Zone 3:** _____ Formation Stimulated With: _____

Perforated: ____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: [signature] (Signature)

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 4976 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1540 |
| **Operations Name:** | PGP T38B W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 5/6/1999

Drilling Contractor: Noah Horn Well Drilling

Date drilling completed: 5/11/1999

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 1953.20

Log Total Depth (feet): 0.00

Coal Seam at Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10496583.4800

Permitted State Plane Y: 3611169.1900

Final Plat State Plane X: 10496583.5210

Final Plat State Plane Y: 3611169.1900

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | BU-1540 plat.pdf |

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| COAL | BU-1540 coal.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS | BU-1540 gs.pdf |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: Gamma/Caliper/Deviation/Resistivity

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| CASING | BU-1540 casing.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: _____

List of Attached Items:

| Description | FileName |
|---|---|
| LOG | BU-1540 log.pdf |

## 9. Comments

[4/28/2014, jsa]
Material inserted by DGO [3/24/2014, jhh]

## 10. Signature

Permitee: CNX Gas Company LLC  Date: 3/28/2014

Signed By: Leslie Arrington  Title: **********

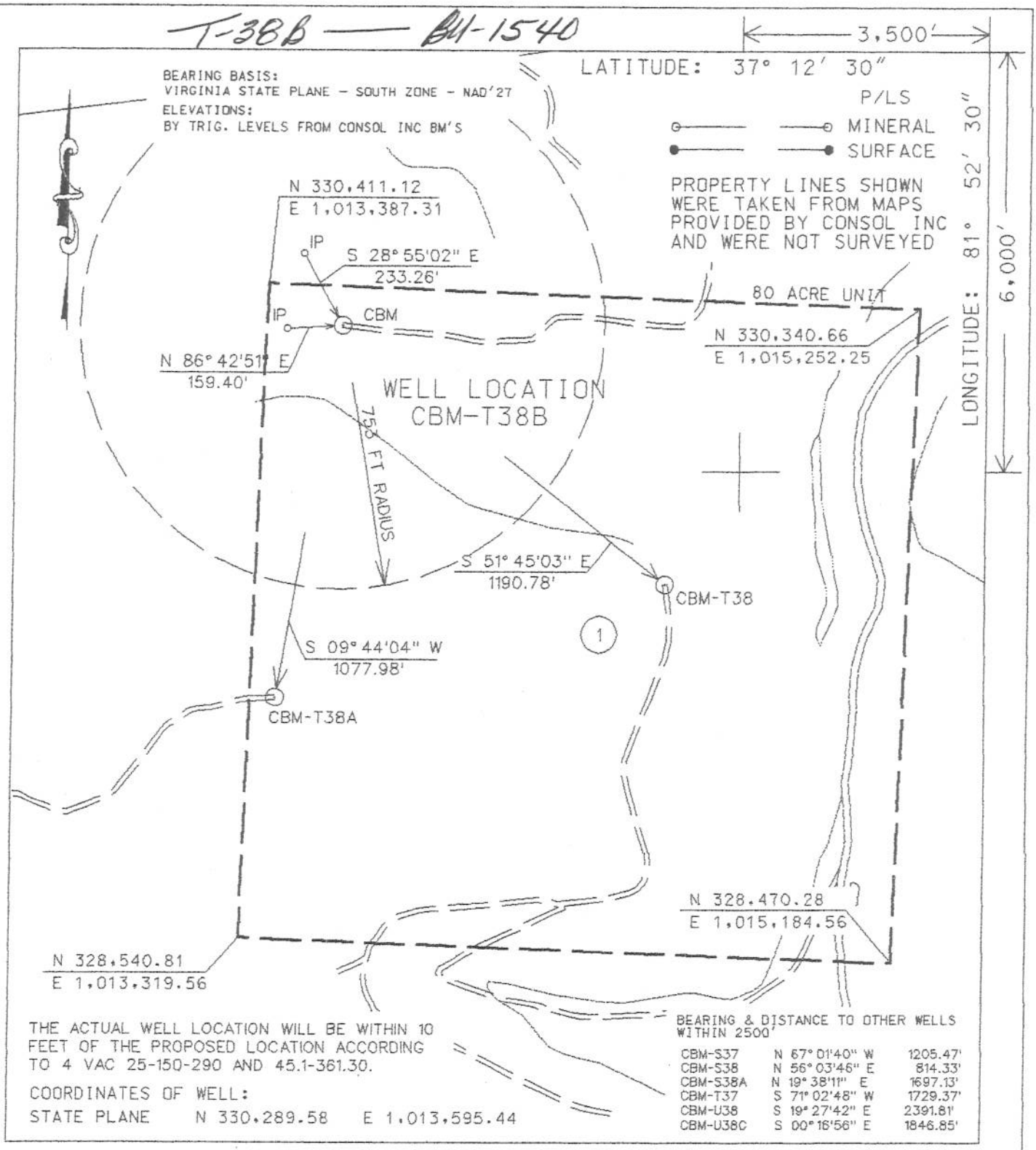
## INTERNAL USE ONLY

Submit Date: 3/28/2014

Status: A  Date: 4/28/2014

Final PDF Date: 4/28/2014

T-38B — BM-1540




THE ACTUAL WELL LOCATION WILL BE WITHIN 10 FEET OF THE PROPOSED LOCATION ACCORDING TO 4 VAC 25-150-290 AND 45.1-361.30.

COORDINATES OF WELL:

STATE PLANE N 330,289.58 E 1,013,595.44

BEARING & DISTANCE TO OTHER WELLS WITHIN 2500'

| | | |
|---|---|---|
| CBM-S37 | N 67° 01'40" W | 1205.47' |
| CBM-S38 | N 56° 03'46" E | 814.33' |
| CBM-S38A | N 19° 38'11" E | 1697.13' |
| CBM-T37 | S 71° 02'48" W | 1729.37' |
| CBM-U38 | S 19° 27'42" E | 2391.81' |
| CBM-U38C | S 00° 16'56" E | 1846.85' |

# WELL LOCATION PLAT

PGP_T38BPLAT
PGP2/1901 - 9802/16

Company POCAHONTAS GAS PARTNERSHIP Well Name and Number CBM-PGP-T38B

Tract No. COAL MOUNTAIN Elevation 2101.02' Quadrangle CLARKS MOUNTAIN

County BUCHANAN District GARDEN Scale: 1" = 400' Date 6/4/99

This Plat is a new plat ____; an updated plat ____; or a final location plat X

+ Denotes the location of a well on United States Topographic Maps, scale 1:24,000, latitude and longitude lines being represented by border lines as shown.

Claude A. Mayo

Licensed Professional Engineer or Licensed Land Surveyor

(Affix Seal)

Form DGO-GO-7
Rev. 9/91

# Exhibit A

Well Name: 99-PGP-T-38B
SURFACE ELEV: 2090.07 EASTING: 1013595.44 NORTHING: 330289.58

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA3 | 36.90 | 39.00 | 2053.17 | 2.10 | |
| | 39.00 | 59.00 | 2051.07 | 20.00 | |
| COAL | 59.00 | 60.20 | 2031.07 | 1.20 | |
| | 60.20 | 123.00 | 2029.87 | 62.80 | |
| JB1 | 123.00 | 125.70 | 1967.07 | 2.70 | |
| | 125.70 | 171.50 | 1964.37 | 45.80 | |
| JB3 | 171.50 | 174.10 | 1918.57 | 2.60 | |
| | 174.10 | 256.90 | 1915.97 | 82.80 | |
| T1 | 256.90 | 258.00 | 1833.17 | 1.10 | |
| | 258.00 | 343.30 | 1832.07 | 85.30 | |
| COAL | 343.30 | 344.30 | 1746.77 | 1.00 | |
| | 344.30 | 370.00 | 1745.77 | 25.70 | |
| US1 | 370.00 | 371.00 | 1720.07 | 1.00 | |
| | 371.00 | 470.70 | 1719.07 | 99.70 | |
| US2 | 470.70 | 471.70 | 1619.37 | 1.00 | |
| | 471.70 | 593.00 | 1618.37 | 121.30 | |
| GC2 | 593.00 | 594.60 | 1497.07 | 1.60 | |
| | 594.60 | 648.00 | 1495.47 | 53.40 | |
| SE1 | 648.00 | 649.00 | 1442.07 | 1.00 | |
| | 649.00 | 679.00 | 1441.07 | 30.00 | |
| SE2 | 679.00 | 681.80 | 1411.07 | 2.80 | |
| | 681.80 | 718.70 | 1408.27 | 36.90 | |
| *LS1 | 718.70 | 720.80 | 1371.37 | 2.10 | |
| | 720.80 | 734.00 | 1369.27 | 13.20 | |
| *LS2 | 734.00 | 735.00 | 1356.07 | 1.00 | |
| | 735.00 | 777.40 | 1355.07 | 42.40 | |
| *UH1 | 777.40 | 779.50 | 1312.67 | 2.10 | |
| | 779.50 | 830.00 | 1310.57 | 50.50 | |
| *UH2 | 830.00 | 832.00 | 1260.07 | 2.00 | |
| | 832.00 | 884.50 | 1258.07 | 52.50 | |
| *MH1 | 884.50 | 886.60 | 1205.57 | 2.10 | |
| | 886.60 | 946.50 | 1203.47 | 59.90 | |
| *MH2 | 946.50 | 947.50 | 1143.57 | 1.00 | |
| | 947.50 | 988.70 | 1142.57 | 41.20 | |
| *P11 | 988.70 | 991.30 | 1101.37 | 2.60 | |
| | 991.30 | 1013.10 | 1098.77 | 21.80 | |
| *P10 | 1013.10 | 1014.20 | 1076.97 | 1.10 | |
| | 1014.20 | 1069.50 | 1075.87 | 55.30 | |
| *LH2 | 1069.50 | 1070.60 | 1020.57 | 1.10 | |
| | 1070.60 | 1102.90 | 1019.47 | 32.30 | |
| *COAL | 1102.90 | 1104.30 | 987.17 | 1.40 | |
| | 1104.30 | 1148.80 | 985.77 | 44.50 | |
| *P91 | 1148.80 | 1150.50 | 941.27 | 1.70 | |
| | 1150.50 | 1165.00 | 939.57 | 14.50 | |
| *P92 | 1165.00 | 1166.50 | 925.07 | 1.50 | |
| | 1166.50 | 1172.50 | 923.57 | 6.00 | |
| *P93 | 1172.50 | 1174.50 | 917.57 | 2.00 | |
| | 1174.50 | 1201.00 | 915.57 | 26.50 | |
| *P81 | 1201.00 | 1202.00 | 889.07 | 1.00 | |
| | 1202.00 | 1231.60 | 888.07 | 29.60 | |

| | | | | |
|---|---|---|---|---|
| *P82 | 1231.60 | 1232.80 | 858.47 | 1.20 |
| | 1232.80 | 1400.90 | 857.27 | 168.10 |
| *P61 | 1400.90 | 1401.90 | 689.17 | 1.00 |
| | 1401.90 | 1412.00 | 688.17 | 10.10 |
| *P62 | 1412.00 | 1413.00 | 678.07 | 1.00 |
| | 1413.00 | 1444.00 | 677.07 | 31.00 |
| *P51 | 1444.00 | 1446.40 | 646.07 | 2.40 |
| | 1446.40 | 1534.90 | 643.67 | 88.50 |
| *P41 | 1534.90 | 1536.00 | 555.17 | 1.10 |
| | 1536.00 | 1617.50 | 554.07 | 81.50 |
| *P3 | 1617.50 | 1623.20 | 472.57 | 5.70 |
| | 1623.20 | 1662.00 | 466.87 | 38.80 |
| *P21 | 1662.00 | 1663.80 | 428.07 | 1.80 |
| | 1663.80 | 1700.70 | 426.27 | 36.90 |
| *P22 | 1700.70 | 1701.80 | 389.37 | 1.10 |
| | 1701.80 | 1800.40 | 388.27 | 98.60 |
| *SJ3 | 1800.40 | 1801.60 | 289.67 | 1.20 |
| | 1801.60 | 1802.40 | 288.47 | 0.80 |
| *SJ2 | 1802.40 | 1804.70 | 287.67 | 2.30 |
| | 1804.70 | 1954.50 | 285.37 | 149.80 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION.
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO PROXIMITY OF GAS WELL TO HURRICANE BRANCH.
FILE: C:\GAS\T38B.CMP
DATE: 05/24/99

Gas and Oil Shows

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 258' | 1953.2' | 1695.2' | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Cuttings or samples: _____ are __X__ are not available for examination by a member of the Virginia Division of Mineral Resources

Cuttings or samples: _____ have __X__ have not been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS

List logs ran on wellbore: Gamma, Caliper, Resistivity, Deviation

Did logs disclose vertical location of a coal seam? __X__ Yes _____ No

SURVEY RESULTS

| Depth Of Survey | Direction/Distance/ Degrees From True Vertical | Depth Of Survey | Direction/Distance Degrees From True Vertical |
|---|---|---|---|
| See Deviation Survey | | | |

Use additional sheets as necessary

## CASING AND TUBING PROGRAM

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 8 5/8" | 0–18' | | | | | | |
| Surface | 8 5/8" | 0–18' | | | | | | |
| Water Protection | 4 ½" | 0–1934.06' | 6 ½" | 195 | X | | 05-11-99 | |
| Coal Protection | 4 ½" | 0–1934.06' | 6 ½" | 195 | X | | 05-11-99 | |
| Other Casing And Tubing Left In Well | | | | | | | | |
| Liners | | | | | | | | |

REMARKS: Shut down fishing jobs, depths and dates, caving, lost circulation, etc.: _____

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Cunningham (Signature)

Form DGO-GO-14
Rev. 10/96

# DRILL DATA HOLE -- NOAH HORN WELL DRILLING, INC.

COMPANY: PGP

HOLE NO.: T-38-B

LOCATION: Hurricane Creek

DRILL: Rig #35

DATE STARTED: 05-06-99

ELECTRIC LOGGED: Yes

DATE COMPLETED: 05-11-99

GROUTED: Yes

| DEPTH | | THICKNESS | STRATA | REMARKS |
|---|---|---|---|---|
| FROM | TO | FT. | DESCRIPTION | VOIDS, ETC. |
| 0.00 | 18.00 | 18.00 | OVERBURDEN | 18' OF 8 5/8" CASING |
| 18.00 | 25.00 | 7.00 | SANDSTONE | 6 ½" HOLE |
| 25.00 | 56.00 | 31.00 | SANDY SHALE | |
| 56.00 | 87.00 | 31.00 | SANDSTONE | |
| 87.00 | 118.00 | 31.00 | SANDSTONE | |
| 118.00 | 149.00 | 31.00 | SANDSTONE | |
| 149.00 | 180.00 | 31.00 | SANDY SHALE | |
| 180.00 | 210.00 | 30.00 | SANDY SHALE | |
| 210.00 | 240.00 | 30.00 | SANDSTONE | |
| 240.00 | 270.00 | 30.00 | SANDY SHALE | |
| 270.00 | 300.00 | 30.00 | SANDY SHALE | |
| 300.00 | 330.00 | 30.00 | SANDY SHALE | |
| 330.00 | 360.00 | 30.00 | SANDSTONE | |
| 360.00 | 390.00 | 30.00 | SANDSTONE | |
| 390.00 | 420.00 | 30.00 | SANDSTONE | |
| 420.00 | 450.00 | 30.00 | SANDY SHALE | |
| 450.00 | 480.00 | 30.00 | SANDSTONE | |
| 480.00 | 510.00 | 30.00 | SANDY SHALE | |
| 510.00 | 540.00 | 30.00 | SANDY SHALE | |
| 540.00 | 570.00 | 30.00 | SANDY SHALE | |
| 570.00 | 600.00 | 30.00 | SANDSTONE | |
| 600.00 | 630.00 | 30.00 | SANDY SHALE | |
| 630.00 | 660.00 | 30.00 | SANDY SHALE | |
| 660.00 | 690.00 | 30.00 | SANDY SHALE / COAL | |
| 690.00 | 720.00 | 30.00 | SANDSTONE | |
| 720.00 | 750.00 | 30.00 | SANDY SHALE | |
| 750.00 | 780.00 | 30.00 | SANDY SHALE | |
| 780.00 | 810.00 | 30.00 | SANDSTONE | |
| 810.00 | 840.00 | 30.00 | SANDSTONE | |
| 840.00 | 870.00 | 30.00 | SANDSTONE | |
| 870.00 | 900.00 | 30.00 | SANDSTONE/ COAL | |
| 900.00 | 930.00 | 30.00 | SANDY SHALE | |

| FR | TO | FT | DESCRIPTION | |
|---|---|---|---|---|
| 930.00 | 960.00 | 30.00 | SANDSTONE | |
| 960.00 | 990.00 | 30.00 | SANDY SHALE | |
| 990.00 | 1020.00 | 30.00 | SANDY SHALE | |
| 1020.00 | 1050.00 | 30.00 | SANDSTONE | |
| 1050.00 | 1080.00 | 30.00 | SANDY SHALE | |
| 1080.00 | 1110.00 | 30.00 | SANDY SHALE | |
| 1110.00 | 1140.00 | 30.00 | SANDSTONE | |
| 1140.00 | 1170.00 | 30.00 | SANDY SHALE | |
| 1170.00 | 1200.00 | 30.00 | SANDY SHALE | |
| 1200.00 | 1230.00 | 30.00 | SANDSTONE | |
| 1230.00 | 1260.00 | 30.00 | SANDSTONE | |
| 1260.00 | 1290.00 | 30.00 | SANDSTONE | |
| 1290.00 | 1320.00 | 30.00 | SANDSTONE | |
| 1320.00 | 1350.00 | 30.00 | SANDY SHALE | |
| 1350.00 | 1380.00 | 30.00 | SANDY SHALE | |
| 1380.00 | 1410.00 | 30.00 | SANDSTONE / COAL / SHALE | |
| 1410.00 | 1440.00 | 30.00 | SANDY SHALE | |
| 1440.00 | 1470.00 | 30.00 | SANDY SHALE | |
| 1470.00 | 1500.00 | 30.00 | SANDSTONE | |
| 1500.00 | 1530.00 | 30.00 | SANDY SHALE | |
| 1530.00 | 1560.00 | 30.00 | SANDSTONE | |
| 1560.00 | 1590.00 | 30.00 | SANDSTONE | |
| 1590.00 | 1622.00 | 32.00 | SANDY SHALE | |
| 1622.00 | 1627.00 | 5.00 | COAL P-3 | |
| 1627.00 | 1650.00 | 23.00 | SANDSTONE | |
| 1650.00 | 1680.00 | 30.00 | SANDSTONE | |
| 1680.00 | 1710.00 | 30.00 | SANDY SHALE | |
| 1710.00 | 1740.00 | 30.00 | SANDSTONE | |
| 1740.00 | 1770.00 | 30.00 | SANDY SHALE | |
| 1770.00 | 1800.00 | 30.00 | SANDSTONE | |
| 1800.00 | 1830.00 | 30.00 | SANDY SHALE / RED SHALE | |
| 1830.00 | 1860.00 | 30.00 | SANDY SHALE | |
| 1860.00 | 1890.00 | 30.00 | SANDSTONE | |
| 1890.00 | 1920.00 | 30.00 | SANDSTONE | |
| 1920.00 | 1950.00 | 30.00 | SANDSTONE | 1936.00' OF 4 ½" Casing |

1950.00 FT. TOTAL DEPTH
18.00 FT. OF 8 5/8" CASING
1936.00 FT. FO 4 ½" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 634
**Company:** CNX Gas Company LLC
**File Number:** BU-3327
**Operations Name:** CBM T38C W/PL
**Operation Type:** Coalbed/Pipeline
**Completion Report Type:** Original

# COMPLETION REPORT (DGO-GO-15)

**Well Type:** Coalbed/Pipeline **Date Well Completed:** 1/23/2007
**Driller's Total Depth:** 1,972 **Log's Total Depth:** 1,976

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

☐ Stimulated ☐ Not Stimulated ☑ Gob

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 9/6/2007 10:05:12 AM *(Company)*

By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 9/6/2007

Status: Inspr Approved Date: 9/18/2007

Final PDF Date: 9/18/2007

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 493 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3327 |
| **Operations Name:** | CBM T38C W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 1/11/2007
Drilling Contractor: Noah Horn
Date drilling completed: 1/23/2007
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,972
Log Total Depth (feet): 1,976
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,013,399
Final Plat State Plane X: 1,013,399
Permitted State Plane Y: 329,212
Final Plat State Plane Y: 329,212
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | Platt.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T38C Exhibit A.doc |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | T38C Gas Show.xls |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑ Yes ☐ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | T38C Casing.xls |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

16" casing cemented on the backside to surface; Mine void @ 303' - 306'

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | T38C Drill Data.doc |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 9/6/2007 *(Company)*

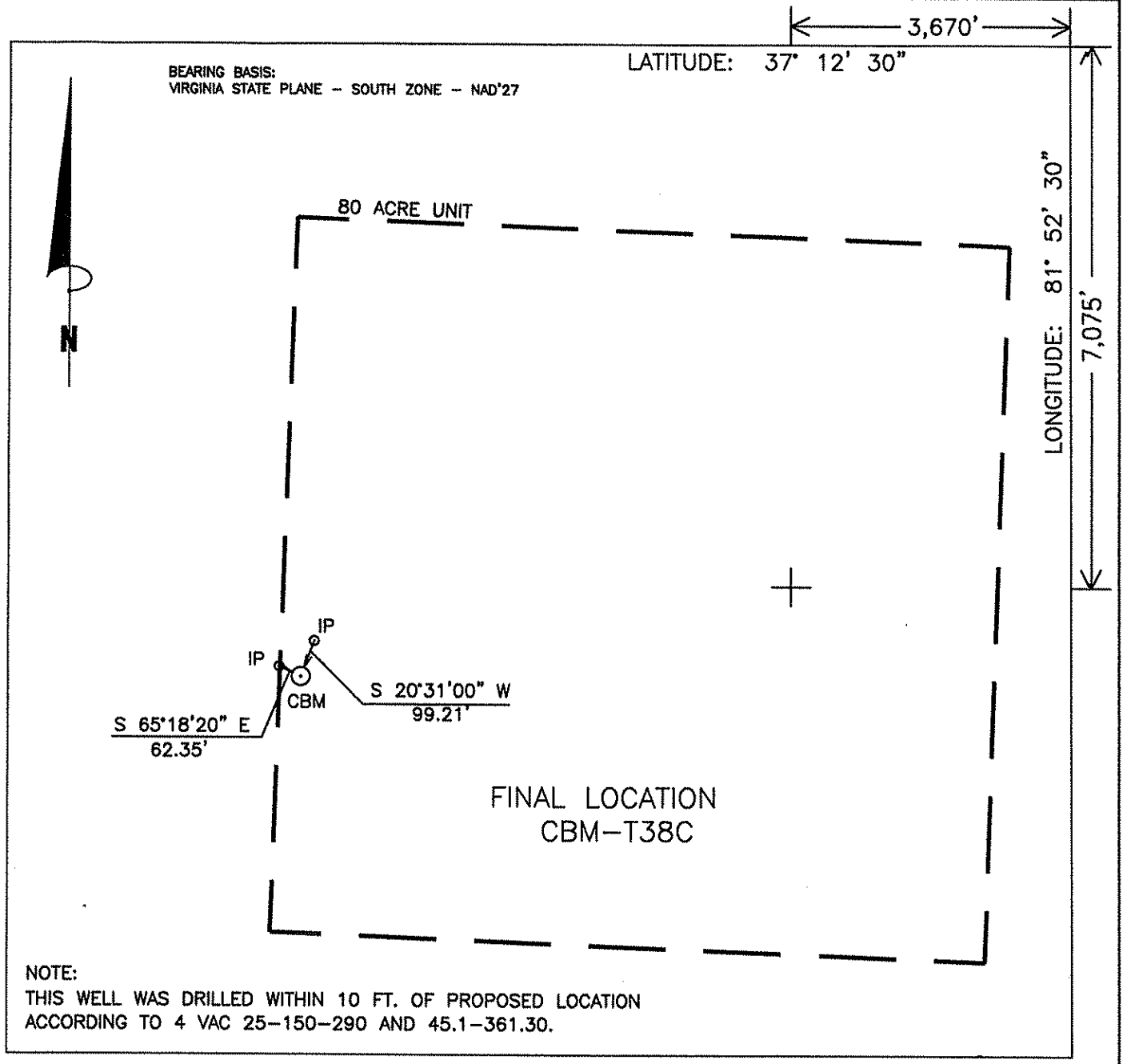
Signed By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 9/6/2007

Status: Inspr Approved Date: 9/18/2007

Final PDF Date: 9/18/2007




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

# WELL LOCATION PLAT

T38CFNL
2N24/82–271/33

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T38C

TRACT NUMBER COAL MOUNTAIN MINING QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 329,212.19 E 1,013,399.36

ELEVATION: 2412.10' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 01–16–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown. (optional).

D R Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No. 8540
1-22-07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM T38C
SURFACE ELEV: 2412.10  EASTING: 1013399.36  NORTHING:  329212.19

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| KN1 | 53.70 | 55.00 | 2358.40 | 1.30 | |
| | 55.00 | 174.50 | 2357.10 | 119.50 | |
| AL2 | 174.50 | 175.00 | 2237.60 | 0.50 | |
| | 175.00 | 284.10 | 2237.10 | 109.10 | |
| RA1 | 284.10 | 285.00 | 2128.00 | 0.90 | |
| | 285.00 | 303.00 | 2127.10 | 18.00 | |
| RA2 | 303.00 | 306.50 | 2109.10 | 3.50 | |
| | 306.50 | 332.60 | 2105.60 | 26.10 | |
| RA3 | 332.60 | 333.20 | 2079.50 | 0.60 | |
| | 333.20 | 336.10 | 2078.90 | 2.90 | |
| COAL | 336.10 | 337.20 | 2076.00 | 1.10 | |
| | 337.20 | 415.00 | 2074.90 | 77.80 | |
| JB1 | 415.00 | 416.50 | 1997.10 | 1.50 | |
| | 416.50 | 457.20 | 1995.60 | 40.70 | |
| JB2 | 457.20 | 458.10 | 1954.90 | 0.90 | |
| | 458.10 | 491.20 | 1954.00 | 33.10 | |
| JB3 | 491.20 | 491.90 | 1920.90 | 0.70 | |
| | 491.90 | 555.20 | 1920.20 | 63.30 | |
| T1 | 555.20 | 555.80 | 1856.90 | 0.60 | |
| | 555.80 | 952.80 | 1856.30 | 397.00 | |
| *COAL | 952.80 | 953.30 | 1459.30 | 0.50 | |
| | 953.30 | 957.80 | 1458.80 | 4.50 | |
| *SE1 | 985.80 | 988.00 | 1426.30 | 2.20 | |
| | 988.00 | 1026.80 | 1424.10 | 38.80 | |
| *SE2 | 1026.80 | 1029.80 | 1385.30 | 3.00 | |
| | 1029.80 | 1063.10 | 1382.30 | 33.30 | |
| *LS1 | 1063.10 | 1063.90 | 1349.00 | 0.80 | |
| | 1063.90 | 1069.80 | 1348.20 | 5.90 | |
| *LS2 | 1069.80 | 1070.20 | 1342.30 | 0.40 | |
| | 1070.20 | 1093.80 | 1341.90 | 23.60 | |
| *UH1 | 1093.80 | 1095.30 | 1318.30 | 1.50 | |
| | 1095.30 | 1143.80 | 1316.80 | 48.50 | |
| *UH3 | 1143.80 | 1145.90 | 1268.30 | 2.10 | |
| | 1145.90 | 1201.00 | 1266.20 | 55.10 | |
| *MH1 | 1201.00 | 1203.00 | 1211.10 | 2.00 | |
| | 1203.00 | 1266.70 | 1209.10 | 63.70 | |
| *MH2 | 1266.70 | 1268.30 | 1145.40 | 1.60 | |
| | 1268.30 | 1312.80 | 1143.80 | 44.50 | |
| *P11 | 1312.80 | 1315.80 | 1099.30 | 3.00 | |
| | 1315.80 | 1339.50 | 1096.30 | 23.70 | |
| *P10 | 1339.50 | 1341.00 | 1072.60 | 1.50 | |
| | 1341.00 | 1393.70 | 1071.10 | 52.70 | |
| *LH1 | 1393.70 | 1394.20 | 1018.40 | 0.50 | |
| | 1394.20 | 1470.50 | 1017.90 | 76.30 | |
| *P91 | 1470.50 | 1471.30 | 941.60 | 0.80 | |
| | 1471.30 | 1493.20 | 940.80 | 21.90 | |
| *P92 | 1493.20 | 1494.50 | 918.90 | 1.30 | |

| | | | | |
|---|---|---|---|---|
| | 1494.50 | 1535.00 | 917.60 | 40.50 |
| *P81 | 1535.00 | 1535.80 | 877.10 | 0.80 |
| | 1535.80 | 1565.90 | 876.30 | 30.10 |
| *P82 | 1565.90 | 1566.70 | 846.20 | 0.80 |
| | 1566.70 | 1799.80 | 845.40 | 233.10 |
| *P52 | 1799.80 | 1800.80 | 612.30 | 1.00 |
| | 1800.80 | 1904.50 | 611.30 | 103.70 |
| *P3 | 1904.50 | 1908.90 | 507.60 | 4.40 |
| | 1908.90 | 1948.80 | 503.20 | 39.90 |
| *COAL | 1948.80 | 1949.60 | 463.30 | 0.80 |
| | 1949.60 | 1976.07 | 462.50 | 26.47 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\T38C.CMP
DATE: 04/17/07

## Oil & Gas Show

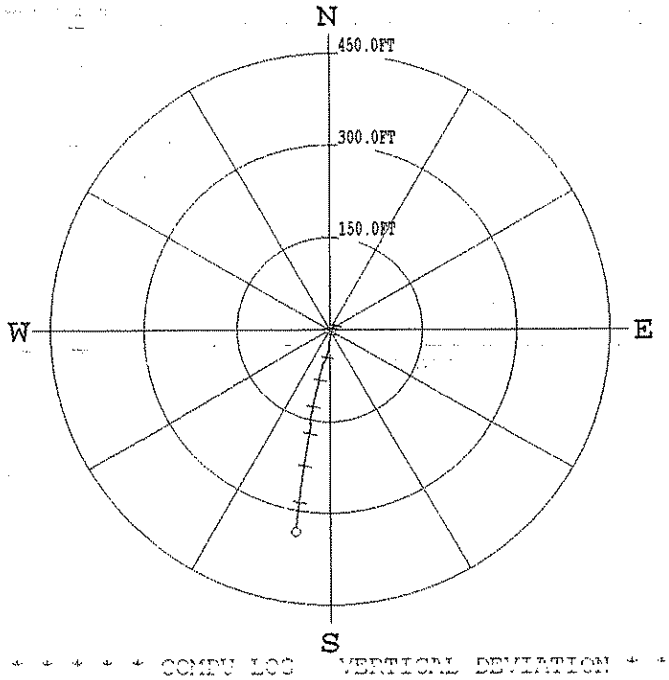
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 986 | 1494 | 508 | | | |
| Pocahontas | 1800 | 1909 | 109 | | | |
| | | | | Not Taken | | |
| | | | | | | |

# COMPU-LOG DEVIATION

LIENT: Consol Energy
OCATION:
OLE ID: 07-CNX-T-38-C
ATE OF LOG: 01/23/07
ROBE: 9136CA 955

MAG DECL: -6.9

SCALE: 150 FT/IN
TRUE DEPTH: 1909.31 FT
AZIMUTH: 189.5
DISTANCE: 335.1 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU LOG VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE : Vansant,Va
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 07-CNX-T-38-C
DATE OF LOG : 01/23/07
PROBE : 9136CA , 955
DEPTH UNITS : FEET
LOG: 07-CNX-T-38-C_01-23-07_04-30_9136CA_.02_-0.02_1968.91_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.98 | 0.61 | 0.71 | 0.9 | 49.2 | 1.8 | 11.0 |
| 60.0 | 59.98 | 0.78 | 0.91 | 1.2 | 49.1 | 1.6 | 92.8 |
| 70.0 | 69.97 | 0.57 | 1.03 | 1.2 | 61.3 | 1.7 | 207.5 |
| 80.0 | 79.97 | 0.31 | 0.94 | 1.0 | 71.8 | 1.6 | 227.4 |
| 90.0 | 89.96 | 0.05 | 0.84 | 0.8 | 86.3 | 1.6 | 211.6 |
| 100.0 | 99.96 | -0.17 | 0.68 | 0.7 | 104.3 | 1.7 | 240.4 |
| 110.0 | 109.96 | -0.43 | 0.64 | 0.8 | 124.2 | 1.6 | 208.5 |
| 120.0 | 119.95 | -0.32 | 0.48 | 0.6 | 124.3 | 1.8 | 19.0 |
| 130.0 | 129.95 | 0.00 | 0.48 | 0.5 | 89.9 | 1.8 | 15.9 |
| 140.0 | 139.94 | 0.29 | 0.61 | 0.7 | 64.5 | 1.8 | 34.1 |
| 150.0 | 149.94 | 0.50 | 0.83 | 1.0 | 58.9 | 1.8 | 38.6 |
| 160.0 | 159.93 | 0.42 | 0.92 | 1.0 | 65.4 | 1.5 | 110.1 |
| 170.0 | 169.93 | 0.62 | 1.14 | 1.3 | 61.2 | 2.0 | 23.5 |
| 180.0 | 179.92 | 0.73 | 1.05 | 1.3 | 55.1 | 1.5 | 188.0 |
| 190.0 | 189.92 | 0.62 | 1.27 | 1.4 | 63.8 | 1.5 | 96.5 |
| 200.0 | 199.91 | 0.57 | 1.52 | 1.6 | 69.5 | 1.5 | 99.5 |
| 210.0 | 209.91 | 0.54 | 1.78 | 1.9 | 73.0 | 1.5 | 89.7 |
| 220.0 | 219.91 | 0.51 | 2.04 | 2.1 | 76.0 | 1.5 | 123.3 |
| 230.0 | 229.90 | 0.29 | 2.10 | 2.1 | 82.2 | 1.6 | 191.9 |
| 240.0 | 239.90 | 0.22 | 2.04 | 2.1 | 83.7 | 2.0 | 342.4 |
| 250.0 | 249.89 | 0.55 | 1.98 | 2.1 | 74.6 | 1.9 | 20.6 |
| 260.0 | 259.89 | 0.88 | 2.10 | 2.3 | 67.3 | 1.9 | 18.8 |
| 270.0 | 269.88 | 1.14 | 2.30 | 2.6 | 63.6 | 1.8 | 50.7 |
| 280.0 | 279.88 | 1.41 | 2.50 | 2.9 | 60.7 | 1.9 | 38.1 |
| 290.0 | 289.87 | 1.60 | 2.65 | 3.1 | 58.8 | 1.5 | 125.3 |
| 300.0 | 299.87 | 1.59 | 2.90 | 3.3 | 61.2 | 1.5 | 97.4 |
| 310.0 | 309.86 | 1.54 | 3.15 | 3.5 | 64.0 | 1.5 | 82.3 |
| 320.0 | 319.86 | 1.55 | 3.41 | 3.7 | 65.5 | 1.5 | 97.1 |
| 330.0 | 329.86 | 1.55 | 3.66 | 4.0 | 67.0 | 1.5 | 84.6 |
| 340.0 | 339.85 | 1.57 | 3.92 | 4.2 | 68.1 | 1.6 | 73.3 |
| 350.0 | 349.85 | 1.63 | 4.17 | 4.5 | 68.7 | 1.9 | 41.5 |
| 360.0 | 359.85 | 1.78 | 4.23 | 4.6 | 67.1 | 0.0 | 0.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 300.0 | 299.87 | 1.59 | 2.90 | 3.3 | 61.2 | 1.5 | 97.4 |
| 310.0 | 309.86 | 1.54 | 3.15 | 3.5 | 64.0 | 1.5 | 82.3 |
| 320.0 | 319.86 | 1.55 | 3.41 | 3.7 | 65.5 | 1.5 | 97.1 |
| 330.0 | 329.86 | 1.55 | 3.66 | 4.0 | 67.0 | 1.5 | 84.6 |
| 340.0 | 339.85 | 1.57 | 3.92 | 4.2 | 68.1 | 1.6 | 73.3 |
| 350.0 | 349.85 | 1.63 | 4.17 | 4.5 | 68.7 | 1.9 | 41.5 |
| 360.0 | 359.85 | 1.78 | 4.23 | 4.6 | 67.1 | 0.0 | 0.0 |
| 370.0 | 369.85 | 1.74 | 4.21 | 4.6 | 67.6 | 0.5 | 173.8 |
| 380.0 | 379.84 | 1.66 | 4.32 | 4.6 | 69.0 | 0.6 | 117.4 |
| 390.0 | 389.84 | 1.59 | 4.49 | 4.8 | 70.5 | 1.1 | 113.1 |
| 400.0 | 399.84 | 1.58 | 4.77 | 5.0 | 71.6 | 1.8 | 83.5 |
| 410.0 | 409.83 | 1.74 | 5.12 | 5.4 | 71.2 | 2.5 | 55.5 |
| 420.0 | 419.82 | 2.12 | 5.43 | 5.8 | 68.7 | 2.8 | 32.8 |
| 430.0 | 429.81 | 2.54 | 5.66 | 6.2 | 65.8 | 2.9 | 27.8 |
| 440.0 | 439.79 | 3.01 | 5.82 | 6.6 | 62.7 | 2.5 | 349.9 |
| 450.0 | 449.79 | 3.25 | 5.67 | 6.5 | 60.2 | 0.6 | 288.7 |
| 460.0 | 459.79 | 3.30 | 5.61 | 6.5 | 59.5 | 0.8 | 303.5 |
| 470.0 | 469.79 | 3.33 | 5.55 | 6.5 | 59.0 | 0.1 | 148.6 |
| 480.0 | 479.79 | 3.31 | 5.59 | 6.5 | 59.4 | 0.3 | 107.9 |
| 490.0 | 489.79 | 3.28 | 5.64 | 6.5 | 59.8 | 1.1 | 103.4 |
| 500.0 | 499.79 | 3.28 | 5.87 | 6.7 | 60.8 | 1.7 | 85.6 |
| 510.0 | 509.78 | 3.31 | 6.14 | 7.0 | 61.7 | 2.3 | 69.2 |
| 520.0 | 519.78 | 3.39 | 6.47 | 7.3 | 62.4 | 2.0 | 75.1 |
| 530.0 | 529.77 | 3.57 | 6.84 | 7.7 | 62.4 | 2.6 | 52.7 |
| 540.0 | 539.75 | 3.92 | 7.23 | 8.2 | 61.5 | 3.2 | 40.3 |
| 550.0 | 549.74 | 4.42 | 7.48 | 8.7 | 59.4 | 3.1 | 9.6 |
| 560.0 | 559.72 | 4.95 | 7.64 | 9.1 | 57.1 | 3.3 | 11.2 |
| 570.0 | 569.71 | 5.47 | 7.70 | 9.4 | 54.6 | 3.1 | 359.0 |
| 580.0 | 579.69 | 6.00 | 7.76 | 9.8 | 52.3 | 3.0 | 0.7 |
| 590.0 | 589.68 | 6.50 | 7.75 | 10.1 | 50.0 | 2.1 | 346.6 |
| 600.0 | 599.68 | 6.61 | 7.74 | 10.2 | 49.5 | 0.5 | 48.0 |
| 610.0 | 609.68 | 6.66 | 7.91 | 10.3 | 49.9 | 1.3 | 72.6 |
| 620.0 | 619.68 | 6.70 | 8.03 | 10.5 | 50.1 | 1.2 | 80.4 |
| 630.0 | 629.67 | 6.84 | 8.07 | 10.6 | 49.3 | 1.0 | 10.9 |
| 640.0 | 639.67 | 7.15 | 8.09 | 10.8 | 48.5 | 1.0 | 4.2 |
| 650.0 | 649.67 | 7.31 | 8.10 | 10.9 | 47.9 | 0.9 | 0.1 |
| 660.0 | 659.67 | 7.48 | 8.08 | 11.0 | 47.2 | 1.0 | 342.6 |
| 670.0 | 669.67 | 7.60 | 8.09 | 11.1 | 46.8 | 0.8 | 357.9 |
| 680.0 | 679.67 | 7.78 | 8.09 | 11.2 | 46.1 | 1.2 | 330.4 |
| 690.0 | 689.66 | 7.93 | 8.05 | 11.3 | 45.4 | 0.6 | 340.7 |
| 700.0 | 699.66 | 7.97 | 8.09 | 11.4 | 45.4 | 0.5 | 358.3 |
| 710.0 | 709.66 | 7.95 | 8.04 | 11.3 | 45.3 | 0.8 | 170.8 |
| 720.0 | 719.66 | 7.94 | 8.00 | 11.3 | 45.2 | 0.8 | 49.1 |
| 730.0 | 729.66 | 7.96 | 7.93 | 11.2 | 44.9 | 0.9 | 21.2 |
| 740.0 | 739.66 | 8.10 | 7.92 | 11.3 | 44.3 | 0.9 | 6.0 |
| 750.0 | 749.66 | 8.23 | 7.98 | 11.5 | 44.1 | 0.8 | 48.1 |
| 760.0 | 759.66 | 8.27 | 8.08 | 11.6 | 44.3 | 0.6 | 64.2 |
| 770.0 | 769.66 | 8.18 | 8.16 | 11.6 | 44.9 | 0.7 | 129.9 |
| 780.0 | 779.65 | 7.97 | 8.19 | 11.4 | 45.8 | 0.9 | 163.7 |
| 790.0 | 789.65 | 7.60 | 8.17 | 11.2 | 47.1 | 2.5 | 185.5 |
| 800.0 | 799.63 | 7.08 | 8.14 | 10.8 | 49.0 | 3.1 | 187.1 |
| 810.0 | 809.61 | 6.42 | 7.96 | 10.2 | 51.1 | 4.5 | 201.5 |
| 820.0 | 819.57 | 5.61 | 7.69 | 9.5 | 53.9 | 5.4 | 198.8 |
| 830.0 | 829.52 | 4.65 | 7.32 | 8.7 | 57.6 | 6.6 | 206.4 |
| 840.0 | 839.44 | 3.51 | 6.86 | 7.7 | 62.9 | 7.7 | 195.7 |
| 850.0 | 849.34 | 2.21 | 6.31 | 6.7 | 70.7 | 8.7 | 202.5 |
| 860.0 | 859.22 | 0.78 | 5.64 | 5.7 | 82.1 | 9.6 | 204.7 |
| 870.0 | 869.06 | -0.69 | 4.70 | 4.8 | 98.3 | 10.3 | 195.7 |
| 880.0 | 878.88 | -2.48 | 4.11 | 4.8 | 121.1 | 11.5 | 202.5 |
| 890.0 | 888.67 | -4.39 | 3.46 | 5.6 | 141.8 | 12.1 | 200.0 |
| 900.0 | 898.44 | -6.41 | 2.76 | 7.0 | 156.7 | 12.9 | 184.8 |
| 910.0 | 908.17 | -8.61 | 2.15 | 8.9 | 166.0 | 13.5 | 203.6 |
| 920.0 | 917.87 | -10.86 | 1.32 | 10.9 | 173.1 | 14.7 | 210.2 |
| 930.0 | 927.53 | -13.27 | 0.41 | 13.3 | 178.2 | 15.4 | 196.4 |
| 940.0 | 937.15 | -15.95 | 0.59 | 16.0 | 177.9 | 16.1 | 171.6 |
| 950.0 | 946.75 | -18.58 | 0.96 | 18.6 | 177.0 | 16.3 | 169.6 |
| 960.0 | 956.36 | -20.41 | -0.81 | 20.4 | 182.3 | 16.1 | 194.2 |
| 970.0 | 965.95 | -23.10 | -1.60 | 23.2 | 184.0 | 16.4 | 191.4 |
| 980.0 | 975.54 | -25.90 | -1.99 | 26.0 | 184.4 | 16.4 | 165.7 |
| 990.0 | 985.14 | -26.31 | 0.27 | 26.3 | 179.4 | 16.4 | 203.7 |
| 1000.0 | 994.73 | -29.04 | -0.48 | 29.0 | 180.9 | 16.7 | 200.7 |
| 1010.0 | 1004.32 | -31.74 | -1.31 | 31.8 | 182.4 | 16.3 | 195.5 |
| 1020.0 | 1013.92 | -34.43 | -2.08 | 34.5 | 183.5 | 16.2 | 196.9 |
| 1030.0 | 1023.53 | -37.12 | -2.81 | 37.2 | 184.3 | 16.1 | 193.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 970.0 | 965.95 | -23.10 | -1.60 | 23.2 | 184.0 | 16.4 | 191.4 |
| 980.0 | 975.54 | -25.90 | -1.99 | 26.0 | 184.4 | 16.4 | 165.7 |
| 990.0 | 985.14 | -26.31 | 0.27 | 26.3 | 179.4 | 16.4 | 203.7 |
| 1000.0 | 994.73 | -29.04 | -0.48 | 29.0 | 180.9 | 16.7 | 200.7 |
| 1010.0 | 1004.32 | -31.74 | -1.31 | 31.8 | 182.4 | 16.3 | 195.5 |
| 1020.0 | 1013.92 | -34.43 | -2.08 | 34.5 | 183.5 | 16.2 | 196.9 |
| 1030.0 | 1023.53 | -37.12 | -2.81 | 37.2 | 184.3 | 16.1 | 193.5 |
| 1040.0 | 1033.13 | -39.81 | -3.57 | 40.0 | 185.1 | 16.5 | 197.4 |
| 1050.0 | 1042.73 | -42.50 | -4.33 | 42.7 | 185.8 | 16.1 | 194.3 |
| 1060.0 | 1052.34 | -45.15 | -5.13 | 45.4 | 186.5 | 16.0 | 193.6 |
| 1070.0 | 1061.95 | -47.79 | -5.90 | 48.2 | 187.0 | 15.8 | 195.9 |
| 1080.0 | 1071.57 | -50.41 | -6.62 | 50.8 | 187.5 | 15.8 | 196.2 |
| 1090.0 | 1081.20 | -52.90 | -7.43 | 53.4 | 188.0 | 15.7 | 288.9 |
| 1100.0 | 1090.84 | -53.10 | -9.27 | 53.9 | 189.9 | 15.7 | 195.0 |
| 1110.0 | 1100.47 | -55.29 | -10.62 | 56.3 | 190.9 | 15.5 | 196.5 |
| 1120.0 | 1110.10 | -57.88 | -11.34 | 59.0 | 191.1 | 15.7 | 195.6 |
| 1130.0 | 1119.73 | -60.47 | -12.08 | 61.7 | 191.3 | 15.7 | 194.5 |
| 1140.0 | 1129.35 | -63.08 | -12.44 | 64.3 | 191.2 | 16.0 | 135.8 |
| 1150.0 | 1138.97 | -65.11 | -12.98 | 66.4 | 191.3 | 16.0 | 240.9 |
| 1160.0 | 1148.58 | -67.60 | -13.93 | 69.0 | 191.6 | 16.2 | 194.6 |
| 1170.0 | 1158.19 | -70.30 | -14.59 | 71.8 | 191.7 | 16.2 | 193.5 |
| 1180.0 | 1167.79 | -73.02 | -15.17 | 74.6 | 191.7 | 16.3 | 202.7 |
| 1190.0 | 1177.40 | -75.65 | -16.03 | 77.3 | 192.0 | 16.2 | 192.3 |
| 1200.0 | 1187.00 | -78.29 | -15.84 | 79.9 | 191.4 | 16.1 | 190.8 |
| 1210.0 | 1196.61 | -80.59 | -17.20 | 82.4 | 192.0 | 16.0 | 197.5 |
| 1220.0 | 1206.21 | -83.27 | -17.89 | 85.2 | 192.1 | 16.1 | 179.0 |
| 1230.0 | 1215.82 | -85.97 | -18.05 | 87.8 | 191.9 | 16.3 | 207.4 |
| 1240.0 | 1225.43 | -88.66 | -18.64 | 90.6 | 191.9 | 15.8 | 195.0 |
| 1250.0 | 1235.05 | -91.30 | -19.37 | 93.3 | 192.0 | 15.9 | 197.7 |
| 1260.0 | 1244.66 | -93.92 | -20.13 | 96.1 | 192.1 | 16.0 | 195.9 |
| 1270.0 | 1254.27 | -96.56 | -20.96 | 98.8 | 192.2 | 16.0 | 200.2 |
| 1280.0 | 1263.88 | -99.24 | -21.71 | 101.6 | 192.3 | 16.4 | 201.2 |
| 1290.0 | 1273.48 | -101.89 | -22.61 | 104.4 | 192.5 | 16.3 | 192.2 |
| 1300.0 | 1283.07 | -104.65 | -23.15 | 107.2 | 192.5 | 16.4 | 193.1 |
| 1310.0 | 1292.66 | -107.43 | -23.36 | 109.9 | 192.3 | 16.5 | 171.7 |
| 1320.0 | 1302.24 | -109.99 | -24.43 | 112.7 | 192.5 | 16.4 | 184.4 |
| 1330.0 | 1311.82 | -112.75 | -25.16 | 115.5 | 192.6 | 16.7 | 192.5 |
| 1340.0 | 1321.40 | -115.59 | -25.54 | 118.4 | 192.5 | 16.8 | 190.9 |
| 1350.0 | 1330.97 | -118.38 | -26.25 | 121.3 | 192.5 | 16.9 | 194.7 |
| 1360.0 | 1340.54 | -121.22 | -26.90 | 124.2 | 192.5 | 17.1 | 192.5 |
| 1370.0 | 1350.09 | -124.13 | -27.39 | 127.1 | 192.4 | 17.3 | 195.4 |
| 1380.0 | 1359.64 | -127.00 | -28.13 | 130.1 | 192.5 | 17.5 | 194.8 |
| 1390.0 | 1369.18 | -129.93 | -28.69 | 133.1 | 192.5 | 17.5 | 178.1 |
| 1400.0 | 1378.71 | -132.50 | -28.35 | 135.5 | 192.1 | 17.5 | 230.1 |
| 1410.0 | 1388.25 | -135.04 | -29.67 | 138.3 | 192.4 | 17.8 | 193.6 |
| 1420.0 | 1397.77 | -138.06 | -30.16 | 141.3 | 192.3 | 17.9 | 184.0 |
| 1430.0 | 1407.28 | -141.04 | -30.90 | 144.4 | 192.4 | 17.7 | 189.7 |
| 1440.0 | 1416.80 | -144.05 | -31.47 | 147.4 | 192.3 | 18.2 | 195.2 |
| 1450.0 | 1426.29 | -147.13 | -31.73 | 150.5 | 192.2 | 18.5 | 163.0 |
| 1460.0 | 1435.78 | -150.04 | -32.70 | 153.6 | 192.3 | 18.3 | 194.3 |
| 1470.0 | 1445.28 | -151.85 | -31.85 | 155.2 | 191.8 | 18.4 | 68.6 |
| 1480.0 | 1454.76 | -153.17 | -30.71 | 156.2 | 191.3 | 18.4 | 195.2 |
| 1490.0 | 1464.25 | -156.25 | -31.37 | 159.4 | 191.4 | 18.4 | 192.4 |
| 1500.0 | 1473.74 | -159.34 | -31.99 | 162.5 | 191.4 | 18.5 | 181.3 |
| 1510.0 | 1483.21 | -162.48 | -32.62 | 165.7 | 191.4 | 19.0 | 191.6 |
| 1520.0 | 1492.67 | -165.69 | -33.00 | 168.9 | 191.3 | 19.1 | 191.9 |
| 1530.0 | 1502.13 | -168.85 | -33.68 | 172.2 | 191.3 | 18.9 | 193.6 |
| 1540.0 | 1511.59 | -172.04 | -34.25 | 175.4 | 191.3 | 19.0 | 189.1 |
| 1550.0 | 1521.05 | -175.25 | -34.74 | 178.7 | 191.2 | 19.1 | 192.3 |
| 1560.0 | 1530.50 | -178.49 | -35.24 | 181.9 | 191.2 | 19.2 | 188.6 |
| 1570.0 | 1539.94 | -181.76 | -35.72 | 185.2 | 191.1 | 19.4 | 189.6 |
| 1580.0 | 1549.37 | -185.02 | -36.28 | 188.5 | 191.1 | 19.4 | 191.4 |
| 1590.0 | 1558.79 | -188.32 | -36.80 | 191.9 | 191.1 | 19.6 | 191.1 |
| 1600.0 | 1568.21 | -191.64 | -37.30 | 195.2 | 191.0 | 19.7 | 189.5 |
| 1610.0 | 1577.62 | -194.98 | -37.84 | 198.6 | 191.0 | 19.8 | 188.5 |
| 1620.0 | 1587.03 | -198.34 | -38.39 | 202.0 | 191.0 | 20.1 | 188.8 |
| 1630.0 | 1596.42 | -201.73 | -38.90 | 205.4 | 190.9 | 20.2 | 189.4 |
| 1640.0 | 1605.81 | -205.14 | -39.45 | 208.9 | 190.9 | 20.2 | 188.6 |
| 1650.0 | 1615.19 | -208.56 | -39.99 | 212.4 | 190.9 | 20.3 | 188.3 |
| 1660.0 | 1624.56 | -212.01 | -40.49 | 215.8 | 190.8 | 20.6 | 189.6 |
| 1670.0 | 1633.92 | -215.49 | -41.03 | 219.4 | 190.8 | 20.8 | 190.9 |
| 1680.0 | 1643.27 | -218.99 | -41.55 | 222.9 | 190.7 | 20.9 | 190.2 |
| 1690.0 | 1652.61 | -222.52 | -42.04 | 226.5 | 190.7 | 21.0 | 186.9 |
| 1700.0 | 1661.94 | -226.07 | -42.55 | 230.0 | 190.7 | 21.1 | 189.3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | | | | |
| 1650.0 | 1615.19 | -208.56 | -39.99 | 212.4 | 190.9 | 20.3 | 188.3 |
| 1660.0 | 1624.56 | -212.01 | -40.49 | 215.8 | 190.8 | 20.6 | 189.6 |
| 1670.0 | 1633.92 | -215.49 | -41.03 | 219.4 | 190.8 | 20.8 | 190.9 |
| 1680.0 | 1643.27 | -218.99 | -41.55 | 222.9 | 190.7 | 20.9 | 190.2 |
| 1690.0 | 1652.61 | -222.52 | -42.04 | 226.5 | 190.7 | 21.0 | 186.9 |
| 1700.0 | 1661.94 | -226.07 | -42.55 | 230.0 | 190.7 | 21.1 | 188.3 |
| 1710.0 | 1671.27 | -229.64 | -43.09 | 233.7 | 190.6 | 21.3 | 187.9 |
| 1720.0 | 1680.58 | -233.24 | -43.62 | 237.3 | 190.6 | 21.4 | 187.1 |
| 1730.0 | 1689.89 | -236.87 | -44.08 | 240.9 | 190.5 | 21.5 | 186.8 |
| 1740.0 | 1699.18 | -240.53 | -44.58 | 244.6 | 190.5 | 21.7 | 187.9 |
| 1750.0 | 1708.46 | -244.22 | -45.05 | 248.3 | 190.5 | 22.0 | 186.0 |
| 1760.0 | 1717.73 | -247.94 | -45.60 | 252.1 | 190.4 | 22.1 | 189.9 |
| 1770.0 | 1726.98 | -251.71 | -46.04 | 255.9 | 190.4 | 22.4 | 190.0 |
| 1780.0 | 1736.23 | -255.46 | -46.59 | 259.7 | 190.3 | 22.5 | 188.9 |
| 1790.0 | 1745.47 | -259.27 | -47.00 | 263.5 | 190.3 | 22.6 | 187.8 |
| 1800.0 | 1754.70 | -263.09 | -47.52 | 267.3 | 190.2 | 22.7 | 186.1 |
| 1810.0 | 1763.92 | -266.92 | -48.07 | 271.2 | 190.2 | 22.8 | 187.9 |
| 1820.0 | 1773.13 | -270.78 | -48.49 | 275.1 | 190.2 | 22.9 | 183.9 |
| 1830.0 | 1782.34 | -274.65 | -48.95 | 279.0 | 190.1 | 23.1 | 185.9 |
| 1840.0 | 1791.54 | -278.55 | -49.45 | 282.9 | 190.1 | 23.2 | 186.8 |
| 1850.0 | 1800.72 | -282.47 | -49.88 | 286.8 | 190.0 | 23.4 | 190.1 |
| 1860.0 | 1809.91 | -286.40 | -50.36 | 290.8 | 190.0 | 23.4 | 187.4 |
| 1870.0 | 1819.08 | -290.35 | -50.88 | 294.8 | 189.9 | 23.5 | 188.3 |
| 1880.0 | 1828.24 | -294.33 | -51.33 | 298.8 | 189.9 | 23.8 | 186.6 |
| 1890.0 | 1837.39 | -298.33 | -51.82 | 302.8 | 189.9 | 23.9 | 188.1 |
| 1900.0 | 1846.54 | -302.35 | -52.22 | 306.8 | 189.8 | 24.1 | 172.3 |
| 1910.0 | 1855.66 | -306.39 | -52.64 | 310.9 | 189.7 | 24.1 | 190.9 |
| 1920.0 | 1864.79 | -310.43 | -53.20 | 315.0 | 189.7 | 24.1 | 187.4 |
| 1930.0 | 1873.91 | -314.51 | -53.64 | 319.1 | 189.7 | 24.4 | 186.3 |
| 1940.0 | 1883.02 | -318.60 | -54.15 | 323.2 | 189.6 | 24.5 | 183.8 |
| 1950.0 | 1892.13 | -322.70 | -54.60 | 327.3 | 189.6 | 24.4 | 186.1 |
| 1960.0 | 1901.22 | -326.83 | -55.04 | 331.4 | 189.6 | 24.7 | 186.6 |
| 1968.9 | 1909.33 | -330.53 | -55.38 | 335.1 | 189.5 | 0.0 | 0.0 |

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 22' | 24" | 5.9 | X | | 1/11/2007 | |
| Surface | 16" | 360' | 20" | 242.5 | | X | 1/15/2007 | Bkt @ 247' |
| Water Protection | 13 3/8" | 596' | 15" | 493.5 | X | | 1/16/2007 | Bkt @ 88' |
| Coal Protection | 13 3/8" | 596' | 15" | 493.5 | X | | 1/16/2007 | Bkt @ 88' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY: CNX** **HOLE #: T-38C**

**LOCATION: OSBORNE MTN, VA** **DRILL RIG #: 87**

**DATE STARTED: 01-11-07** **DATED COMPLETED: 01-23-07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | THICKNESS | | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 21 | 21 | |
| 21 | 37 | 16 | SAND STONE |
| 37 | 66 | 29 | SAND STONE/SHALE/COAL/SANDY SHALE/SAND STONE |
| 66 | 124 | 58 | SAND STONE |
| 124 | 158 | 34 | SAND STONE/SANDY SHALE STR |
| 158 | 189 | 31 | SANDY SHALE/SAND STONE/SANDY SHALE STR |
| 189 | 221 | 32 | SANDY SHALE/COAL/SANDY SHALE/SAND STONE |
| 221 | 252 | 31 | SAND STONE |
| 252 | 284 | 32 | SAND STONE/SANDY SHALE |
| 284 | 316 | 32 | SANDY SHALE/SAND STONE/SANDY SHALE/VOID/SANDY SHALE |
| 316 | 347 | 31 | SANDY SHALE/COAL/SANDY SHALE |
| 347 | 360 | 13 | SANDY SHALE/COAL/SAND STONE |
| 360 | 410 | 50 | SAND STONE |
| 410 | 441 | 31 | SANDY SHALE/COAL/SAND STONE |
| 441 | 473 | 32 | SAND STONE/COAL/SAND STONE |
| 473 | 505 | 32 | SAND STONE/SANDY SHALE STR/COAL |
| 505 | 536 | 31 | SAND STONE |
| 536 | 568 | 32 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE/SAND STONE |
| 568 | 600 | 32 | SAND STONE |
| 600 | 631 | 31 | SANDY SHALE |
| 631 | 683 | 52 | SANDY SHALE/SAND STONE |
| 683 | 714 | 31 | SAND STONE/SANDY SHALE/SAND STONE |
| 714 | 777 | 63 | SAND STONE |
| 777 | 808 | 31 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 808 | 872 | 64 | SANDY SHALE |
| 872 | 885 | 13 | SANDY SHALE/SAND STONE |
| 885 | 903 | 18 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE |
| 903 | 947 | 44 | SANDY SHALE |
| 947 | 977 | 30 | SANDY SHALE/COAL/SANDY SHALE/SAND STONE |
| 977 | 1009 | 32 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 1009 | 1040 | 31 | SAND STONE/COAL/SANDY SHALE |
| 1040 | 1072 | 32 | SAND STONE/SANDY SHALE STR |
| 1072 | 1103 | 31 | SAND STONE/SANDY SHALE STR/COAL |

| | | | |
|---|---|---|---|
| 1103 | 1135 | 32 | SAND STONE |
| 1135 | 1162 | 27 | SANDY SHALE |
| 1162 | 1193 | 31 | SANDY SHALE/COAL/SANDY SHALE |
| 1193 | 1225 | 32 | SANDY SHALE |
| 1225 | 1257 | 32 | SANDY SHALE/COAL/SANDY SHALE/SAND STONE |
| 1257 | 1288 | 31 | SAND STONE/SANDY SHALE |
| 1288 | 1320 | 32 | SANDY SHALE |
| 1320 | 1351 | 31 | SANDY SHALE/COAL/SANDY SHALE/SAND STONE |
| 1351 | 1383 | 32 | SAND STONE/SANDY SHALE |
| 1383 | 1414 | 31 | SANDY SHALE/SAND STONE |
| 1414 | 1446 | 32 | SAND STONE/SANDY SHALE |
| 1446 | 1477 | 31 | SANDY SHALE/SAND STONE /COAL /SANDY SHALE |
| 1477 | 1509 | 32 | SANDY SHALE/SAND STONE /COAL /SANDY SHALE/SAND STONE |
| 1509 | 1541 | 32 | SAND STONE/COAL & SANDY SHALE STR |
| 1541 | 1571 | 30 | SANDY SHALE/COAL/SAND STONE |
| 1571 | 1634 | 63 | SAND STONE |
| 1634 | 1665 | 31 | SANDY SHALE/SAND STONE |
| 1665 | 1697 | 32 | SAND STONE/SANDY SHALE |
| 1697 | 1728 | 31 | SANDY SHALE/SAND STONE |
| 1728 | 1760 | 32 | SAND STONE/SANDY SHALE/SAND STONE |
| 1760 | 1792 | 32 | SANDY SHALE/COAL/SAND STONE |
| 1792 | 1823 | 31 | SAND STONE/COAL STR/SANDY SHALE |
| 1823 | 1855 | 32 | SAND STONE/SANDY SHALE STR |
| 1855 | 1885 | 30 | SAND STONE/SANDY SHALE STR |
| 1885 | 1916 | 31 | SAND STONE/COAL/SHALE/SAND STONE |
| 1916 | 1948 | 32 | SAND STONE/SANDY SHALE STR |
| 1948 | 1972 | 24 | SAND STONE/SANDY SHALE |

1972.00 FT. TOTAL DEPTH
21.00 FT. OF 22” CASING
370.14 FT. OF 16” CASING
596.30 FT. OF 13 3/8” CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1038 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3490 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 7/12/2007 |
| **Driller's Total Depth:** | 1645.00 | **Log's Total Depth:** | 1650.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 1/23/2008 | *(Company)* |
| By: | Les Arrington | Title: | Manager | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 1/23/2008 | | |
| Status: | | Date: | 1/24/2008 |
| Final PDF Date: | 2/28/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1058 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3490 |
| **Operations Name:** | CBM T38G W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

| | | | |
|---|---|---|---|
| Date drilling commenced: | 6/27/2007 | Drilling Contractor: | Noah Horn |
| Date drilling completed: | 7/12/2007 | Rig Type: | ☑ Rotary ☐ Cable |
| Driller's Total Depth (feet): | 1645.00 | | |
| Log Total Depth (feet): | 1650.27 | Coal Seam at Total Depth: | Pocahontas |

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

| | | | |
|---|---|---|---|
| Permitted State Plane X: | 1014550.30 | Final Plat State Plane X: | 1014550.27 |
| Permitted State Plane Y: | 329329.99 | Final Plat State Plane Y: | 329330.39 |

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T38G Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T38G Exhibit A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| Show Gas | T38G Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Caliper,Gamma,Density,Temp,Deviation

Did logs disclose vertical locations of a coal seam? ☐

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T38G Deviation.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | T38G Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| Drill Data | T38G Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 1/15/2008

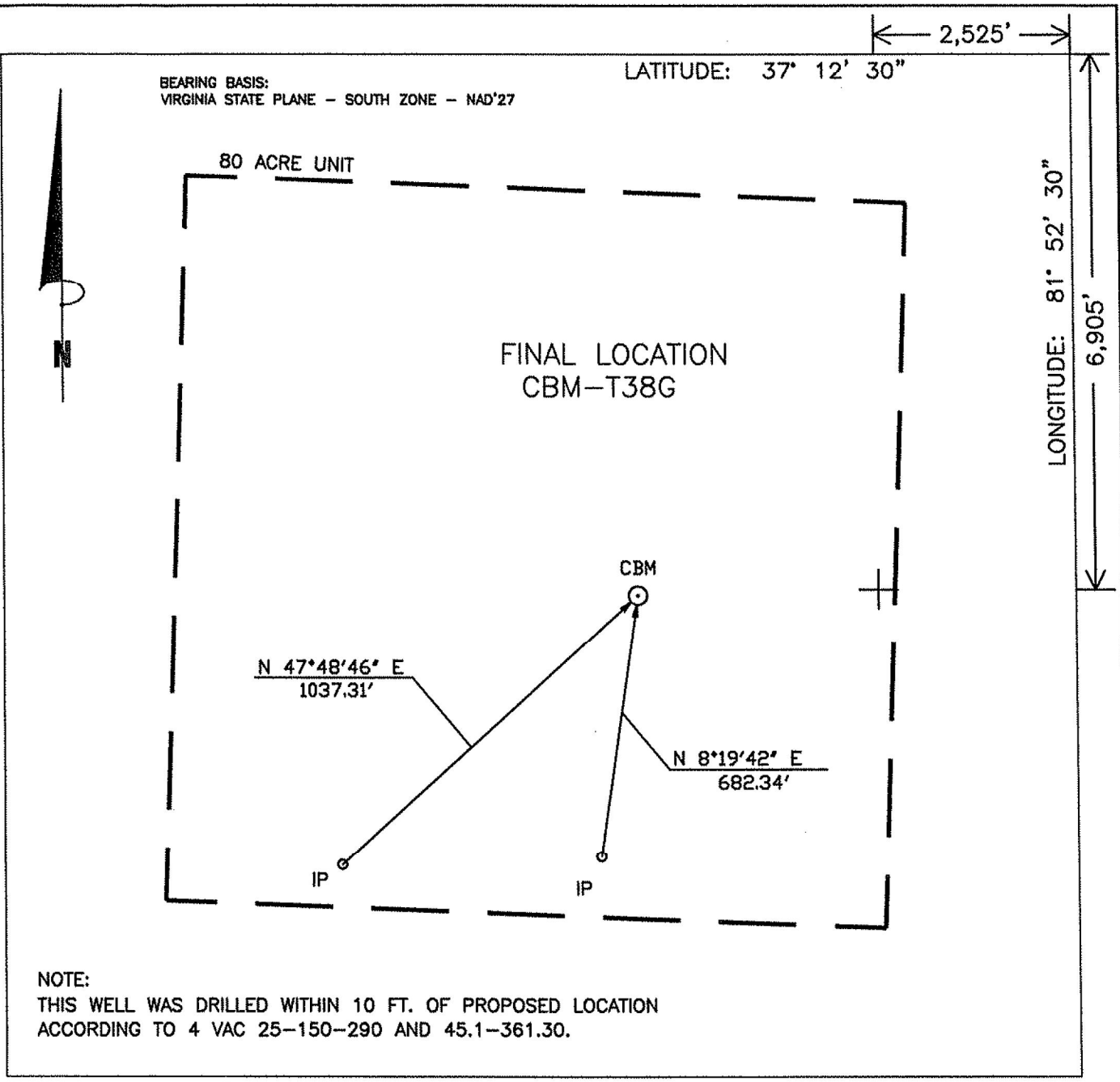
Signed By: Leslie K. Arrington Title: Manager

## INTERNAL USE ONLY

Submit Date: 1/15/2008

Status: A Date: 1/17/2008

Final PDF Date: 2/27/2008




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

# WELL LOCATION PLAT

T38GFNL
2N25/177–594/27

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T38G

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 329,330.39 E 1,014,550.27

ELEVATION: 2117.97' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 06–29–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

┼ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
6/29/07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM T38G
SURFACE ELEV: 2117.97 EASTING: 1014550.27 NORTHING: 329330.36

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA3 | 42.70 | 44.90 | 2075.27 | 2.20 | |
| | 44.90 | 124.20 | 2073.07 | 79.30 | |
| JB1 | 124.20 | 127.20 | 1993.77 | 3.00 | |
| | 127.20 | 168.80 | 1990.77 | 41.60 | |
| JB3 | 168.80 | 171.80 | 1949.17 | 3.00 | |
| | 171.80 | 242.80 | 1946.17 | 71.00 | |
| T1 | 242.80 | 243.80 | 1875.17 | 1.00 | |
| | 243.80 | 255.00 | 1874.17 | 11.20 | |
| TI | 255.00 | 256.90 | 1862.97 | 1.90 | |
| | 256.90 | 262.50 | 1861.07 | 5.60 | |
| COAL | 262.50 | 263.20 | 1855.47 | 0.70 | |
| | 263.20 | 312.80 | 1854.77 | 49.60 | |
| COAL | 312.80 | 313.20 | 1805.17 | 0.40 | |
| | 313.20 | 358.70 | 1804.77 | 45.50 | |
| *COAL | 358.70 | 359.90 | 1759.27 | 1.20 | |
| | 359.90 | 373.40 | 1758.07 | 13.50 | |
| *US1 | 373.40 | 374.20 | 1744.57 | 0.80 | |
| | 374.20 | 476.80 | 1743.77 | 102.60 | |
| *US2 | 476.80 | 477.30 | 1641.17 | 0.50 | |
| | 477.30 | 656.70 | 1640.67 | 179.40 | |
| *SE1 | 656.70 | 657.30 | 1461.27 | 0.60 | |
| | 657.30 | 696.90 | 1460.67 | 39.60 | |
| *SE2 | 696.90 | 699.50 | 1421.07 | 2.60 | |
| | 699.50 | 733.20 | 1418.47 | 33.70 | |
| *LS1 | 733.20 | 735.70 | 1384.77 | 2.50 | |
| | 735.70 | 750.40 | 1382.27 | 14.70 | |
| *LS2 | 750.40 | 751.60 | 1367.57 | 1.20 | |
| | 751.60 | 783.70 | 1366.37 | 32.10 | |
| *UH1 | 783.70 | 784.80 | 1334.27 | 1.10 | |
| | 784.80 | 842.10 | 1333.17 | 57.30 | |
| *UH2 | 842.10 | 843.90 | 1275.87 | 1.80 | |
| | 843.90 | 896.50 | 1274.07 | 52.60 | |
| *MH1 | 896.50 | 898.50 | 1221.47 | 2.00 | |
| | 898.50 | 962.20 | 1219.47 | 63.70 | |
| *MH2 | 962.20 | 963.70 | 1155.77 | 1.50 | |
| | 963.70 | 1004.20 | 1154.27 | 40.50 | |
| *P11 | 1004.20 | 1006.90 | 1113.77 | 2.70 | |
| | 1006.90 | 1028.90 | 1111.07 | 22.00 | |
| *P10 | 1028.90 | 1030.00 | 1089.07 | 1.10 | |
| | 1030.00 | 1083.30 | 1087.97 | 53.30 | |
| *LH2 | 1083.30 | 1083.80 | 1034.67 | 0.50 | |
| | 1083.80 | 1152.60 | 1034.17 | 68.80 | |
| *P91 | 1152.60 | 1154.00 | 965.37 | 1.40 | |
| | 1154.00 | 1174.90 | 963.97 | 20.90 | |
| *COAL | 1174.90 | 1175.10 | 943.07 | 0.20 | |
| | 1175.10 | 1179.30 | 942.87 | 4.20 | |
| *P92 | 1179.30 | 1180.00 | 938.67 | 0.70 | |
| | 1180.00 | 1217.30 | 937.97 | 37.30 | |

| | | | | |
|---|---|---|---|---|
| *P81 | 1217.30 | 1217.70 | 900.67 | 0.40 |
| | 1217.70 | 1244.80 | 900.27 | 27.10 |
| *P82 | 1244.80 | 1245.80 | 873.17 | 1.00 |
| | 1245.80 | 1466.90 | 872.17 | 221.10 |
| *P51 | 1466.90 | 1468.60 | 651.07 | 1.70 |
| | 1468.60 | 1557.50 | 649.37 | 88.90 |
| *P41 | 1557.50 | 1557.90 | 560.47 | 0.40 |
| | 1557.90 | 1650.27 | 560.07 | 92.37 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\T38G.CMP
DATE: 08/27/07

Well: T38G

## Oil & Gas Show

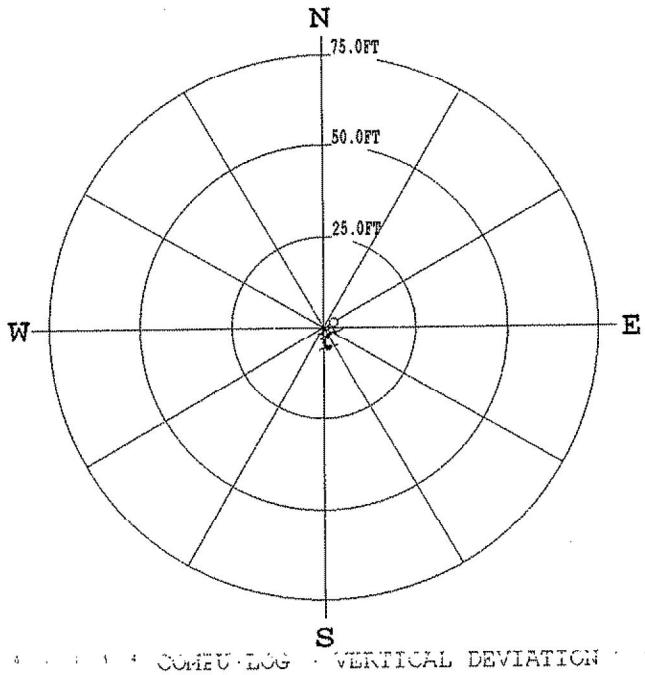
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 359 | 1154 | 795 | | | |
| Pocahontas | 1467 | 1469 | 2 | | | |
| Total IPF | | | | Not Taken | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: CNX Gas
LOCATION: Osbourne Mtn.
HOLE ID: 07-CNX-T-38-G
DATE OF LOG: 07/12/07
PROBE: 0019C 732

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1643.12 FT
AZIMUTH: 63.9
DISTANCE: 3.0 FT
+ = 300 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION - * * * * * *

CLIENT : CNX Gas
FIELD OFFICE : M.Sammons
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 07-CNX-T-38-G
DATE OF LOG : 07/12/07
PROBE : 0019C , 732
DEPTH UNITS : FEET
LOG: 07-CNX-T-38-G_07-12-07_16-27_0019C_.02_-9.17_1643.68_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 50.00 | -0.53 | -0.40 | 0.7 | 217.0 | 1.3 | 175.9 |
| 60.0 | 59.99 | -0.75 | -0.37 | 0.8 | 205.9 | 1.3 | 150.8 |
| 70.0 | 69.99 | -0.89 | -0.19 | 0.9 | 192.2 | 1.3 | 121.3 |
| 80.0 | 79.99 | -0.94 | 0.03 | 0.9 | 178.0 | 1.3 | 92.4 |
| 90.0 | 89.99 | -0.92 | 0.26 | 1.0 | 164.1 | 1.3 | 72.3 |
| 100.0 | 99.98 | -0.83 | 0.47 | 1.0 | 150.5 | 1.2 | 55.1 |
| 110.0 | 109.98 | -0.68 | 0.63 | 0.9 | 137.4 | 1.3 | 41.4 |
| 120.0 | 119.98 | -0.58 | 0.82 | 1.0 | 125.6 | 1.3 | 91.9 |
| 130.0 | 129.98 | -0.60 | 1.06 | 1.2 | 119.3 | 1.4 | 79.7 |
| 140.0 | 139.97 | -0.57 | 1.30 | 1.4 | 113.8 | 1.3 | 72.7 |
| 150.0 | 149.97 | -0.48 | 1.49 | 1.6 | 107.7 | 1.2 | 56.8 |
| 160.0 | 159.97 | -0.35 | 1.62 | 1.7 | 102.1 | 1.2 | 34.1 |
| 170.0 | 169.97 | -0.17 | 1.67 | 1.7 | 95.8 | 0.7 | 21.1 |
| 180.0 | 179.97 | -0.02 | 1.63 | 1.6 | 90.8 | 1.0 | 334.4 |
| 190.0 | 189.97 | 0.09 | 1.55 | 1.6 | 86.8 | 0.8 | 317.6 |
| 200.0 | 199.96 | 0.17 | 1.42 | 1.4 | 83.2 | 0.8 | 286.6 |
| 210.0 | 209.96 | 0.18 | 1.24 | 1.3 | 81.9 | 1.0 | 262.0 |
| 220.0 | 219.96 | 0.11 | 1.04 | 1.0 | 83.8 | 1.3 | 238.2 |
| 230.0 | 229.96 | 0.02 | 0.84 | 0.8 | 88.5 | 1.1 | 255.5 |
| 240.0 | 239.96 | 0.01 | 0.65 | 0.7 | 89.1 | 1.0 | 269.8 |
| 250.0 | 249.95 | -0.04 | 0.46 | 0.5 | 94.8 | 1.2 | 248.1 |
| 260.0 | 259.95 | -0.17 | 0.27 | 0.3 | 121.9 | 1.5 | 220.6 |
| 270.0 | 269.95 | -0.40 | 0.13 | 0.4 | 161.6 | 1.7 | 203.9 |
| 280.0 | 279.94 | -0.69 | 0.04 | 0.7 | 177.0 | 1.8 | 197.4 |
| 290.0 | 289.94 | -0.98 | -0.06 | 1.0 | 183.5 | 1.7 | 199.9 |
| 300.0 | 299.93 | -1.24 | -0.19 | 1.3 | 188.6 | 1.6 | 210.7 |
| 310.0 | 309.93 | -1.48 | -0.34 | 1.5 | 192.9 | 1.5 | 218.9 |
| 320.0 | 319.93 | -1.67 | -0.50 | 1.7 | 196.7 | 1.4 | 227.2 |
| 330.0 | 329.92 | -1.84 | -0.68 | 2.0 | 200.3 | 1.3 | 233.4 |
| 340.0 | 339.92 | -1.95 | -0.87 | 2.1 | 204.0 | 0.8 | 249.2 |
| 350.0 | 349.92 | -1.90 | -0.76 | 2.1 | 201.8 | 1.3 | 75.3 |
| 360.0 | 359.92 | -1.91 | -0.52 | 2.0 | 195.1 | 1.6 | 104.6 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 359.92 | -1.91 | -0.32 | 2.6 | 159.1 | 1.5 | 20.1 |
| 369.91 | -2.07 | -0.23 | 2.1 | 186.5 | 1.9 | 135.1 |
| 379.90 | -2.40 | -0.04 | 2.4 | 180.9 | 2.2 | 156.4 |
| 389.90 | -2.76 | -0.04 | 2.8 | 180.9 | 2.0 | 190.3 |
| 399.89 | -3.05 | -0.17 | 3.1 | 183.2 | 1.7 | 211.3 |
| 409.89 | -3.28 | -0.35 | 3.3 | 186.1 | 1.6 | 227.8 |
| 419.88 | -3.46 | -0.53 | 3.5 | 188.7 | 1.2 | 241.7 |
| 429.88 | -3.45 | -0.67 | 3.5 | 190.9 | 0.9 | 356.9 |
| 439.88 | -3.32 | -0.65 | 3.4 | 191.1 | 0.3 | 354.8 |
| 449.88 | -3.29 | -0.60 | 3.3 | 190.4 | 0.9 | 64.5 |
| 459.88 | -3.25 | -0.41 | 3.3 | 187.2 | 1.1 | 92.5 |
| 469.87 | -3.39 | -0.13 | 3.4 | 182.1 | 2.5 | 138.0 |
| 479.86 | -3.80 | 0.09 | 3.8 | 178.6 | 2.7 | 160.4 |
| 489.85 | -4.22 | 0.13 | 4.2 | 178.3 | 2.1 | 177.0 |
| 499.85 | -4.52 | 0.02 | 4.5 | 179.7 | 1.6 | 221.9 |
| 509.85 | -4.56 | -0.18 | 4.6 | 182.2 | 1.0 | 290.6 |
| 519.84 | -4.44 | -0.27 | 4.5 | 183.4 | 0.9 | 20.4 |
| 529.84 | -4.37 | -0.08 | 4.4 | 181.1 | 1.6 | 96.1 |
| 539.84 | -4.51 | 0.19 | 4.5 | 177.6 | 2.0 | 136.1 |
| 549.83 | -4.78 | 0.43 | 4.8 | 174.8 | 2.0 | 135.6 |
| 559.82 | -5.07 | 0.64 | 5.1 | 172.8 | 2.0 | 153.6 |
| 569.82 | -5.40 | 0.73 | 5.5 | 172.3 | 1.9 | 183.8 |
| 579.81 | -5.68 | 0.66 | 5.7 | 173.3 | 1.5 | 203.5 |
| 589.81 | -5.78 | 0.47 | 5.8 | 175.4 | 1.4 | 274.6 |
| 599.81 | -5.66 | 0.28 | 5.7 | 177.2 | 1.4 | 323.6 |
| 609.81 | -5.47 | 0.16 | 5.5 | 178.3 | 1.1 | 334.6 |
| 619.80 | -5.26 | 0.20 | 5.3 | 177.9 | 1.3 | 28.2 |
| 629.80 | -5.13 | 0.39 | 5.1 | 175.6 | 1.6 | 87.4 |
| 639.80 | -5.15 | 0.68 | 5.2 | 172.5 | 1.6 | 90.5 |
| 649.79 | -5.23 | 0.96 | 5.3 | 169.6 | 1.8 | 118.0 |
| 659.79 | -5.39 | 1.20 | 5.5 | 167.5 | 1.7 | 132.9 |
| 669.78 | -5.64 | 1.33 | 5.8 | 166.8 | 1.6 | 170.3 |
| 679.78 | -5.90 | 1.32 | 6.0 | 167.4 | 1.5 | 188.3 |
| 689.78 | -6.13 | 1.23 | 6.3 | 168.7 | 1.4 | 219.6 |
| 699.77 | -6.23 | 1.02 | 6.3 | 170.7 | 1.3 | 267.1 |
| 709.77 | -6.15 | 0.81 | 6.2 | 172.5 | 1.4 | 311.9 |
| 719.77 | -5.93 | 0.70 | 6.0 | 173.3 | 1.5 | 339.6 |
| 729.76 | -5.69 | 0.61 | 5.7 | 173.8 | 1.5 | 349.2 |
| 739.76 | -5.45 | 0.68 | 5.5 | 172.8 | 1.5 | 43.2 |
| 749.76 | -5.31 | 0.89 | 5.4 | 170.5 | 1.4 | 61.2 |
| 759.76 | -5.27 | 1.14 | 5.4 | 167.8 | 1.5 | 100.4 |
| 769.75 | -5.36 | 1.38 | 5.5 | 165.6 | 1.5 | 123.3 |
| 779.75 | -5.54 | 1.56 | 5.8 | 164.3 | 1.4 | 149.0 |
| 789.75 | -5.78 | 1.63 | 6.0 | 164.2 | 1.4 | 177.5 |
| 799.74 | -6.01 | 1.58 | 6.2 | 165.3 | 1.4 | 209.8 |
| 809.74 | -6.18 | 1.42 | 6.3 | 167.1 | 1.5 | 247.4 |
| 819.73 | -6.12 | 1.14 | 6.2 | 169.5 | 1.8 | 306.2 |
| 829.73 | -5.87 | 0.94 | 5.9 | 170.9 | 2.0 | 334.9 |
| 839.73 | -5.59 | 1.01 | 5.7 | 169.7 | 1.5 | 31.6 |
| 849.72 | -5.36 | 1.16 | 5.5 | 167.8 | 1.5 | 44.3 |
| 859.72 | -5.24 | 1.36 | 5.4 | 165.4 | 1.3 | 76.6 |
| 869.72 | -5.23 | 1.57 | 5.5 | 163.3 | 1.2 | 68.6 |
| 879.71 | -5.25 | 1.75 | 5.5 | 161.5 | 1.1 | 121.2 |
| 889.71 | -5.28 | 1.92 | 5.6 | 160.0 | 1.0 | 94.8 |
| 899.71 | -5.37 | 2.02 | 5.7 | 159.4 | 0.9 | 167.9 |
| 909.71 | -5.52 | 2.04 | 5.9 | 159.7 | 0.8 | 173.8 |
| 919.71 | -5.66 | 2.03 | 6.0 | 160.3 | 0.9 | 186.0 |
| 929.71 | -5.79 | 2.00 | 6.1 | 160.9 | 0.7 | 183.7 |
| 939.71 | -5.93 | 1.92 | 6.2 | 162.1 | 1.2 | 232.2 |
| 949.71 | -6.05 | 1.74 | 6.3 | 164.0 | 1.2 | 233.2 |
| 959.70 | -6.14 | 1.51 | 6.3 | 166.2 | 1.7 | 262.8 |
| 969.70 | -6.05 | 1.18 | 6.2 | 168.9 | 2.2 | 294.7 |
| 979.69 | -5.90 | 0.86 | 6.0 | 171.7 | 2.0 | 303.1 |
| 989.68 | -5.62 | 0.62 | 5.7 | 173.7 | 2.1 | 328.2 |
| 999.68 | -5.26 | 0.58 | 5.3 | 173.7 | 2.0 | 354.0 |
| 1009.67 | -4.91 | 0.54 | 4.9 | 173.7 | 2.0 | 4.6 |
| 1019.66 | -4.58 | 0.52 | 4.6 | 173.5 | 2.0 | 344.1 |
| 1029.66 | -4.24 | 0.49 | 4.3 | 173.4 | 1.9 | 353.4 |
| 1039.65 | -3.92 | 0.46 | 3.9 | 173.4 | 1.8 | 358.5 |
| 1049.65 | -3.59 | 0.45 | 3.6 | 172.9 | 1.9 | 353.0 |
| 1059.64 | -3.29 | 0.46 | 3.3 | 172.0 | 1.7 | 4.8 |
| 1069.64 | -3.00 | 0.49 | 3.0 | 170.7 | 1.6 | 19.8 |
| 1079.63 | -2.73 | 0.57 | 2.8 | 168.2 | 1.7 | 5.2 |
| 1089.63 | -2.51 | 0.67 | 2.6 | 165.1 | 1.4 | 60.9 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1069.64 | -3.00 | 0.49 | 3.0 | 170.7 | 1.6 | 19.8 |
| 1079.63 | -2.73 | 0.57 | 2.8 | 168.2 | 1.7 | 5.2 |
| 1089.63 | -2.51 | 0.67 | 2.6 | 165.1 | 1.4 | 60.9 |
| 1099.63 | -2.39 | 0.88 | 2.6 | 159.8 | 1.4 | 69.7 |
| 1109.62 | -2.48 | 1.09 | 2.7 | 156.2 | 1.4 | 136.8 |
| 1119.62 | -2.62 | 1.27 | 2.9 | 154.1 | 1.2 | 121.1 |
| 1129.62 | -2.71 | 1.45 | 3.1 | 151.9 | 1.0 | 130.3 |
| 1139.62 | -2.89 | 1.47 | 3.2 | 153.0 | 1.1 | 198.3 |
| 1149.62 | -3.03 | 1.30 | 3.3 | 156.8 | 1.7 | 278.6 |
| 1159.61 | -2.92 | 1.02 | 3.1 | 160.7 | 1.8 | 314.0 |
| 1169.61 | -2.64 | 0.86 | 2.8 | 161.9 | 1.8 | 337.4 |
| 1179.60 | -2.34 | 0.84 | 2.5 | 160.3 | 1.7 | 28.3 |
| 1189.60 | -2.10 | 1.01 | 2.3 | 154.4 | 1.6 | 53.3 |
| 1199.59 | -1.97 | 1.24 | 2.3 | 147.9 | 1.5 | 71.9 |
| 1209.59 | -1.89 | 1.48 | 2.4 | 141.9 | 1.4 | 82.3 |
| 1219.59 | -1.89 | 1.71 | 2.5 | 137.9 | 1.1 | 105.7 |
| 1229.59 | -1.99 | 1.83 | 2.7 | 137.4 | 1.0 | 172.0 |
| 1239.58 | -2.17 | 1.76 | 2.8 | 141.0 | 1.1 | 213.6 |
| 1249.58 | -2.31 | 1.66 | 2.8 | 144.4 | 1.0 | 240.0 |
| 1259.58 | -2.40 | 1.49 | 2.8 | 148.1 | 1.1 | 253.9 |
| 1269.58 | -2.43 | 1.29 | 2.7 | 152.0 | 1.2 | 273.5 |
| 1279.57 | -2.14 | 1.20 | 2.5 | 150.7 | 2.0 | 3.9 |
| 1289.57 | -1.84 | 1.34 | 2.3 | 143.9 | 1.8 | 35.7 |
| 1299.56 | -1.64 | 1.57 | 2.3 | 136.2 | 1.7 | 57.3 |
| 1309.56 | -1.53 | 1.83 | 2.4 | 129.9 | 1.5 | 75.5 |
| 1319.56 | -1.50 | 2.07 | 2.6 | 125.8 | 1.3 | 93.2 |
| 1329.55 | -1.49 | 2.31 | 2.7 | 122.7 | 1.4 | 83.3 |
| 1339.55 | -1.48 | 2.55 | 2.9 | 120.1 | 1.2 | 88.7 |
| 1349.55 | -1.48 | 2.76 | 3.1 | 118.2 | 1.2 | 95.7 |
| 1359.55 | -1.50 | 2.92 | 3.3 | 117.2 | 0.7 | 119.6 |
| 1369.54 | -1.55 | 3.04 | 3.4 | 117.0 | 0.7 | 110.7 |
| 1379.54 | -1.60 | 3.09 | 3.5 | 117.3 | 0.3 | 144.5 |
| 1389.54 | -1.64 | 3.16 | 3.6 | 117.4 | 0.5 | 121.2 |
| 1399.54 | -1.67 | 3.27 | 3.7 | 117.1 | 0.7 | 103.1 |
| 1409.54 | -1.71 | 3.38 | 3.8 | 116.8 | 0.7 | 106.3 |
| 1419.54 | -1.76 | 3.40 | 3.8 | 117.3 | 0.4 | 227.4 |
| 1429.54 | -1.79 | 3.31 | 3.8 | 118.3 | 0.8 | 272.5 |
| 1439.54 | -1.79 | 3.21 | 3.7 | 119.2 | 0.4 | 265.1 |
| 1449.54 | -1.76 | 3.10 | 3.6 | 119.6 | 0.7 | 289.3 |
| 1459.54 | -1.67 | 2.94 | 3.4 | 119.6 | 1.5 | 307.9 |
| 1469.53 | -1.42 | 2.93 | 3.3 | 115.9 | 2.2 | 52.7 |
| 1479.53 | -1.17 | 3.22 | 3.4 | 110.0 | 1.9 | 65.6 |
| 1489.52 | -1.16 | 3.42 | 3.6 | 108.7 | 0.7 | 134.9 |
| 1499.52 | -1.23 | 3.44 | 3.7 | 109.6 | 0.3 | 223.4 |
| 1509.52 | -1.28 | 3.41 | 3.6 | 110.6 | 0.3 | 148.7 |
| 1519.52 | -1.31 | 3.35 | 3.6 | 111.4 | 0.6 | 249.8 |
| 1529.52 | -1.31 | 3.20 | 3.5 | 112.3 | 1.2 | 286.2 |
| 1539.52 | -1.16 | 3.00 | 3.2 | 111.2 | 1.2 | 292.6 |
| 1549.51 | -0.96 | 2.80 | 3.0 | 108.9 | 1.9 | 331.7 |
| 1559.51 | -0.58 | 2.76 | 2.8 | 101.8 | 2.2 | 343.6 |
| 1569.50 | -0.19 | 2.76 | 2.8 | 93.9 | 2.1 | 4.4 |
| 1579.49 | 0.18 | 2.91 | 2.9 | 86.5 | 2.2 | 15.1 |
| 1589.48 | 0.52 | 3.05 | 3.1 | 80.3 | 1.9 | 48.9 |
| 1599.48 | 0.48 | 3.16 | 3.2 | 81.3 | 0.6 | 141.0 |
| 1609.48 | 0.43 | 3.15 | 3.2 | 82.3 | 0.7 | 244.4 |
| 1619.48 | 0.47 | 2.95 | 3.0 | 80.9 | 1.2 | 294.2 |
| 1629.47 | 0.73 | 2.80 | 2.9 | 75.5 | 2.5 | 354.7 |
| 1639.46 | 1.17 | 2.78 | 3.0 | 67.1 | 2.9 | 345.5 |
| 1643.12 | 1.33 | 2.72 | 3.0 | 63.9 | 2.7 | 331.7 |

Well: T38G

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 2410' | 24" | | | X | 06/27/07 | |
| Surface | 13 3/8" | 338.35' | 15 3/8" | 211.5 | X | | 06/29/07 | bskt @ 85' |
| Water Protection | 13 3/8" | 338.35' | 15 3/8" | 211.5 | X | | 06/29/07 | bskt @ 85' |
| Coal Protection | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** CNX **HOLE #: T-38G**

**LOCATION:** OSBORNE MTN **DRILL RIG #: 87**

**DATE STARTED: 06-27-07** **DATED COMPLETED: 07-12-07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | THICKNESS | | STRATA REMARKS |
|---|---|---|---|
| **FROM** | **TO** | **FT** | **DESCRIPTION,VOIDS ETC** |
| 0 | 24 | 24 | OVERBURDEN/SOFT SAND/SAND STONE |
| 24 | 35 | 11 | SAND STONE/SOFT SAND |
| 35 | 65 | 30 | SAND STONE/COAL/SANDY SHALE |
| 65 | 95 | 30 | SANDY SHALE/SAND STONE |
| 95 | 125 | 30 | SAND STONE/SANDY SHALE STR |
| 125 | 156 | 31 | SANDY SHALE/COAL/SAND STONE |
| 156 | 188 | 32 | SAND STONE STR/SANDY |
| SHALE/COAL/SANDY SHALE/SAND STONE | | | |
| 188 | 219 | 31 | SAND STONE |
| 219 | 251 | 32 | SAND STONE/SANDY SHALE STRKS |
| 251 | 282 | 31 | SANDY SHALE/COAL/SAND STONE/SANDY |
| SHALE | | | |
| 282 | 314 | 32 | SANDY SHALE STR/COAL STR/SAND STONE |
| 314 | 346 | 32 | SANDY SHALE/COAL/SAND STONE |
| 346 | 358 | 12 | SAND STONE/SANDY SHALE STR |
| 358 | 404 | 46 | |
| 404 | 467 | 63 | SANDY SHALE |
| 467 | 499 | 32 | SAND STONE |
| 499 | 530 | 31 | SAND STONE STR/COAL/SANDY SHALE/ |
| SAND STONE | | | |
| 530 | 562 | 32 | SAND STONE/SANDY SHALE STRKS |
| 562 | 594 | 32 | SAND STONE |
| 594 | 657 | 63 | SAND STONE/SANDY SHALE STRKS |
| 657 | 689 | 32 | SAND |
| 689 | 720 | 31 | SAND/SANDY SHALE |
| 720 | 783 | 63 | SANDY SHALE/COAL/SAND STONE/SANDY |
| SHALE | | | |
| 783 | 815 | 32 | SANDY SHALE/COAL/SANDY SHALE/COAL |
| 815 | 846 | 31 | SANDY SHALE STR/SAND STONE |
| 846 | 878 | 32 | SAND/SANDY SHALE |
| 878 | 910 | 32 | SAND/SANDY SHALE/COAL/SANDY SHALE |
| 910 | 941 | 31 | SAND/SANDY SHALE/COAL |
| 941 | 1005 | 64 | SAND/SANDY SHALE |
| 1005 | 1036 | 31 | SANDY SHALE/SAND/SANDY SHALE/COAL |
| 1036 | 1068 | 32 | SAND/SANDY SHALE |
| 1068 | 1090 | 22 | SAND/SANDY SHALE/COAL/SAND |
| 1090 | 1121 | 31 | SAND/SANDY SHALE/COAL |
| 1121 | 1153 | 32 | SAND STONE/SANDY SHALE STR |
| 1153 | 1185 | 32 | SANDY SHALE/COAL |
| 1185 | 1216 | 31 | COAL/SAND STONE/SANDY SHALE/COAL |
| 1216 | 1247 | 31 | SANDY SHALE/COAL/SAND STONE |
| 1247 | 1279 | 32 | SAND STONE |

| | | | |
|---|---|---|---|
| 1279 | 1311 | 32 | SAND STONE/SHALE STRKS |
| 1311 | 1343 | 32 | SAND STONE |
| 1343 | 1374 | 31 | SAND STONE/SHALE STR |
| 1374 | 1406 | 32 | SAND STONE/SANDY SHALE STR |
| 1406 | 1437 | 31 | SAND STONE |
| 1437 | 1469 | 32 | SAND STONE/COAL/SANDY SHALE |
| 1469 | 1501 | 32 | SANDY SHALE/COAL/SAND STONE |
| 1501 | 1532 | 31 | SANDY SHALE/SAND STONE |
| 1532 | 1595 | 63 | SAND STONE /COAL /SHALE /SAND STONE |
| 1595 | 1627 | 32 | SAND STONE |
| 1627 | 1645 | 18 | SANDY SHALE |

1645.00 FT. TOTAL DEPTH
24.10 FT. OF 22" CASING
338.35 FT. OF 13 3/8" CASING

**COMMONWEALTH OF VIRGINIA**
VIRGINIA DEPARTMENT OF ENERGY
**GAS AND OIL**
3405 MOUNTAIN EMPIRE RD
BIG STONE GAP, VIRGINIA 24219

## INSPECTION REPORT

**NAME AND ADDRESS OF PERMITTEE:**
CNX Gas Company LLC
2481 John Nash Blvd
Bluefield, WV 24701

**OPERATION NAME:** CBM T38G W/PL
**OPERATION TYPE:** Gas/Pipeline
**DATE ISSUED:** 04/29/08
**FILE NUMBER:** BU-3490
**APPLICATION NO.:**

**PRIORITY:** 3
**NEXT INSPECTION DUE BY:** 11/30/2008

**TYPE OF INSPECTION:** Cementing
**OPERATION STATUS:** Drilled/Waiting Completion/PL
**ACTIONS OF THE INSPECTORS:** Site OK

**INSPECTED and found Acceptable:**

**Site Condition**
**Road Condition**
**Equipment Condition**
**Pit Condition**
**CBM Site Safety -- Imminent Danger - N Dangerous Condition - N Department of Labor and Industry Notified - N**

**INSPECTED and found Not Acceptable:**

**COMMENTS/RECOMMENDATIONS:**
Well is completed.
TD @ 6952 feet.

The Pit and Liner OK.
Site is stable.
Road and Drainage OK.

A cement job was being conducted by Haliburton.

**DATE START - STOP**
10/02/08 2:30 PM 2:50 PM

**INSPECTOR:** Joe Altizer

**INSPECTION:** 113772

**COMMONWEALTH OF VIRGINIA**
VIRGINIA DEPARTMENT OF ENERGY
**GAS AND OIL**
3405 MOUNTAIN EMPIRE RD
BIG STONE GAP, VIRGINIA 24219

## INSPECTION REPORT

**NAME AND ADDRESS OF PERMITTEE:**
CNX Gas Company LLC
2481 John Nash Blvd
Bluefield, WV 24701

**OPERATION NAME:** CBM T38G W/PL
**OPERATION TYPE:** Gas/Pipeline
**DATE ISSUED:** 04/29/08
**FILE NUMBER:** BU-3490
**APPLICATION NO.:**

**PRIORITY:** 2
**NEXT INSPECTION DUE BY:** 10/07/2008

**TYPE OF INSPECTION:** Permitted Site
**OPERATION STATUS:** Drilling
**ACTIONS OF THE INSPECTORS:** Site OK

**INSPECTED and found Acceptable:**

**Site Condition**
**Road Condition**
**Equipment Condition**
**Pit Condition**
**CBM Site Safety -- Imminent Danger - N Dangerous Condition - N Department of Labor and Industry Notified - N**

**INSPECTED and found Not Acceptable:**

**COMMENTS/RECOMMENDATIONS:**
Noah Horns Rig # 831 is drilling T-38G to establish well T38GCV.
This started on 9-16-08.

8 7/8 hole, Ran 2204 feet of 7 inch.
Cemented: 210 Sacks of Class A Cement with 2 % c/c / ¼ Fl.
7 ph @ 70 degrees.

Well was drilling at 2682 feet at the time of this visit.

Projected TD: 6900 feet.

This rig is provided with multiple purpose gas detector.
M 40 M
The Pit and Liner OK.
Site is stable.
Road and Drainage OK.

The rig was down for repairs with no drilling being conducted during this visit.

**DATE START - STOP**
09/23/08 11:25 AM 11:55 AM

**INSPECTOR:** Joe Altizer

**INSPECTION:** 113427

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 452
**Company:** CNX Gas Company LLC
**File Number:** BU-3192
**Operations Name:** CBM T38D W/PL
**Operation Type:** Coalbed/Pipeline
**Completion Report Type:** Original

# COMPLETION REPORT (DGO-GO-15)

**Well Type:** Coalbed/Pipeline **Date Well Completed:** 1/23/2007
**Driller's Total Depth:** 1,893 **Log's Total Depth:** 1,897

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

☐ Stimulated ☐ Not Stimulated ☑ Gob

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 7/5/2007 10:34:56 AM *(Company)*

By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 7/5/2007

Status: Inspr Approved Date: 7/20/2007

Final PDF Date: 7/20/2007

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 490 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3192 |
| **Operations Name:** | CBM T38D W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 1/12/2007
Drilling Contractor: Noah Horn
Date drilling completed: 1/23/2007
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,893
Log Total Depth (feet): 1,897
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,013,433
Final Plat State Plane X: 1,013,437
Permitted State Plane Y: 329,480
Final Plat State Plane Y: 329,477
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T38D Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T38D Exhibit A.doc |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | T38D Gas Show.doc |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper Gamma Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑ Yes ☐ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T38D Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | T38D Casing.doc |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

Grouted backside of 16" casing to surface

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | T38D Drill Data (2).doc |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 7/5/2007 *(Company)*

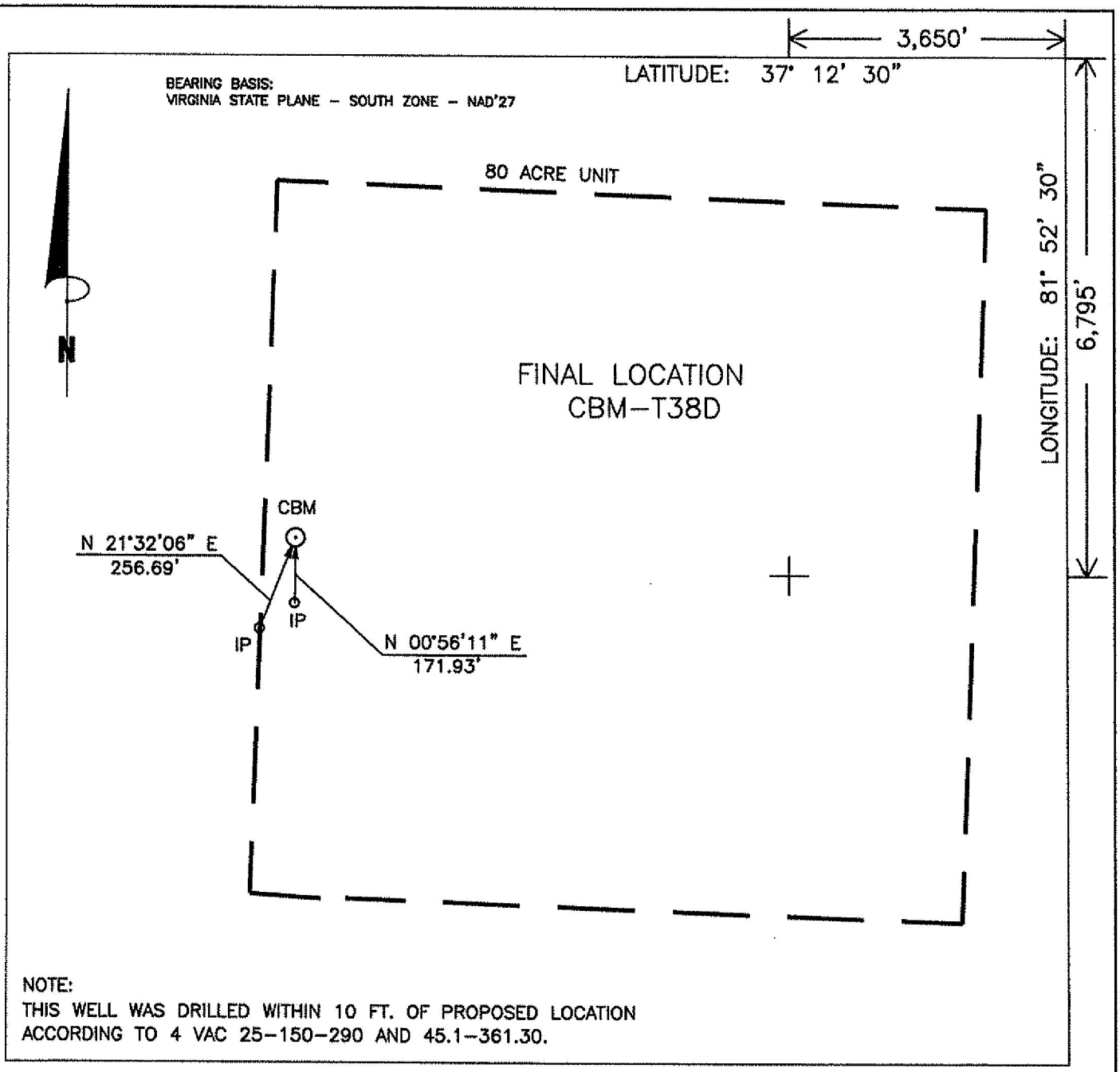
Signed By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 7/5/2007

Status: Inspr Approved Date: 7/20/2007

Final PDF Date: 7/20/2007




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

# WELL LOCATION PLAT

T38DFNL
2N24/86–556/49

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T38D

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 329,477.01 E 1,013,436.94

ELEVATION: 2368.86' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 01–23–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

D.R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No.
8540
1-23-07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

# Exhibit A

Well Name: 07 CBM T38D
SURFACE ELEV: 2368.86  EASTING: 1013436.94  NORTHING:  329477.01

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| AL1 | 115.80 | 116.30 | 2253.06 | 0.50 | |
| | 116.30 | 134.90 | 2252.56 | 18.60 | |
| AL2 | 134.90 | 135.90 | 2233.96 | 1.00 | |
| | 135.90 | 243.20 | 2232.96 | 107.30 | |
| RA1 | 243.20 | 245.60 | 2125.66 | 2.40 | |
| | 245.60 | 266.00 | 2123.26 | 20.40 | |
| RA2 | 266.00 | 268.30 | 2102.86 | 2.30 | |
| | 268.30 | 295.90 | 2100.56 | 27.60 | |
| RA3 | 295.90 | 298.00 | 2072.96 | 2.10 | |
| | 298.00 | 300.10 | 2070.86 | 2.10 | |
| RA3 | 300.10 | 301.20 | 2068.76 | 1.10 | |
| | 301.20 | 381.20 | 2067.66 | 80.00 | |
| JB1 | 381.20 | 384.00 | 1987.66 | 2.80 | |
| | 384.00 | 423.00 | 1984.86 | 39.00 | |
| JB3 | 423.00 | 427.00 | 1945.86 | 4.00 | |
| | 427.00 | 514.50 | 1941.86 | 87.50 | |
| TI | 514.50 | 515.40 | 1854.36 | 0.90 | |
| | 515.40 | 516.30 | 1853.46 | 0.90 | |
| TI | 516.30 | 517.00 | 1852.56 | 0.70 | |
| | 517.00 | 627.90 | 1851.86 | 110.90 | |
| *US1 | 627.90 | 628.70 | 1740.96 | 0.80 | |
| | 628.70 | 732.90 | 1740.16 | 104.20 | |
| *US2 | 732.90 | 733.80 | 1635.96 | 0.90 | |
| | 733.80 | 854.90 | 1635.06 | 121.10 | |
| *COAL | 854.90 | 857.00 | 1513.96 | 2.10 | |
| | 857.00 | 909.60 | 1511.86 | 52.60 | |
| *SE1 | 909.60 | 910.70 | 1459.26 | 1.10 | |
| | 910.70 | 942.00 | 1458.16 | 31.30 | |
| *SE2 | 942.00 | 943.90 | 1426.86 | 1.90 | |
| | 943.90 | 983.80 | 1424.96 | 39.90 | |
| *LS1 | 983.80 | 986.80 | 1385.06 | 3.00 | |
| | 986.80 | 997.90 | 1382.06 | 11.10 | |
| *LS2 | 997.90 | 998.50 | 1370.96 | 0.60 | |
| | 998.50 | 1046.40 | 1370.36 | 47.90 | |
| *UH1 | 1046.40 | 1049.50 | 1322.46 | 3.10 | |
| | 1049.50 | 1098.50 | 1319.36 | 49.00 | |
| *UH2 | 1098.50 | 1101.80 | 1270.36 | 3.30 | |
| | 1101.80 | 1156.00 | 1267.06 | 54.20 | |
| *MH1 | 1156.00 | 1158.00 | 1212.86 | 2.00 | |
| | 1158.00 | 1262.80 | 1210.86 | 104.80 | |
| *P11 | 1262.80 | 1265.90 | 1106.06 | 3.10 | |
| | 1265.90 | 1292.10 | 1102.96 | 26.20 | |
| *P10 | 1292.10 | 1293.90 | 1076.76 | 1.80 | |
| | 1293.90 | 1330.60 | 1074.96 | 36.70 | |
| *LH1 | 1330.60 | 1331.20 | 1038.26 | 0.60 | |
| | 1331.20 | 1347.30 | 1037.66 | 16.10 | |
| *LH2 | 1347.30 | 1348.20 | 1021.56 | 0.90 | |

| | | | | |
|---|---|---|---|---|
| | 1348.20 | 1421.70 | 1020.66 | 73.50 |
| *P91 | 1421.70 | 1422.60 | 947.16 | 0.90 |
| | 1422.60 | 1475.60 | 946.26 | 53.00 |
| *P81 | 1475.60 | 1477.20 | 893.26 | 1.60 |
| | 1477.20 | 1479.80 | 891.66 | 2.60 |
| *COAL | 1479.80 | 1480.80 | 889.06 | 1.00 |
| | 1480.80 | 1681.00 | 888.06 | 200.20 |
| *P61 | 1681.00 | 1682.00 | 687.86 | 1.00 |
| | 1682.00 | 1695.80 | 686.86 | 13.80 |
| *P62 | 1695.80 | 1696.80 | 673.06 | 1.00 |
| | 1696.80 | 1726.00 | 672.06 | 29.20 |
| *P51 | 1726.00 | 1727.90 | 642.86 | 1.90 |
| | 1727.90 | 1823.00 | 640.96 | 95.10 |
| *P41 | 1823.00 | 1824.90 | 545.86 | 1.90 |
| | 1824.90 | 1896.89 | 543.96 | 71.99 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\T38D.CMP
DATE: 02/07/07

# Oil & Gas Show

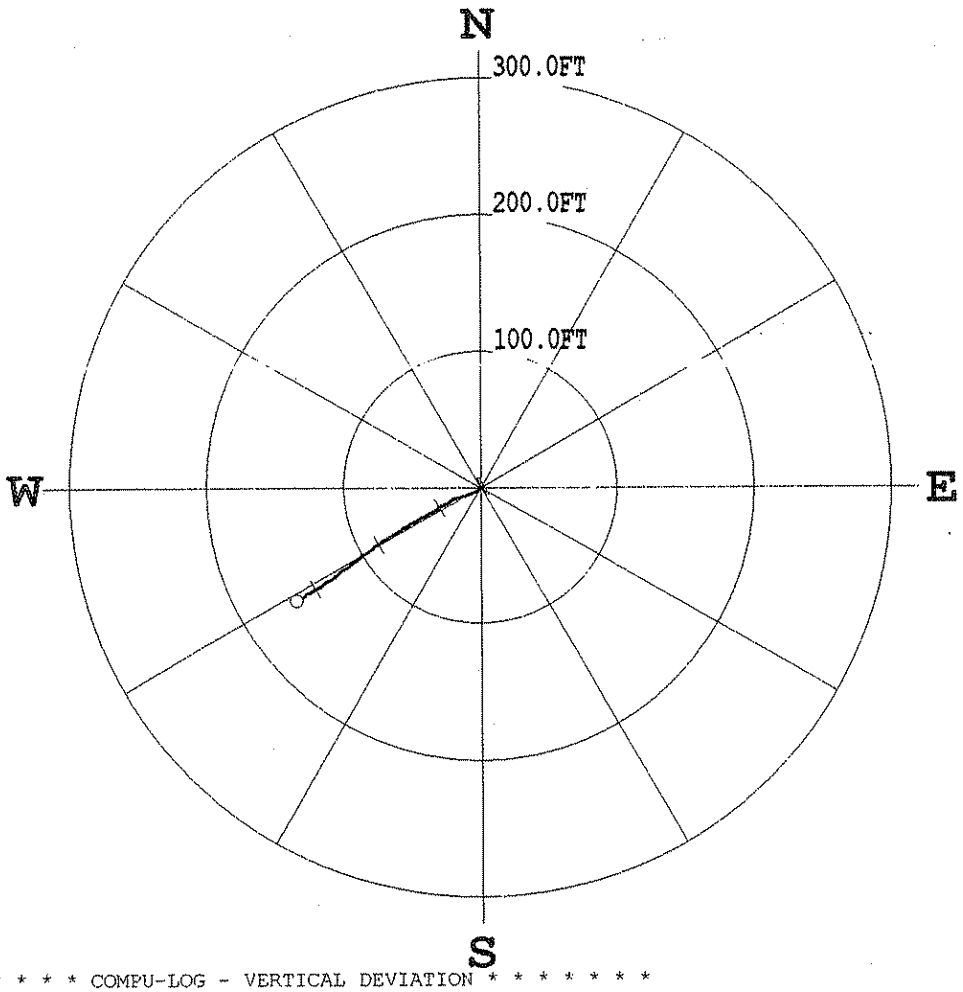
| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Lee/Norton | 855 | 1481 | 626 | | | |
| Pocahontas | 1681 | 1825 | 144 | | | |
| Total | | | | | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

LIENT: CONSOL ENERGY
OCATION:
OLE ID: 07-CNX-T-38D
ATE OF LOG: 01/23/07
ROBE: 0026C  1044

MAG DECL: -7.1

SCALE: 100 FT/IN
TRUE DEPTH: 1879.43 FT
AZIMUTH: 238.1
DISTANCE: 157.9 FT
+ = 300 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

| | | | |
|---|---|---|---|
| CLIENT | : CONSOL ENERGY | HOLE ID. | : 07-CNX-T-38D |
| FIELD OFFICE | : O'DRISCOLL | DATE OF LOG | : 01/23/07 |
| DATA FROM | : - | PROBE | : 0026C , 1044 |
| MAG. DECL. | : -7.100 | DEPTH UNITS | : FEET |

LOG: 07-CNX-T-38D_01-23-07_04-06_0026C_.10_0.00_1896.80_DEVI.log

| ABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 6.6 | 6.60 | 0.00 | -0.00 | 0.0 | 344.9 | 0.5 | 344.9 |
| 10.0 | 10.00 | 0.03 | -0.01 | 0.0 | 337.1 | 0.5 | 331.8 |
| 20.0 | 20.00 | 0.03 | -0.05 | 0.1 | 299.6 | 0.5 | 154.9 |
| 30.0 | 30.00 | -0.04 | -0.02 | 0.0 | 199.6 | 0.5 | 152.9 |
| 40.0 | 40.00 | -0.12 | 0.03 | 0.1 | 168.3 | 0.5 | 145.3 |
| 50.0 | 50.00 | -0.15 | 0.10 | 0.2 | 144.9 | 0.5 | 61.2 |
| 60.0 | 60.00 | -0.07 | 0.13 | 0.2 | 117.6 | 0.5 | 350.2 |
| 70.0 | 70.00 | 0.02 | 0.10 | 0.1 | 81.5 | 0.5 | 339.8 |
| 80.0 | 80.00 | 0.10 | 0.07 | 0.1 | 33.5 | 0.5 | 336.9 |
| 90.0 | 90.00 | 0.19 | 0.03 | 0.2 | 9.4 | 0.6 | 337.3 |
| 100.0 | 100.00 | 0.27 | -0.01 | 0.3 | 358.0 | 0.5 | 333.0 |
| 110.0 | 110.00 | 0.36 | -0.06 | 0.4 | 350.7 | 0.6 | 328.2 |
| 120.0 | 120.00 | 0.42 | -0.11 | 0.4 | 344.9 | 0.4 | 312.2 |
| 130.0 | 129.99 | 0.46 | -0.17 | 0.5 | 339.5 | 0.4 | 299.1 |
| 140.0 | 139.99 | 0.49 | -0.24 | 0.5 | 333.9 | 0.4 | 285.7 |
| 150.0 | 149.99 | 0.51 | -0.31 | 0.6 | 328.5 | 0.2 | 221.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 60.0 | 60.00 | -0.07 | 0.14 | 0.2 | 117.6 | 0.5 | 350.2 |
| 70.0 | 70.00 | 0.02 | 0.10 | 0.1 | 81.5 | 0.5 | 339.8 |
| 80.0 | 80.00 | 0.10 | 0.07 | 0.1 | 33.5 | 0.5 | 336.9 |
| 90.0 | 90.00 | 0.19 | 0.03 | 0.2 | 9.4 | 0.6 | 337.3 |
| 100.0 | 100.00 | 0.27 | -0.01 | 0.3 | 358.0 | 0.5 | 333.0 |
| 110.0 | 110.00 | 0.36 | -0.06 | 0.4 | 350.7 | 0.6 | 328.2 |
| 120.0 | 120.00 | 0.42 | -0.11 | 0.4 | 344.9 | 0.4 | 312.2 |
| 130.0 | 129.99 | 0.46 | -0.17 | 0.5 | 339.5 | 0.4 | 299.1 |
| 140.0 | 139.99 | 0.49 | -0.24 | 0.5 | 333.9 | 0.4 | 285.7 |
| 150.0 | 149.99 | 0.51 | -0.31 | 0.6 | 328.5 | 0.2 | 221.1 |
| 160.0 | 159.99 | 0.50 | -0.37 | 0.6 | 323.3 | 0.3 | 218.7 |
| 170.0 | 169.99 | 0.47 | -0.42 | 0.6 | 317.9 | 0.4 | 212.1 |
| 180.0 | 179.99 | 0.42 | -0.45 | 0.6 | 312.9 | 0.3 | 160.5 |
| 190.0 | 189.99 | 0.38 | -0.41 | 0.6 | 312.3 | 0.4 | 79.5 |
| 200.0 | 199.99 | 0.39 | -0.35 | 0.5 | 318.2 | 0.4 | 51.2 |
| 210.0 | 209.99 | 0.44 | -0.30 | 0.5 | 325.4 | 0.4 | 39.4 |
| 220.0 | 219.99 | 0.48 | -0.26 | 0.5 | 332.2 | 0.4 | 44.5 |
| 230.0 | 229.99 | 0.54 | -0.24 | 0.6 | 336.1 | 0.4 | 19.2 |
| 240.0 | 239.99 | 0.60 | -0.24 | 0.6 | 338.0 | 0.4 | 359.2 |
| 250.0 | 249.99 | 0.65 | -0.28 | 0.7 | 336.9 | 0.4 | 297.1 |
| 260.0 | 259.99 | 0.62 | -0.30 | 0.7 | 334.2 | 0.4 | 90.5 |
| 270.0 | 269.99 | 0.67 | -0.26 | 0.7 | 338.5 | 0.4 | 357.2 |
| 280.0 | 279.99 | 0.73 | -0.29 | 0.8 | 338.0 | 0.4 | 316.2 |
| 290.0 | 289.99 | 0.74 | -0.35 | 0.8 | 334.8 | 0.3 | 246.4 |
| 300.0 | 299.99 | 0.71 | -0.40 | 0.8 | 330.8 | 0.3 | 216.6 |
| 310.0 | 309.99 | 0.68 | -0.35 | 0.8 | 332.6 | 0.4 | 76.2 |
| 320.0 | 319.99 | 0.71 | -0.32 | 0.8 | 335.7 | 0.6 | 134.8 |
| 330.0 | 329.99 | 0.64 | -0.34 | 0.7 | 332.0 | 0.4 | 177.6 |
| 340.0 | 339.99 | 0.56 | -0.34 | 0.7 | 328.6 | 0.5 | 170.2 |
| 350.0 | 349.99 | 0.47 | -0.32 | 0.6 | 325.9 | 0.5 | 148.3 |
| 360.0 | 359.99 | 0.42 | -0.24 | 0.5 | 330.2 | 0.5 | 109.1 |
| 370.0 | 369.99 | 0.45 | -0.16 | 0.5 | 340.8 | 0.5 | 35.7 |
| 380.0 | 379.99 | 0.54 | -0.14 | 0.6 | 345.5 | 0.5 | 331.5 |
| 390.0 | 389.99 | 0.57 | -0.20 | 0.6 | 341.1 | 0.4 | 266.4 |
| 400.0 | 399.99 | 0.56 | -0.26 | 0.6 | 335.1 | 0.3 | 275.1 |
| 410.0 | 409.99 | 0.54 | -0.32 | 0.6 | 329.5 | 0.4 | 208.4 |
| 420.0 | 419.99 | 0.47 | -0.34 | 0.6 | 324.1 | 0.4 | 168.6 |
| 430.0 | 429.99 | 0.41 | -0.30 | 0.5 | 323.1 | 0.5 | 89.4 |
| 440.0 | 439.99 | 0.48 | -0.25 | 0.5 | 332.6 | 0.4 | 341.3 |
| 450.0 | 449.99 | 0.53 | -0.28 | 0.6 | 332.1 | 0.1 | 212.3 |
| 460.0 | 459.99 | 0.52 | -0.31 | 0.6 | 329.0 | 0.3 | 240.4 |
| 470.0 | 469.99 | 0.47 | -0.34 | 0.6 | 323.6 | 0.4 | 185.9 |
| 480.0 | 479.98 | 0.45 | -0.24 | 0.5 | 331.7 | 0.8 | 70.3 |
| 490.0 | 489.98 | 0.51 | -0.16 | 0.5 | 342.1 | 0.4 | 17.3 |
| 500.0 | 499.98 | 0.58 | -0.10 | 0.6 | 350.3 | 0.5 | 26.9 |
| 510.0 | 509.98 | 0.66 | -0.05 | 0.7 | 355.6 | 0.5 | 22.9 |
| 520.0 | 519.98 | 0.74 | -0.01 | 0.7 | 359.1 | 0.4 | 22.8 |
| 530.0 | 529.98 | 0.75 | -0.01 | 0.8 | 359.2 | 0.3 | 208.2 |
| 540.0 | 539.98 | 0.68 | 0.04 | 0.7 | 3.6 | 0.6 | 138.2 |
| 550.0 | 549.98 | 0.66 | 0.15 | 0.7 | 13.1 | 0.5 | 88.2 |
| 560.0 | 559.98 | 0.68 | 0.28 | 0.7 | 22.3 | 0.8 | 86.3 |
| 570.0 | 569.98 | 0.69 | 0.39 | 0.8 | 29.7 | 0.9 | 87.0 |
| 580.0 | 579.98 | 0.70 | 0.50 | 0.9 | 35.4 | 0.3 | 57.8 |
| 590.0 | 589.98 | 0.75 | 0.59 | 1.0 | 38.1 | 0.4 | 44.3 |
| 600.0 | 599.98 | 0.81 | 0.66 | 1.0 | 39.1 | 0.5 | 52.5 |
| 610.0 | 609.98 | 0.83 | 0.70 | 1.1 | 40.0 | 0.2 | 164.4 |
| 620.0 | 619.98 | 0.78 | 0.72 | 1.1 | 42.5 | 0.4 | 141.5 |
| 630.0 | 629.98 | 0.73 | 0.77 | 1.1 | 46.4 | 0.4 | 138.7 |
| 640.0 | 639.98 | 0.70 | 0.86 | 1.1 | 50.9 | 0.6 | 106.2 |
| 650.0 | 649.98 | 0.67 | 0.94 | 1.2 | 54.7 | 0.5 | 108.2 |
| 660.0 | 659.98 | 0.66 | 1.04 | 1.2 | 57.8 | 0.7 | 72.1 |
| 670.0 | 669.98 | 0.69 | 1.13 | 1.3 | 58.6 | 0.5 | 49.3 |
| 680.0 | 679.98 | 0.76 | 1.19 | 1.4 | 57.5 | 0.5 | 46.1 |
| 690.0 | 689.97 | 0.76 | 1.21 | 1.4 | 57.8 | 0.3 | 168.1 |
| 700.0 | 699.97 | 0.73 | 1.27 | 1.5 | 60.3 | 0.6 | 97.9 |
| 710.0 | 709.97 | 0.74 | 1.38 | 1.6 | 61.8 | 0.6 | 75.8 |
| 720.0 | 719.97 | 0.80 | 1.45 | 1.7 | 61.1 | 0.7 | 43.1 |
| 730.0 | 729.97 | 0.85 | 1.47 | 1.7 | 59.9 | 0.2 | 52.9 |
| 740.0 | 739.97 | 0.83 | 1.51 | 1.7 | 61.2 | 0.3 | 142.6 |
| 750.0 | 749.97 | 0.79 | 1.55 | 1.7 | 62.9 | 0.6 | 77.1 |
| 760.0 | 759.97 | 0.86 | 1.62 | 1.8 | 62.0 | 0.5 | 31.2 |
| 770.0 | 769.97 | 0.93 | 1.67 | 1.9 | 60.7 | 0.5 | 27.0 |
| 780.0 | 779.97 | 0.99 | 1.69 | 2.0 | 59.6 | 0.3 | 24.2 |
| 790.0 | 789.97 | 1.01 | 1.71 | 2.0 | 59.3 | 0.1 | 107.3 |
| 800.0 | 799.97 | 0.98 | 1.75 | 2.0 | 60.6 | 0.5 | 85.3 |
| 810.0 | 809.97 | 1.03 | 1.83 | 2.1 | 60.7 | 0.5 | 40.8 |
| 820.0 | 819.97 | 1.11 | 1.88 | 2.2 | 59.4 | 0.5 | 24.3 |
| 830.0 | 829.97 | 1.19 | 1.91 | 2.2 | 58.1 | 0.4 | 21.9 |
| 840.0 | 839.97 | 1.26 | 1.94 | 2.3 | 57.0 | 0.1 | 16.4 |
| 850.0 | 849.97 | 1.24 | 1.98 | 2.3 | 57.9 | 0.4 | 109.5 |
| 860.0 | 859.97 | 1.21 | 2.02 | 2.4 | 59.1 | 0.4 | 107.0 |
| 870.0 | 869.97 | 1.23 | 2.11 | 2.4 | 59.8 | 0.3 | 103.3 |
| 880.0 | 879.97 | 1.24 | 2.18 | 2.5 | 60.4 | 0.4 | 78.1 |
| 890.0 | 889.97 | 1.29 | 2.25 | 2.6 | 60.2 | 0.5 | 34.3 |
| 900.0 | 899.97 | 1.36 | 2.27 | 2.6 | 59.1 | 0.4 | 11.3 |
| 910.0 | 909.97 | 1.43 | 2.28 | 2.7 | 57.8 | 0.3 | 339.5 |
| 920.0 | 919.97 | 1.46 | 2.25 | 2.7 | 57.0 | 0.2 | 260.6 |
| 930.0 | 929.97 | 1.49 | 2.21 | 2.7 | 56.1 | 0.3 | 274.5 |
| 940.0 | 939.97 | 1.52 | 2.17 | 2.7 | 55.1 | 0.3 | 296.5 |
| 950.0 | 949.97 | 1.50 | 2.09 | 2.6 | 54.2 | 1.1 | 243.1 |
| 960.0 | 959.96 | 1.34 | 1.86 | 2.3 | 54.1 | 2.0 | 232.5 |
| 970.0 | 969.95 | 1.04 | 1.52 | 1.8 | 55.8 | 3.1 | 225.7 |
| 980.0 | 979.93 | 0.57 | 1.09 | 1.2 | 62.3 | 4.2 | 221.7 |
| 990.0 | 989.90 | -0.01 | 0.56 | 0.6 | 90.8 | 5.2 | 212.3 |
| 1000.0 | 999.86 | -0.67 | -0.12 | 0.7 | 189.7 | 5.9 | 224.8 |
| 1010.0 | 1009.80 | -1.39 | -0.91 | 1.7 | 213.2 | 6.4 | 231.8 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | 0.57 | 1.09 | 1.2 | 62.3 | 4.2 | 221.7 |
| 990.0 | 989.90 | -0.01 | 0.56 | 0.6 | 90.8 | 5.2 | 212.3 |
| 1000.0 | 999.86 | -0.67 | -0.12 | 0.7 | 189.7 | 5.9 | 224.8 |
| 1010.0 | 1009.80 | -1.39 | -0.91 | 1.7 | 213.2 | 6.4 | 231.8 |
| 1020.0 | 1019.73 | -2.04 | -1.82 | 2.7 | 221.7 | 6.6 | 239.7 |
| 1030.0 | 1029.66 | -2.62 | -2.89 | 3.9 | 227.9 | 7.4 | 243.9 |
| 1040.0 | 1039.57 | -3.18 | -4.08 | 5.2 | 232.1 | 7.8 | 254.1 |
| 1050.0 | 1049.47 | -3.76 | -5.41 | 6.6 | 235.2 | 8.9 | 242.3 |
| 1060.0 | 1059.33 | -4.43 | -6.94 | 8.2 | 237.4 | 9.9 | 248.0 |
| 1070.0 | 1069.17 | -5.10 | -8.57 | 10.0 | 239.2 | 10.5 | 250.8 |
| 1080.0 | 1079.00 | -5.77 | -10.28 | 11.8 | 240.7 | 10.4 | 249.9 |
| 1090.0 | 1088.82 | -6.32 | -12.04 | 13.6 | 242.3 | 11.0 | 253.5 |
| 1100.0 | 1098.64 | -6.84 | -13.87 | 15.5 | 243.8 | 10.9 | 251.4 |
| 1110.0 | 1108.46 | -7.32 | -15.68 | 17.3 | 245.0 | 10.8 | 253.4 |
| 1120.0 | 1118.28 | -7.77 | -17.53 | 19.2 | 246.1 | 11.0 | 252.9 |
| 1130.0 | 1128.10 | -8.31 | -19.35 | 21.1 | 246.8 | 10.9 | 250.4 |
| 1140.0 | 1137.92 | -9.16 | -20.97 | 22.9 | 246.4 | 10.3 | 214.4 |
| 1150.0 | 1147.77 | -10.33 | -22.28 | 24.6 | 245.1 | 10.0 | 227.8 |
| 1160.0 | 1157.61 | -11.31 | -23.73 | 26.3 | 244.5 | 10.1 | 241.3 |
| 1170.0 | 1167.46 | -12.20 | -25.23 | 28.0 | 244.2 | 9.9 | 239.0 |
| 1180.0 | 1177.30 | -12.98 | -26.81 | 29.8 | 244.2 | 10.2 | 249.0 |
| 1190.0 | 1187.14 | -13.41 | -28.53 | 31.5 | 244.8 | 10.4 | 267.8 |
| 1200.0 | 1197.00 | -14.52 | -29.78 | 33.1 | 244.0 | 9.6 | 228.9 |
| 1210.0 | 1206.86 | -15.62 | -31.02 | 34.7 | 243.3 | 9.4 | 231.6 |
| 1220.0 | 1216.72 | -16.63 | -32.31 | 36.3 | 242.8 | 9.9 | 238.8 |
| 1230.0 | 1226.58 | -17.56 | -33.73 | 38.0 | 242.5 | 9.8 | 240.7 |
| 1240.0 | 1236.43 | -18.35 | -35.24 | 39.7 | 242.5 | 9.8 | 243.9 |
| 1250.0 | 1246.28 | -18.93 | -36.87 | 41.4 | 242.8 | 10.2 | 255.4 |
| 1260.0 | 1256.13 | -19.84 | -38.26 | 43.1 | 242.6 | 9.6 | 228.6 |
| 1270.0 | 1265.99 | -20.82 | -39.59 | 44.7 | 242.3 | 9.8 | 239.1 |
| 1280.0 | 1275.84 | -21.60 | -41.10 | 46.4 | 242.3 | 9.9 | 245.4 |
| 1290.0 | 1285.69 | -22.10 | -42.77 | 48.1 | 242.7 | 10.3 | 254.5 |
| 1300.0 | 1295.54 | -23.15 | -44.04 | 49.8 | 242.3 | 9.8 | 233.5 |
| 1310.0 | 1305.40 | -24.07 | -45.47 | 51.5 | 242.1 | 9.9 | 240.0 |
| 1320.0 | 1315.25 | -24.92 | -46.98 | 53.2 | 242.1 | 9.9 | 240.6 |
| [illegible].0 | 1325.09 | -25.75 | -48.50 | 54.9 | 242.0 | 10.0 | 241.9 |
| 1340.0 | 1334.94 | -26.47 | -50.10 | 56.7 | 242.2 | 10.3 | 252.5 |
| 1350.0 | 1344.78 | -27.42 | -51.50 | 58.3 | 242.0 | 9.7 | 231.9 |
| 1360.0 | 1354.64 | -28.41 | -52.89 | 60.0 | 241.8 | 10.1 | 238.7 |
| 1370.0 | 1364.48 | -29.25 | -54.44 | 61.8 | 241.8 | 10.3 | 241.0 |
| 1380.0 | 1374.32 | -29.86 | -56.11 | 63.6 | 242.0 | 10.4 | 254.7 |
| 1390.0 | 1384.16 | -30.93 | -57.50 | 65.3 | 241.7 | 9.9 | 211.4 |
| 1400.0 | 1394.00 | -32.13 | -58.76 | 67.0 | 241.3 | 10.2 | 249.2 |
| 1410.0 | 1403.85 | -33.17 | -60.16 | 68.7 | 241.1 | 8.9 | 232.9 |
| 1420.0 | 1413.69 | -34.11 | -61.68 | 70.5 | 241.1 | 10.4 | 239.2 |
| 1430.0 | 1423.53 | -34.98 | -63.22 | 72.3 | 241.0 | 10.2 | 240.1 |
| 1440.0 | 1433.37 | -35.90 | -64.71 | 74.0 | 241.0 | 10.0 | 237.7 |
| 1450.0 | 1443.22 | -36.84 | -66.17 | 75.7 | 240.9 | 10.0 | 237.4 |
| 1460.0 | 1453.07 | -37.74 | -67.66 | 77.5 | 240.8 | 10.0 | 239.4 |
| 1470.0 | 1462.92 | -38.62 | -69.15 | 79.2 | 240.8 | 10.1 | 240.3 |
| 1480.0 | 1472.76 | -39.23 | -70.81 | 80.9 | 241.0 | 10.7 | 251.9 |
| 1490.0 | 1482.60 | -40.37 | -72.12 | 82.7 | 240.8 | 9.3 | 217.3 |
| 1500.0 | 1492.45 | -41.43 | -73.47 | 84.4 | 240.6 | 10.0 | 234.4 |
| 1510.0 | 1502.29 | -42.37 | -74.94 | 86.1 | 240.5 | 10.2 | 239.1 |
| 1520.0 | 1512.12 | -43.05 | -76.63 | 87.9 | 240.7 | 10.7 | 229.5 |
| 1530.0 | 1521.96 | -44.32 | -77.88 | 89.6 | 240.4 | 10.1 | 215.6 |
| 1540.0 | 1531.81 | -45.57 | -79.09 | 91.3 | 240.1 | 10.0 | 225.0 |
| 1550.0 | 1541.65 | -46.69 | -80.44 | 93.0 | 239.9 | 10.1 | 231.4 |
| 1560.0 | 1551.49 | -47.75 | -81.87 | 94.8 | 239.7 | 10.5 | 235.5 |
| 1570.0 | 1561.33 | -48.73 | -83.38 | 96.6 | 239.7 | 10.4 | 238.1 |
| 1580.0 | 1571.16 | -49.51 | -85.04 | 98.4 | 239.8 | 10.8 | 268.4 |
| 1590.0 | 1580.98 | -50.44 | -86.62 | 100.2 | 239.8 | 10.6 | 229.9 |
| 1600.0 | 1590.81 | -51.80 | -87.84 | 102.0 | 239.5 | 10.2 | 237.9 |
| 1610.0 | 1600.65 | -53.06 | -89.11 | 103.7 | 239.2 | 10.4 | 230.6 |
| 1620.0 | 1610.49 | -54.17 | -90.53 | 105.5 | 239.1 | 10.3 | 242.2 |
| 1630.0 | 1620.31 | -54.90 | -92.24 | 107.3 | 239.2 | 11.1 | 246.5 |
| 1640.0 | 1630.13 | -56.00 | -93.78 | 109.2 | 239.2 | 10.9 | 224.3 |
| 1650.0 | 1639.95 | -57.33 | -95.06 | 111.0 | 238.9 | 10.5 | 225.2 |
| 1660.0 | 1649.78 | -58.56 | -96.40 | 112.8 | 238.7 | 10.6 | 232.5 |
| 1670.0 | 1659.61 | -59.58 | -97.94 | 114.6 | 238.7 | 10.9 | 239.0 |
| 1680.0 | 1669.43 | -60.26 | -99.69 | 116.5 | 238.8 | 11.2 | 247.1 |
| 1690.0 | 1679.24 | -61.20 | -101.37 | 118.4 | 238.9 | 11.0 | 233.6 |
| 1700.0 | 1689.06 | -62.43 | -102.82 | 120.3 | 238.7 | 11.0 | 224.8 |
| 1710.0 | 1698.88 | -63.81 | -104.07 | 122.1 | 238.5 | 10.6 | 224.3 |
| 1720.0 | 1708.71 | -65.10 | -105.41 | 123.9 | 238.3 | 10.8 | 228.8 |
| 1730.0 | 1718.53 | -66.35 | -106.80 | 125.7 | 238.1 | 10.8 | 229.5 |
| 1740.0 | 1728.35 | -67.50 | -108.28 | 127.6 | 238.1 | 10.9 | 234.0 |
| 1750.0 | 1738.17 | -68.44 | -109.96 | 129.5 | 238.1 | 11.4 | 254.7 |
| 1760.0 | 1747.96 | -69.06 | -111.86 | 131.5 | 238.3 | 11.8 | 243.0 |
| 1770.0 | 1757.76 | -70.27 | -113.43 | 133.4 | 238.2 | 11.3 | 218.9 |
| 1780.0 | 1767.58 | -71.62 | -114.75 | 135.3 | 238.0 | 10.8 | 227.0 |
| 1790.0 | 1777.39 | -72.75 | -116.33 | 137.2 | 238.0 | 11.3 | 238.8 |
| 1800.0 | 1787.19 | -73.73 | -118.03 | 139.2 | 238.0 | 11.4 | 241.9 |
| 1810.0 | 1796.98 | -74.41 | -119.93 | 141.1 | 238.2 | 11.9 | 250.1 |
| 1820.0 | 1806.77 | -75.40 | -121.70 | 143.2 | 238.2 | 11.9 | 222.8 |
| 1830.0 | 1816.57 | -76.70 | -123.13 | 145.1 | 238.1 | 11.5 | 242.4 |
| 1840.0 | 1826.36 | -77.59 | -124.96 | 147.1 | 238.2 | 12.0 | 250.6 |
| 1850.0 | 1836.15 | -78.28 | -126.89 | 149.1 | 238.3 | 11.9 | 223.5 |
| 1860.0 | 1845.94 | -79.76 | -128.24 | 151.1 | 238.1 | 11.4 | 228.9 |
| 1870.0 | 1855.74 | -80.99 | -129.82 | 153.0 | 238.0 | 11.7 | 233.8 |
| 1880.0 | 1865.53 | -82.06 | -131.54 | 155.0 | 238.0 | 11.7 | 240.4 |
| 1890.0 | 1875.32 | -83.06 | -133.32 | 157.1 | 238.1 | 11.8 | 243.8 |
| 1894.2 | 1879.43 | -83.36 | -134.13 | 157.9 | 238.1 | 12.0 | 254.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1790.0 | 1777.39 | -72.75 | -116.33 | 137.2 | 238.0 | 11.3 | 238.0 |
| 1800.0 | 1787.19 | -73.73 | -118.03 | 139.2 | 238.0 | 11.4 | 241.9 |
| 1810.0 | 1796.98 | -74.41 | -119.93 | 141.1 | 238.2 | 11.9 | 250.1 |
| 1820.0 | 1806.77 | -75.40 | -121.70 | 143.2 | 238.2 | 11.9 | 222.8 |
| 1830.0 | 1816.57 | -76.70 | -123.13 | 145.1 | 238.1 | 11.5 | 242.4 |
| 1840.0 | 1826.36 | -77.59 | -124.96 | 147.1 | 238.2 | 12.0 | 250.6 |
| 1850.0 | 1836.15 | -78.28 | -126.89 | 149.1 | 238.3 | 11.9 | 223.5 |
| 1860.0 | 1845.94 | -79.76 | -128.24 | 151.2 | 238.1 | 11.4 | 228.9 |
| 1870.0 | 1855.74 | -80.99 | -129.82 | 153.0 | 238.0 | 11.7 | 233.8 |
| 1880.0 | 1865.53 | -82.06 | -131.54 | 155.0 | 238.0 | 11.7 | 240.4 |
| 1890.0 | 1875.32 | -83.06 | -133.32 | 157.1 | 238.1 | 11.8 | 243.8 |
| 1894.2 | 1879.43 | -83.36 | -134.13 | 157.9 | 238.1 | 12.0 | 254.1 |

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | Cemented To Surface No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22” | 22.3’ | 24” | | | X | 1/12/07 | |
| Surface | 16” | 316’ | 20” | 307 | | X | 1/16/07 | Basket @ 160’ |
| Water Protection | 13 3/8” | 548.1 | 15 3/8” | 236 | X | | 1/17/07 | Basket @ 338’ |
| Coal Protection | | | | | | | | |
| Other Casing And Tubing Left In Well | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY: CNX** **HOLE T-38D**

**LOCATION:** **DRILL RIG #: 19**

**DATE STARTED: 01/12/07** **DATED COMPLETED: 01/23/07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | THICKNESS | | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 22.30 | 22.30 | OVERBURDEN |
| 22.30 | 62.90 | 40.60 | SAND |
| 62.90 | 92.35 | 29.45 | SANDY SHALE/SAND |
| 92.35 | 122.65 | 30.30 | SAND/SANDY SHALE/SAND |
| 122.65 | 152.05 | 29.40 | SAND |
| 152.05 | 181.00 | 28.95 | SAND/SANDY SHALE/SAND |
| 181.00 | 210.00 | 29.00 | SAND |
| 210.00 | 241.00 | 31.00 | SAND/SANDY SHALE |
| 241.00 | 272.15 | 31.15 | SANDY SHALE/SAND/SANDY SHALE |
| 272.15 | 303.00 | 30.85 | SANDY SHALE/SAND |
| 303.00 | 318.00 | 15.00 | SANDY SHALE/COAL/SANDY SHALE |
| 318.00 | 334.20 | 16.20 | SANDY SHALE/SAND |
| 334.20 | 365.05 | 30.85 | SAND/SANDY SHALE |
| 365.05 | 396.20 | 31.15 | SANDY SHALE/COAL/SAND |
| 396.20 | 427.20 | 31.00 | SANDY SHALE/SAND/COAL |
| 427.20 | 457.35 | 30.15 | SAND/SANDY SHALE |
| 457.35 | 484.30 | 26.95 | SAND |
| 484.30 | 515.05 | 30.75 | SAND/SANDY SHALE/COAL |
| 515.05 | 546.25 | 31.20 | SAND |
| 546.25 | 577.45 | 31.20 | SAND/SANDY SHALE |
| 577.45 | 595.05 | 17.60 | SANDY SHALE/SAND |
| 595.05 | 625.95 | 30.90 | SAND/SANDY SHALE/SAND |
| 625.95 | 688.25 | 62.30 | SAND |
| 688.25 | 717.85 | 29.60 | SAND/SANDY SHALE/SAND |
| 717.85 | 749.65 | 31.80 | SAND/SANDY SHALE |
| 749.65 | 781.55 | 31.90 | SANDY SHALE |
| 781.55 | 812.50 | 30.95 | SANDY SHALE |
| 812.50 | 843.10 | 30.60 | SANDY SHALE/COAL/SANDY SHALE |
| 843.10 | 847.30 | 4.20 | SANDY SHALE/SAND/SANDY SHALE |
| 847.30 | 906.05 | 58.75 | SANDY SHALE/SAND |
| 906.05 | 937.80 | 31.75 | SAND/SANDY SHALE /COAL /SAND |
| 937.80 | 969.80 | 32.00 | SAND/SANDY SHALE |
| 969.80 | 1001.70 | 31.90 | SANDY SHALE/SAND |
| 1001.70 | 1033.40 | 31.70 | SAND/SANDY SHALE |
| 1033.40 | 1065.15 | 31.75 | SANDY SHALE/SAND |
| 1065.15 | 1085.15 | 20.00 | SAND/COAL/SANDY SHALE |
| 1085.15 | 1115.20 | 30.05 | SANDY SHALE/SAND |
| 1115.20 | 1146.35 | 31.15 | SAND/COAL/SANDY SHALE |
| 1146.35 | 1175.85 | 29.50 | SANDY SHALE/SAND |
| 1175.85 | 1206.05 | 30.20 | SANDY SHALE |
| 1206.05 | 1236.90 | 30.85 | SANDY SHALE/SAND/SANDY SHALE |
| 1236.90 | 1268.55 | 31.65 | SANDY SHALE/SAND |

| | | | |
|---|---|---|---|
| 1268.55 | 1300.70 | 32.15 | SAND/SANDY SHALE/COAL/SAND |
| 1300.70 | 1330.35 | 29.65 | SAND/SANDY SHALE/SAND |
| 1330.35 | 1362.10 | 31.75 | SANDY SHALE/SAND |
| 1362.10 | 1393 | 30.90 | SAND/SANDY SHALE |
| 1393 | 1425 | 32 | SANDY SHALE/SAND/SANDY SHALE |
| 1425 | 1456.35 | 31.35 | SANDY SHALE |
| 1456.35 | 1488.35 | 32.00 | SANDY SHALE/COAL/SANDY SHALE |
| 1488.35 | 1519.55 | 31.20 | SANDY SHALE/SAND |
| 1519.55 | 1612.40 | 92.85 | SAND/SANDY SHALE/SAND |
| 1612.40 | 1641.95 | 29.55 | SAND/SANDY SHALE |
| 1641.95 | 1673.85 | 31.90 | SAND/COAL/SANDY SHALE |
| 1673.85 | 1705.05 | 31.20 | SANDY SHALE/COAL/SAND |
| 1705.05 | 1768.35 | 63.30 | SAND/SANDY SHALE/SAND |
| 1768.35 | 1799.20 | 30.85 | SANDY SHALE/SAND |
| 1799.20 | 1830.80 | 31.60 | SAND/SANDY SHALE/SAND |
| 1830.80 | 1861.75 | 30.95 | SAND |
| 1861.75 | 1892.55 | 30.80 | SAND/SANDY SHALE |

1892.55 FT. TOTAL DEPTH
22.30 FT. OF 22” CASING
316.00 FT. OF 16” CASING
548.10 FT. OF 13 3/8” CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 431
**Company:** CNX Gas Company LLC
**File Number:** BU-3190
**Operations Name:** CBM T38E W/PL
**Operation Type:** Coalbed/Pipeline
**Completion Report Type:** Original

# COMPLETION REPORT (DGO-GO-15)

**Well Type:** Coalbed/Pipeline **Date Well Completed:** 2/14/2007
**Driller's Total Depth:** 1,635 **Log's Total Depth:** 1,627

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

☐ Stimulated ☐ Not Stimulated ☑ Gob

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 6/22/2007 2:09:08 PM *(Company)*

By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 6/22/2007

Status: Inspr Approved Date: 6/25/2007

Final PDF Date: 7/3/2007

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 469 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3190 |
| **Operations Name:** | CBM T38E W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 2/2/2007
Drilling Contractor: Noah Horn
Date drilling completed: 2/14/2007
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,635
Log Total Depth (feet): 1,627
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,013,610
Final Plat State Plane X: 1,013,616
Permitted State Plane Y: 330,289
Final Plat State Plane Y: 330,291
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T38E Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T38E Exhibit A.doc |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | T38E Gas Show.doc |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper Gamma Density Temp Deviaton

Did logs disclose vertical locations of a coal seam? ☑ Yes ☐ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T38E Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | T38E Casing.doc |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | T38E Drill Data.doc |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/22/2007 *(Company)*

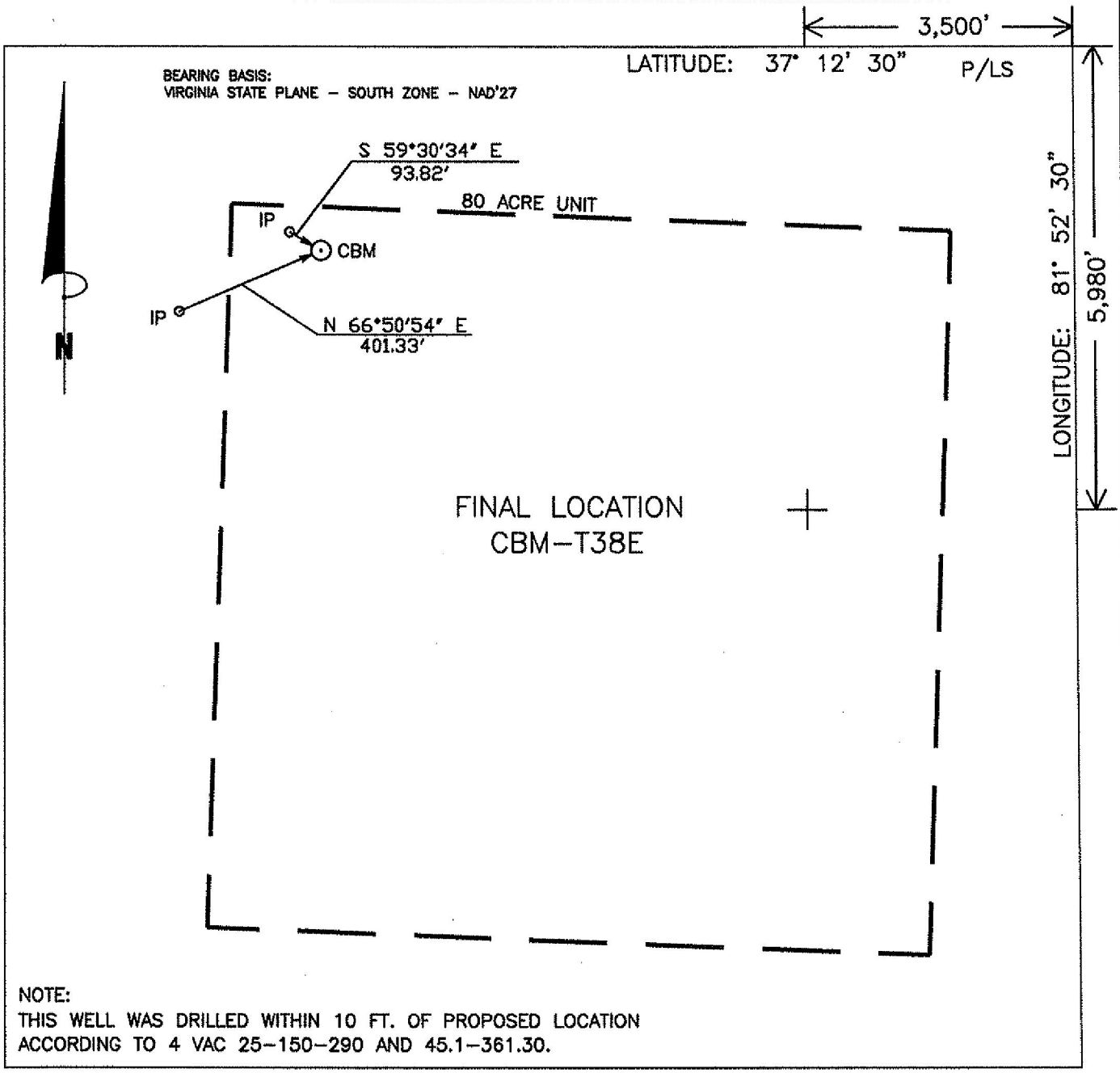
Signed By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 6/22/2007

Status: Inspr Approved Date: 6/25/2007

Final PDF Date: 7/2/2007




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

# WELL LOCATION PLAT

T38EFNL
2N25/132–556/55

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T38E

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 330,291.00 E 1,013,616.39

ELEVATION: 2100.39' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 02–21–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional)

D.R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No.
8540
2/21/07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM T38E
SURFACE ELEV: 2100.39  EASTING: 1013616.39  NORTHING:  330291.00

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA3 | 36.90 | 38.40 | 2063.49 | 1.50 | |
| | 38.40 | 122.10 | 2061.99 | 83.70 | |
| JB1 | 122.10 | 125.00 | 1978.29 | 2.90 | |
| | 125.00 | 171.00 | 1975.39 | 46.00 | |
| JB3 | 171.00 | 173.80 | 1929.39 | 2.80 | |
| | 173.80 | 229.50 | 1926.59 | 55.70 | |
| COAL | 229.50 | 230.00 | 1870.89 | 0.50 | |
| | 230.00 | 256.00 | 1870.39 | 26.00 | |
| T1 | 256.00 | 257.90 | 1844.39 | 1.90 | |
| | 257.90 | 349.70 | 1842.49 | 91.80 | |
| *COAL | 349.70 | 350.70 | 1750.69 | 1.00 | |
| | 350.70 | 369.70 | 1749.69 | 19.00 | |
| *US1 | 369.70 | 370.40 | 1730.69 | 0.70 | |
| | 370.40 | 470.30 | 1729.99 | 99.90 | |
| *US2 | 470.30 | 471.50 | 1630.09 | 1.20 | |
| | 471.50 | 653.50 | 1628.89 | 182.00 | |
| *SE1 | 653.50 | 654.90 | 1446.89 | 1.40 | |
| | 654.90 | 686.40 | 1445.49 | 31.50 | |
| *SE2 | 686.40 | 688.90 | 1413.99 | 2.50 | |
| | 688.90 | 724.90 | 1411.49 | 36.00 | |
| *LS1 | 724.90 | 727.10 | 1375.49 | 2.20 | |
| | 727.10 | 786.40 | 1373.29 | 59.30 | |
| *UH1 | 786.40 | 787.90 | 1313.99 | 1.50 | |
| | 787.90 | 840.80 | 1312.49 | 52.90 | |
| *UH2 | 840.80 | 842.30 | 1259.59 | 1.50 | |
| | 842.30 | 898.90 | 1258.09 | 56.60 | |
| *MH1 | 898.90 | 900.20 | 1201.49 | 1.30 | |
| | 900.20 | 963.20 | 1200.19 | 63.00 | |
| *MH2 | 963.20 | 964.10 | 1137.19 | 0.90 | |
| | 964.10 | 1007.00 | 1136.29 | 42.90 | |
| *P11 | 1007.00 | 1009.60 | 1093.39 | 2.60 | |
| | 1009.60 | 1033.60 | 1090.79 | 24.00 | |
| *P10 | 1033.60 | 1034.70 | 1066.79 | 1.10 | |
| | 1034.70 | 1093.30 | 1065.69 | 58.60 | |
| *LH2 | 1093.30 | 1094.00 | 1007.09 | 0.70 | |
| | 1094.00 | 1168.50 | 1006.39 | 74.50 | |
| *P91 | 1168.50 | 1170.00 | 931.89 | 1.50 | |
| | 1170.00 | 1195.20 | 930.39 | 25.20 | |
| *P92 | 1195.20 | 1196.10 | 905.19 | 0.90 | |
| | 1196.10 | 1232.90 | 904.29 | 36.80 | |
| *P81 | 1232.90 | 1234.50 | 867.49 | 1.60 | |
| | 1234.50 | 1435.30 | 865.89 | 200.80 | |
| *P61 | 1435.30 | 1437.30 | 665.09 | 2.00 | |
| | 1437.30 | 1466.40 | 663.09 | 29.10 | |
| *COAL | 1466.40 | 1467.40 | 633.99 | 1.00 | |
| | 1467.40 | 1477.10 | 632.99 | 9.70 | |
| *P51 | 1477.10 | 1480.00 | 623.29 | 2.90 | |

| | | | | |
|---|---|---|---|---|
| | 1480.00 | 1580.40 | 620.39 | 100.40 |
| *P41 | 1580.40 | 1581.50 | 519.99 | 1.10 |
| | 1581.50 | 1626.96 | 518.89 | 45.46 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\T38E.CMP
DATE: 03/26/07

# Oil & Gas Show

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Lee/Norton | 350 | 1234 | 884 | | | |
| Pocahontas | 1435 | 1581 | 146 | | | |
| Total | | | | NOT TAKEN | | |
| | | | | | | |

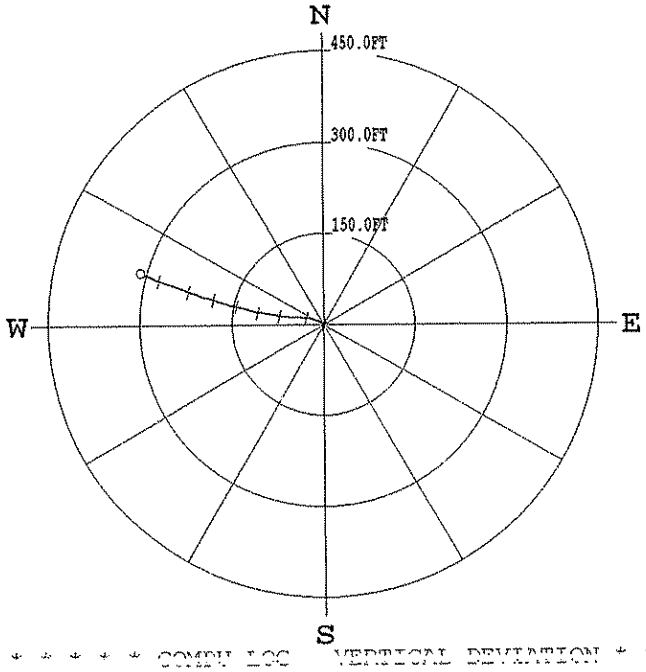
PLAN VIEW

# COMPU-LOG DEVIATION

CLIENT: CNX Gas
LOCATION: Laurel
HOLE ID: 07-CNX-T-38-E
DATE OF LOG: 02/14/07
PROBE: 0019C 732

MAG DECL: -6.9

SCALE: 150 FT/IN
TRUE DEPTH: 1586.43 FT
AZIMUTH: 286.0
DISTANCE: 309.8 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG VERTICAL DEVIATION * * * * * * *

CLIENT : CNX Gas
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900

HOLE ID. : 07-CNX-T-38-E
DATE OF LOG : 02/14/07
PROBE : 0019C , 732
DEPTH UNITS : FEET

LOG: 07-CNX-T-38-E_02-14-07_00-34_0019C_.02_-9.17_1630.21_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | 0.47 | -0.32 | 0.6 | 326.1 | 1.6 | 291.7 |
| 60.0 | 59.99 | 0.53 | -0.58 | 0.8 | 312.2 | 1.6 | 278.3 |
| 70.0 | 69.98 | 0.56 | -0.85 | 1.0 | 303.6 | 1.5 | 275.1 |
| 80.0 | 79.98 | 0.47 | -1.07 | 1.2 | 293.7 | 1.5 | 195.8 |
| 90.0 | 89.98 | 0.22 | -1.03 | 1.1 | 282.1 | 1.5 | 150.2 |
| 100.0 | 99.97 | 0.03 | -0.84 | 0.8 | 271.9 | 1.5 | 121.1 |
| 110.0 | 109.97 | -0.10 | -0.60 | 0.6 | 260.8 | 1.5 | 111.5 |
| 120.0 | 119.97 | -0.18 | -0.32 | 0.4 | 241.0 | 1.7 | 102.0 |
| 130.0 | 129.96 | -0.18 | -0.03 | 0.2 | 189.2 | 1.7 | 84.2 |
| 140.0 | 139.96 | -0.10 | 0.25 | 0.3 | 112.1 | 1.6 | 63.1 |
| 150.0 | 149.95 | 0.08 | 0.45 | 0.5 | 80.5 | 1.6 | 33.9 |
| 160.0 | 159.95 | 0.31 | 0.52 | 0.6 | 59.1 | 1.0 | 0.8 |
| 170.0 | 169.95 | 0.52 | 0.45 | 0.7 | 41.2 | 1.4 | 317.4 |
| 180.0 | 179.95 | 0.64 | 0.27 | 0.7 | 22.5 | 1.2 | 286.8 |
| 190.0 | 189.94 | 0.62 | 0.04 | 0.6 | 3.5 | 1.4 | 254.1 |
| 200.0 | 199.94 | 0.54 | -0.20 | 0.6 | 340.1 | 1.4 | 229.0 |
| 210.0 | 209.94 | 0.35 | -0.35 | 0.5 | 315.0 | 1.4 | 213.9 |
| 220.0 | 219.93 | 0.11 | -0.45 | 0.5 | 283.9 | 1.6 | 187.0 |
| 230.0 | 229.93 | -0.16 | -0.47 | 0.5 | 250.8 | 1.6 | 177.8 |
| 240.0 | 239.92 | -0.45 | -0.41 | 0.6 | 222.2 | 2.2 | 156.6 |
| 250.0 | 249.92 | -0.71 | -0.23 | 0.7 | 198.2 | 1.8 | 140.3 |
| 260.0 | 259.91 | -0.95 | -0.01 | 1.0 | 180.4 | 1.9 | 125.1 |
| 270.0 | 269.91 | -1.12 | 0.32 | 1.2 | 164.3 | 2.2 | 114.2 |
| 280.0 | 279.90 | -1.26 | 0.66 | 1.4 | 152.4 | 2.4 | 118.0 |
| 290.0 | 289.89 | -1.37 | 1.01 | 1.7 | 143.8 | 1.8 | 75.3 |
| 300.0 | 299.89 | -1.25 | 1.24 | 1.8 | 135.2 | 1.2 | 18.4 |
| 310.0 | 309.89 | -1.11 | 1.19 | 1.6 | 133.0 | 0.9 | 309.2 |
| 320.0 | 319.89 | -1.08 | 1.07 | 1.5 | 135.2 | 1.5 | 268.1 |
| 330.0 | 329.89 | -1.09 | 0.92 | 1.4 | 139.9 | 0.8 | 271.0 |
| 340.0 | 339.88 | -1.08 | 0.75 | 1.3 | 145.1 | 0.8 | 292.4 |
| 350.0 | 349.88 | -0.90 | 0.69 | 1.1 | 142.4 | 1.3 | 352.2 |
| 360.0 | 359.88 | -0.69 | 0.69 | 1.0 | 135.0 | 1.0 | 333.3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 290.0 | 289.89 | -1.37 | 1.01 | 1.7 | 143.8 | 1.8 | 75.5 |
| 300.0 | 299.89 | -1.25 | 1.24 | 1.8 | 135.2 | 1.2 | 18.4 |
| 310.0 | 309.89 | -1.11 | 1.19 | 1.6 | 133.0 | 0.9 | 309.2 |
| 320.0 | 319.89 | -1.08 | 1.07 | 1.5 | 135.2 | 1.5 | 268.1 |
| 330.0 | 329.89 | -1.09 | 0.92 | 1.4 | 139.9 | 0.8 | 271.0 |
| 340.0 | 339.88 | -1.08 | 0.75 | 1.3 | 145.1 | 0.8 | 292.4 |
| 350.0 | 349.88 | -0.90 | 0.69 | 1.1 | 142.4 | 1.3 | 352.2 |
| 360.0 | 359.88 | -0.69 | 0.69 | 1.0 | 135.0 | 1.0 | 333.3 |
| 370.0 | 369.88 | -0.49 | 0.61 | 0.8 | 128.7 | 1.0 | 302.9 |
| 380.0 | 379.87 | -0.40 | 0.47 | 0.6 | 130.4 | 0.9 | 291.6 |
| 390.0 | 389.87 | -0.30 | 0.35 | 0.5 | 130.3 | 1.1 | 333.7 |
| 400.0 | 399.87 | -0.05 | 0.25 | 0.3 | 102.1 | 1.6 | 329.5 |
| 410.0 | 409.87 | 0.21 | 0.18 | 0.3 | 40.3 | 1.7 | 317.8 |
| 420.0 | 419.86 | 0.45 | 0.01 | 0.4 | 1.6 | 2.1 | 336.3 |
| 430.0 | 429.85 | 0.80 | -0.10 | 0.8 | 353.2 | 2.6 | 335.2 |
| 440.0 | 439.84 | 1.23 | -0.40 | 1.3 | 342.0 | 3.7 | 314.7 |
| 450.0 | 449.81 | 1.67 | -0.95 | 1.9 | 330.2 | 4.9 | 306.6 |
| 460.0 | 459.77 | 2.10 | -1.75 | 2.7 | 320.2 | 6.2 | 299.9 |
| 470.0 | 469.71 | 2.59 | -2.72 | 3.8 | 313.6 | 7.0 | 293.7 |
| 480.0 | 479.63 | 3.11 | -3.87 | 5.0 | 308.8 | 8.1 | 291.5 |
| 490.0 | 489.53 | 3.67 | -5.19 | 6.4 | 305.3 | 8.6 | 291.3 |
| 500.0 | 499.40 | 4.26 | -6.64 | 7.9 | 302.7 | 9.4 | 291.1 |
| 510.0 | 509.26 | 4.86 | -8.26 | 9.6 | 300.5 | 10.4 | 291.0 |
| 520.0 | 519.08 | 5.51 | -10.02 | 11.4 | 298.8 | 11.4 | 289.8 |
| 530.0 | 528.86 | 6.20 | -11.96 | 13.5 | 297.4 | 12.4 | 289.4 |
| 540.0 | 538.61 | 6.95 | -14.06 | 15.7 | 296.3 | 13.0 | 292.8 |
| 550.0 | 548.36 | 7.69 | -16.15 | 17.9 | 295.5 | 13.9 | 288.8 |
| 560.0 | 558.06 | 8.43 | -18.45 | 20.3 | 294.6 | 14.0 | 288.7 |
| 570.0 | 567.75 | 9.25 | -20.80 | 22.8 | 294.0 | 14.9 | 292.4 |
| 580.0 | 577.46 | 9.96 | -23.08 | 25.1 | 293.3 | 13.6 | 285.8 |
| 590.0 | 587.17 | 10.65 | -25.37 | 27.5 | 292.8 | 13.9 | 286.7 |
| 600.0 | 596.87 | 10.92 | -27.77 | 29.8 | 291.5 | 14.6 | 272.6 |
| 610.0 | 606.50 | 10.98 | -30.45 | 32.4 | 289.8 | 16.7 | 273.3 |
| 620.0 | 616.07 | 11.18 | -33.35 | 35.2 | 288.5 | 16.7 | 279.7 |
| 630.0 | 625.67 | 11.24 | -36.13 | 37.8 | 287.3 | 16.5 | 275.2 |
| 640.0 | 635.26 | 11.36 | -38.98 | 40.6 | 286.2 | 16.6 | 272.5 |
| 650.0 | 644.83 | 11.61 | -41.85 | 43.4 | 285.5 | 16.8 | 273.8 |
| 660.0 | 654.42 | 11.79 | -44.68 | 46.2 | 284.8 | 16.8 | 278.8 |
| 670.0 | 664.00 | 11.95 | -47.53 | 49.0 | 284.1 | 16.1 | 271.3 |
| 680.0 | 673.60 | 12.07 | -50.34 | 51.8 | 283.5 | 16.6 | 274.7 |
| 690.0 | 683.19 | 12.21 | -53.16 | 54.5 | 282.9 | 16.6 | 275.9 |
| 700.0 | 692.78 | 12.40 | -55.99 | 57.4 | 282.5 | 15.7 | 270.2 |
| 710.0 | 702.38 | 12.54 | -58.79 | 60.1 | 282.0 | 16.6 | 279.1 |
| 720.0 | 711.97 | 12.73 | -61.59 | 62.9 | 281.7 | 16.5 | 273.4 |
| 730.0 | 721.57 | 12.93 | -64.39 | 65.7 | 281.4 | 16.3 | 275.9 |
| 740.0 | 731.16 | 13.24 | -67.20 | 68.5 | 281.1 | 16.4 | 273.2 |
| 750.0 | 740.76 | 13.42 | -69.99 | 71.3 | 280.9 | 16.1 | 272.1 |
| 760.0 | 750.36 | 13.76 | -72.77 | 74.1 | 280.7 | 15.9 | 283.1 |
| 770.0 | 760.07 | 14.49 | -75.03 | 76.4 | 280.9 | 13.1 | 288.3 |
| 780.0 | 769.81 | 15.19 | -77.18 | 78.7 | 281.1 | 13.1 | 288.1 |
| 790.0 | 779.55 | 15.78 | -79.35 | 80.9 | 281.2 | 12.9 | 280.0 |
| 800.0 | 789.29 | 16.33 | -81.53 | 83.1 | 281.3 | 13.3 | 288.0 |
| 810.0 | 799.03 | 16.80 | -83.77 | 85.4 | 281.3 | 13.4 | 275.3 |
| 820.0 | 808.74 | 16.99 | -86.12 | 87.8 | 281.2 | 13.8 | 273.6 |
| 830.0 | 818.46 | 17.24 | -88.44 | 90.1 | 281.0 | 13.4 | 278.3 |
| 840.0 | 828.20 | 17.71 | -90.69 | 92.4 | 281.1 | 13.2 | 283.8 |
| 850.0 | 837.93 | 18.08 | -92.97 | 94.7 | 281.0 | 13.5 | 279.8 |
| 860.0 | 847.65 | 18.49 | -95.26 | 97.0 | 281.0 | 13.3 | 285.8 |
| 870.0 | 857.38 | 19.06 | -97.49 | 99.3 | 281.1 | 13.4 | 284.3 |
| 880.0 | 867.11 | 19.59 | -99.75 | 101.7 | 281.1 | 13.4 | 281.3 |
| 890.0 | 876.82 | 19.85 | -102.10 | 104.0 | 281.0 | 14.0 | 274.2 |
| 900.0 | 886.52 | 20.04 | -104.54 | 106.4 | 280.9 | 14.6 | 266.7 |
| 910.0 | 896.17 | 20.16 | -107.15 | 109.0 | 280.7 | 15.9 | 274.7 |
| 920.0 | 905.83 | 20.75 | -109.65 | 111.6 | 280.7 | 13.3 | 290.6 |
| 930.0 | 915.57 | 21.31 | -111.82 | 113.8 | 280.8 | 12.9 | 283.5 |
| 940.0 | 925.32 | 21.91 | -113.98 | 116.1 | 280.9 | 12.9 | 281.3 |
| 950.0 | 935.07 | 22.48 | -116.12 | 118.3 | 281.0 | 12.8 | 285.9 |
| 960.0 | 944.82 | 23.04 | -118.27 | 120.5 | 281.0 | 12.9 | 284.5 |
| 970.0 | 954.56 | 23.75 | -120.41 | 122.7 | 281.2 | 13.3 | 290.8 |
| 980.0 | 964.30 | 24.36 | -122.59 | 125.0 | 281.2 | 13.0 | 288.0 |
| 990.0 | 974.04 | 25.03 | -124.74 | 127.2 | 281.3 | 13.1 | 288.3 |
| 1000.0 | 983.78 | 25.70 | -126.90 | 129.5 | 281.4 | 13.1 | 285.7 |
| 1010.0 | 993.52 | 26.32 | -129.08 | 131.7 | 281.5 | 13.2 | 283.4 |
| 1020.0 | 1003.25 | 26.88 | -131.32 | 134.0 | 281.6 | 12.8 | 284.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 970.0 | 954.56 | 23.75 | -120.41 | 122.7 | 281.2 | 13.3 | 290.8 |
| 980.0 | 964.30 | 24.36 | -122.59 | 125.0 | 281.2 | 13.0 | 288.0 |
| 990.0 | 974.04 | 25.03 | -124.74 | 127.2 | 281.3 | 13.1 | 288.3 |
| 1000.0 | 983.78 | 25.70 | -126.90 | 129.5 | 281.4 | 13.1 | 285.7 |
| 1010.0 | 993.52 | 26.32 | -129.08 | 131.7 | 281.5 | 13.2 | 283.4 |
| 1020.0 | 1003.25 | 26.88 | -131.32 | 134.0 | 281.6 | 12.8 | 284.1 |
| 1030.0 | 1012.98 | 27.45 | -133.55 | 136.3 | 281.6 | 13.3 | 282.2 |
| 1040.0 | 1022.71 | 28.02 | -135.79 | 138.7 | 281.7 | 13.4 | 287.3 |
| 1050.0 | 1032.43 | 28.57 | -138.07 | 141.0 | 281.7 | 13.4 | 285.9 |
| 1060.0 | 1042.15 | 29.13 | -140.35 | 143.3 | 281.7 | 13.9 | 281.5 |
| 1070.0 | 1051.87 | 29.72 | -142.63 | 145.7 | 281.8 | 13.6 | 288.4 |
| 1080.0 | 1061.58 | 30.39 | -144.90 | 148.0 | 281.8 | 13.5 | 289.5 |
| 1090.0 | 1071.29 | 31.01 | -147.20 | 150.4 | 281.9 | 13.9 | 284.5 |
| 1100.0 | 1080.98 | 31.43 | -149.65 | 152.9 | 281.9 | 15.8 | 268.4 |
| 1110.0 | 1090.55 | 32.01 | -152.48 | 155.8 | 281.9 | 17.0 | 287.6 |
| 1120.0 | 1100.19 | 33.00 | -154.94 | 158.4 | 282.0 | 14.2 | 293.6 |
| 1130.0 | 1109.89 | 33.78 | -157.23 | 160.8 | 282.1 | 13.6 | 284.8 |
| 1140.0 | 1119.57 | 34.58 | -159.58 | 163.3 | 282.2 | 14.2 | 285.7 |
| 1150.0 | 1129.26 | 35.35 | -161.93 | 165.7 | 282.3 | 14.3 | 288.3 |
| 1160.0 | 1138.95 | 36.06 | -164.30 | 168.2 | 282.4 | 14.4 | 288.7 |
| 1170.0 | 1148.63 | 36.78 | -166.70 | 170.7 | 282.4 | 14.9 | 280.4 |
| 1180.0 | 1158.21 | 37.30 | -169.49 | 173.5 | 282.4 | 17.6 | 283.9 |
| 1190.0 | 1167.75 | 38.09 | -172.40 | 176.6 | 282.5 | 17.8 | 289.5 |
| 1200.0 | 1177.38 | 39.20 | -174.81 | 179.2 | 282.6 | 14.5 | 295.9 |
| 1210.0 | 1187.06 | 40.28 | -177.09 | 181.6 | 282.8 | 14.7 | 294.7 |
| 1220.0 | 1196.74 | 41.25 | -179.41 | 184.1 | 282.9 | 14.5 | 291.4 |
| 1230.0 | 1206.42 | 42.18 | -181.75 | 186.6 | 283.1 | 14.5 | 290.7 |
| 1240.0 | 1216.10 | 43.04 | -184.10 | 189.1 | 283.2 | 14.6 | 290.9 |
| 1250.0 | 1225.76 | 43.76 | -186.57 | 191.6 | 283.2 | 15.2 | 283.4 |
| 1260.0 | 1235.41 | 44.33 | -189.13 | 194.3 | 283.2 | 15.2 | 282.3 |
| 1270.0 | 1245.02 | 44.83 | -191.83 | 197.0 | 283.2 | 16.5 | 279.3 |
| 1280.0 | 1254.61 | 45.31 | -194.64 | 199.8 | 283.1 | 16.6 | 280.2 |
| 1290.0 | 1264.13 | 46.05 | -197.60 | 202.9 | 283.1 | 18.2 | 289.8 |
| 1300.0 | 1273.70 | 47.25 | -200.20 | 205.7 | 283.3 | 15.3 | 297.4 |
| 1310.0 | 1283.35 | 48.42 | -202.57 | 208.3 | 283.4 | 15.4 | 296.5 |
| 1320.0 | 1292.99 | 49.46 | -204.99 | 210.9 | 283.6 | 15.3 | 291.0 |
| 1330.0 | 1302.64 | 50.37 | -207.48 | 213.5 | 283.6 | 15.4 | 290.6 |
| 1340.0 | 1312.27 | 51.29 | -209.98 | 216.2 | 283.7 | 15.5 | 289.8 |
| 1350.0 | 1321.90 | 52.14 | -212.56 | 218.9 | 283.8 | 16.5 | 282.7 |
| 1360.0 | 1331.44 | 52.80 | -215.45 | 221.8 | 283.8 | 18.8 | 293.3 |
| 1370.0 | 1341.02 | 54.03 | -218.04 | 224.6 | 283.9 | 15.8 | 290.5 |
| 1380.0 | 1350.63 | 54.99 | -220.61 | 227.4 | 284.0 | 16.0 | 290.6 |
| 1390.0 | 1360.24 | 55.96 | -223.21 | 230.1 | 284.1 | 16.1 | 289.7 |
| 1400.0 | 1369.76 | 56.80 | -226.14 | 233.2 | 284.1 | 19.1 | 295.3 |
| 1410.0 | 1379.32 | 58.17 | -228.72 | 236.0 | 284.3 | 16.8 | 298.7 |
| 1420.0 | 1388.90 | 59.29 | -231.33 | 238.8 | 284.4 | 16.6 | 293.3 |
| 1430.0 | 1398.49 | 60.41 | -233.96 | 241.6 | 284.5 | 16.6 | 293.6 |
| 1440.0 | 1408.05 | 61.41 | -236.69 | 244.5 | 284.5 | 17.8 | 285.8 |
| 1450.0 | 1417.56 | 62.16 | -239.68 | 247.6 | 284.5 | 19.8 | 286.4 |
| 1460.0 | 1426.95 | 63.34 | -242.91 | 251.0 | 284.6 | 20.2 | 291.5 |
| 1470.0 | 1436.33 | 64.55 | -246.15 | 254.5 | 284.7 | 20.3 | 291.5 |
| 1480.0 | 1445.71 | 65.68 | -249.44 | 257.9 | 284.8 | 20.4 | 288.5 |
| 1490.0 | 1455.08 | 66.80 | -252.74 | 261.4 | 284.8 | 20.5 | 289.6 |
| 1500.0 | 1464.44 | 68.04 | -256.03 | 264.9 | 284.9 | 20.7 | 292.6 |
| 1510.0 | 1473.79 | 69.26 | -259.36 | 268.4 | 285.0 | 20.9 | 290.5 |
| 1520.0 | 1483.13 | 70.48 | -262.71 | 272.0 | 285.0 | 20.9 | 291.3 |
| 1530.0 | 1492.47 | 71.74 | -266.07 | 275.6 | 285.1 | 20.9 | 288.1 |
| 1540.0 | 1501.80 | 72.92 | -269.46 | 279.2 | 285.1 | 21.2 | 289.7 |
| 1550.0 | 1511.13 | 74.07 | -272.86 | 282.7 | 285.2 | 20.8 | 285.6 |
| 1560.0 | 1520.48 | 75.54 | -276.07 | 286.2 | 285.3 | 18.8 | 304.4 |
| 1570.0 | 1529.97 | 77.14 | -278.78 | 289.3 | 285.5 | 18.4 | 300.9 |
| 1580.0 | 1539.46 | 78.64 | -281.53 | 292.3 | 285.6 | 18.2 | 298.8 |
| 1590.0 | 1548.88 | 79.71 | -284.70 | 295.6 | 285.6 | 21.8 | 290.6 |
| 1600.0 | 1558.18 | 80.83 | -288.19 | 299.3 | 285.7 | 21.7 | 289.9 |
| 1610.0 | 1567.48 | 82.05 | -291.66 | 303.0 | 285.7 | 21.7 | 290.6 |
| 1620.0 | 1576.81 | 83.69 | -294.83 | 306.5 | 285.8 | 19.4 | 301.5 |
| 1630.0 | 1586.24 | 85.47 | -297.65 | 309.7 | 286.0 | 19.7 | 302.9 |
| 1630.2 | 1586.43 | 85.51 | -297.71 | 309.7 | 286.0 | 0.0 | 0.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1320.0 | 1292.99 | 49.46 | -204.99 | 210.9 | 283.6 | 15.3 | 291.0 |
| 1330.0 | 1302.64 | 50.37 | -207.48 | 213.5 | 283.6 | 15.4 | 290.6 |
| 1340.0 | 1312.27 | 51.29 | -209.98 | 216.2 | 283.7 | 15.5 | 289.8 |
| 1350.0 | 1321.90 | 52.14 | -212.56 | 218.9 | 283.8 | 16.5 | 282.7 |
| 1360.0 | 1331.44 | 52.80 | -215.45 | 221.8 | 283.8 | 18.8 | 293.3 |
| 1370.0 | 1341.02 | 54.03 | -218.04 | 224.6 | 283.9 | 15.8 | 290.5 |
| 1380.0 | 1350.63 | 54.99 | -220.61 | 227.4 | 284.0 | 16.0 | 290.6 |
| 1390.0 | 1360.24 | 55.96 | -223.21 | 230.1 | 284.1 | 16.1 | 289.7 |
| 1400.0 | 1369.76 | 56.80 | -226.14 | 233.2 | 284.1 | 19.1 | 295.3 |
| 1410.0 | 1379.32 | 58.17 | -228.72 | 236.0 | 284.3 | 16.8 | 298.7 |
| 1420.0 | 1388.90 | 59.29 | -231.33 | 238.8 | 284.4 | 16.6 | 293.3 |
| 1430.0 | 1398.49 | 60.41 | -233.96 | 241.6 | 284.5 | 16.6 | 293.6 |
| 1440.0 | 1408.05 | 61.41 | -236.69 | 244.5 | 284.5 | 17.8 | 285.8 |
| 1450.0 | 1417.56 | 62.16 | -239.68 | 247.6 | 284.5 | 19.8 | 286.4 |
| 1460.0 | 1426.95 | 63.34 | -242.91 | 251.0 | 284.6 | 20.2 | 291.5 |
| 1470.0 | 1436.33 | 64.55 | -246.15 | 254.5 | 284.7 | 20.3 | 291.5 |
| 1480.0 | 1445.71 | 65.68 | -249.44 | 257.9 | 284.8 | 20.4 | 288.5 |
| 1490.0 | 1455.08 | 66.80 | -252.74 | 261.4 | 284.8 | 20.5 | 289.6 |
| 1500.0 | 1464.44 | 68.04 | -256.03 | 264.9 | 284.9 | 20.7 | 292.6 |
| 1510.0 | 1473.79 | 69.26 | -259.36 | 268.4 | 285.0 | 20.9 | 290.5 |
| 1520.0 | 1483.13 | 70.48 | -262.71 | 272.0 | 285.0 | 20.9 | 291.3 |
| 1530.0 | 1492.47 | 71.74 | -266.07 | 275.6 | 285.1 | 20.9 | 288.1 |
| 1540.0 | 1501.80 | 72.92 | -269.46 | 279.2 | 285.1 | 21.2 | 289.7 |
| 1550.0 | 1511.13 | 74.07 | -272.86 | 282.7 | 285.2 | 20.8 | 285.6 |
| 1560.0 | 1520.48 | 75.54 | -276.07 | 286.2 | 285.3 | 18.8 | 304.4 |
| 1570.0 | 1529.97 | 77.14 | -278.78 | 289.3 | 285.5 | 18.4 | 300.9 |
| 1580.0 | 1539.46 | 78.64 | -281.53 | 292.3 | 285.6 | 18.2 | 298.8 |
| 1590.0 | 1548.88 | 79.71 | -284.70 | 295.6 | 285.6 | 21.8 | 290.6 |
| 1600.0 | 1558.18 | 80.83 | -288.19 | 299.3 | 285.7 | 21.7 | 289.9 |
| 1610.0 | 1567.48 | 82.05 | -291.66 | 303.0 | 285.7 | 21.7 | 290.6 |
| 1620.0 | 1576.81 | 83.69 | -294.83 | 306.5 | 285.8 | 19.4 | 301.5 |
| 1630.0 | 1586.24 | 85.47 | -297.65 | 309.7 | 286.0 | 19.7 | 302.9 |
| 1630.2 | 1586.45 | 85.51 | -297.71 | 309.7 | 286.0 | 0.0 | 0.0 |

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | Cemented To Surface No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22” | 18’ | 24” | | | X | 2-5-07 | |
| Surface | 13 3/8” | 302.25’ | 15 3/8” | 196 cu/ft | X | | 2-6-07 | BASKET@86’ |
| Water Protection | 13 3/8 | 302.25” | 15 3/8” | 196 cu/ft | X | | 2-6-07 | BASKET@86’ |
| Coal Protection | 13 3/8 | 302.25” | 15 3/8” | 196 cu/ft | X | | 2-6-07 | BASKET@86’ |
| Other Casing And Tubing Left In Well | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY: CNX** **HOLE #: T-38E**

**LOCATION: GARDEN OF EDEN** **DRILL RIG #: 87**

**DATE STARTED: 02-02-07** **DATED COMPLETED: 2-14-07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | THICKNESS | | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 18 | 18 | COAL/SHALE/SANDY SHALE/SAND STONE |
| 18 | 35 | 17 | SAND STONE |
| 35 | 45 | 10 | |
| 45 | 64 | 19 | SANDY SHALE/COAL/SANDY SHALE |
| 64 | 124 | 60 | SAND STONE/SANDY SHALE STR |
| 124 | 155 | 31 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 155 | 187 | 32 | SAND STONE/SANDY SHALE/COAL/SAND STONE |
| 187 | 219 | 32 | SAND STONE/SANDY SHALE STR |
| 219 | 250 | 31 | SAND STONE/SANDY SHALE/POSS COAL/SAND STONE |
| 250 | 282 | 32 | SAND STONE/SANDY SHALE/COAL/SANDY SHALE W/SAND STONE STR |
| 282 | 314 | 32 | SAND STONE |
| 314 | 322 | 8 | SAND STONE |
| 322 | 336 | 14 | SAND STONE |
| 336 | 367 | 31 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 367 | 399 | 32 | SAND STONE/COAL & SANDY SHALE STR/SAND STONE |
| 399 | 433 | 34 | SAND STONE/SANDY SHALE STR |
| 433 | 464 | 31 | SAND STONE/SANDY SHALE/SAND STONE |
| 464 | 496 | 32 | SAND STONE/COAL & SANDY SHALE STR/SAND STONE |
| 496 | 528 | 32 | SAND STONE STR/COAL/SANDY SHALE |
| 528 | 570 | 42 | SANDY SHALE |
| 570 | 598 | 28 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 598 | 630 | 32 | SANDY SHALE/COAL/SAND STONE/SANDY SHALE |
| 630 | 661 | 31 | SANDY SHALE/COAL/SAND STONE |
| 661 | 693 | 32 | SAND STONE/COAL |
| 693 | 724 | 31 | COAL/SANDY SHALE/SAND STONE STR/SANDY SHALE |
| 724 | 756 | 32 | SANDY SHALE/COAL/SAND STONE/SANDY SHALE |
| 756 | 788 | 32 | SANDY SHALE/COAL STR/SAND STONE |
| 788 | 819 | 31 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 819 | 851 | 32 | SAND STONE/COAL/SANDY SHALE |
| 851 | 883 | 32 | SAND STONE |
| 883 | 914 | 31 | SANDY SHALE/COAL/SANDY SHALE |

| | | | |
|---|---|---|---|
| 914 | 946 | 32 | SANDY SHALE |
| 946 | 977 | 31 | SANDY SHALE/COAL/SAND STONE/SANDY SHALE |
| 977 | 1009 | 32 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1009 | 1041 | 32 | SAND STONE |
| 1041 | 1072 | 31 | SAND STONE/SANDY SHALE |
| 1072 | 1104 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 1104 | 1135 | 31 | SANDY SHALE |
| 1135 | 1167 | 32 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1167 | 1198 | 31 | SANDY SHALE/COAL/SANDY SHALE/COAL/SANDY SHALE |
| 1198 | 1230 | 32 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1230 | 1262 | 32 | SANDY SHALE/SAND STONE |
| 1262 | 1293 | 31 | SAND STONE/SANDY SHALE |
| 1293 | 1357 | 64 | SANDY SHALE |
| 1357 | 1398 | 41 | SANDY SHALE/SAND STONE |
| 1398 | 1430 | 32 | SAND STONE |
| 1430 | 1461 | 31 | SAND STONE/COAL/SANDY SHALE |
| 1461 | 1493 | 32 | SANDY SHALE/COAL/SAND STONE/SANDY SHALE/COAL |
| 1493 | 1525 | 32 | SANDY SHALE/SAND STONE |
| 1525 | 1556 | 31 | SAND STONE/SANDY SHALE STR |
| 1556 | 1588 | 32 | SAND STONE/POSS COAL & SHALE/SAND STONE |
| 1588 | 1620 | 32 | SAND STONE/POSS COAL & SHALE/SAND STONE/SANDY SHALE STR |
| 1620 | 1635 | 15 | SAND STONE |

1635.00 FT. TOTAL DEPTH
18.00 FT. OF 22” CASING
302.25 FT. OF 13 3/8” CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 761
**Company:** CNX Gas Company LLC
**File Number:** BU-3440
**Operations Name:** CBM T38F W/PL
**Operation Type:** Coalbed/Pipeline
**Completion Report Type:** Original

# COMPLETION REPORT (DGO-GO-15)

**Well Type:** Coalbed/Pipeline **Date Well Completed:** 6/27/2007
**Driller's Total Depth:** 1,642 **Log's Total Depth:** 1,635

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

☐ Stimulated ☐ Not Stimulated ☑ Gob

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 11/3/2007 11:33:14 AM *(Company)*

By: Leslie K Arrinton Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 11/3/2007

Status: Inspr Approved Date: 11/7/2007

Final PDF Date: 11/13/2007

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 721 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3440 |
| **Operations Name:** | CBM T38F W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 6/19/2007
Drilling Contractor: Noah Horn
Date drilling completed: 6/27/2007
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,642
Log Total Depth (feet): 1,635
Coal Seam At Total Depth PARDEE

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X 1,014,484
Final Plat State Plane X: 1,014,491
Permitted State Plane Y: 328,850
Final Plat State Plane Y: 328,845
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T38F Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T38F Exhibit A.pdf |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | T38F Gas Show.xls |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper,Gamma,Density,Temp,Deviation

Did logs disclose vertical locations of a coal seam? ☐ Yes ☑ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T38F Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| CASING | T38F Casing.xls |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | T38F Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 10/10/2007 *(Company)*

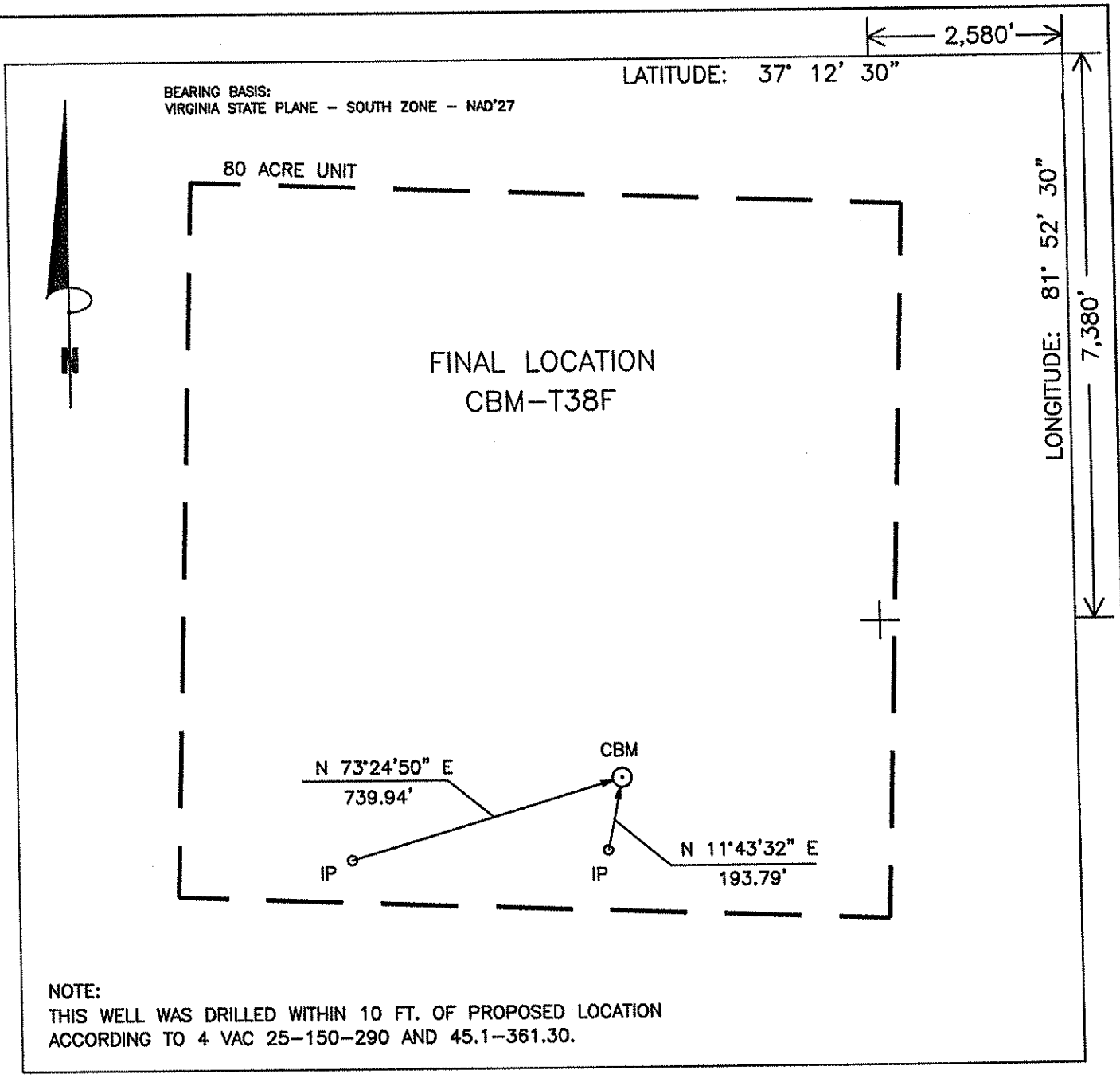
Signed By: Leslie K. Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 10/10/2007

Status: Inspr Approved Date: 10/11/2007

Final PDF Date: 10/11/2007




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

T38FFNL
2N25/174–594/25

# WELL LOCATION PLAT

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T38F

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 328,844.99 E 1,014,490.81

ELEVATION: 2126.09' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 06–21–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown on this plat.

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
PROFESSIONAL ENGINEER
6/21/07

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM T38F_revised
SURFACE ELEV: 2126.09 EASTING: 1014490.81 NORTHING: 328844.99

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA3 | 40.90 | 41.80 | 2085.19 | 0.90 | |
| | 41.80 | 119.60 | 2084.29 | 77.80 | |
| JB1 | 119.60 | 121.60 | 2006.49 | 2.00 | |
| | 121.60 | 158.70 | 2004.49 | 37.10 | |
| JB3 | 158.70 | 161.50 | 1967.39 | 2.80 | |
| | 161.50 | 254.50 | 1964.59 | 93.00 | |
| TI | 254.50 | 255.40 | 1871.59 | 0.90 | |
| | 255.40 | 372.00 | 1870.69 | 116.60 | |
| *US1 | 372.00 | 373.80 | 1754.09 | 1.80 | |
| | 373.80 | 412.00 | 1752.29 | 38.20 | |
| *COAL | 412.00 | 412.90 | 1714.09 | 0.90 | |
| | 412.90 | 476.80 | 1713.19 | 63.90 | |
| *US2 | 476.80 | 477.70 | 1649.29 | 0.90 | |
| | 477.70 | 657.70 | 1648.39 | 180.00 | |
| *SE1 | 657.70 | 658.80 | 1468.39 | 1.10 | |
| | 658.80 | 693.90 | 1467.29 | 35.10 | |
| *SE2 | 693.90 | 695.90 | 1432.19 | 2.00 | |
| | 695.90 | 739.30 | 1430.19 | 43.40 | |
| *LS1 | 739.30 | 741.80 | 1386.79 | 2.50 | |
| | 741.80 | 788.60 | 1384.29 | 46.80 | |
| *UH1 | 788.60 | 789.90 | 1337.49 | 1.30 | |
| | 789.90 | 847.80 | 1336.19 | 57.90 | |
| *UH2 | 847.80 | 849.80 | 1278.29 | 2.00 | |
| | 849.80 | 902.90 | 1276.29 | 53.10 | |
| *MH1 | 902.90 | 904.90 | 1223.19 | 2.00 | |
| | 904.90 | 970.60 | 1221.19 | 65.70 | |
| *MH2 | 970.60 | 971.50 | 1155.49 | 0.90 | |
| | 971.50 | 1010.80 | 1154.59 | 39.30 | |
| *P11 | 1010.80 | 1013.70 | 1115.29 | 2.90 | |
| | 1013.70 | 1035.50 | 1112.39 | 21.80 | |
| *P10 | 1035.50 | 1036.90 | 1090.59 | 1.40 | |
| | 1036.90 | 1093.80 | 1089.19 | 56.90 | |
| *LH2 | 1093.80 | 1094.90 | 1032.29 | 1.10 | |
| | 1094.90 | 1167.20 | 1031.19 | 72.30 | |
| *P91 | 1167.20 | 1168.60 | 958.89 | 1.40 | |
| | 1168.60 | 1184.20 | 957.49 | 15.60 | |
| *COAL | 1184.20 | 1184.90 | 941.89 | 0.70 | |
| | 1184.90 | 1186.90 | 941.19 | 2.00 | |
| *P92 | 1186.90 | 1187.90 | 939.19 | 1.00 | |
| | 1187.90 | 1189.10 | 938.19 | 1.20 | |
| *P92 | 1189.10 | 1190.10 | 936.99 | 1.00 | |
| | 1190.10 | 1225.80 | 935.99 | 35.70 | |
| *P81 | 1225.80 | 1226.10 | 900.29 | 0.30 | |
| | 1226.10 | 1256.10 | 899.99 | 30.00 | |
| *P82 | 1256.10 | 1257.00 | 869.99 | 0.90 | |
| | 1257.00 | 1422.80 | 869.09 | 165.80 | |
| *P61 | 1422.80 | 1423.10 | 703.29 | 0.30 | |
| | 1423.10 | 1437.90 | 702.99 | 14.80 | |

| | | | | |
|---|---|---|---|---|
| *P62 | 1437.90 | 1438.50 | 688.19 | 0.60 |
| | 1438.50 | 1469.00 | 687.59 | 30.50 |
| *P51 | 1469.00 | 1470.90 | 657.09 | 1.90 |
| | 1470.90 | 1563.90 | 655.19 | 93.00 |
| *P41 | 1563.90 | 1564.60 | 562.19 | 0.70 |
| | 1564.60 | 1642.00 | 561.49 | 77.40 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\T38F.CMP
DATE: 08/23/07

Well: T38F

## Oil & Gas Show

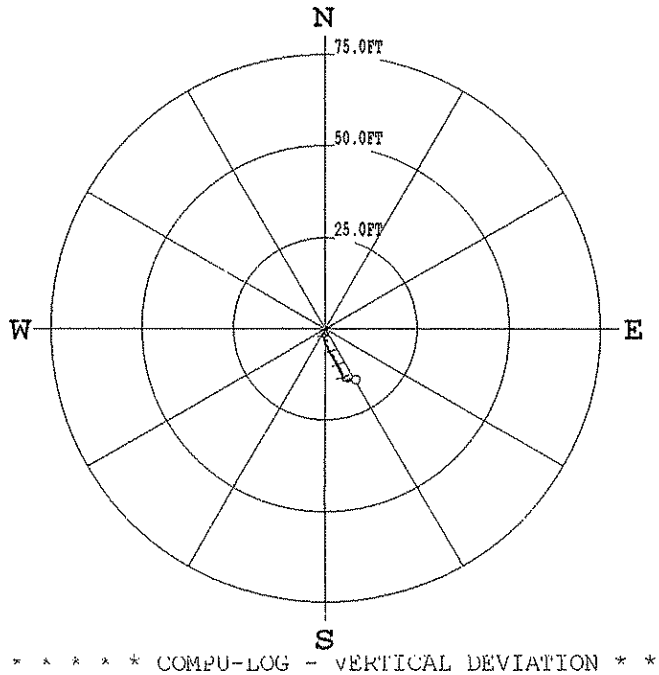
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 372 | 1190 | 818 | | | |
| Pocahontas | 1469 | 1471 | 2 | | | |
| Total IPF | | | | Not Taken | | |
| | | | | | | |

# COMPU-LOG DEVIATION

CLIENT: CNX Gas
LOCATION: Osbourne Mtn.
HOLE ID: 07-CNX-T-38-F
DATE OF LOG: 06/28/07
PROBE: 0019C 732

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1633.86 FT
AZIMUTH: 148.9
DISTANCE: 16.1 FT
+ = 300 FT INCR
O = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX Gas
FIELD OFFICE : M.Sammons
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 07-CNX-T-38-F
DATE OF LOG : 06/28/07
PROBE : 0019C , 732
DEPTH UNITS : FEET
LOG: 07-CNX-T-38-F_06-28-07_08-10_0019C_.02_-9.17_1634.41_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 50.00 | -0.12 | 0.80 | 0.8 | 98.4 | 1.4 | 33.5 |
| 60.0 | 59.99 | 0.09 | 0.94 | 0.9 | 84.6 | 1.4 | 22.0 |
| 70.0 | 69.99 | 0.31 | 0.85 | 0.9 | 70.2 | 1.5 | 313.3 |
| 80.0 | 79.99 | 0.40 | 0.63 | 0.7 | 57.4 | 1.4 | 275.0 |
| 90.0 | 89.98 | 0.39 | 0.38 | 0.5 | 43.8 | 1.4 | 266.6 |
| 100.0 | 99.98 | 0.33 | 0.14 | 0.4 | 23.3 | 1.5 | 232.8 |
| 110.0 | 109.98 | 0.15 | -0.03 | 0.2 | 348.5 | 1.5 | 205.3 |
| 120.0 | 119.97 | -0.12 | -0.07 | 0.1 | 209.9 | 1.6 | 183.7 |
| 130.0 | 129.97 | -0.41 | -0.12 | 0.4 | 195.6 | 1.7 | 205.3 |
| 140.0 | 139.96 | -0.71 | -0.19 | 0.7 | 195.4 | 1.8 | 175.0 |
| 150.0 | 149.96 | -1.01 | -0.13 | 1.0 | 187.1 | 1.8 | 170.7 |
| 160.0 | 159.95 | -1.32 | -0.07 | 1.3 | 183.2 | 1.6 | 182.7 |
| 170.0 | 169.95 | -1.61 | 0.03 | 1.6 | 178.8 | 1.7 | 135.7 |
| 180.0 | 179.95 | -1.82 | 0.22 | 1.8 | 173.0 | 1.5 | 134.8 |
| 190.0 | 189.94 | -1.92 | 0.44 | 2.0 | 166.9 | 1.4 | 109.5 |
| 200.0 | 199.94 | -1.99 | 0.67 | 2.1 | 161.4 | 1.3 | 98.5 |
| 210.0 | 209.94 | -1.92 | 0.84 | 2.1 | 156.3 | 0.9 | 29.8 |
| 220.0 | 219.94 | -1.81 | 0.81 | 2.0 | 155.7 | 0.8 | 319.9 |
| 230.0 | 229.93 | -1.68 | 0.67 | 1.8 | 158.4 | 1.2 | 285.1 |
| 240.0 | 239.93 | -1.72 | 0.45 | 1.8 | 165.3 | 1.1 | 266.1 |
| 250.0 | 249.93 | -1.66 | 0.26 | 1.7 | 171.0 | 1.0 | 267.8 |
| 260.0 | 259.93 | -1.59 | 0.08 | 1.6 | 177.1 | 1.6 | 10.7 |
| 270.0 | 269.92 | -1.33 | 0.02 | 1.3 | 179.1 | 1.6 | 5.7 |
| 280.0 | 279.92 | -1.10 | -0.10 | 1.1 | 185.0 | 1.6 | 288.5 |
| 290.0 | 289.91 | -1.12 | -0.36 | 1.2 | 197.9 | 1.8 | 220.1 |
| 300.0 | 299.91 | -1.38 | -0.56 | 1.5 | 202.1 | 1.9 | 219.0 |
| 310.0 | 309.90 | -1.63 | -0.76 | 1.8 | 205.1 | 1.9 | 215.1 |
| 320.0 | 319.90 | -1.92 | -0.92 | 2.1 | 205.7 | 1.9 | 188.4 |
| 330.0 | 329.89 | -2.17 | -0.71 | 2.3 | 198.1 | 2.1 | 127.3 |
| 340.0 | 339.88 | -2.43 | -0.46 | 2.5 | 190.7 | 2.0 | 154.5 |
| 350.0 | 349.88 | -2.74 | -0.30 | 2.8 | 186.3 | 2.0 | 179.6 |
| 360.0 | 359.87 | -3.06 | -0.40 | 3.1 | 187.4 | 2.4 | 149.6 |
| 370.0 | 369.87 | -3.28 | -0.19 | 3.3 | 183.3 | 1.4 | 122.8 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 280.0 | 279.92 | -1.10 | -0.10 | 1.1 | 185.0 | 1.6 | 288.5 |
| 290.0 | 289.91 | -1.12 | -0.36 | 1.2 | 197.9 | 1.8 | 220.1 |
| 300.0 | 299.91 | -1.38 | -0.56 | 1.5 | 202.1 | 1.9 | 219.0 |
| 310.0 | 309.90 | -1.63 | -0.76 | 1.8 | 205.1 | 1.9 | 215.1 |
| 320.0 | 319.90 | -1.92 | -0.92 | 2.1 | 205.7 | 1.9 | 188.4 |
| 330.0 | 329.89 | -2.17 | -0.71 | 2.3 | 198.1 | 2.1 | 127.3 |
| 340.0 | 339.88 | -2.43 | -0.46 | 2.5 | 190.7 | 2.0 | 154.5 |
| 350.0 | 349.88 | -2.74 | -0.30 | 2.8 | 186.3 | 2.0 | 179.6 |
| 360.0 | 359.87 | -3.06 | -0.40 | 3.1 | 187.4 | 2.4 | 149.6 |
| 370.0 | 369.87 | -3.28 | -0.19 | 3.3 | 183.3 | 1.4 | 122.8 |
| 380.0 | 379.87 | -3.38 | -0.01 | 3.4 | 180.1 | 1.4 | 117.7 |
| 390.0 | 389.86 | -3.47 | 0.20 | 3.5 | 176.7 | 1.1 | 100.8 |
| 400.0 | 399.86 | -3.47 | 0.35 | 3.5 | 174.2 | 0.7 | 64.3 |
| 410.0 | 409.86 | -3.40 | 0.43 | 3.4 | 172.8 | 0.5 | 22.4 |
| 420.0 | 419.86 | -3.33 | 0.39 | 3.4 | 173.2 | 0.6 | 310.9 |
| 430.0 | 429.86 | -3.32 | 0.27 | 3.3 | 175.3 | 0.7 | 274.8 |
| 440.0 | 439.86 | -3.33 | 0.12 | 3.3 | 177.9 | 1.2 | 250.6 |
| 450.0 | 449.86 | -3.49 | -0.05 | 3.5 | 180.9 | 1.7 | 204.8 |
| 460.0 | 459.85 | -3.81 | -0.13 | 3.8 | 181.9 | 2.1 | 189.0 |
| 470.0 | 469.84 | -4.17 | -0.07 | 4.2 | 180.9 | 2.2 | 162.9 |
| 480.0 | 479.84 | -4.52 | 0.08 | 4.5 | 178.9 | 2.2 | 157.0 |
| 490.0 | 489.83 | -4.84 | 0.30 | 4.9 | 176.5 | 2.1 | 140.9 |
| 500.0 | 499.82 | -5.07 | 0.53 | 5.1 | 174.0 | 1.7 | 124.8 |
| 510.0 | 509.82 | -5.16 | 0.76 | 5.2 | 171.6 | 1.2 | 102.5 |
| 520.0 | 519.82 | -5.10 | 0.87 | 5.2 | 170.3 | 0.6 | 4.2 |
| 530.0 | 529.82 | -5.02 | 0.79 | 5.1 | 171.1 | 0.8 | 289.8 |
| 540.0 | 539.82 | -5.11 | 0.63 | 5.1 | 173.0 | 1.7 | 203.6 |
| 550.0 | 549.81 | -5.43 | 0.60 | 5.5 | 173.7 | 2.1 | 164.1 |
| 560.0 | 559.80 | -5.76 | 0.75 | 5.8 | 172.6 | 2.1 | 149.2 |
| 570.0 | 569.80 | -6.04 | 0.97 | 6.1 | 170.9 | 1.9 | 132.6 |
| 580.0 | 579.79 | -6.16 | 1.20 | 6.3 | 169.0 | 1.2 | 93.9 |
| 590.0 | 589.79 | -6.06 | 1.26 | 6.2 | 168.2 | 0.7 | 359.6 |
| 600.0 | 599.79 | -6.07 | 1.12 | 6.2 | 169.5 | 1.5 | 206.0 |
| 610.0 | 609.79 | -6.38 | 1.10 | 6.5 | 170.2 | 1.9 | 171.3 |
| 620.0 | 619.78 | -6.69 | 1.23 | 6.8 | 169.6 | 2.0 | 147.9 |
| 630.0 | 629.77 | -6.96 | 1.44 | 7.1 | 168.3 | 1.9 | 132.2 |
| 640.0 | 639.77 | -7.10 | 1.68 | 7.3 | 166.7 | 1.4 | 100.4 |
| 650.0 | 649.77 | -7.06 | 1.85 | 7.3 | 165.3 | 0.7 | 38.6 |
| 660.0 | 659.77 | -6.93 | 1.87 | 7.2 | 164.9 | 1.0 | 324.7 |
| 670.0 | 669.77 | -6.97 | 1.70 | 7.2 | 166.3 | 1.4 | 226.9 |
| 680.0 | 679.76 | -7.27 | 1.69 | 7.5 | 166.9 | 2.0 | 164.0 |
| 690.0 | 689.75 | -7.59 | 1.84 | 7.8 | 166.4 | 2.0 | 141.5 |
| 700.0 | 699.75 | -7.73 | 2.07 | 8.0 | 165.0 | 1.4 | 104.8 |
| 710.0 | 709.75 | -7.68 | 2.23 | 8.0 | 163.8 | 0.8 | 41.1 |
| 720.0 | 719.75 | -7.56 | 2.25 | 7.9 | 163.4 | 0.8 | 342.7 |
| 730.0 | 729.75 | -7.53 | 2.10 | 7.8 | 164.4 | 1.2 | 249.5 |
| 740.0 | 739.74 | -7.78 | 1.99 | 8.0 | 165.7 | 1.8 | 175.0 |
| 750.0 | 749.74 | -8.10 | 2.12 | 8.4 | 165.4 | 2.0 | 152.4 |
| 760.0 | 759.73 | -8.30 | 2.35 | 8.6 | 164.2 | 1.7 | 121.9 |
| 770.0 | 769.73 | -8.30 | 2.52 | 8.7 | 163.1 | 0.9 | 65.8 |
| 780.0 | 779.73 | -8.19 | 2.57 | 8.6 | 162.6 | 0.8 | 325.4 |
| 790.0 | 789.73 | -8.11 | 2.45 | 8.5 | 163.2 | 0.9 | 279.5 |
| 800.0 | 799.72 | -8.30 | 2.34 | 8.6 | 164.3 | 1.8 | 173.5 |
| 810.0 | 809.72 | -8.61 | 2.44 | 8.9 | 164.2 | 1.8 | 152.1 |
| 820.0 | 819.71 | -8.88 | 2.62 | 9.3 | 163.5 | 1.9 | 136.6 |
| 830.0 | 829.71 | -9.00 | 2.85 | 9.4 | 162.4 | 0.9 | 63.7 |
| 840.0 | 839.71 | -8.88 | 2.93 | 9.4 | 161.7 | 0.9 | 2.8 |
| 850.0 | 849.71 | -8.83 | 2.83 | 9.3 | 162.2 | 1.0 | 272.1 |
| 860.0 | 859.70 | -9.04 | 2.72 | 9.4 | 163.2 | 1.8 | 182.7 |
| 870.0 | 869.70 | -9.36 | 2.80 | 9.8 | 163.3 | 1.9 | 143.8 |
| 880.0 | 879.69 | -9.61 | 3.02 | 10.1 | 162.6 | 1.7 | 130.0 |
| 890.0 | 889.69 | -9.68 | 3.24 | 10.2 | 161.5 | 1.0 | 67.6 |
| 900.0 | 899.69 | -9.57 | 3.34 | 10.1 | 160.7 | 0.9 | 1.8 |
| 910.0 | 909.69 | -9.51 | 3.24 | 10.0 | 161.2 | 1.0 | 270.1 |
| 920.0 | 919.68 | -9.70 | 3.11 | 10.2 | 162.2 | 1.7 | 186.9 |
| 930.0 | 929.68 | -10.02 | 3.18 | 10.5 | 162.4 | 1.9 | 149.6 |
| 940.0 | 939.67 | -10.28 | 3.38 | 10.8 | 161.8 | 1.9 | 136.1 |
| 950.0 | 949.67 | -10.42 | 3.61 | 11.0 | 160.9 | 0.9 | 66.5 |
| 960.0 | 959.67 | -10.31 | 3.70 | 11.0 | 160.2 | 0.9 | 2.7 |
| 970.0 | 969.66 | -10.18 | 3.61 | 10.8 | 160.5 | 1.1 | 283.0 |
| 980.0 | 979.66 | -10.38 | 3.46 | 10.9 | 161.6 | 1.7 | 194.9 |
| 990.0 | 989.66 | -10.71 | 3.50 | 11.3 | 161.9 | 2.0 | 160.2 |
| 1000.0 | 999.65 | -10.97 | 3.69 | 11.6 | 161.4 | 1.7 | 132.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 950.0 | 949.67 | -10.42 | 3.61 | 11.0 | 160.9 | 0.9 | 66.5 |
| 960.0 | 959.67 | -10.31 | 3.76 | 11.0 | 160.2 | 0.9 | 2.7 |
| 970.0 | 969.66 | -10.18 | 3.61 | 10.8 | 160.5 | 1.1 | 283.0 |
| 980.0 | 979.66 | -10.38 | 3.46 | 10.9 | 161.6 | 1.7 | 194.9 |
| 990.0 | 989.66 | -10.71 | 3.50 | 11.3 | 161.9 | 2.0 | 160.2 |
| 1000.0 | 999.65 | -10.97 | 3.69 | 11.6 | 161.4 | 1.7 | 132.5 |
| 1010.0 | 1009.65 | -11.12 | 3.91 | 11.8 | 160.6 | 1.2 | 98.3 |
| 1020.0 | 1019.64 | -11.06 | 4.04 | 11.8 | 159.9 | 0.7 | 34.6 |
| 1030.0 | 1029.64 | -10.93 | 4.03 | 11.6 | 159.8 | 0.9 | 305.3 |
| 1040.0 | 1039.64 | -10.93 | 3.85 | 11.6 | 160.6 | 1.5 | 219.6 |
| 1050.0 | 1049.64 | -11.20 | 3.76 | 11.8 | 161.4 | 2.0 | 179.8 |
| 1060.0 | 1059.63 | -11.54 | 3.84 | 12.2 | 161.6 | 2.0 | 151.3 |
| 1070.0 | 1069.63 | -11.80 | 4.04 | 12.5 | 161.1 | 1.6 | 130.4 |
| 1080.0 | 1079.62 | -11.87 | 4.22 | 12.6 | 160.4 | 0.8 | 62.4 |
| 1090.0 | 1089.62 | -11.78 | 4.31 | 12.5 | 159.9 | 0.8 | 22.5 |
| 1100.0 | 1099.62 | -11.64 | 4.37 | 12.4 | 159.4 | 1.0 | 342.3 |
| 1110.0 | 1109.62 | -11.71 | 4.22 | 12.4 | 160.2 | 1.7 | 193.1 |
| 1120.0 | 1119.61 | -12.02 | 4.21 | 12.7 | 160.7 | 1.9 | 174.5 |
| 1130.0 | 1129.61 | -12.29 | 4.33 | 13.0 | 160.6 | 1.6 | 140.2 |
| 1140.0 | 1139.61 | -12.43 | 4.53 | 13.2 | 160.0 | 1.3 | 109.1 |
| 1150.0 | 1149.60 | -12.47 | 4.74 | 13.3 | 159.2 | 1.0 | 32.8 |
| 1160.0 | 1159.60 | -12.32 | 4.82 | 13.2 | 158.7 | 1.0 | 329.6 |
| 1170.0 | 1169.60 | -12.29 | 4.66 | 13.1 | 159.2 | 1.0 | 283.4 |
| 1180.0 | 1179.60 | -12.39 | 4.51 | 13.2 | 160.0 | 1.4 | 194.9 |
| 1190.0 | 1189.59 | -12.64 | 4.50 | 13.4 | 160.4 | 1.5 | 163.3 |
| 1200.0 | 1199.59 | -12.92 | 4.50 | 13.7 | 160.8 | 1.7 | 164.2 |
| 1210.0 | 1209.59 | -13.15 | 4.67 | 14.0 | 160.5 | 1.9 | 131.3 |
| 1220.0 | 1219.58 | -13.37 | 4.87 | 14.2 | 160.0 | 1.6 | 116.1 |
| 1230.0 | 1229.58 | -13.47 | 5.12 | 14.4 | 159.2 | 1.5 | 98.9 |
| 1240.0 | 1239.58 | -13.40 | 5.31 | 14.4 | 158.4 | 0.9 | 10.5 |
| 1250.0 | 1249.57 | -13.24 | 5.34 | 14.3 | 158.0 | 1.0 | 357.3 |
| 1260.0 | 1259.57 | -13.09 | 5.29 | 14.1 | 158.0 | 0.9 | 311.7 |
| 1270.0 | 1269.57 | -13.02 | 5.15 | 14.0 | 158.4 | 1.0 | 276.8 |
| 1280.0 | 1279.57 | -13.03 | 4.97 | 13.9 | 159.1 | 1.1 | 247.3 |
| 1290.0 | 1289.57 | -13.10 | 4.79 | 14.0 | 159.9 | 1.1 | 247.1 |
| 1300.0 | 1299.57 | -13.25 | 4.67 | 14.1 | 160.6 | 1.2 | 201.3 |
| 1310.0 | 1309.56 | -13.47 | 4.62 | 14.2 | 161.1 | 1.5 | 167.9 |
| 1320.0 | 1319.56 | -13.72 | 4.68 | 14.5 | 161.2 | 1.6 | 148.2 |
| 1330.0 | 1329.56 | -13.96 | 4.82 | 14.8 | 161.0 | 1.8 | 121.4 |
| 1340.0 | 1339.55 | -14.15 | 5.06 | 15.0 | 160.3 | 1.9 | 114.6 |
| 1350.0 | 1349.55 | -14.24 | 5.37 | 15.2 | 159.3 | 2.0 | 101.1 |
| 1360.0 | 1359.54 | -14.29 | 5.72 | 15.4 | 158.2 | 2.1 | 100.3 |
| 1370.0 | 1369.53 | -14.26 | 6.06 | 15.5 | 157.0 | 1.7 | 62.8 |
| 1380.0 | 1379.53 | -14.10 | 6.12 | 15.4 | 156.5 | 0.7 | 335.3 |
| 1390.0 | 1389.53 | -14.02 | 6.04 | 15.3 | 156.7 | 0.8 | 321.1 |
| 1400.0 | 1399.53 | -13.88 | 5.99 | 15.1 | 156.7 | 0.6 | 269.0 |
| 1410.0 | 1409.53 | -13.89 | 5.88 | 15.1 | 157.1 | 0.8 | 238.2 |
| 1420.0 | 1419.53 | -13.97 | 5.77 | 15.1 | 157.6 | 0.8 | 220.5 |
| 1430.0 | 1429.53 | -14.12 | 5.72 | 15.2 | 157.9 | 0.9 | 208.2 |
| 1440.0 | 1439.52 | -14.29 | 5.72 | 15.4 | 158.2 | 1.3 | 132.5 |
| 1450.0 | 1449.52 | -14.37 | 6.00 | 15.6 | 157.3 | 1.8 | 93.6 |
| 1460.0 | 1459.52 | -14.33 | 6.30 | 15.7 | 156.3 | 1.8 | 83.5 |
| 1470.0 | 1469.51 | -14.23 | 6.62 | 15.7 | 155.0 | 2.0 | 84.9 |
| 1480.0 | 1479.50 | -14.06 | 6.85 | 15.6 | 154.0 | 1.4 | 6.1 |
| 1490.0 | 1489.50 | -13.80 | 6.90 | 15.4 | 153.4 | 1.5 | 356.6 |
| 1500.0 | 1499.50 | -13.61 | 6.80 | 15.2 | 153.5 | 1.2 | 326.8 |
| 1510.0 | 1509.50 | -13.59 | 6.68 | 15.1 | 153.8 | 0.7 | 189.9 |
| 1520.0 | 1519.50 | -13.70 | 6.61 | 15.2 | 154.2 | 0.7 | 213.1 |
| 1530.0 | 1529.49 | -13.84 | 6.56 | 15.3 | 154.6 | 0.9 | 199.9 |
| 1540.0 | 1539.49 | -14.00 | 6.58 | 15.5 | 154.8 | 1.0 | 165.0 |
| 1550.0 | 1549.49 | -14.12 | 6.72 | 15.6 | 154.6 | 1.6 | 84.3 |
| 1560.0 | 1559.49 | -14.15 | 6.96 | 15.8 | 153.8 | 1.5 | 91.9 |
| 1570.0 | 1569.48 | -14.13 | 7.21 | 15.9 | 153.0 | 1.3 | 101.4 |
| 1580.0 | 1579.48 | -14.08 | 7.48 | 15.9 | 152.0 | 1.7 | 66.1 |
| 1590.0 | 1589.48 | -14.00 | 7.75 | 16.0 | 151.0 | 1.5 | 76.6 |
| 1600.0 | 1599.47 | -13.87 | 8.02 | 16.0 | 150.0 | 1.9 | 44.7 |
| 1610.0 | 1609.47 | -13.69 | 8.28 | 16.0 | 148.8 | 2.0 | 10.4 |
| 1620.0 | 1619.46 | -13.63 | 8.20 | 15.9 | 149.0 | 0.7 | 171.5 |
| 1630.0 | 1629.46 | -13.75 | 8.26 | 16.0 | 148.9 | 0.7 | 154.7 |
| 1634.4 | 1633.88 | -13.78 | 8.31 | 16.1 | 148.9 | 0.0 | 0.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1620.0 | 1619.46 | -13.63 | 8.20 | 15.9 | 149.0 | 0.7 | 171.5 |
| 1630.0 | 1629.46 | -13.73 | 8.26 | 16.0 | 148.9 | 0.7 | 154.7 |
| 1634.4 | 1633.88 | -13.78 | 8.31 | 16.1 | 148.9 | 0.0 | 0.0 |

Well: T38F

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 27' | 24" | 5.9 | | X | 6/20/2007 | |
| Surface | 16" | 258.55 | 20" | 234 | X | | 6/20/2007 | Bskt @ 86' |
| Water Protection | 13 3/8" | 341.10' | 15 3/8" | 144 | X | | 6/22/2007 | Bskt @ 85' |
| Coal Protection | 13 3/8" | 341.10' | 15 3/8" | 144 | X | | 6/22/2007 | Bskt @ 85' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

**Webb, Beverly**

**Subject:** FW: T-38F

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** **CNX** **HOLE #: T-38F**

**LOCATION:** **OSBORNE MTN, VA** **DRILL RIG #: 87**

**DATE STARTED: 06-19-07** **DATED COMPLETED: 06-27-07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | | THICKNESS | STRATA | REMARKS |
|---|---|---|---|---|
| FROM | TO | FT | | DESCRIPTION,VOIDS ETC |
| 0 | 27 | 27 | | |
| 27 | 37 | 10 | | SAND STONE |
| 37 | 67 | 30 | | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 67 | 97 | 30 | | SAND STONE |
| 97 | 127 | 30 | | SAND STONE/COAL/SANDY SHALE STR |
| 127 | 158 | 31 | | SANDY SHALE STR/SAND STONE |
| 158 | 190 | 32 | | SANDY SHALE/COAL BROKE UP/SAND STONE |
| 190 | 221 | 31 | | SAND STONE |
| 221 | 253 | 32 | | SAND STONE/SANDY SHALE |
| 253 | 270 | 17 | | SANDY SHALE |
| 270 | 316 | 46 | | SAND STONE |
| 316 | 347 | 31 | | SAND STONE/SANDY SHALE |
| 347 | 370 | 23 | | |
| 370 | 383 | 13 | | |
| 383 | 414 | 31 | | SAND STONE/SAND/SHALE |
| 414 | 446 | 32 | | SANDY SHALE/SAND STONE/SANDY SHALE |
| 446 | 478 | 32 | | SANDY SHALE |
| 478 | 509 | 31 | | SANDY SHALE/COAL/SANDY SHALE |
| 509 | 541 | 32 | | SANDY SHALE |
| 541 | 572 | 31 | | SANDY SHALE |
| 572 | 604 | 32 | | SANDY SHALE/SAND STONE/COAL |
| 604 | 636 | 32 | | SANDY SHALE/SAND STONE |
| 636 | 667 | 31 | | SAND STONE/SANDY SHALE /COAL /SAND STONE |
| 667 | 699 | 32 | | SAND STONE/COAL/SANDY SHALE |
| 699 | 731 | 32 | | SAND STONE/COAL STRKS/SANDY SHALE |
| 731 | 763 | 32 | | SANDY SHALE/SAND STONE/COAL/SANDY SHALE |
| 763 | 794 | 31 | | SANDY SHALE/COAL/SANDY SHALE/COAL/SANDY SHALE |
| 794 | 826 | 32 | | SANDY SHALE/COAL/SAND STONE |
| 826 | 858 | 32 | | SAND STONE/SANDY SHALE STR |
| 858 | 890 | 32 | | SANDY SHALE/COAL/SANDY SHALE/SAND STONE STR |
| 890 | 921 | 31 | | SAND STONE STR/SANDY SHALE/COAL/SANDY SHALE/SAND STONE |
| 921 | 953 | 32 | | SAND STONE |
| 953 | 985 | 32 | | SANDY SHALE/COAL/SAND STONE |
| 985 | 1016 | 31 | | SAND STONE/COAL/SANDY SHALE |

| | | | |
|---|---|---|---|
| 1016 | 1048 | 32 | SANDY SHALE/COAL/SAND STONE |
| 1048 | 1079 | 31 | SANDY SHALE/SAND STONE |
| 1079 | 1131 | 52 | SAND STONE/SANDY SHALE/COAL/SANDY SHALE |
| 1131 | 1163 | 32 | SANDY SHALE |
| 1163 | 1195 | 32 | SANDY SHALE |
| 1195 | 1227 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 1227 | 1323 | 96 | SANDY SHALE |
| 1323 | 1355 | 32 | SANDY SHALE/SAND STONE |
| 1355 | 1386 | 31 | SAND STONE |
| 1386 | 1418 | 32 | SAND STONE/SANDY SHALE |
| 1418 | 1450 | 32 | SANDY SHALE/COAL/SANDY SHALE/COAL/SANDY SHALE |
| 1450 | 1481 | 31 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1481 | 1513 | 32 | SANDY SHALE/SAND STONE |
| 1513 | 1545 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 1545 | 1576 | 31 | SANDY SHALE |
| 1576 | 1618 | 42 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1618 | 1642 | 24 | SANDY SHALE |

1642.00 FT. TOTAL DEPTH
27.00 FT. OF 22" CASING
260.35 FT. OF 16" CASING
341.10 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 3879 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1187 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coal Bed | **Date Well Completed:** | 9/17/1997 |
| **Driller's Total Depth:** | 2048.70 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: £ Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| T39 | BU-1187 STIM.pdf |

## 3. Final Production

| Description | FileName |
|---|---|
| T39 | BU-1187 STIM.pdf |

## 4. Comments

*Notes:*

[7/2/2013, jsa]
Infprmation inserted by DGO [6/25/2013, jhh]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/28/2013 | *(Company)* |
| By: | Leslie Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/28/2013 | | |
| Status: | Approved | Date: | 7/2/2013 |
| Final PDF Date: | 7/2/2013 | | |

BV-1187

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T39
Permit #: 3428

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

RECEIVED
OCT 1997
DIVISION OF GAS & OIL

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 9/17/97 Total Depth of Well: 2048.70'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 576 MSCF N2, 429 bbls water
610 sx 20/40 and 193 sx 12/20
Perforated: 1926 TO 1934 No. of Perforations: OH Perforation Size: NA
Formation Broke Down at: 1804 PSIG Average Injection Rate 30 BPM
ISIP 1258 PSIG 5 MIN SIP 1172 PSIG Average Injection Pressure: 1810 PSIG
Date stimulated: 9/17.

**Zone 2:** P4, P5, P6, P7 Formation Stimulated With: 579 MSCF N2, 443 bbls water
393 sx 20/40 and 211 sx 12/20
Perforated: 1525 TO 1865 No. of Perforations: 72 Perforation Size: .70" EHD
Formation Broke Down at: 2483 PSIG Average Injection Rate 30 BPM
ISIP 1192 PSIG 5 MIN SIP 981 PSIG Average Injection Pressure: 2651 PSIG
Date stimulated: 9/17.

**Zone 3:** P9, P10, P11, LH3 Formation Stimulated With: 494 MSCF N2, 390 bbls water
440 sx 20/40 and 265 sx 12/20
Perforated: 1308 TO 1476 No. of Perforations: 56 Perforation Size: .70" EHD
Formation Broke Down at: 1481 PSIG Average Injection Rate 30 BPM
ISIP 1530 PSIG 5 MIN SIP 1361 PSIG Average Injection Pressure: 2086 PSIG
Date stimulated: 9/17.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | NA | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: [signature] (Signature)

ENTERED

Form DGO-GO-15
Rev 9/91

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T39
Permit #: 3428

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

**COMPLETION REPORT**

WELL TYPE: Oil __ Gas __ Coalbed Methane _x_ or Injection __ well.

Date Well Completed: 9/17/97 Total Depth of Well: 2048.7'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** MH, UH3, UH, LS, S Formation Stimulated With: 507 MSCF N2, 353 bbls water 305 sx 20/40 and 201 sx 12/20
Perforated: 953 TO 1208 No. of Perforations: 64 Perforation Size: .70"EHD
Formation Broke Down at: 2108 PSIG Average Injection Rate 30 BPM
ISIP 1399 PSIG 5 MIN SIP 1000 PSIG Average Injection Pressure: 2276 PSIG
Date stimulated: 9/17.

**Zone 5:** _____ Formation Stimulated With: _____
Perforated: __ TO ____ No. ofPerforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG __ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

**Zone 6:** _____ Formation Stimulated With: _____
Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ____ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (4) | | | | | |
| Zone (5) | | | | | |
| Zone (6) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: Judith K. Pennington (Signature)

Form DGO-GO-15
Rev 9/91

BV-1187

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T39
Permit #: 3428

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

RECEIVED
OCT 1997
DIVISION OF GAS & OIL

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 9/17/97 Total Depth of Well: 2048.70'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 576 MSCF N2, 429 bbls water
610 sx 20/40 and 193 sx 12/20
Perforated: 1926 TO 1934 No. of Perforations: OH Perforation Size: NA
Formation Broke Down at: 1804 PSIG Average Injection Rate 30 BPM
ISIP 1258 PSIG 5 MIN SIP 1172 PSIG Average Injection Pressure: 1810 PSIG
Date stimulated: 9/17.

**Zone 2:** P4, P5, P6, P7 Formation Stimulated With: 579 MSCF N2, 443 bbls water
393 sx 20/40 and 211 sx 12/20
Perforated: 1525 TO 1865 No. of Perforations: 72 Perforation Size: .70" EHD
Formation Broke Down at: 2483 PSIG Average Injection Rate 30 BPM
ISIP 1192 PSIG 5 MIN SIP 981 PSIG Average Injection Pressure: 2651 PSIG
Date stimulated: 9/17.

**Zone 3:** P9, P10, P11, LH3 Formation Stimulated With: 494 MSCF N2, 390 bbls water
440 sx 20/40 and 265 sx 12/20
Perforated: 1308 TO 1476 No. of Perforations: 56 Perforation Size: .70" EHD
Formation Broke Down at: 1481 PSIG Average Injection Rate 30 BPM
ISIP 1530 PSIG 5 MIN SIP 1361 PSIG Average Injection Pressure: 2086 PSIG
Date stimulated: 9/17.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | NA | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: [signature] (Signature)

ENTERED

Form DGO-GO-15
Rev 9/91

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T39
Permit #: 3428

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

**COMPLETION REPORT**

WELL TYPE: Oil __ Gas __ Coalbed Methane _x_ or Injection __ well.

Date Well Completed: 9/17/97 Total Depth of Well: 2048.7'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** MH, UH3, UH, LS, S Formation Stimulated With: 507 MSCF N2, 353 bbls water 305 sx 20/40 and 201 sx 12/20
Perforated: 953 TO 1208 No. of Perforations: 64 Perforation Size: .70"EHD
Formation Broke Down at: 2108 PSIG Average Injection Rate 30 BPM
ISIP 1399 PSIG 5 MIN SIP 1000 PSIG Average Injection Pressure: 2276 PSIG
Date stimulated: 9/17.

**Zone 5:** _____ Formation Stimulated With: _____
Perforated: __ TO ____ No. ofPerforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG __ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

**Zone 6:** _____ Formation Stimulated With: _____
Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ____ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (4) | | | | | |
| Zone (5) | | | | | |
| Zone (6) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)
By: Judith K. Pennington (Signature)

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 3879 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1187 |
| **Operations Name:** | PGP T39 |
| **Operation Type:** | Coal Bed |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 8/16/1997

Drilling Contractor: Noah Horn

Date drilling completed: 8/20/1997

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 2048.70

Log Total Depth (feet): 0.00

Coal Seam At Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10499648.8000

Permitted State Plane Y: 3610108.7400

Final Plat State Plane X: 10499648.8070

Final Plat State Plane Y: 3610108.3150

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| T39 | BU-1187 PLAT.pdf |

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| T39 | BU-1187 COAL.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| T39 | BU-1187 GS.pdf |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: Deviation/Gamma/Calipier

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|
| T39 | BU-1187 CASING.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|---|---|
| T39 | BU-1187 CASING.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By:

List of Attached Items:

| Description | FileName |
|---|---|
| T39 | BU-1187 LOG.pdf |

## 9. Comments

[7/2/2013, jsa]
Information inserted by DGO [6/25/2013, jhh]

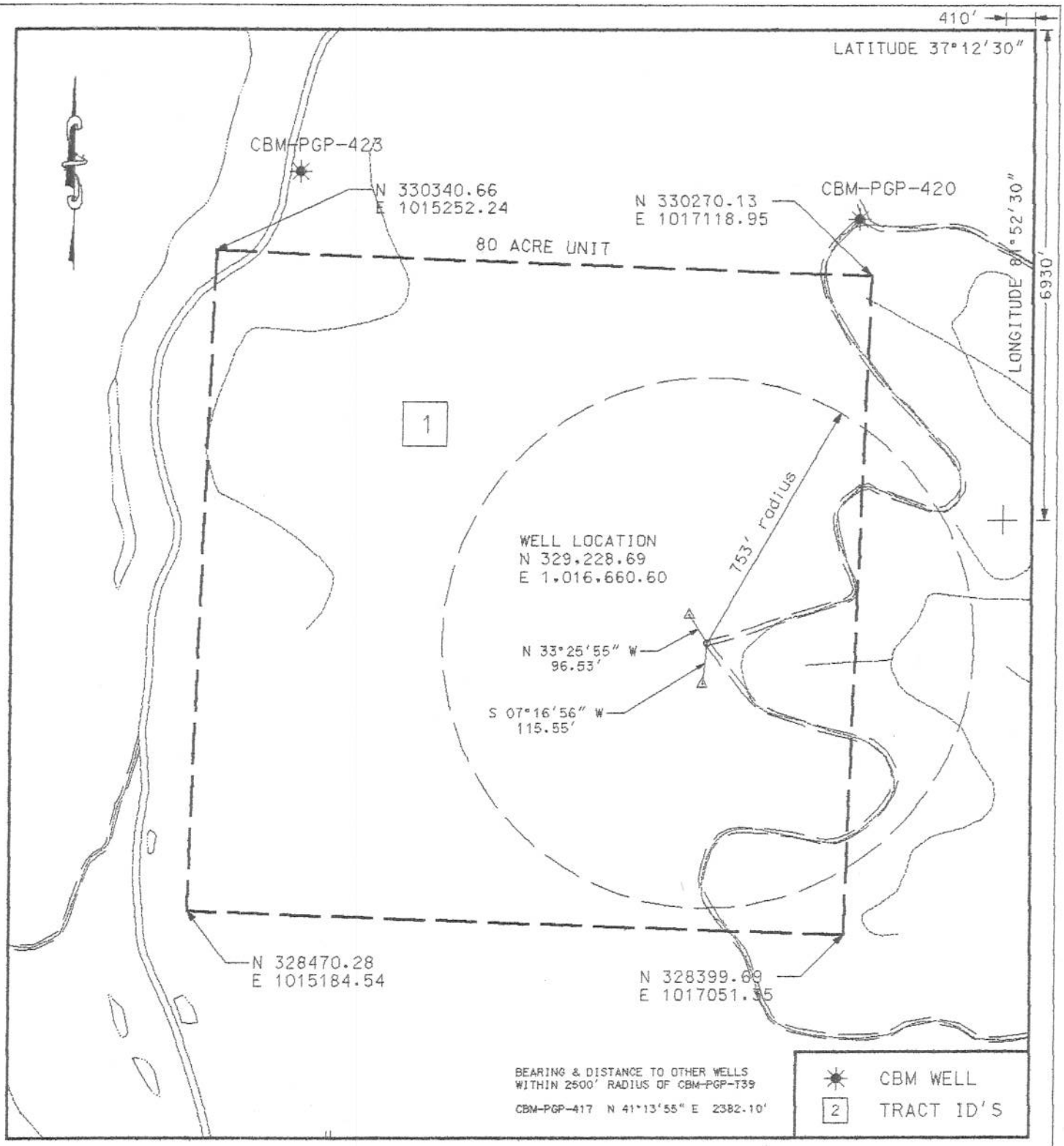
## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/28/2013

Signed By: Leslie Arrington Title: **********

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/28/2013 | | |
| Status: | A | Date: | 7/2/2013 |
| Final PDF Date: | 11/8/2013 | | |




# WELL LOCATION PLAT

Company Pocahontas Gas Partnership Well Name and Number CBM-PGP-T39

Tract No. Coal Mountain Elevation 2417.31' Quadrangle Keen Mountain

County Buchanan District Garden Scale: 1" = 400' Date 9/11/97

This plat is a new plat ____ ; an updated plat ____ ; or a final plat X

\+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

Form DGO-GO-7
Rev. 9/91

Claude D. Morgan
Licensed Professional Engineer or Licensed Land Surveyor

(Affix Seal)

COMMONWEALTH OF VIRGINIA
CLAUDE D. MORGAN
10953
REGISTERED PROFESSIONAL ENGINEER

Exhibit A

Well Name: 97-PGP-T39
Elevation: 2417.31

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA2 | 274.50 | 278.10 | 2142.81 | 3.60 | MINE VOID |
| | 278.10 | 321.30 | 2139.21 | 43.20 | |
| RA3 | 321.30 | 322.80 | 2096.01 | 1.50 | |
| | 322.80 | 323.90 | 2094.51 | 1.10 | |
| RA3 | 323.90 | 326.00 | 2093.41 | 2.10 | |
| | 326.00 | 405.90 | 2091.31 | 79.90 | |
| JB1 | 405.90 | 407.30 | 2011.41 | 1.40 | |
| | 407.30 | 443.90 | 2010.01 | 36.60 | |
| JB3 | 443.90 | 446.10 | 1973.41 | 2.20 | MINE VOID |
| | 446.10 | 534.10 | 1971.21 | 88.00 | |
| TI | 534.10 | 535.90 | 1883.21 | 1.80 | |
| | 535.90 | 768.70 | 1881.41 | 232.80 | |
| US2 | 768.70 | 769.00 | 1648.61 | 0.30 | |
| | 769.00 | 953.20 | 1648.31 | 184.20 | |
| SE1 | 953.20 | 954.20 | 1464.11 | 1.00 | |
| | 954.20 | 991.20 | 1463.11 | 37.00 | |
| SE2 | 991.20 | 993.50 | 1426.11 | 2.30 | |
| | 993.50 | 1032.10 | 1423.81 | 38.60 | |
| LS1 | 1032.10 | 1034.00 | 1385.21 | 1.90 | |
| | 1034.00 | 1049.40 | 1383.31 | 15.40 | |
| LS2 | 1049.40 | 1049.90 | 1367.91 | 0.50 | |
| | 1049.90 | 1080.80 | 1367.41 | 30.90 | |
| UH1 | 1080.80 | 1082.10 | 1336.51 | 1.30 | |
| | 1082.10 | 1145.80 | 1335.21 | 63.70 | |
| UH3 | 1145.80 | 1147.00 | 1271.51 | 1.20 | |
| | 1147.00 | 1148.50 | 1270.31 | 1.50 | |
| UH3 | 1148.50 | 1149.90 | 1268.81 | 1.40 | |
| | 1149.90 | 1205.40 | 1267.41 | 55.50 | |
| MH1 | 1205.40 | 1207.30 | 1211.91 | 1.90 | |
| | 1207.30 | 1308.10 | 1210.01 | 100.80 | |
| P11 | 1308.10 | 1312.20 | 1109.21 | 4.10 | |
| | 1312.20 | 1323.00 | 1105.11 | 10.80 | |
| P10 | 1323.00 | 1324.30 | 1094.31 | 1.30 | |
| | 1324.30 | 1387.00 | 1093.01 | 62.70 | |
| LH3 | 1387.00 | 1388.00 | 1030.31 | 1.00 | |
| | 1388.00 | 1465.30 | 1029.31 | 77.30 | |
| P91 | 1465.30 | 1466.10 | 952.01 | 0.80 | |
| | 1466.10 | 1467.60 | 951.21 | 1.50 | |
| P91 | 1467.60 | 1468.40 | 949.71 | 0.80 | |
| | 1468.40 | 1474.10 | 948.91 | 5.70 | |
| P92 | 1474.10 | 1475.10 | 943.21 | 1.00 | |
| | 1475.10 | 1525.00 | 942.21 | 49.90 | |
| P71 | 1525.00 | 1526.10 | 892.31 | 1.10 | |
| | 1526.10 | 1531.20 | 891.21 | 5.10 | |
| P71 | 1531.20 | 1532.30 | 886.11 | 1.10 | |
| | 1532.30 | 1550.90 | 885.01 | 18.60 | |
| P72 | 1550.90 | 1551.10 | 866.41 | 0.20 | |
| | 1551.10 | 1663.10 | 866.21 | 112.00 | |
| COAL | 1663.10 | 1663.70 | 754.21 | 0.60 | |
| | 1663.70 | 1666.10 | 753.61 | 2.40 | |

| | | | | |
|---|---|---|---|---|
| COAL | 1666.10 | 1667.30 | 751.21 | 1.20 |
| | 1667.30 | 1711.20 | 750.01 | 43.90 |
| P61 | 1711.20 | 1711.80 | 706.11 | 0.60 |
| | 1711.80 | 1725.90 | 705.51 | 14.10 |
| P62 | 1725.90 | 1726.60 | 691.41 | 0.70 |
| | 1726.60 | 1757.80 | 690.71 | 31.20 |
| P51 | 1757.80 | 1759.80 | 659.51 | 2.00 |
| | 1759.80 | 1851.10 | 657.51 | 91.30 |
| P41 | 1851.10 | 1852.20 | 566.21 | 1.10 |
| | 1852.20 | 1863.10 | 565.11 | 10.90 |
| P42 | 1863.10 | 1863.80 | 554.21 | 0.70 |
| | 1863.80 | 1926.00 | 553.51 | 62.20 |
| P3 | 1926.00 | 1934.40 | 491.31 | 8.40 |
| | 1934.40 | 2052.00 | 482.91 | 117.60 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION

T-39
PAGE 2

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP-T39
Permit #: 3428

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## DRILLING REPORT

Pursuant to VR-480-05-22.1, s 1.36, the undersigned Permittee submits this report on Well CBM- PGP-T39 in the Garden District of the Buchanan City/County, Virginia on this 6th day, October month, 19 97.

LOCATION

City/County: Buchanan District: Garden
Surface Elevation: 2417.31' Elevation of Kelly Bushing: _____ Quadrangle: Keen Mountain
----- Ft. S. of Latitude ------ and ----- Ft. W. of Longitude -----

or, State Plane Coordinates: Zone 5 N 329,228.69 E 1,016,660.60

Attach a final location plat as required by VR 480-05-22.1, s 1.36.

DRILLING DATA

Date Drilling Commenced: August 16, 1997 Drilling Contractor: Noah Horn
Date Drilling Completed: August 20, 1997 Rig Type: x Rotary __ Cable Tool
Total Depth of Well: 2048.70'

GEOLOGICAL DATA

Fresh Water at: N/R Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM

Salt Water at: _____ Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM

COAL SEAMS:

| NAME | TOP | BOTTOM | THICKNESS | MINING IN AREA YES | NO | MINED OUT |
|---|---|---|---|---|---|---|
| See DGO-GO-14, Exhibit A | | | | | | |

GAS AND OIL SHOWS:

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 628.50' | 2048.70' | 1420.20' | | | |

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP-T39
Permit #: 3428

Cuttings or samples are ___ are not _x_ available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have ___ have not _x_ been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes __x__ No _____

SURVEY RESULTS*:

* See Deviation Survey

CASING AND TUBING

| | SIZE | TOP | BOTTOM | CEMENT USED LENGTH | DATE IN CU/FT | PACKERS OR BRIDGE PLUGS CEMENTED | KIND | SIZE | SET AT |
|---|---|---|---|---|---|---|---|---|---|
| Conductor | 18" | 0 | 21.00' | 21.00' | | | | | |
| Surface | 18" | 0 | 21.00' | 21.00' | | | | | |
| Water Protection | 13 3/8" | 0 | 486.05' | 486.05' | 8/18/97 | 95 Std | Cement to Surface | | |
| Coal Protection | 8 5/8" | 0 | 628.50' | 628.50 | 8/19/97 | 295 Std | Cement to Surface | | |
| Other Casing and Tubing Left In Well | 5 1/2" | 0 | 1917.55' | 1917.55' | 8/28/97 | 120 Std 160 H.L. | Cement to Surface | | |

Liners

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.
Basket at 53.40'
Basket at 63.50'
Void at 445'-447', 274'-278'

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP-T39
Permit #: 3428

Cuttings or samples are ___ are not _x_ available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have ___ have not _x_ been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes __x__ No _____

SURVEY RESULTS*:

* See Deviation Survey

CASING AND TUBING

| | SIZE | TOP | BOTTOM | CEMENT USED LENGTH | DATE IN CU/FT | PACKERS OR BRIDGE PLUGS CEMENTED | KIND | SIZE | SET AT |
|---|---|---|---|---|---|---|---|---|---|
| Conductor | 18" | 0 | 21.00' | 21.00' | | | | | |
| Surface | 18" | 0 | 21.00' | 21.00' | | | | | |
| Water Protection | 13 3/8" | 0 | 486.05' | 486.05' | 8/18/97 | 95 Std | Cement to Surface | | |
| Coal Protection | 8 5/8" | 0 | 628.50' | 628.50 | 8/19/97 | 295 Std | Cement to Surface | | |
| Other Casing and Tubing Left In Well | 5 1/2" | 0 | 1917.55' | 1917.55' | 8/28/97 | 120 Std 160 H.L. | Cement to Surface | | |

Liners

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.
Basket at 53.40'
Basket at 63.50'
Void at 445'-447', 274'-278'

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-T-39
Permit #: 3428

# DRILLER'S LOG

Compiled by - Noah Horn

| Geologic Age | Formation | General Lithology | Color | Depth Top | Depth Bottom | Thickness | Remarks |
|---|---|---|---|---|---|---|---|
| | | OVERBURDEN | | 0 | 20 | | |
| | | SAND | | 20 | 110 | | |
| | | SHALE | | 110 | 140 | | |
| | | SANDY SHALE | | 140 | 170 | | |
| | | SAND | | 170 | 200 | | |
| | | SANDY SHALE | | 200 | 230 | | |
| Pennsylvanian | Pocahontas | SHALE | | 230 | 245 | | |
| | | COAL | | 245 | 246 | | |
| | | SANDY SHALE | | 246 | 260 | | |
| | | SHALE | | 260 | 277 | | |
| | | BROKEN UP | | 277 | 279.2 | | |
| | | SHALE | | 279.2 | 319 | | |
| | | COAL | | 319 | 320 | | |
| | | SANDY SHALE | | 320 | 350 | | |
| | | SHALE | | 350 | 408 | | |
| | | COAL | | 408 | 409 | | |
| | | SANDY SHALE | | 409 | 445 | | |
| | | VOID | | 445 | 447 | | |
| | | SANDY SHALE | | 447 | 470 | | |
| | | SAND | | 470 | 490 | | |
| | | SANDY SHALE | | 490 | 520 | | |
| | | SHALE | | 520 | 523 | | |
| | | COAL | | 523 | 524 | | |
| | | SHALE | | 524 | 547 | | |
| | | COAL | | 547 | 548 | | |
| | | SAND | | 548 | 580 | | |
| | | SANDY SHALE | | 580 | 635 | | |
| | | SAND | | 635 | 760 | | |
| | | SANDY SHALE | | 760 | 880 | | |
| | | SHALE | | 880 | 940 | | |
| | | SHALE W/COAL | | 940 | 1000 | | |
| | | SANDY SHALE | | 1000 | 1030 | | |
| | | SHALE W/COAL | | 1030 | 1090 | | |
| | | SANDY SHALE | | 1090 | 1150 | | |
| | | SHALE W/COAL | | 1150 | 1210 | | |
| | | SHALE | | 1210 | 1270 | | |
| | | SANDY SHALE | | 1270 | 1300 | | |
| | | SHALE W/COAL | | 1300 | 1330 | | |
| | | SHALE | | 1330 | 1450 | | |
| | | SANDY SHALE | | 1450 | 1500 | | |
| | | COAL | | 1500 | 1502 | | |
| | | SAND | | 1502 | 1510 | | |
| | | SANDY SHALE | | 1510 | 1540 | | |
| | | SAND | | 1540 | 1660 | | |
| | | SHALE | | 1660 | 1720 | | |
| | | COAL | | 1720 | 1721 | | |
| | | SANDY SHALE | | 1721 | 1750 | | |
| | | SAND | | 1750 | 1870 | | |
| | | COAL | | 1870 | 1871 | | |
| | | SHALE | | 1871 | 1923 | | |
| | | COAL | | 1923 | 1930 | | |
| | | SANDY SHALE | | 1930 | 2050 | | |

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1547 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3536 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 6/11/2008 |
| **Driller's Total Depth:** | 1904.00 | **Log's Total Depth:** | 1907.70 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 11/20/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 11/20/2008 | | |
| Status: | | Date: | 11/26/2008 |
| Final PDF Date: | 3/27/2009 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1587 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3536 |
| **Operations Name:** | CBM T39B W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 6/5/2008

Drilling Contractor: Noah Horn

Date drilling completed: 6/11/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1904.00

Log Total Depth (feet): 1907.73

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10499621.6000

Permitted State Plane Y: 3609571.9900

Final Plat State Plane X: 10499620.5900

Final Plat State Plane Y: 3609570.3600

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T39B PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T39B EXHIBIT A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | T39B Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: caliper gamma density temp deviation

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T39B DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | T39B Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

Void at 442 ft; 16" casing cemented on backside to surface.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| Drill Data | T39B DRILL DATA.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 11/20/2008

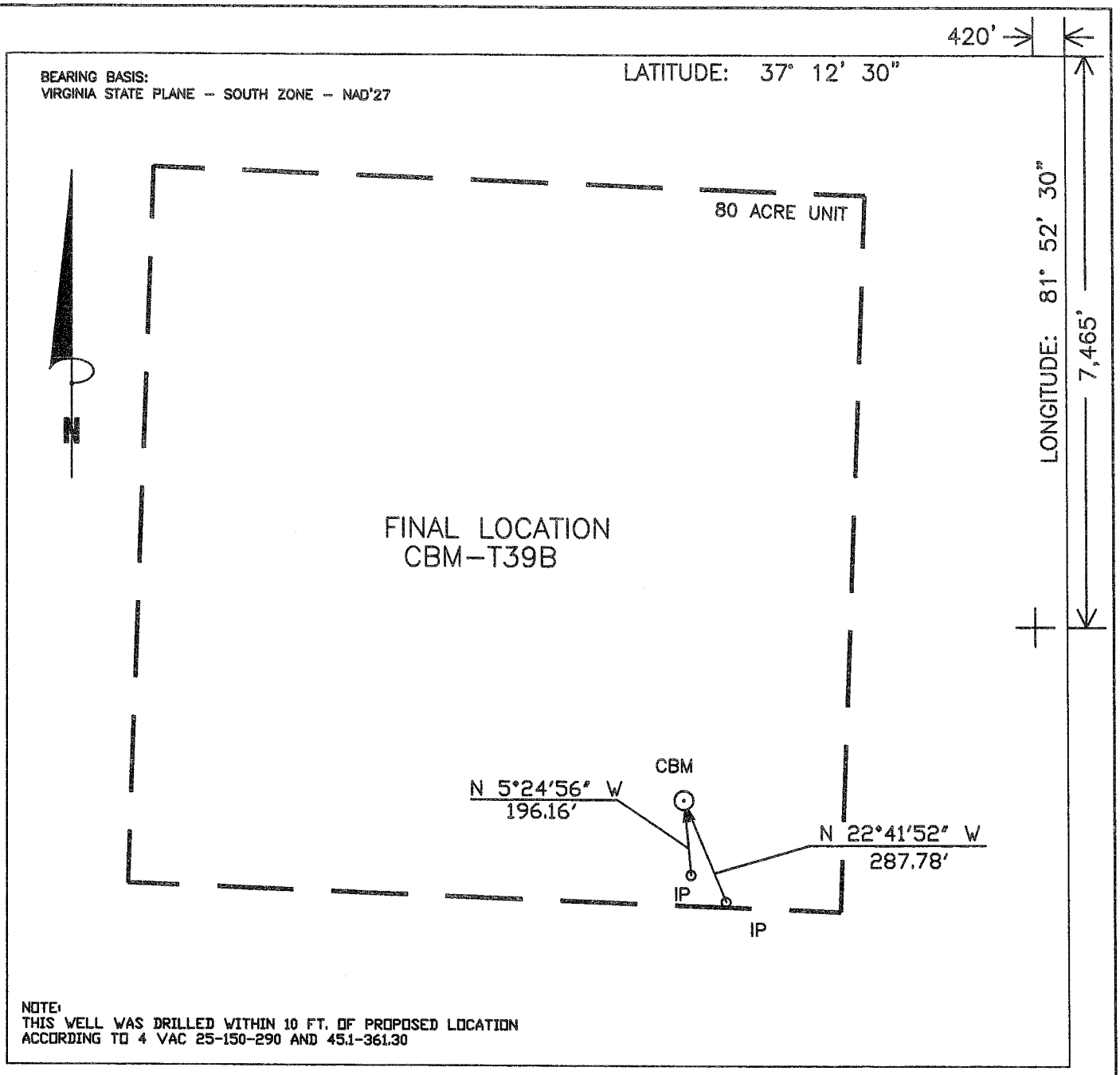
Signed By: Leslie Arrington Title: Director Environmental Permitting

## INTERNAL USE ONLY

Submit Date: 11/20/2008

Status: A Date: 11/26/2008

Final PDF Date: 3/24/2009




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25-150-290 AND 45.1-361.30

# WELL LOCATION PLAT

T39BFNL
2N31/22-678/19

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T39B

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): N 328,690.75 E 1,016,632.39

ELEVATION: 2419.34' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 06–12–08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DRP
DANNY R. PRICE
Lic. No. 008540
6-12-08
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

T39B.CMP
Exhibit A

Well Name: 08 CBM T39B
SURFACE ELEV: 2419.34 EASTING: 1016632.39 NORTHING: 328690.75

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| AL2 | 140.40 | 141.30 | 2278.94 | 0.90 | |
| | 141.30 | 183.20 | 2278.04 | 41.90 | |
| COAL | 183.20 | 184.80 | 2236.14 | 1.60 | |
| | 184.80 | 240.90 | 2234.54 | 56.10 | |
| RA1 | 240.90 | 242.10 | 2178.44 | 1.20 | |
| | 242.10 | 291.00 | 2177.24 | 48.90 | |
| RA2 | 291.00 | 294.00 | 2128.34 | 3.00 | |
| | 294.00 | 314.10 | 2125.34 | 20.10 | |
| RA3 | 314.10 | 316.10 | 2105.24 | 2.00 | |
| | 316.10 | 400.80 | 2103.24 | 84.70 | |
| JB1 | 400.80 | 402.70 | 2018.54 | 1.90 | |
| | 402.70 | 445.00 | 2016.64 | 42.30 | |
| JB3 | 445.00 | 450.00 | 1974.34 | 5.00 | |
| | 450.00 | 514.90 | 1969.34 | 64.90 | |
| COAL | 514.90 | 516.00 | 1904.44 | 1.10 | |
| | 516.00 | 532.30 | 1903.34 | 16.30 | |
| TI | 532.30 | 533.10 | 1887.04 | 0.80 | |
| | 533.10 | 650.30 | 1886.24 | 117.20 | |
| *US1 | 650.30 | 650.90 | 1769.04 | 0.60 | |
| | 650.90 | 764.60 | 1768.44 | 113.70 | |
| *US2 | 764.60 | 765.50 | 1654.74 | 0.90 | |
| | 765.50 | 948.10 | 1653.84 | 182.60 | |
| *SE1 | 948.10 | 949.50 | 1471.24 | 1.40 | |
| | 949.50 | 987.00 | 1469.84 | 37.50 | |
| *SE2 | 987.00 | 989.40 | 1432.34 | 2.40 | |
| | 989.40 | 1032.20 | 1429.94 | 42.80 | |
| *LS1 | 1032.20 | 1034.70 | 1387.14 | 2.50 | |
| | 1034.70 | 1047.20 | 1384.64 | 12.50 | |
| *LS2 | 1047.20 | 1048.00 | 1372.14 | 0.80 | |
| | 1048.00 | 1081.10 | 1371.34 | 33.10 | |
| *LS3 | 1081.10 | 1081.90 | 1338.24 | 0.80 | |
| | 1081.90 | 1141.10 | 1337.44 | 59.20 | |
| *UH2 | 1141.10 | 1142.20 | 1278.24 | 1.10 | |
| | 1142.20 | 1202.00 | 1277.14 | 59.80 | |
| *MH1 | 1202.00 | 1203.60 | 1217.34 | 1.60 | |
| | 1203.60 | 1303.70 | 1215.74 | 100.10 | |
| *P11 | 1303.70 | 1306.00 | 1115.64 | 2.30 | |
| | 1306.00 | 1319.60 | 1113.34 | 13.60 | |
| *P10 | 1319.60 | 1321.00 | 1099.74 | 1.40 | |
| | 1321.00 | 1385.00 | 1098.34 | 64.00 | |
| *LH3 | 1385.00 | 1386.00 | 1034.34 | 1.00 | |
| | 1386.00 | 1469.90 | 1033.34 | 83.90 | |
| *P92 | 1469.90 | 1471.10 | 949.44 | 1.20 | |
| | 1471.10 | 1472.00 | 948.24 | 0.90 | |
| *COAL | 1472.00 | 1472.80 | 947.34 | 0.80 | |
| | 1472.80 | 1479.90 | 946.54 | 7.10 | |
| *P81 | 1479.90 | 1481.00 | 939.44 | 1.10 | |
| | 1481.00 | 1519.90 | 938.34 | 38.90 | |
| *P71 | 1519.90 | 1520.40 | 899.44 | 0.50 | |
| | 1520.40 | 1551.00 | 898.94 | 30.60 | |
| *P72 | 1551.00 | 1552.20 | 868.34 | 1.20 | |
| | 1552.20 | 1661.00 | 867.14 | 108.80 | |
| *COAL | 1661.00 | 1662.00 | 758.34 | 1.00 | |
| | 1662.00 | 1663.60 | 757.34 | 1.60 | |
| *COAL | 1663.60 | 1665.00 | 755.74 | 1.40 | |
| | 1665.00 | 1720.70 | 754.34 | 55.70 | |

| | | | | |
|---|---|---|---|---|
| *P62 | 1720.70 | 1721.40 | 698.64 | 0.70 |
| | 1721.40 | 1754.50 | 697.94 | 33.10 |
| *P51 | 1754.50 | 1755.90 | 664.84 | 1.40 |
| | 1755.90 | 1846.10 | 663.44 | 90.20 |
| *P42 | 1846.10 | 1847.30 | 573.24 | 1.20 |
| | 1847.30 | 1907.73 | 572.04 | 60.43 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\T39B.CMP
DATE: 07/09/08

Well: **T39B**

## Oil & Gas Show

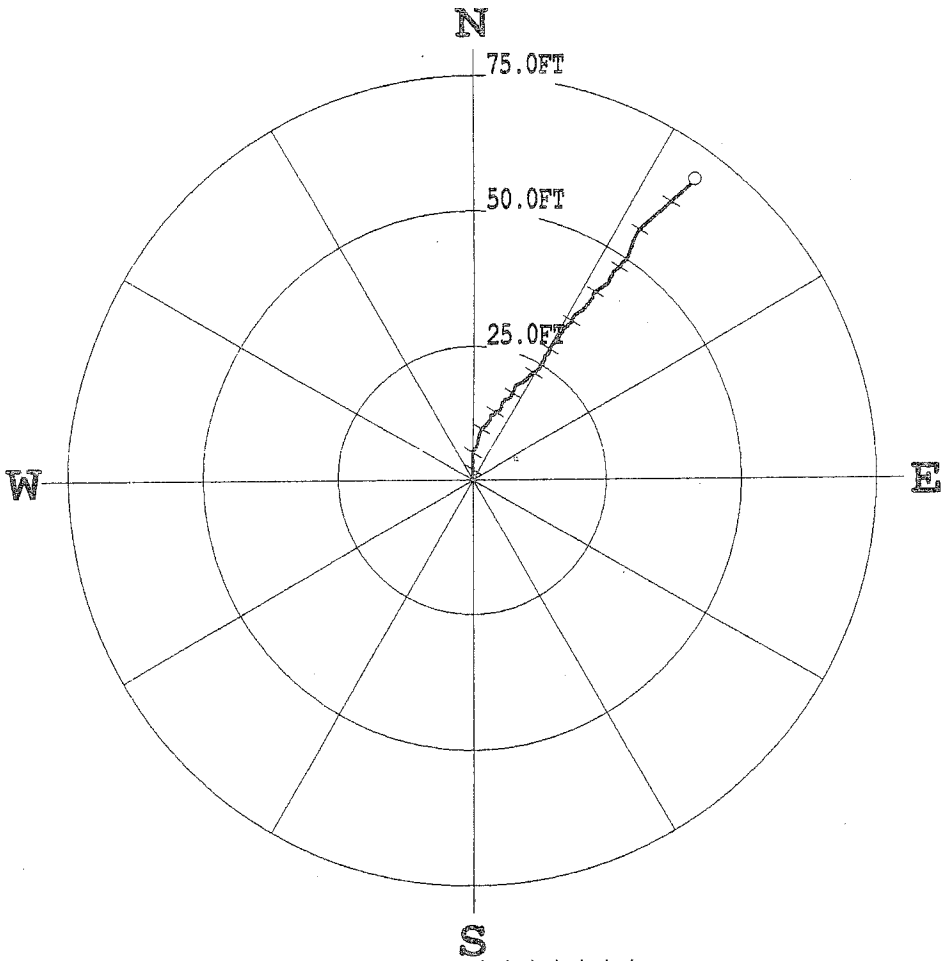
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 948.1 | 1481.0 | 532.9 | | | |
| Pocahontas | 1551.0 | 1847.3 | 296.3 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: CNX GAS
LOCATION: -
HOLE ID: 08-CNX-T-39-B
DATE OF LOG: 06/12/08
PROBE: 0026C 777

MAG DECL: -7.1

SCALE: 25 FT/IN
TRUE DEPTH: 1902.79 FT
AZIMUTH: 36.7
DISTANCE: 69.3 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX GAS
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
HOLE ID. : 08-CNX-T-39-B
DATE OF LOG : 06/12/08
PROBE : 0026C , 777
DEPTH UNITS : FEET
LOG: 08-CNX-T-39-B_06-12-08_02-49_0026C_.10_-7.90_1907.50_DEVI.log

| ABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| -1.30 | -1.30 | 0.00 | 0.00 | 0.0 | 0.0 | 1.1 | 66.1 |
| 2.10 | 2.10 | 0.02 | 0.01 | 0.0 | 32.1 | 1.0 | 126.9 |
| 12.10 | 12.10 | -0.00 | -0.07 | 0.1 | 268.3 | 1.0 | 275.9 |
| 22.10 | 22.10 | 0.15 | -0.00 | 0.1 | 358.2 | 1.2 | 47.7 |
| 32.10 | 32.09 | 0.13 | 0.11 | 0.2 | 39.9 | 1.5 | 347.4 |
| 42.10 | 42.09 | 0.23 | 0.20 | 0.3 | 40.7 | 0.7 | 91.5 |
| 52.10 | 52.09 | 0.40 | 0.29 | 0.5 | 35.6 | 1.5 | 17.1 |
| 62.10 | 62.09 | 0.54 | 0.40 | 0.7 | 36.5 | 0.6 | 74.2 |
| 72.10 | 72.09 | 0.56 | 0.40 | 0.7 | 35.6 | 0.6 | 281.5 |
| 82.10 | 82.09 | 0.66 | 0.25 | 0.7 | 20.5 | 0.5 | 309.3 |
| 92.10 | 92.09 | 0.73 | 0.15 | 0.7 | 11.4 | 1.3 | 321.8 |
| 102.10 | 102.08 | 0.93 | 0.02 | 0.9 | 1.0 | 1.0 | 296.2 |
| 112.10 | 112.08 | 1.13 | -0.10 | 1.1 | 355.1 | 1.8 | 346.3 |
| 122.10 | 122.07 | 1.43 | -0.05 | 1.4 | 358.1 | 1.6 | 347.6 |
| 132.10 | 132.07 | 1.69 | -0.06 | 1.7 | 358.1 | 1.7 | 17.3 |
| 142.10 | 142.07 | 1.82 | 0.06 | 1.8 | 1.8 | 0.4 | 271.0 |
| 152.10 | 152.07 | 2.00 | 0.02 | 2.0 | 0.6 | 1.2 | 40.7 |
| 162.10 | 162.07 | 2.06 | 0.08 | 2.1 | 2.1 | 0.3 | 293.9 |
| 172.10 | 172.06 | 2.27 | 0.03 | 2.3 | 0.7 | 1.5 | 1.8 |

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| -1.30 | -1.30 | 0.00 | 0.00 | 0.0 | 0.0 | 1.1 | 66.1 |
| 2.10 | 2.10 | 0.02 | 0.01 | 0.0 | 32.1 | 1.0 | 126.9 |
| 12.10 | 12.10 | -0.00 | -0.07 | 0.1 | 268.3 | 1.0 | 275.9 |
| 22.10 | 22.10 | 0.15 | -0.00 | 0.1 | 358.2 | 1.2 | 47.7 |
| 32.10 | 32.09 | 0.13 | 0.11 | 0.2 | 39.9 | 1.5 | 347.4 |
| 42.10 | 42.09 | 0.23 | 0.20 | 0.3 | 40.7 | 0.7 | 91.5 |
| 52.10 | 52.09 | 0.40 | 0.29 | 0.5 | 35.6 | 1.5 | 17.1 |
| 62.10 | 62.09 | 0.54 | 0.40 | 0.7 | 36.5 | 0.6 | 74.2 |
| 72.10 | 72.09 | 0.56 | 0.40 | 0.7 | 35.6 | 0.6 | 281.5 |
| 82.10 | 82.09 | 0.66 | 0.25 | 0.7 | 20.5 | 0.5 | 309.3 |
| 92.10 | 92.09 | 0.73 | 0.15 | 0.7 | 11.4 | 1.3 | 321.8 |
| 102.10 | 102.08 | 0.93 | 0.02 | 0.9 | 1.0 | 1.0 | 296.2 |
| 112.10 | 112.08 | 1.13 | -0.10 | 1.1 | 355.1 | 1.8 | 346.3 |
| 122.10 | 122.07 | 1.43 | -0.05 | 1.4 | 358.1 | 1.6 | 347.6 |
| 132.10 | 132.07 | 1.69 | -0.06 | 1.7 | 358.1 | 1.7 | 17.3 |
| 142.10 | 142.07 | 1.82 | 0.06 | 1.8 | 1.8 | 0.4 | 271.0 |
| 152.10 | 152.07 | 2.00 | 0.02 | 2.0 | 0.6 | 1.2 | 40.7 |
| 162.10 | 162.07 | 2.06 | 0.08 | 2.1 | 2.1 | 0.3 | 293.9 |
| 172.10 | 172.06 | 2.27 | 0.03 | 2.3 | 0.7 | 1.5 | 1.8 |
| 182.10 | 182.06 | 2.47 | -0.08 | 2.5 | 358.1 | 1.6 | 351.5 |
| 192.10 | 192.06 | 2.76 | -0.04 | 2.8 | 359.2 | 1.4 | 50.0 |
| 202.10 | 202.05 | 2.86 | -0.09 | 2.9 | 358.1 | 1.7 | 341.0 |
| 212.10 | 212.05 | 3.06 | -0.00 | 3.1 | 360.0 | 0.3 | 52.4 |
| 222.10 | 222.05 | 3.21 | -0.04 | 3.2 | 359.2 | 1.7 | 0.3 |
| 232.10 | 232.05 | 3.34 | 0.08 | 3.3 | 1.4 | 0.1 | 275.9 |
| 242.10 | 242.04 | 3.48 | 0.04 | 3.5 | 0.7 | 0.8 | 287.1 |
| 252.10 | 252.04 | 3.56 | 0.08 | 3.6 | 1.3 | 1.6 | 330.5 |
| 262.10 | 262.04 | 3.83 | -0.01 | 3.8 | 359.8 | 1.4 | 341.5 |
| 272.10 | 272.03 | 4.14 | -0.05 | 4.1 | 359.3 | 1.9 | 0.3 |
| 282.10 | 282.03 | 4.42 | -0.08 | 4.4 | 358.9 | 1.6 | 341.6 |
| 292.10 | 292.02 | 4.77 | -0.01 | 4.8 | 359.8 | 1.8 | 23.4 |
| 302.10 | 302.02 | 5.05 | 0.04 | 5.0 | 0.5 | 1.3 | 344.2 |
| 312.10 | 312.01 | 5.35 | 0.18 | 5.3 | 2.0 | 1.9 | 54.9 |
| 322.10 | 322.01 | 5.62 | 0.35 | 5.6 | 3.6 | 1.6 | 44.1 |
| 332.10 | 332.00 | 5.81 | 0.55 | 5.8 | 5.4 | 1.8 | 34.2 |
| 342.10 | 342.00 | 6.09 | 0.73 | 6.1 | 6.9 | 1.7 | 30.9 |
| 352.10 | 351.99 | 6.40 | 0.82 | 6.5 | 7.3 | 2.3 | 27.0 |
| 362.10 | 361.98 | 6.76 | 0.90 | 6.8 | 7.6 | 1.9 | 8.0 |
| 372.10 | 371.98 | 7.08 | 0.93 | 7.1 | 7.5 | 2.0 | 1.5 |
| 382.10 | 381.97 | 7.38 | 1.00 | 7.5 | 7.7 | 1.1 | 349.5 |
| 392.10 | 391.97 | 7.70 | 1.07 | 7.8 | 7.9 | 2.0 | 23.6 |
| 402.10 | 401.96 | 8.04 | 1.11 | 8.1 | 7.9 | 2.0 | 3.1 |
| 412.10 | 411.95 | 8.41 | 1.16 | 8.5 | 7.8 | 2.1 | 10.9 |
| 422.10 | 421.95 | 8.69 | 1.33 | 8.8 | 8.7 | 1.2 | 77.5 |
| 432.10 | 431.95 | 8.86 | 1.35 | 9.0 | 8.6 | 2.2 | 15.5 |
| 442.10 | 441.94 | 9.25 | 1.43 | 9.4 | 8.8 | 2.6 | 29.7 |
| 452.10 | 451.93 | 9.54 | 1.64 | 9.7 | 9.7 | 1.8 | 343.7 |
| 462.10 | 461.93 | 9.71 | 1.82 | 9.9 | 10.6 | 1.6 | 58.6 |
| 472.10 | 471.92 | 9.85 | 2.05 | 10.1 | 11.7 | 1.6 | 66.8 |
| 482.10 | 481.92 | 10.02 | 2.23 | 10.3 | 12.5 | 2.1 | 53.2 |
| 492.10 | 491.92 | 10.15 | 2.37 | 10.4 | 13.2 | 0.7 | 354.2 |
| 502.10 | 501.91 | 10.30 | 2.45 | 10.6 | 13.4 | 1.0 | 44.3 |
| 512.10 | 511.91 | 10.41 | 2.60 | 10.7 | 14.0 | 2.9 | 52.8 |
| 522.10 | 521.90 | 10.85 | 2.86 | 11.2 | 14.8 | 2.0 | 344.2 |
| 532.10 | 531.89 | 10.96 | 2.95 | 11.3 | 15.1 | 2.3 | 61.6 |
| 542.10 | 541.88 | 11.36 | 3.23 | 11.8 | 15.9 | 2.8 | 13.8 |
| 552.10 | 551.87 | 11.80 | 3.27 | 12.2 | 15.5 | 2.5 | 4.6 |
| 562.10 | 561.87 | 12.03 | 3.26 | 12.5 | 15.2 | 0.8 | 75.3 |
| 572.10 | 571.86 | 12.11 | 3.55 | 12.6 | 16.4 | 1.8 | 66.3 |
| 582.10 | 581.86 | 12.20 | 3.87 | 12.8 | 17.6 | 2.2 | 64.9 |
| 592.10 | 591.85 | 12.56 | 4.08 | 13.2 | 18.0 | 1.9 | 356.1 |
| 602.10 | 601.84 | 12.70 | 4.12 | 13.4 | 18.0 | 1.3 | 79.2 |
| 612.10 | 611.84 | 12.80 | 4.41 | 13.5 | 19.0 | 2.4 | 65.0 |
| 622.10 | 621.83 | 12.98 | 4.79 | 13.8 | 20.2 | 2.5 | 64.2 |
| 632.10 | 631.82 | 13.31 | 5.10 | 14.3 | 21.0 | 3.0 | 19.1 |
| 642.10 | 641.81 | 13.75 | 5.26 | 14.7 | 20.9 | 3.1 | 13.5 |
| 652.10 | 651.80 | 14.12 | 5.27 | 15.1 | 20.5 | 1.8 | 355.5 |
| 662.10 | 661.80 | 14.35 | 5.25 | 15.3 | 20.1 | 0.8 | 2.0 |
| 672.10 | 671.79 | 14.42 | 5.39 | 15.4 | 20.5 | 2.1 | 78.3 |
| 682.10 | 681.79 | 14.62 | 5.75 | 15.7 | 21.5 | 3.0 | 34.5 |
| 692.10 | 691.78 | 14.91 | 5.81 | 16.0 | 21.3 | 0.8 | 63.9 |
| 702.10 | 701.78 | 15.02 | 6.08 | 16.2 | 22.0 | 2.4 | 74.3 |
| 712.10 | 711.77 | 15.14 | 6.39 | 16.4 | 22.9 | 2.5 | 70.5 |
| 722.10 | 721.76 | 15.33 | 6.77 | 16.8 | 23.8 | 3.0 | 63.6 |
| 732.10 | 731.75 | 15.61 | 7.11 | 17.2 | 24.5 | 2.9 | 0.9 |
| 742.10 | 741.74 | 15.99 | 7.12 | 17.5 | 24.0 | 1.9 | 355.4 |
| 752.10 | 751.73 | 16.27 | 7.44 | 17.9 | 24.6 | 3.5 | 50.7 |
| 762.10 | 761.72 | 16.75 | 7.58 | 18.4 | 24.4 | 3.4 | 15.6 |
| 772.10 | 771.71 | 17.09 | 7.62 | 18.7 | 24.0 | 1.6 | 48.1 |
| 782.10 | 781.70 | 17.56 | 7.82 | 19.2 | 24.0 | 2.7 | 15.9 |
| 792.10 | 791.69 | 17.78 | 8.02 | 19.5 | 24.3 | 1.6 | 74.8 |
| 802.10 | 801.68 | 17.88 | 8.29 | 19.7 | 24.9 | 2.0 | 69.8 |
| 812.10 | 811.68 | 18.05 | 8.65 | 20.0 | 25.6 | 2.6 | 64.8 |
| 822.10 | 821.67 | 18.22 | 9.02 | 20.3 | 26.3 | 2.0 | 70.6 |
| 832.10 | 831.66 | 18.36 | 9.36 | 20.6 | 27.0 | 2.5 | 58.5 |
| 842.10 | 841.65 | 18.60 | 9.55 | 20.9 | 27.2 | 2.1 | 63.9 |
| 852.10 | 851.64 | 18.80 | 9.92 | 21.3 | 27.8 | 3.0 | 43.7 |
| 862.10 | 861.64 | 19.07 | 10.07 | 21.6 | 27.8 | 1.8 | 62.4 |
| 872.10 | 871.62 | 19.37 | 10.46 | 22.0 | 28.4 | 3.2 | 12.4 |
| 882.10 | 881.62 | 19.63 | 10.63 | 22.3 | 28.4 | 2.3 | 59.4 |
| 892.10 | 891.61 | 19.81 | 10.99 | 22.7 | 29.0 | 2.6 | 60.2 |
| 902.10 | 901.60 | 20.07 | 11.39 | 23.1 | 29.6 | 3.4 | 33.9 |
| 912.10 | 911.59 | 20.27 | 11.63 | 23.4 | 29.9 | 2.1 | 62.4 |
| 922.10 | 921.58 | 20.50 | 12.01 | 23.8 | 30.4 | 3.0 | 3.2 |

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|---|---|---|---|---|---|---|---|
| 872.10 | 871.62 | 19.37 | 10.46 | 22.0 | 28.4 | 3.2 | 12.4 |
| 882.10 | 881.62 | 19.63 | 10.63 | 22.3 | 28.4 | 2.3 | 59.4 |
| 892.10 | 891.61 | 19.81 | 10.99 | 22.7 | 29.0 | 2.6 | 60.2 |
| 902.10 | 901.60 | 20.07 | 11.39 | 23.1 | 29.6 | 3.4 | 33.9 |
| 912.10 | 911.59 | 20.27 | 11.63 | 23.4 | 29.9 | 2.1 | 62.4 |
| 922.10 | 921.58 | 20.50 | 12.01 | 23.8 | 30.4 | 3.0 | 3.2 |
| 932.10 | 931.58 | 20.66 | 12.17 | 24.0 | 30.5 | 1.9 | 65.6 |
| 942.10 | 941.56 | 20.96 | 12.50 | 24.4 | 30.8 | 3.4 | 31.2 |
| 952.10 | 951.56 | 21.33 | 12.56 | 24.8 | 30.5 | 1.2 | 11.0 |
| 962.10 | 961.55 | 21.47 | 12.72 | 25.0 | 30.7 | 2.0 | 68.3 |
| 972.10 | 971.55 | 21.59 | 13.01 | 25.2 | 31.1 | 1.1 | 48.7 |
| 982.10 | 981.54 | 21.86 | 13.04 | 25.5 | 30.8 | 2.7 | 6.2 |
| 992.10 | 991.53 | 22.39 | 13.29 | 26.0 | 30.7 | 2.8 | 345.3 |
| 1002.10 | 1001.52 | 22.83 | 13.33 | 26.4 | 30.3 | 3.0 | 13.1 |
| 1012.10 | 1011.51 | 23.14 | 13.40 | 26.7 | 30.1 | 1.4 | 52.2 |
| 1022.10 | 1021.51 | 23.29 | 13.70 | 27.0 | 30.5 | 1.4 | 46.7 |
| 1032.10 | 1031.49 | 23.61 | 14.10 | 27.5 | 30.9 | 3.6 | 44.7 |
| 1042.10 | 1041.48 | 24.08 | 14.27 | 28.0 | 30.7 | 2.7 | 7.6 |
| 1052.10 | 1051.47 | 24.42 | 14.35 | 28.3 | 30.4 | 1.5 | 52.9 |
| 1062.10 | 1061.45 | 24.85 | 14.59 | 28.8 | 30.4 | 3.4 | 16.1 |
| 1072.10 | 1071.44 | 25.22 | 14.76 | 29.2 | 30.3 | 2.6 | 54.8 |
| 1082.10 | 1081.43 | 25.60 | 15.14 | 29.7 | 30.6 | 3.4 | 15.0 |
| 1092.10 | 1091.42 | 25.88 | 15.25 | 30.0 | 30.5 | 2.2 | 66.2 |
| 1102.10 | 1101.41 | 26.18 | 15.63 | 30.5 | 30.8 | 2.4 | 356.9 |
| 1112.10 | 1111.40 | 26.49 | 15.94 | 30.9 | 31.0 | 2.6 | 0.5 |
| 1122.10 | 1121.38 | 26.85 | 16.22 | 31.4 | 31.1 | 2.8 | 353.7 |
| 1132.10 | 1131.38 | 27.19 | 16.31 | 31.7 | 31.0 | 2.1 | 57.6 |
| 1142.10 | 1141.36 | 27.59 | 16.75 | 32.3 | 31.3 | 2.9 | 15.8 |
| 1152.10 | 1151.34 | 28.06 | 16.84 | 32.7 | 31.0 | 1.9 | 15.7 |
| 1162.10 | 1161.34 | 28.28 | 17.13 | 33.1 | 31.2 | 2.0 | 55.1 |
| 1172.10 | 1171.33 | 28.49 | 17.49 | 33.4 | 31.5 | 4.1 | 37.0 |
| 1182.10 | 1181.31 | 28.85 | 17.74 | 33.9 | 31.6 | 2.9 | 57.3 |
| 1192.10 | 1191.31 | 29.07 | 18.10 | 34.2 | 31.9 | 3.5 | 55.1 |
| 1202.10 | 1201.28 | 29.65 | 18.47 | 34.9 | 31.9 | 3.9 | 25.9 |
| 1212.10 | 1211.27 | 30.13 | 18.60 | 35.4 | 31.7 | 1.6 | 22.5 |
| 1222.10 | 1221.25 | 30.52 | 18.93 | 35.9 | 31.8 | 2.3 | 9.9 |
| 1232.10 | 1231.24 | 30.78 | 19.25 | 36.3 | 32.0 | 2.9 | 64.2 |
| 1242.10 | 1241.23 | 31.06 | 19.71 | 36.8 | 32.4 | 3.0 | 61.9 |
| 1252.10 | 1251.22 | 31.27 | 20.10 | 37.2 | 32.7 | 2.6 | 61.1 |
| 1262.10 | 1261.20 | 31.55 | 20.56 | 37.7 | 33.1 | 3.5 | 41.0 |
| 1272.10 | 1271.19 | 31.88 | 20.83 | 38.1 | 33.2 | 3.4 | 50.1 |
| 1282.10 | 1281.18 | 32.29 | 21.09 | 38.6 | 33.1 | 2.3 | 358.8 |
| 1292.10 | 1291.17 | 32.52 | 21.40 | 38.9 | 33.3 | 2.1 | 54.4 |
| 1302.10 | 1301.15 | 32.95 | 21.74 | 39.5 | 33.4 | 3.1 | 6.9 |
| 1312.10 | 1311.14 | 33.25 | 21.98 | 39.9 | 33.5 | 4.1 | 56.7 |
| 1322.10 | 1321.12 | 33.66 | 22.27 | 40.4 | 33.5 | 4.0 | 21.2 |
| 1332.10 | 1331.11 | 34.24 | 22.40 | 40.9 | 33.2 | 3.2 | 7.7 |
| 1342.10 | 1341.10 | 34.57 | 22.53 | 41.3 | 33.1 | 3.4 | 70.5 |
| 1352.10 | 1351.09 | 34.86 | 22.87 | 41.7 | 33.3 | 1.6 | 46.5 |
| 1362.10 | 1361.08 | 35.12 | 23.22 | 42.1 | 33.5 | 2.5 | 61.2 |
| 1372.10 | 1371.07 | 35.37 | 23.61 | 42.5 | 33.7 | 2.2 | 61.8 |
| 1382.10 | 1381.06 | 35.57 | 23.91 | 42.9 | 33.9 | 2.4 | 54.0 |
| 1392.10 | 1391.05 | 35.81 | 24.28 | 43.3 | 34.1 | 2.6 | 60.3 |
| 1402.10 | 1401.04 | 36.02 | 24.59 | 43.6 | 34.3 | 2.6 | 57.7 |
| 1412.10 | 1411.03 | 36.24 | 24.92 | 44.0 | 34.5 | 2.2 | 57.6 |
| 1422.10 | 1421.03 | 36.45 | 25.21 | 44.3 | 34.7 | 1.8 | 46.3 |
| 1432.10 | 1431.02 | 36.75 | 25.37 | 44.7 | 34.6 | 3.4 | 16.2 |
| 1442.10 | 1441.00 | 37.41 | 25.58 | 45.3 | 34.4 | 4.2 | 29.7 |
| 1452.10 | 1450.98 | 37.75 | 25.92 | 45.8 | 34.5 | 1.6 | 34.4 |
| 1462.10 | 1460.98 | 38.06 | 26.02 | 46.1 | 34.4 | 3.4 | 9.8 |
| 1472.10 | 1470.95 | 38.61 | 26.36 | 46.7 | 34.3 | 3.3 | 55.1 |
| 1482.10 | 1480.95 | 38.87 | 26.67 | 47.1 | 34.5 | 2.4 | 50.3 |
| 1492.10 | 1490.93 | 39.16 | 27.04 | 47.6 | 34.6 | 2.8 | 52.5 |
| 1502.10 | 1500.92 | 39.44 | 27.38 | 48.0 | 34.8 | 2.0 | 45.2 |
| 1512.10 | 1510.92 | 39.69 | 27.62 | 48.4 | 34.8 | 1.9 | 43.1 |
| 1522.10 | 1520.91 | 40.07 | 27.77 | 48.7 | 34.7 | 4.2 | 24.8 |
| 1532.10 | 1530.90 | 40.38 | 28.14 | 49.2 | 34.9 | 2.6 | 50.1 |
| 1542.10 | 1540.89 | 40.64 | 28.42 | 49.6 | 35.0 | 2.0 | 41.5 |
| 1552.10 | 1550.88 | 40.89 | 28.64 | 49.9 | 35.0 | 2.0 | 44.8 |
| 1562.10 | 1560.88 | 41.15 | 28.84 | 50.3 | 35.0 | 2.0 | 40.4 |
| 1572.10 | 1570.87 | 41.50 | 28.99 | 50.6 | 34.9 | 3.5 | 18.0 |
| 1582.10 | 1580.84 | 42.18 | 29.21 | 51.3 | 34.7 | 4.1 | 16.6 |
| 1592.10 | 1590.82 | 42.89 | 29.42 | 52.0 | 34.4 | 4.2 | 20.9 |
| 1602.10 | 1600.80 | 43.37 | 29.72 | 52.6 | 34.4 | 1.9 | 22.2 |
| 1612.10 | 1610.78 | 43.95 | 29.85 | 53.1 | 34.2 | 4.3 | 18.7 |
| 1622.10 | 1620.75 | 44.66 | 30.14 | 53.9 | 34.0 | 4.1 | 30.5 |
| 1632.10 | 1630.72 | 45.35 | 30.49 | 54.6 | 33.9 | 4.5 | 26.1 |
| 1642.10 | 1640.69 | 46.05 | 30.85 | 55.4 | 33.8 | 4.4 | 39.7 |
| 1652.10 | 1650.68 | 46.37 | 31.16 | 55.9 | 33.9 | 2.3 | 57.2 |
| 1662.10 | 1660.67 | 46.69 | 31.49 | 56.3 | 34.0 | 2.4 | 48.0 |
| 1672.10 | 1670.65 | 47.01 | 31.85 | 56.8 | 34.1 | 3.0 | 51.1 |
| 1682.10 | 1680.64 | 47.34 | 32.24 | 57.3 | 34.3 | 3.0 | 50.0 |
| 1692.10 | 1690.63 | 47.67 | 32.63 | 57.8 | 34.4 | 3.0 | 50.6 |
| 1702.10 | 1700.62 | 48.00 | 33.02 | 58.3 | 34.5 | 2.7 | 51.9 |
| 1712.10 | 1710.60 | 48.33 | 33.41 | 58.8 | 34.7 | 3.0 | 48.9 |
| 1722.10 | 1720.59 | 48.66 | 33.78 | 59.2 | 34.8 | 2.2 | 41.0 |
| 1732.10 | 1730.57 | 49.02 | 34.18 | 59.8 | 34.9 | 3.1 | 50.5 |
| 1742.10 | 1740.56 | 49.40 | 34.64 | 60.3 | 35.0 | 3.0 | 49.9 |
| 1752.10 | 1750.54 | 49.73 | 35.02 | 60.8 | 35.2 | 3.0 | 51.5 |
| 1762.10 | 1760.53 | 50.07 | 35.42 | 61.3 | 35.3 | 3.4 | 46.4 |
| 1772.10 | 1770.52 | 50.40 | 35.81 | 61.8 | 35.4 | 2.6 | 49.3 |
| 1782.10 | 1780.50 | 50.76 | 36.22 | 62.4 | 35.5 | 3.4 | 54.4 |
| 1792.10 | 1790.49 | 51.09 | 36.61 | 62.9 | 35.6 | 2.8 | 49.3 |
| 1802.10 | 1800.47 | 51.44 | 37.02 | 63.4 | 35.7 | 3.0 | 49.8 |
| 1812.10 | 1810.46 | 51.77 | 37.41 | 63.9 | 35.9 | 2.9 | 48.3 |
| 1822.10 | 1820.44 | 52.16 | 37.84 | 64.4 | 36.0 | 3.7 | 50.7 |

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|---|---|---|---|---|---|---|---|
| 1712.10 | 1710.60 | 48.33 | 33.41 | 58.8 | 34.7 | 3.0 | 49.3 |
| 1722.10 | 1720.59 | 48.66 | 33.78 | 59.2 | 34.8 | 2.2 | 41.0 |
| 1732.10 | 1730.57 | 49.02 | 34.18 | 59.8 | 34.9 | 3.1 | 50.5 |
| 1742.10 | 1740.56 | 49.40 | 34.64 | 60.3 | 35.0 | 3.0 | 49.9 |
| 1752.10 | 1750.54 | 49.73 | 35.02 | 60.8 | 35.2 | 3.0 | 51.5 |
| 1762.10 | 1760.53 | 50.07 | 35.42 | 61.3 | 35.3 | 3.4 | 46.4 |
| 1772.10 | 1770.52 | 50.40 | 35.81 | 61.8 | 35.4 | 2.6 | 49.3 |
| 1782.10 | 1780.50 | 50.76 | 36.22 | 62.4 | 35.5 | 3.4 | 54.4 |
| 1792.10 | 1790.49 | 51.09 | 36.61 | 62.9 | 35.6 | 2.8 | 49.3 |
| 1802.10 | 1800.47 | 51.44 | 37.02 | 63.4 | 35.7 | 3.0 | 49.8 |
| 1812.10 | 1810.46 | 51.77 | 37.41 | 63.9 | 35.9 | 2.9 | 48.3 |
| 1822.10 | 1820.44 | 52.16 | 37.84 | 64.4 | 36.0 | 3.7 | 50.7 |
| 1832.10 | 1830.43 | 52.51 | 38.25 | 65.0 | 36.1 | 3.0 | 48.9 |
| 1842.10 | 1840.41 | 52.89 | 38.67 | 65.5 | 36.2 | 3.6 | 53.8 |
| 1852.10 | 1850.39 | 53.29 | 39.13 | 66.1 | 36.3 | 3.1 | 50.2 |
| 1862.10 | 1860.38 | 53.64 | 39.54 | 66.6 | 36.4 | 2.8 | 47.3 |
| 1872.10 | 1870.36 | 54.05 | 39.98 | 67.2 | 36.5 | 3.2 | 49.9 |
| 1882.10 | 1880.34 | 54.44 | 40.43 | 67.8 | 36.6 | 3.1 | 51.4 |
| 1892.10 | 1890.33 | 54.82 | 40.85 | 68.4 | 36.7 | 3.9 | 46.4 |
| 1902.10 | 1900.30 | 55.42 | 41.31 | 69.1 | 36.7 | 4.6 | 27.1 |
| 1904.60 | 1902.79 | 55.60 | 41.38 | 69.3 | 36.7 | 3.7 | 12.0 |

Well: **T39B**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 32 | 24" | | | X | 6/5/08 | |
| Surface | 16" | 503 | 20" | 492 | X | | 6/9/08 | Basket@336' |
| Water Protection | 13 3/8" | 592.6 | 15 3/8" | 204 | X | | 6/10/08 | Basket@84' |
| Coal Protection | 13 3/8" | 592.6 | 15 3/8" | 204 | X | | 6/10/08 | Basket@84' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY: CNX
HOLE: T-39B
RIG #: 799
LOCATION: BUCHANAN, VA

DATE STARTED: 6/5/2008
DATE COMPLETED: 6/11/2008

ELECTRIC LOGGED: YES
GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION,VOIDS ETC |
|---|---|---|---|
| 0 | 32 | 32 | |
| 32 | 89 | 57 | SHALE |
| 89 | 120 | 31 | SAND |
| 120 | 151 | 31 | SHALE/COAL |
| 151 | 182 | 31 | SAND |
| 182 | 213 | 31 | SAND/SHALE |
| 213 | 244 | 31 | SHALE/COAL/SAND |
| 244 | 276 | 32 | SAND/SHALE |
| 276 | 307 | 31 | SAND/COAL |
| 307 | 339 | 32 | SAND/COAL/SHALE |
| 339 | 371 | 32 | SAND/SHALE |
| 371 | 402 | 31 | SAND/SHALE/COAL |
| 402 | 434 | 32 | SAND/SHALE |
| 434 | 466 | 32 | SAND/SHALE/COAL |
| 466 | 498 | 32 | SAND/SHALE |
| 498 | 515 | 17 | SAND/SHALE/CEMENT |
| 515 | 529 | 14 | SHALE |
| 529 | 561 | 32 | SHALE/COAL |
| 561 | 593 | 32 | SAND/SHALE |
| 593 | 623 | 30 | SAND/SHALE |
| 623 | 634 | 11 | SHALE |
| 634 | | | |
| 560 | 638 | 78 | CEMENT PLUG/SHOE |
| 638 | | | |
| 634 | 655 | 21 | SAND/COAL |
| 655 | 686 | 31 | SAND/SHALE |
| 686 | 718 | 32 | SHALE/SAND |
| 718 | 750 | 32 | SHALE/SAND |
| 750 | 781 | 31 | SHALE/COAL |
| 781 | 813 | 32 | SHALE |
| 813 | 844 | 31 | SHALE/SAND |
| 844 | 876 | 32 | SHALE |
| 876 | 908 | 32 | SHALE |
| 908 | 939 | 31 | SHALE |
| 939 | 970 | 31 | SHALE/COAL |
| 970 | 1002 | 32 | SHALE/COAL |
| 1002 | 1033 | 31 | SHALE/COAL |

| | | |
|---|---|---|
| 1033 | 1065 | 32 SHALE/COAL |
| 1065 | 1096 | 31 COAL/SHALE |
| 1096 | 1128 | 32 SAND/SHALE |
| 1128 | 1160 | 32 COAL/SAND |
| 1160 | 1191 | 31 SHALE |
| 1191 | 1222 | 31 SHALE/COAL |
| 1222 | 1254 | 32 SHALE |
| 1254 | 1285 | 31 SHALE |
| 1285 | 1317 | 32 SHALE/COAL |
| 1317 | 1349 | 32 SHALE/COAL |
| 1349 | 1381 | 32 SHALE/SAND |
| 1381 | 1412 | 31 SHALE/COAL |
| 1412 | 1443 | 31 SHALE/SAND |
| 1443 | 1474 | 31 SHALE/COAL |
| 1474 | 1506 | 32 SHALE/COAL |
| 1506 | 1537 | 31 SHALE/COAL |
| 1537 | 1569 | 32 SHALE/COAL |
| 1569 | 1601 | 32 SAND/SHALE |
| 1601 | 1632 | 31 SAND/SHALE |
| 1632 | 1663 | 31 SHALE/COAL/SAND |
| 1663 | 1695 | 32 SHALE/COAL/SAND |
| 1695 | 1727 | 32 SHALE/COAL |
| 1727 | 1758 | 31 SHALE/COAL |
| 1758 | 1790 | 32 SAND/SHALE |
| 1790 | 1821 | 31 SAND/SHALE |
| 1821 | 1853 | 32 SAND/SHALE/COAL |
| 1853 | 1884 | 31 SAND/SHALE |
| 1884 | 1904 | 20 SAND/SHALE |

1904' TOTAL DEPTH
32' OF 22" CASING
503.47' OF 16" CASING
592.6' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1546 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3570 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 6/18/2008 |
| **Driller's Total Depth:** | 1907.00 | **Log's Total Depth:** | 1910.50 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 11/20/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 11/20/2008 | | |
| Status: | | Date: | 11/26/2008 |
| Final PDF Date: | 3/27/2009 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1586 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3570 |
| **Operations Name:** | CBM T39C W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 6/9/2008

Drilling Contractor: Noah Horn

Date drilling completed: 6/18/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1907.00

Log Total Depth (feet): 1910.52

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10499672.6000

Permitted State Plane Y: 3610059.1600

Final Plat State Plane X: 10499671.5400

Final Plat State Plane Y: 3610057.3800

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T39C PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T39C EXHIBIT A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | T39C Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: caliper gamma density temp deviation

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T39C DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| Description | |
|---|---|
| Casing | T39C Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

Void at 275 ft & 446 ft; 18" & 16" casing cemented on backside to surface.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| Drill Data | T39C DRILL DATA.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 11/20/2008

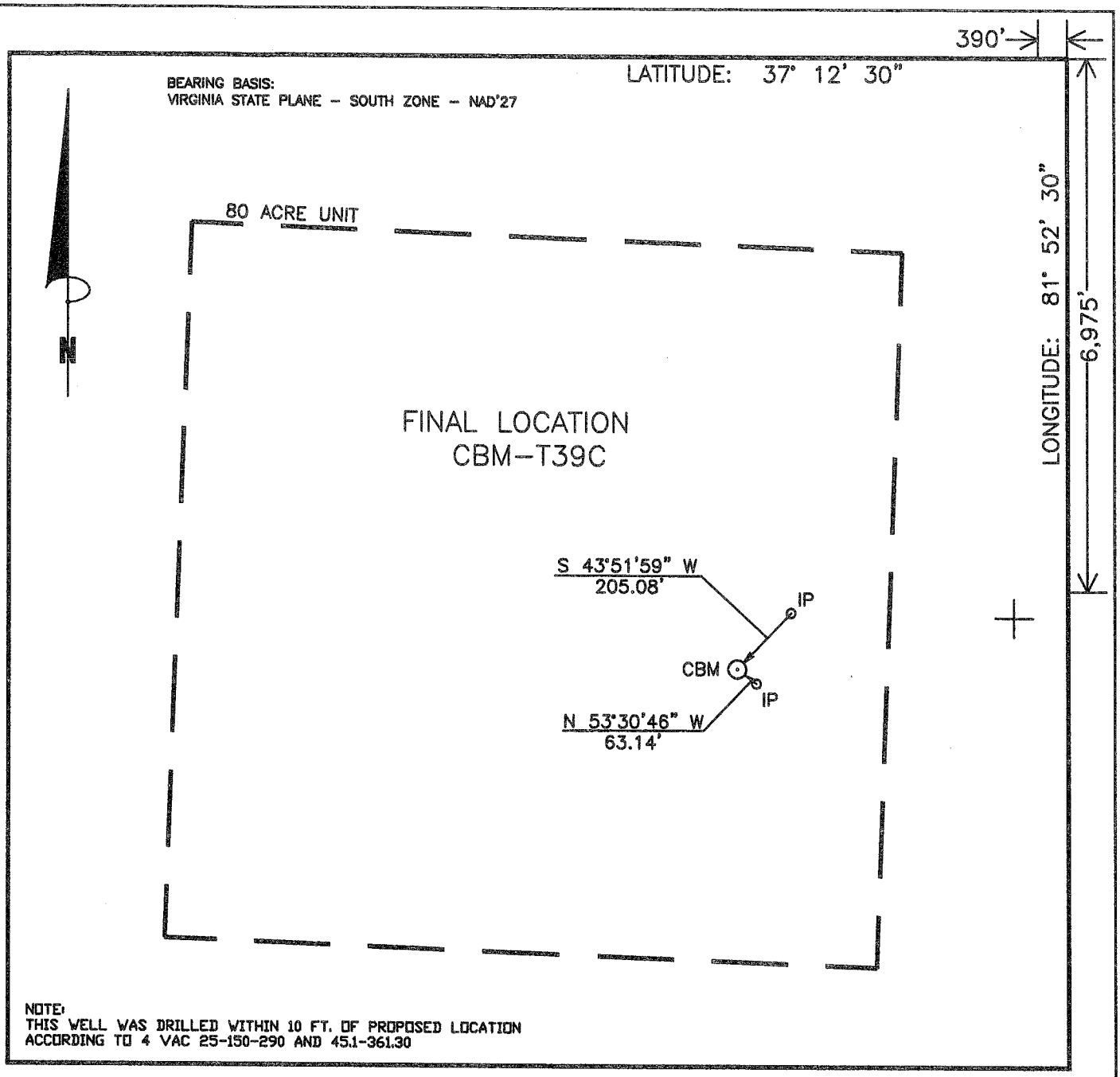
Signed By: Leslie Arrington Title: Director Environmental Permitting

## INTERNAL USE ONLY

Submit Date: 11/20/2008

Status: A Date: 11/26/2008

Final PDF Date: 3/24/2009




# WELL LOCATION PLAT

T39CFNL
2N31/48-678/21

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T39C

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): N 329,177.76 E 1,016,683.34

ELEVATION: 2416.39' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL ING BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 06–20–08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown. (optional)

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
6/23/08
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

T39C.CMP
Exhibit A

Well Name: 08 CBM T39C
SURFACE ELEV: 2416.00 EASTING: 1016684.00 NORTHING: 329180.00

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 142.10 | 142.90 | 2273.90 | 0.80 | |
| | 142.90 | 150.70 | 2273.10 | 7.80 | |
| COAL | 150.70 | 152.00 | 2265.30 | 1.30 | |
| | 152.00 | 244.80 | 2264.00 | 92.80 | |
| COAL | 244.80 | 247.00 | 2171.20 | 2.20 | |
| | 247.00 | 275.00 | 2169.00 | 28.00 | |
| RA2 | 275.00 | 279.20 | 2141.00 | 4.20 | MINED OUT |
| | 279.20 | 319.10 | 2136.80 | 39.90 | |
| COAL | 319.10 | 320.30 | 2096.90 | 1.20 | |
| | 320.30 | 322.60 | 2095.70 | 2.30 | |
| COAL | 322.60 | 323.60 | 2093.40 | 1.00 | |
| | 323.60 | 328.40 | 2092.40 | 4.80 | |
| COAL | 328.40 | 329.80 | 2087.60 | 1.40 | |
| | 329.80 | 406.00 | 2086.20 | 76.20 | |
| JB1 | 406.00 | 407.00 | 2010.00 | 1.00 | |
| | 407.00 | 420.30 | 2009.00 | 13.30 | |
| COAL | 420.30 | 421.10 | 1995.70 | 0.80 | |
| | 421.10 | 441.30 | 1994.90 | 20.20 | |
| JB3 | 441.30 | 442.90 | 1974.70 | 1.60 | |
| | 442.90 | 534.50 | 1973.10 | 91.60 | |
| TI | 534.50 | 535.70 | 1881.50 | 1.20 | |
| | 535.70 | 538.50 | 1880.30 | 2.80 | |
| *COAL | 538.50 | 539.10 | 1877.50 | 0.60 | |
| | 539.10 | 651.30 | 1876.90 | 112.20 | |
| *US1 | 651.30 | 652.20 | 1764.70 | 0.90 | |
| | 652.20 | 767.20 | 1763.80 | 115.00 | |
| *US2 | 767.20 | 767.70 | 1648.80 | 0.50 | |
| | 767.70 | 952.20 | 1648.30 | 184.50 | |
| *SE1 | 952.20 | 953.40 | 1463.80 | 1.20 | |
| | 953.40 | 991.00 | 1462.60 | 37.60 | |
| *SE2 | 991.00 | 993.20 | 1425.00 | 2.20 | |
| | 993.20 | 1032.80 | 1422.80 | 39.60 | |
| *LS1 | 1032.80 | 1034.80 | 1383.20 | 2.00 | |
| | 1034.80 | 1048.10 | 1381.20 | 13.30 | |
| *LS2 | 1048.10 | 1048.80 | 1367.90 | 0.70 | |
| | 1048.80 | 1080.20 | 1367.20 | 31.40 | |
| *LS3 | 1080.20 | 1082.70 | 1335.80 | 2.50 | |
| | 1082.70 | 1145.60 | 1333.30 | 62.90 | |
| *UH2 | 1145.60 | 1148.00 | 1270.40 | 2.40 | |
| | 1148.00 | 1149.00 | 1268.00 | 1.00 | |
| *UH3 | 1149.00 | 1150.50 | 1267.00 | 1.50 | |
| | 1150.50 | 1206.40 | 1265.50 | 55.90 | |
| *MH1 | 1206.40 | 1207.50 | 1209.60 | 1.10 | |
| | 1207.50 | 1307.80 | 1208.50 | 100.30 | |
| *P11 | 1307.80 | 1310.80 | 1108.20 | 3.00 | |
| | 1310.80 | 1322.00 | 1105.20 | 11.20 | |
| *P10 | 1322.00 | 1323.00 | 1094.00 | 1.00 | |
| | 1323.00 | 1384.10 | 1093.00 | 61.10 | |
| *LH3 | 1384.10 | 1385.20 | 1031.90 | 1.10 | |
| | 1385.20 | 1464.00 | 1030.80 | 78.80 | |
| *P92 | 1464.00 | 1465.00 | 952.00 | 1.00 | |
| | 1465.00 | 1471.90 | 951.00 | 6.90 | |
| *P81 | 1471.90 | 1472.50 | 944.10 | 0.60 | |
| | 1472.50 | 1511.00 | 943.50 | 38.50 | |
| *P71 | 1511.00 | 1512.60 | 905.00 | 1.60 | |
| | 1512.60 | 1550.90 | 903.40 | 38.30 | |

| | | | | |
|---|---|---|---|---|
| *P72 | 1550.90 | 1552.00 | 865.10 | 1.10 |
| | 1552.00 | 1658.90 | 864.00 | 106.90 |
| *COAL | 1658.90 | 1659.40 | 757.10 | 0.50 |
| | 1659.40 | 1661.00 | 756.60 | 1.60 |
| *COAL | 1661.00 | 1661.90 | 755.00 | 0.90 |
| | 1661.90 | 1710.20 | 754.10 | 48.30 |
| *P61 | 1710.20 | 1710.80 | 705.80 | 0.60 |
| | 1710.80 | 1724.90 | 705.20 | 14.10 |
| *P62 | 1724.90 | 1725.50 | 691.10 | 0.60 |
| | 1725.50 | 1756.50 | 690.50 | 31.00 |
| *P51 | 1756.50 | 1757.90 | 659.50 | 1.40 |
| | 1757.90 | 1851.80 | 658.10 | 93.90 |
| *P42 | 1851.80 | 1852.50 | 564.20 | 0.70 |
| | 1852.50 | 1862.90 | 563.50 | 10.40 |
| *COAL | 1862.90 | 1863.50 | 553.10 | 0.60 |
| | 1863.50 | 1910.52 | 552.50 | 47.02 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\T39C.CMP
DATE: 06/25/08

Well: **T39C**

## Oil & Gas Show

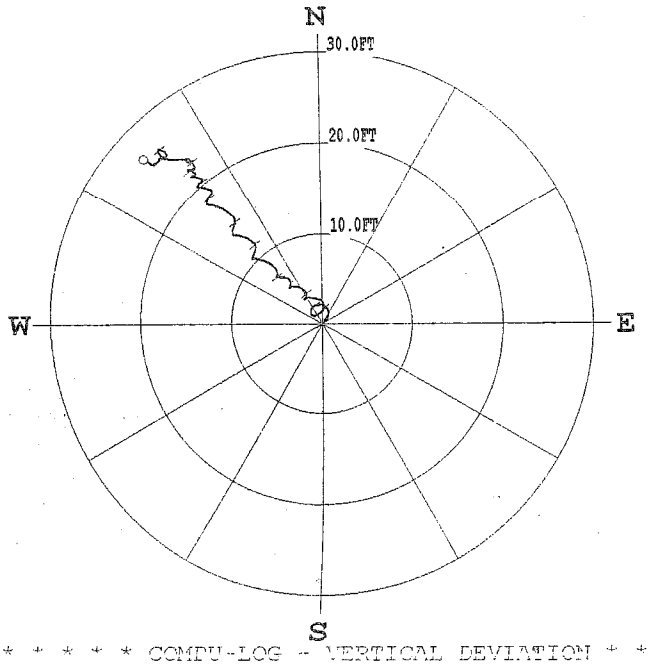
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 952.2 | 1465.0 | 512.8 | | | |
| Pocahontas | 1511.0 | 1757.9 | 246.9 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: Consol Energy
LOCATION:
HOLE ID: 08-CNX-T-39-C
DATE OF LOG: 06/18/08
PROBE: 0019C 732

MAG DECL: -6.9

SCALE: 10 FT/IN
TRUE DEPTH: 1902.91 FT
AZIMUTH: 313.5
DISTANCE: 26.5 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 08-CNX-T-39-C
DATE OF LOG : 06/18/08
PROBE : 0019C , 732
DEPTH UNITS : FEET
LOG: 08-CNX-T-39-C_06-18-08_02-35_0019C_.02_-0.02_1903.77_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | 0.47 | 0.54 | 0.7 | 48.9 | 1.4 | 39.4 |
| 60.0 | 59.98 | 0.70 | 0.62 | 0.9 | 41.5 | 1.3 | 16.6 |
| 70.0 | 69.98 | 0.93 | 0.68 | 1.2 | 36.1 | 1.3 | 7.4 |
| 80.0 | 79.98 | 1.17 | 0.73 | 1.4 | 31.8 | 1.3 | 18.3 |
| 90.0 | 89.97 | 1.42 | 0.69 | 1.6 | 25.9 | 1.5 | 329.5 |
| 100.0 | 99.97 | 1.62 | 0.51 | 1.7 | 17.5 | 1.6 | 312.2 |
| 110.0 | 109.97 | 1.83 | 0.34 | 1.9 | 10.5 | 1.7 | 319.6 |
| 120.0 | 119.96 | 2.01 | 0.12 | 2.0 | 3.4 | 1.7 | 295.7 |
| 130.0 | 129.96 | 2.07 | -0.16 | 2.1 | 355.6 | 1.6 | 268.7 |
| 140.0 | 139.95 | 2.05 | -0.44 | 2.1 | 347.9 | 1.8 | 265.9 |
| 150.0 | 149.95 | 2.01 | -0.74 | 2.1 | 339.8 | 1.6 | 251.9 |
| 160.0 | 159.95 | 1.84 | -0.97 | 2.1 | 332.3 | 1.6 | 224.5 |
| 170.0 | 169.94 | 1.65 | -1.17 | 2.0 | 324.7 | 1.4 | 198.6 |
| 180.0 | 179.94 | 1.43 | -1.26 | 1.9 | 318.6 | 1.3 | 191.4 |
| 190.0 | 189.94 | 1.23 | -1.26 | 1.8 | 314.4 | 0.9 | 173.4 |
| 200.0 | 199.93 | 1.06 | -1.20 | 1.6 | 311.5 | 0.9 | 139.0 |
| 210.0 | 209.93 | 0.94 | -1.11 | 1.5 | 310.1 | 0.8 | 143.5 |
| 220.0 | 219.93 | 0.89 | -0.99 | 1.3 | 311.8 | 1.1 | 109.3 |
| 230.0 | 229.93 | 0.82 | -0.83 | 1.2 | 314.7 | 1.0 | 112.4 |
| 240.0 | 239.93 | 0.85 | -0.68 | 1.1 | 321.6 | 1.0 | 86.7 |
| 250.0 | 249.93 | 0.96 | -0.53 | 1.1 | 330.9 | 1.0 | 68.8 |
| 260.0 | 259.93 | 1.04 | -0.35 | 1.1 | 341.3 | 1.1 | 53.8 |
| 270.0 | 269.92 | 1.18 | -0.21 | 1.2 | 349.8 | 1.4 | 34.2 |
| 280.0 | 279.92 | 1.31 | -0.04 | 1.3 | 358.0 | 1.1 | 51.2 |
| 290.0 | 289.92 | 1.45 | 0.12 | 1.5 | 4.9 | 1.3 | 42.3 |
| 300.0 | 299.91 | 1.72 | 0.20 | 1.7 | 6.7 | 1.6 | 15.9 |
| 310.0 | 309.91 | 2.02 | 0.21 | 2.0 | 6.1 | 1.7 | 353.1 |
| 320.0 | 319.91 | 2.32 | 0.12 | 2.3 | 3.0 | 2.3 | 329.7 |
| 330.0 | 329.90 | 2.64 | -0.11 | 2.6 | 357.7 | 2.4 | 309.7 |
| 340.0 | 339.89 | 2.64 | -0.20 | 2.6 | 355.8 | 1.9 | 280.8 |
| 350.0 | 349.88 | 2.78 | -0.56 | 2.8 | 348.5 | 2.1 | 283.2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 240.0 | 239.93 | 0.85 | -0.68 | 1.1 | 321.6 | 1.0 | 86.7 |
| 250.0 | 249.93 | 0.96 | -0.53 | 1.1 | 330.9 | 1.0 | 68.8 |
| 260.0 | 259.93 | 1.04 | -0.35 | 1.1 | 341.3 | 1.1 | 53.8 |
| 270.0 | 269.92 | 1.18 | -0.21 | 1.2 | 349.8 | 1.4 | 34.2 |
| 280.0 | 279.92 | 1.31 | -0.04 | 1.3 | 358.0 | 1.1 | 51.2 |
| 290.0 | 289.92 | 1.45 | 0.12 | 1.5 | 4.9 | 1.3 | 42.3 |
| 300.0 | 299.91 | 1.72 | 0.20 | 1.7 | 6.7 | 1.6 | 15.9 |
| 310.0 | 309.91 | 2.02 | 0.21 | 2.0 | 6.1 | 1.7 | 353.1 |
| 320.0 | 319.91 | 2.32 | 0.12 | 2.3 | 3.0 | 2.3 | 329.7 |
| 330.0 | 329.90 | 2.64 | -0.11 | 2.6 | 357.7 | 2.4 | 309.7 |
| 340.0 | 339.89 | 2.64 | -0.20 | 2.6 | 355.8 | 1.9 | 280.8 |
| 350.0 | 349.88 | 2.78 | -0.56 | 2.8 | 348.5 | 2.1 | 283.2 |
| 360.0 | 359.88 | 2.84 | -0.91 | 3.0 | 342.2 | 2.5 | 289.5 |
| 370.0 | 369.87 | 2.92 | -1.29 | 3.2 | 336.1 | 1.9 | 260.3 |
| 380.0 | 379.86 | 2.89 | -1.65 | 3.3 | 330.3 | 2.4 | 265.6 |
| 390.0 | 389.86 | 2.77 | -1.92 | 3.4 | 325.3 | 1.0 | 210.7 |
| 400.0 | 399.86 | 2.65 | -1.98 | 3.3 | 323.3 | 0.5 | 200.0 |
| 410.0 | 409.86 | 2.63 | -1.95 | 3.3 | 323.4 | 0.4 | 69.7 |
| 420.0 | 419.86 | 2.68 | -1.87 | 3.3 | 325.1 | 0.6 | 70.8 |
| 430.0 | 429.85 | 2.82 | -1.78 | 3.3 | 327.8 | 1.0 | 31.9 |
| 440.0 | 439.85 | 3.04 | -1.69 | 3.5 | 330.9 | 1.5 | 15.3 |
| 450.0 | 449.85 | 3.36 | -1.70 | 3.8 | 333.2 | 2.4 | 338.0 |
| 460.0 | 459.84 | 3.69 | -1.94 | 4.2 | 332.3 | 2.4 | 307.5 |
| 470.0 | 469.83 | 3.95 | -2.28 | 4.6 | 330.0 | 2.6 | 292.8 |
| 480.0 | 479.82 | 4.09 | -2.68 | 4.9 | 326.7 | 2.2 | 266.5 |
| 490.0 | 489.81 | 4.12 | -3.08 | 5.1 | 323.2 | 2.2 | 267.0 |
| 500.0 | 499.80 | 4.06 | -3.42 | 5.3 | 319.9 | 1.3 | 243.4 |
| 510.0 | 509.80 | 3.94 | -3.55 | 5.3 | 318.0 | 0.4 | 251.4 |
| 520.0 | 519.80 | 3.97 | -3.52 | 5.3 | 318.4 | 0.7 | 84.6 |
| 530.0 | 529.80 | 4.23 | -3.44 | 5.5 | 320.8 | 1.6 | 18.7 |
| 540.0 | 539.79 | 4.58 | -3.42 | 5.7 | 323.2 | 2.2 | 355.5 |
| 550.0 | 549.78 | 4.96 | -3.64 | 6.1 | 323.7 | 2.9 | 318.1 |
| 560.0 | 559.77 | 5.20 | -4.07 | 6.6 | 321.9 | 2.9 | 291.2 |
| 570.0 | 569.76 | 5.21 | -4.49 | 6.9 | 319.2 | 2.4 | 265.0 |
| 580.0 | 579.75 | 5.20 | -4.92 | 7.2 | 316.6 | 2.0 | 258.6 |
| 590.0 | 589.75 | 5.15 | -5.01 | 7.2 | 315.8 | 0.2 | 153.2 |
| 600.0 | 599.75 | 5.28 | -4.93 | 7.2 | 316.9 | 1.7 | 14.9 |
| 610.0 | 609.74 | 5.59 | -4.87 | 7.4 | 318.9 | 1.9 | 11.5 |
| 620.0 | 619.73 | 6.03 | -4.98 | 7.8 | 320.4 | 3.0 | 333.2 |
| 630.0 | 629.72 | 6.44 | -5.32 | 8.4 | 320.4 | 3.1 | 312.4 |
| 640.0 | 639.70 | 6.77 | -5.76 | 8.9 | 319.6 | 3.1 | 299.3 |
| 650.0 | 649.69 | 7.00 | -6.25 | 9.4 | 318.3 | 3.0 | 286.4 |
| 660.0 | 659.68 | 7.11 | -6.72 | 9.8 | 316.6 | 2.9 | 286.4 |
| 670.0 | 669.66 | 7.25 | -7.22 | 10.2 | 315.1 | 2.8 | 276.1 |
| 680.0 | 679.66 | 7.22 | -7.56 | 10.5 | 313.7 | 1.1 | 244.1 |
| 690.0 | 689.66 | 7.26 | -7.58 | 10.5 | 313.8 | 0.6 | 13.4 |
| 700.0 | 699.65 | 7.39 | -7.53 | 10.6 | 314.5 | 0.8 | 26.2 |
| 710.0 | 709.65 | 7.54 | -7.46 | 10.6 | 315.3 | 1.1 | 27.4 |
| 720.0 | 719.65 | 7.77 | -7.36 | 10.7 | 316.6 | 1.6 | 21.2 |
| 730.0 | 729.65 | 8.05 | -7.26 | 10.8 | 317.9 | 1.5 | 20.3 |
| 740.0 | 739.64 | 8.37 | -7.20 | 11.0 | 319.3 | 2.4 | 2.8 |
| 750.0 | 749.63 | 8.83 | -7.26 | 11.4 | 320.6 | 3.2 | 331.4 |
| 760.0 | 759.61 | 9.16 | -7.68 | 12.0 | 320.0 | 3.3 | 312.3 |
| 770.0 | 769.60 | 9.52 | -8.14 | 12.5 | 319.4 | 3.3 | 290.5 |
| 780.0 | 779.58 | 9.69 | -8.65 | 13.0 | 318.2 | 3.0 | 287.1 |
| 790.0 | 789.57 | 9.81 | -9.16 | 13.4 | 317.0 | 3.0 | 279.1 |
| 800.0 | 799.56 | 9.81 | -9.53 | 13.7 | 315.8 | 1.0 | 262.8 |
| 810.0 | 809.56 | 9.85 | -9.61 | 13.8 | 315.7 | 0.4 | 319.7 |
| 820.0 | 819.56 | 9.91 | -9.64 | 13.8 | 315.8 | 0.4 | 282.1 |
| 830.0 | 829.56 | 10.02 | -9.63 | 13.9 | 316.2 | 1.2 | 14.3 |
| 840.0 | 839.56 | 10.09 | -9.69 | 14.0 | 316.2 | 0.4 | 282.8 |
| 850.0 | 849.56 | 10.21 | -9.66 | 14.1 | 316.6 | 1.1 | 19.4 |
| 860.0 | 859.55 | 10.38 | -9.60 | 14.1 | 317.2 | 1.1 | 21.1 |
| 870.0 | 869.55 | 10.50 | -9.56 | 14.2 | 317.7 | 1.4 | 23.6 |
| 880.0 | 879.55 | 10.72 | -9.49 | 14.3 | 318.5 | 1.2 | 19.2 |
| 890.0 | 889.55 | 10.94 | -9.42 | 14.4 | 319.3 | 1.1 | 20.3 |
| 900.0 | 899.54 | 11.25 | -9.38 | 14.6 | 320.2 | 3.1 | 350.3 |
| 910.0 | 909.53 | 11.77 | -9.50 | 15.1 | 321.1 | 3.3 | 333.1 |
| 920.0 | 919.51 | 12.14 | -9.94 | 15.7 | 320.7 | 3.5 | 306.7 |
| 930.0 | 929.49 | 12.52 | -10.42 | 16.3 | 320.2 | 3.5 | 307.2 |
| 940.0 | 939.47 | 12.80 | -10.94 | 16.8 | 319.5 | 3.2 | 292.2 |
| 950.0 | 949.46 | 12.98 | -11.43 | 17.3 | 318.6 | 2.9 | 285.1 |
| 960.0 | 959.45 | 13.11 | -11.92 | 17.7 | 317.7 | 2.5 | 278.2 |
| 970.0 | 969.44 | 13.10 | -12.17 | 17.9 | 317.1 | 0.6 | 290.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 920.0 | 919.51 | 12.14 | -9.94 | 15.7 | 320.7 | 3.5 | 306.7 |
| 930.0 | 929.49 | 12.52 | -10.42 | 16.3 | 320.2 | 3.5 | 307.2 |
| 940.0 | 939.47 | 12.80 | -10.94 | 16.8 | 319.5 | 3.2 | 292.2 |
| 950.0 | 949.46 | 12.98 | -11.43 | 17.3 | 318.6 | 2.9 | 285.1 |
| 960.0 | 959.45 | 13.11 | -11.92 | 17.7 | 317.7 | 2.5 | 278.2 |
| 970.0 | 969.44 | 13.10 | -12.17 | 17.9 | 317.1 | 0.6 | 290.0 |
| 980.0 | 979.44 | 13.16 | -12.24 | 18.0 | 317.1 | 0.5 | 324.2 |
| 990.0 | 989.44 | 13.17 | -12.37 | 18.1 | 316.8 | 0.7 | 262.4 |
| 1000.0 | 999.44 | 13.30 | -12.38 | 18.2 | 317.1 | 0.6 | 320.0 |
| 1010.0 | 1009.44 | 13.35 | -12.42 | 18.2 | 317.1 | 0.3 | 337.2 |
| 1020.0 | 1019.44 | 13.46 | -12.39 | 18.3 | 317.4 | 1.1 | 27.5 |
| 1030.0 | 1029.44 | 13.57 | -12.33 | 18.3 | 317.7 | 0.5 | 28.3 |
| 1040.0 | 1039.44 | 13.81 | -12.25 | 18.5 | 318.4 | 1.4 | 17.4 |
| 1050.0 | 1049.43 | 13.94 | -12.18 | 18.5 | 318.8 | 1.0 | 33.0 |
| 1060.0 | 1059.43 | 14.10 | -12.09 | 18.6 | 319.4 | 1.0 | 36.8 |
| 1070.0 | 1069.43 | 14.23 | -11.98 | 18.6 | 319.9 | 1.8 | 25.3 |
| 1080.0 | 1079.43 | 14.48 | -11.85 | 18.7 | 320.7 | 1.6 | 27.9 |
| 1090.0 | 1089.42 | 14.81 | -11.92 | 19.0 | 321.2 | 3.0 | 297.7 |
| 1100.0 | 1099.41 | 14.97 | -12.37 | 19.4 | 320.4 | 2.6 | 282.7 |
| 1110.0 | 1109.40 | 15.08 | -12.82 | 19.8 | 319.6 | 2.6 | 282.6 |
| 1120.0 | 1119.39 | 15.12 | -13.23 | 20.1 | 318.8 | 2.3 | 272.3 |
| 1130.0 | 1129.39 | 15.11 | -13.42 | 20.2 | 318.4 | 0.1 | 332.1 |
| 1140.0 | 1139.39 | 15.14 | -13.42 | 20.2 | 318.4 | 0.5 | 37.6 |
| 1150.0 | 1149.39 | 15.16 | -13.42 | 20.2 | 318.5 | 1.0 | 38.9 |
| 1160.0 | 1159.38 | 15.32 | -13.33 | 20.3 | 319.0 | 0.8 | 38.5 |
| 1170.0 | 1169.38 | 15.41 | -13.25 | 20.3 | 319.3 | 0.7 | 42.1 |
| 1180.0 | 1179.38 | 15.52 | -13.15 | 20.3 | 319.7 | 0.9 | 42.9 |
| 1190.0 | 1189.38 | 15.63 | -13.04 | 20.4 | 320.2 | 0.8 | 50.5 |
| 1200.0 | 1199.38 | 15.71 | -12.92 | 20.3 | 320.6 | 0.8 | 66.3 |
| 1210.0 | 1209.38 | 15.89 | -12.80 | 20.4 | 321.1 | 2.4 | 359.4 |
| 1220.0 | 1219.37 | 16.14 | -13.13 | 20.8 | 320.9 | 2.5 | 288.8 |
| 1230.0 | 1229.36 | 16.24 | -13.53 | 21.1 | 320.2 | 2.3 | 283.1 |
| 1240.0 | 1239.35 | 16.30 | -13.90 | 21.4 | 319.5 | 2.0 | 272.2 |
| 1250.0 | 1249.35 | 16.27 | -14.07 | 21.5 | 319.1 | 0.3 | 171.6 |
| 1260.0 | 1259.35 | 16.26 | -14.01 | 21.5 | 319.2 | 0.7 | 69.5 |
| 1270.0 | 1269.35 | 16.32 | -13.88 | 21.4 | 319.6 | 1.0 | 62.0 |
| 1280.0 | 1279.34 | 16.41 | -13.72 | 21.4 | 320.1 | 1.2 | 55.0 |
| 1290.0 | 1289.34 | 16.62 | -13.56 | 21.5 | 320.8 | 2.4 | 353.5 |
| 1300.0 | 1299.33 | 16.90 | -13.89 | 21.9 | 320.6 | 2.5 | 305.6 |
| 1310.0 | 1309.32 | 17.06 | -14.24 | 22.2 | 320.1 | 1.6 | 262.7 |
| 1320.0 | 1319.32 | 17.04 | -14.37 | 22.3 | 319.8 | 0.1 | 132.3 |
| 1330.0 | 1329.32 | 16.98 | -14.40 | 22.3 | 319.7 | 0.2 | 169.4 |
| 1340.0 | 1339.32 | 16.95 | -14.37 | 22.2 | 319.7 | 0.4 | 130.2 |
| 1350.0 | 1349.32 | 16.93 | -14.28 | 22.2 | 319.8 | 0.8 | 80.6 |
| 1360.0 | 1359.32 | 16.99 | -14.12 | 22.1 | 320.3 | 1.1 | 61.9 |
| 1370.0 | 1369.32 | 17.02 | -13.97 | 22.0 | 320.6 | 1.0 | 82.1 |
| 1380.0 | 1379.31 | 17.12 | -13.78 | 22.0 | 321.2 | 1.3 | 64.0 |
| 1390.0 | 1389.31 | 17.27 | -13.59 | 22.0 | 321.8 | 2.1 | 24.2 |
| 1400.0 | 1399.30 | 17.63 | -13.75 | 22.4 | 322.1 | 2.5 | 326.4 |
| 1410.0 | 1409.29 | 17.99 | -14.00 | 22.8 | 322.1 | 2.5 | 326.1 |
| 1420.0 | 1419.28 | 18.31 | -14.29 | 23.2 | 322.0 | 2.1 | 291.2 |
| 1430.0 | 1429.28 | 18.30 | -14.51 | 23.4 | 321.6 | 0.5 | 227.8 |
| 1440.0 | 1439.28 | 18.25 | -14.54 | 23.3 | 321.5 | 0.3 | 172.2 |
| 1450.0 | 1449.28 | 18.20 | -14.54 | 23.3 | 321.4 | 0.4 | 155.5 |
| 1460.0 | 1459.28 | 18.10 | -14.54 | 23.2 | 321.2 | 0.7 | 193.8 |
| 1470.0 | 1469.28 | 18.02 | -14.47 | 23.1 | 321.2 | 0.9 | 100.9 |
| 1480.0 | 1479.28 | 17.94 | -14.34 | 23.0 | 321.4 | 1.1 | 115.5 |
| 1490.0 | 1489.27 | 17.87 | -14.16 | 22.8 | 321.6 | 1.3 | 98.7 |
| 1500.0 | 1499.27 | 17.93 | -13.92 | 22.7 | 322.2 | 1.9 | 28.8 |
| 1510.0 | 1509.27 | 18.06 | -14.14 | 22.9 | 321.9 | 1.5 | 261.5 |
| 1520.0 | 1519.26 | 18.16 | -14.43 | 23.2 | 321.5 | 1.8 | 290.5 |
| 1530.0 | 1529.26 | 18.19 | -14.71 | 23.4 | 321.0 | 1.7 | 279.3 |
| 1540.0 | 1539.25 | 18.22 | -15.00 | 23.6 | 320.5 | 1.6 | 275.5 |
| 1550.0 | 1549.25 | 18.23 | -15.28 | 23.8 | 320.0 | 1.6 | 257.2 |
| 1560.0 | 1559.24 | 18.25 | -15.57 | 24.0 | 319.5 | 1.7 | 272.6 |
| 1570.0 | 1569.24 | 18.24 | -15.85 | 24.2 | 319.0 | 1.6 | 270.3 |
| 1580.0 | 1579.24 | 18.24 | -16.12 | 24.3 | 318.5 | 1.6 | 273.8 |
| 1590.0 | 1589.23 | 18.25 | -16.41 | 24.5 | 318.0 | 1.7 | 272.5 |
| 1600.0 | 1599.23 | 18.27 | -16.70 | 24.8 | 317.6 | 1.6 | 274.2 |
| 1610.0 | 1609.22 | 18.38 | -16.99 | 25.0 | 317.3 | 2.0 | 311.3 |
| 1620.0 | 1619.22 | 18.58 | -17.26 | 25.4 | 317.1 | 2.0 | 308.8 |
| 1630.0 | 1629.21 | 18.85 | -17.49 | 25.7 | 317.1 | 2.1 | 327.5 |
| 1640.0 | 1639.21 | 19.16 | -17.64 | 26.0 | 317.4 | 2.0 | 353.8 |
| 1650.0 | 1649.20 | 19.34 | -17.47 | 26.1 | 317.9 | 1.1 | 102.9 |
| 1660.0 | 1659.20 | 19.27 | -17.31 | 25.9 | 318.1 | 1.1 | 102.8 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1530.0 | 1529.26 | [illegible] | [illegible] | 23.6 | 320.5 | 1.6 | [illegible] |
| 1540.0 | 1539.25 | 18.22 | -15.00 | 23.8 | 320.0 | 1.6 | 257.2 |
| 1550.0 | 1549.25 | 18.23 | -15.28 | 24.0 | 319.5 | 1.7 | 272.6 |
| 1560.0 | 1559.24 | 18.25 | -15.57 | 24.2 | 319.0 | 1.6 | 270.3 |
| 1570.0 | 1569.24 | 18.24 | -15.85 | 24.3 | 318.5 | 1.6 | 273.8 |
| 1580.0 | 1579.24 | 18.24 | -16.12 | 24.5 | 318.0 | 1.7 | 272.5 |
| 1590.0 | 1589.23 | 18.25 | -16.41 | 24.8 | 317.6 | 1.6 | 274.2 |
| 1600.0 | 1599.23 | 18.27 | -16.70 | 25.0 | 317.3 | 2.0 | 311.3 |
| 1610.0 | 1609.22 | 18.38 | -16.99 | 25.4 | 317.1 | 2.0 | 308.8 |
| 1620.0 | 1619.22 | 18.58 | -17.26 | 25.7 | 317.1 | 2.1 | 327.5 |
| 1630.0 | 1629.21 | 18.85 | -17.49 | [illegible] | [illegible] | [illegible] | [illegible] |
| 1640.0 | 1639.21 | [illegible] | [illegible] | 26.1 | 317.9 | 1.1 | 102.9 |
| 1650.0 | 1649.20 | 19.34 | -17.47 | 25.9 | 318.1 | 1.1 | 102.8 |
| 1660.0 | 1659.20 | 19.27 | -17.31 | 25.8 | 318.2 | 0.9 | 147.0 |
| 1670.0 | 1669.20 | 19.21 | -17.16 | 25.6 | 318.3 | 0.9 | 121.4 |
| 1680.0 | 1679.20 | 19.13 | -17.02 | 25.5 | 318.5 | 0.9 | 125.6 |
| 1690.0 | 1689.20 | 19.05 | -16.88 | 25.3 | 318.4 | 0.8 | 150.9 |
| 1700.0 | 1699.19 | 18.94 | -16.80 | 25.2 | 318.4 | 0.7 | 144.1 |
| 1710.0 | 1709.19 | 18.82 | -16.73 | 25.1 | 318.4 | 0.6 | 157.2 |
| 1720.0 | 1719.19 | 18.74 | -16.65 | 25.0 | 318.2 | 0.8 | 217.8 |
| 1730.0 | 1729.19 | 18.64 | -16.66 | 25.0 | 317.8 | 1.2 | 248.4 |
| 1740.0 | 1739.19 | 18.55 | -16.82 | 25.1 | 317.3 | 1.2 | 250.6 |
| 1750.0 | 1749.19 | 18.47 | -17.01 | 25.2 | 316.9 | 1.2 | 259.6 |
| 1760.0 | 1759.19 | 18.41 | -17.23 | 25.3 | 316.5 | 1.2 | 249.3 |
| 1770.0 | 1769.18 | 18.36 | -17.42 | 25.3 | 316.2 | 0.7 | 199.8 |
| 1780.0 | 1779.18 | 18.26 | -17.51 | 25.2 | 315.9 | 0.8 | 201.0 |
| 1790.0 | 1789.18 | 18.13 | -17.55 | 25.2 | 315.6 | 1.2 | 231.3 |
| 1800.0 | 1799.18 | 18.01 | -17.62 | 25.2 | 315.3 | 0.9 | 227.6 |
| 1810.0 | 1809.18 | 17.90 | -17.71 | 25.2 | 314.9 | 1.0 | 239.9 |
| 1820.0 | 1819.18 | 17.81 | -17.85 | 25.3 | 314.5 | 1.1 | 247.1 |
| 1830.0 | 1829.18 | 17.72 | -18.01 | 25.4 | 314.1 | 1.3 | 258.4 |
| 1840.0 | 1839.17 | 17.66 | -18.20 | 25.6 | 313.8 | 1.8 | 305.2 |
| 1850.0 | 1849.17 | 17.73 | -18.46 | 25.9 | 313.9 | 1.9 | 310.1 |
| 1860.0 | 1859.16 | 17.97 | -18.69 | 26.2 | 313.8 | 2.0 | 315.5 |
| 1870.0 | 1869.16 | 18.16 | -18.94 | 26.6 | 313.8 | 2.0 | 311.1 |
| 1880.0 | 1879.15 | 18.41 | -19.18 | 26.7 | 313.6 | 0.8 | 166.0 |
| 1890.0 | 1889.15 | 18.43 | -19.33 | 26.6 | 313.5 | 0.9 | 141.5 |
| 1900.0 | 1899.15 | 18.30 | -19.27 | 26.5 | 313.5 | 0.0 | 0.0 |
| 1903.8 | 1902.93 | 18.25 | -19.25 | | | | |

Well: **T39C**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 28 | 24" | 7.05 | | X | 6/9/08 | |
| Surface | 18" | 337.67 | 20" | 514.65 | X | | 6/11/08 | Basket@253 |
| Surface | 16" | 512.35 | 20" | 218.55 | X | | 6/12/08 | Basket@295 |
| Water Protection | 13 3/8" | 595.05 | 15 3/8" | 232.65 | X | | 6/13/08 | |
| Coal Protection | 13 3/8" | 595.05 | 15 3/8" | 232.65 | X | | 6/13/08 | |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE T39C

RIG #: 87

LOCATION: HURRICANE BRANCH, VA

DATE STARTED: 6/9/2008

DATE COMPLETED: 6/18/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 28 | 28 | SHALE/S |
| 28 | 37 | 9 | SAND |
| 37 | 67 | 30 | SAND |
| 67 | 97 | 30 | SAND |
| 97 | 127 | 30 | SAND |
| 127 | 158 | 31 | SAND/COAL |
| 158 | 190 | 32 | SANDY SHALE/SAND |
| 190 | 221 | 31 | SAND/SANDY SHALE |
| 221 | 253 | 32 | SAND/COAL |
| 253 | 278 | 25 | SAND |
| 278 | 284 | 6 | VOID |
| 284 | 316 | 32 | SAND/SANDY SHALE |
| 316 | 348 | 32 | |
| 348 | 379 | 31 | SAND/SHALE/COAL |
| 379 | 411 | 32 | SAND/SHALE |
| 411 | 442 | 31 | |
| 442 | 474 | 32 | SAND |
| 474 | 506 | 32 | SAND |
| 506 | 537 | 31 | |
| 537 | 569 | 32 | SAND |
| 569 | 601 | 32 | SAND |
| 601 | 631 | 30 | SAND |
| 631 | 662 | 31 | SHALE/COAL |
| 662 | 694 | 32 | SAND/SHALE |
| 694 | 726 | 32 | SAND |
| 726 | 757 | 31 | SAND |
| 757 | 789 | 32 | SAND/SHALE |
| 789 | 820 | 31 | SHALE |
| 820 | 820.15 | 0.15 | |
| 820.15 | 851.8 | 31.65 | SAND/SHALE |
| 851.8 | 889.3 | 37.5 | SAND/SHALE |
| 889.3 | 921 | 31.7 | SHALE/SAND |
| 921 | 934 | 13 | SHALE |

| | | | |
|---|---|---|---|
| 934 | 966 | 32 | SAND/SHALE/COAL |
| 966 | 998 | 32 | SAND/SHALE |
| 998 | 1029 | 31 | SAND/SHALE |
| 1029 | 1060 | 31 | SAND/SHALE/COAL |
| 1060 | 1092 | 32 | SAND/SHALE |
| 1092 | 1123 | 31 | SAND |
| 1123 | 1155 | 32 | SAND/COAL/SHALE |
| 1155 | 1187 | 32 | SAND/SHALE |
| 1187 | 1218 | 31 | SAND/SHALE |
| 1218 | 1250 | 32 | SAND/SHALE |
| 1250 | 1282 | 32 | SAND/SHALE |
| 1282 | 1313 | 31 | SHALE/COAL |
| 1313 | 1343 | 30 | SAND/SHALE |
| 1343 | 1375 | 32 | SAND/SHALE |
| 1375 | 1407 | 32 | SANDY SHALE |
| 1407 | 1438 | 31 | SANDY SHALE |
| 1438 | 1470 | 32 | SAND/SHALE/COAL |
| 1470 | 1501 | 31 | SAND/SANDY SHALE |
| 1501 | 1532 | 31 | SAND/SANDY SHALE |
| 1532 | 1564 | 32 | SAND |
| 1564 | 1595 | 31 | SAND |
| 1595 | 1626 | 31 | SAND |
| 1626 | 1657 | 31 | SAND |
| 1657 | 1689 | 32 | SANDY SHALE |
| 1689 | 1719 | 30 | SAND/SANDY SHALE |
| 1719 | 1750 | 31 | SAND/SHALE |
| 1750 | 1782 | 32 | SAND/SHALE |
| 1782 | 1814 | 32 | SAND/COAL |
| 1814 | 1845 | 31 | SAND/SHALE |
| 1845 | 1876 | 31 | SAND/SHALE |
| 1876 | 1907 | 31 | SAND |

1907' TOTAL DEPTH
28' OF 22" CASING
337.67' OF 18" CASING
512.35' OF 16" CASING
595.05' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1516 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3545 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 6/24/2008 |
| **Driller's Total Depth:** | 1916.00 | **Log's Total Depth:** | 1925.40 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 11/11/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 11/11/2008 | | |
| Status: | | Date: | 11/12/2008 |
| Final PDF Date: | 3/26/2009 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1568 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3545 |
| **Operations Name:** | CBM T39D W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 6/13/2008

Drilling Contractor: Noah Horn

Date drilling completed: 6/24/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1916.00

Log Total Depth (feet): 1925.42

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1016765.90

Permitted State Plane Y: 329657.96

Final Plat State Plane X: 1016769.40

Final Plat State Plane Y: 329650.83

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T39D PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T39D EXHIBIT A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | T39D Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: caliper gamma density temp deviation

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T39D DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | T39D Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| Drill Data | T39D DRILL DATA.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 11/11/2008

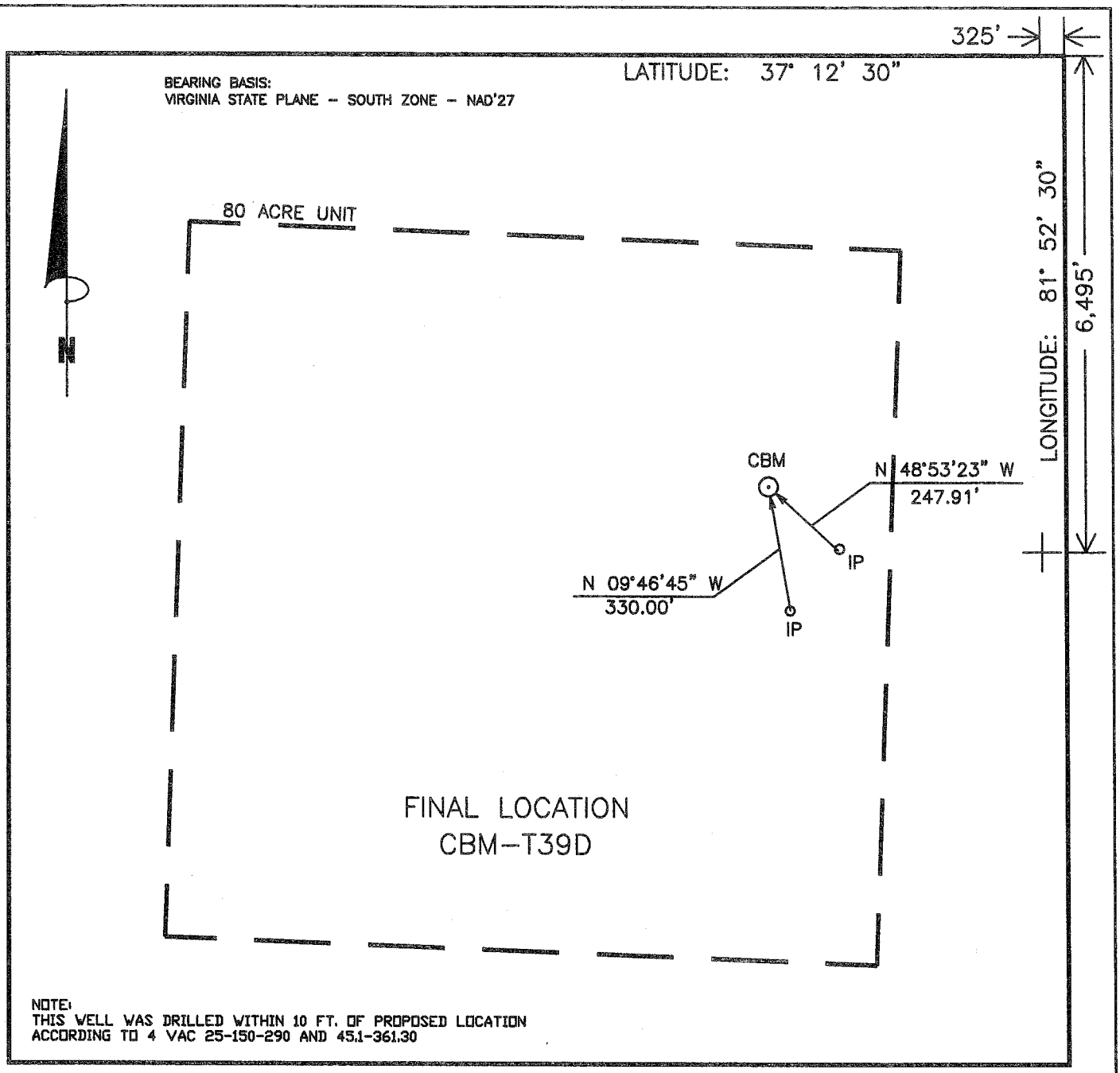
Signed By: Leslie Arrington Title: Director Environmental Permitting

## INTERNAL USE ONLY

Submit Date: 11/11/2008

Status: A Date: 11/12/2008

Final PDF Date: 12/16/2008




# WELL LOCATION PLAT

T39DFNL
2N31/66

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-T39D

TRACT NUMBER COAL MOUNATAIN MINING QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): N 329,650.83 E 1,016,769.40

ELEVATION: 2418.11' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 06-30-08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown. (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
7-1-08
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 10/96

T39D.CMP
Exhibit A

Well Name: 08 CBM T39D
SURFACE ELEV: 2414.71 EASTING: 1016765.92 NORTHING: 329657.96

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 79.50 | 80.60 | 2335.21 | 1.10 | |
| | 80.60 | 142.20 | 2334.11 | 61.60 | |
| AL2 | 142.20 | 142.80 | 2272.51 | 0.60 | |
| | 142.80 | 245.10 | 2271.91 | 102.30 | |
| RA1 | 245.10 | 246.70 | 2169.61 | 1.60 | |
| | 246.70 | 279.00 | 2168.01 | 32.30 | |
| RA2 | 279.00 | 281.90 | 2135.71 | 2.90 | |
| | 281.90 | 327.10 | 2132.81 | 45.20 | |
| RA3 | 327.10 | 327.70 | 2087.61 | 0.60 | |
| | 327.70 | 402.80 | 2087.01 | 75.10 | |
| JB1 | 402.80 | 404.70 | 2011.91 | 1.90 | |
| | 404.70 | 441.50 | 2010.01 | 36.80 | |
| JB3 | 441.50 | 443.80 | 1973.21 | 2.30 | |
| | 443.80 | 531.20 | 1970.91 | 87.40 | |
| TI | 531.20 | 531.80 | 1883.51 | 0.60 | |
| | 531.80 | 537.10 | 1882.91 | 5.30 | |
| *COAL | 537.10 | 537.50 | 1877.61 | 0.40 | |
| | 537.50 | 767.70 | 1877.21 | 230.20 | |
| *US2 | 767.70 | 768.40 | 1647.01 | 0.70 | |
| | 768.40 | 953.00 | 1646.31 | 184.60 | |
| *SE1 | 953.00 | 954.30 | 1461.71 | 1.30 | |
| | 954.30 | 992.00 | 1460.41 | 37.70 | |
| *SE2 | 992.00 | 994.30 | 1422.71 | 2.30 | |
| | 994.30 | 1034.10 | 1420.41 | 39.80 | |
| *LS1 | 1034.10 | 1036.10 | 1380.61 | 2.00 | |
| | 1036.10 | 1049.30 | 1378.61 | 13.20 | |
| *LS2 | 1049.30 | 1050.00 | 1365.41 | 0.70 | |
| | 1050.00 | 1080.20 | 1364.71 | 30.20 | |
| *LS3 | 1080.20 | 1081.00 | 1334.51 | 0.80 | |
| | 1081.00 | 1082.30 | 1333.71 | 1.30 | |
| *LS3 | 1082.30 | 1083.90 | 1332.41 | 1.60 | |
| | 1083.90 | 1144.00 | 1330.81 | 60.10 | |
| *UH3 | 1144.00 | 1146.00 | 1270.71 | 2.00 | |
| | 1146.00 | 1200.50 | 1268.71 | 54.50 | |
| *MH1 | 1200.50 | 1202.00 | 1214.21 | 1.50 | |
| | 1202.00 | 1303.20 | 1212.71 | 101.20 | |
| *P11 | 1303.20 | 1305.30 | 1111.51 | 2.10 | |
| | 1305.30 | 1687.70 | 1109.41 | 382.40 | |
| *COAL | 1687.70 | 1689.80 | 727.01 | 2.10 | |
| | 1689.80 | 1863.80 | 724.91 | 174.00 | |
| *P41 | 1863.80 | 1865.90 | 550.91 | 2.10 | |
| | 1865.90 | 1875.40 | 548.81 | 9.50 | |
| *P42 | 1875.40 | 1877.20 | 539.31 | 1.80 | |
| | 1877.20 | 1925.42 | 537.51 | 48.22 | |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\T39D.CMP
DATE: 07/03/08

Well: **T39D**

## Oil & Gas Show

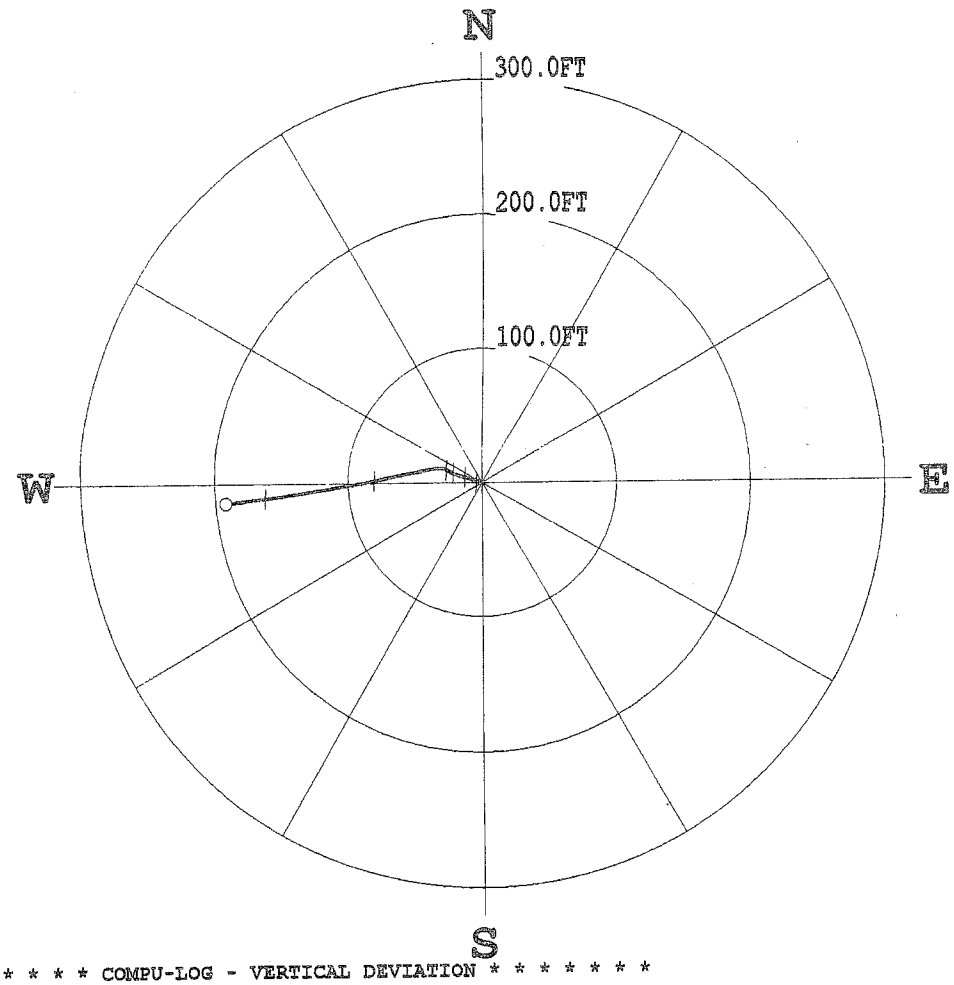
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 953.0 | 1305.3 | 352.3 | | | |
| Pocahontas | 1687.7 | 1877.2 | 189.5 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

LIENT: CNX
OCATION: -
OLE ID: 08-CNX-T-39-D
ATE OF LOG: 06/23/08
ROBE: 0026C 777

MAG DECL: -7.1

SCALE: 100 FT/IN
TRUE DEPTH: 1899.91 FT
AZIMUTH: 265.6
DISTANCE: 191.9 FT
+ = 300 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * *

CLIENT : CNX
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
LOG: 08-CNX-T-39-D_06-23-08_18-00_0026C_.10_-5.90_1925.30_DEVI.log

HOLE ID. : 08-CNX-T-39-D
DATE OF LOG : 06/23/08
PROBE : 0026C , 777
DEPTH UNITS : FEET

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 0.70 | 0.70 | -0.00 | -0.00 | 0.0 | 183.6 | 2.2 | 183.6 |
| 4.10 | 4.10 | -0.12 | -0.04 | 0.1 | 198.7 | 2.2 | 211.9 |
| 14.10 | 14.09 | -0.16 | -0.07 | 0.2 | 203.8 | 2.1 | 87.4 |
| 24.10 | 24.08 | -0.36 | 0.17 | 0.4 | 154.6 | 2.8 | 254.2 |
| 34.10 | 34.07 | -0.24 | 0.19 | 0.3 | 141.6 | 2.4 | 310.3 |
| 44.10 | 44.06 | -0.02 | -0.14 | 0.1 | 260.9 | 2.1 | 220.4 |
| 54.10 | 54.05 | -0.02 | -0.59 | 0.6 | 268.5 | 2.9 | 302.1 |
| 64.10 | 64.04 | 0.32 | -0.90 | 1.0 | 289.6 | 2.6 | 346.6 |
| 74.10 | 74.03 | 0.53 | -0.78 | 0.9 | 304.4 | 1.3 | 47.0 |
| 84.10 | 84.03 | 0.76 | -0.69 | 1.0 | 317.7 | 1.4 | 2.4 |
| 94.10 | 94.02 | 0.87 | -0.53 | 1.0 | 328.8 | 1.0 | 28.2 |
| 104.10 | 104.02 | 0.92 | -0.38 | 1.0 | 337.6 | 1.0 | 98.0 |
| 114.10 | 114.02 | 0.64 | -0.42 | 0.8 | 326.8 | 1.9 | 183.8 |
| 124.10 | 124.01 | 0.77 | -0.30 | 0.8 | 338.8 | 1.2 | 50.7 |
| 134.10 | 134.01 | 0.60 | -0.22 | 0.6 | 340.1 | 2.2 | 212.5 |
| 144.10 | 144.00 | 0.40 | -0.65 | 0.8 | 301.3 | 2.9 | 242.3 |
| 154.10 | 153.98 | 0.26 | -1.15 | 1.2 | 282.7 | 3.2 | 277.4 |
| 164.10 | 163.97 | 0.55 | -1.48 | 1.6 | 290.3 | 2.4 | 348.9 |

LOG: 08-CNX-T-39-D_06-23-08_18-00_0026C_.10_-5.90_1925.30_DEVI.log

| TABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 0.70 | 0.70 | -0.00 | -0.00 | 0.0 | 183.6 | 2.2 | 183.6 |
| 4.10 | 4.10 | -0.12 | -0.04 | 0.1 | 198.7 | 2.2 | 211.9 |
| 14.10 | 14.09 | -0.16 | -0.07 | 0.2 | 203.8 | 2.1 | 87.4 |
| 24.10 | 24.08 | -0.36 | 0.17 | 0.4 | 154.6 | 2.8 | 254.2 |
| 34.10 | 34.07 | -0.24 | 0.19 | 0.3 | 141.6 | 2.4 | 310.3 |
| 44.10 | 44.06 | -0.02 | -0.14 | 0.1 | 260.9 | 2.1 | 220.4 |
| 54.10 | 54.05 | -0.02 | -0.59 | 0.6 | 268.5 | 2.9 | 302.1 |
| 64.10 | 64.04 | 0.32 | -0.90 | 1.0 | 289.6 | 2.6 | 346.6 |
| 74.10 | 74.03 | 0.53 | -0.78 | 0.9 | 304.4 | 1.3 | 47.0 |
| 84.10 | 84.03 | 0.76 | -0.69 | 1.0 | 317.7 | 1.4 | 2.4 |
| 94.10 | 94.02 | 0.87 | -0.53 | 1.0 | 328.8 | 1.0 | 28.2 |
| 104.10 | 104.02 | 0.92 | -0.38 | 1.0 | 337.6 | 1.0 | 98.0 |
| 114.10 | 114.02 | 0.64 | -0.42 | 0.8 | 326.8 | 1.9 | 183.8 |
| 124.10 | 124.01 | 0.77 | -0.30 | 0.8 | 338.8 | 1.2 | 50.7 |
| 134.10 | 134.01 | 0.60 | -0.22 | 0.6 | 340.1 | 2.2 | 212.5 |
| 144.10 | 144.00 | 0.40 | -0.65 | 0.8 | 301.3 | 2.9 | 242.3 |
| 154.10 | 153.98 | 0.26 | -1.15 | 1.2 | 282.7 | 3.2 | 277.4 |
| 164.10 | 163.97 | 0.55 | -1.48 | 1.6 | 290.3 | 2.4 | 348.9 |
| 174.10 | 173.96 | 0.92 | -1.71 | 1.9 | 298.2 | 3.3 | 305.1 |
| 184.10 | 183.95 | 1.32 | -1.94 | 2.3 | 304.1 | 1.9 | 3.3 |
| 194.10 | 193.95 | 1.27 | -1.82 | 2.2 | 305.0 | 1.4 | 141.9 |
| 204.10 | 203.94 | 1.20 | -1.85 | 2.2 | 303.0 | 1.2 | 35.5 |
| 214.10 | 213.94 | 1.11 | -1.87 | 2.2 | 300.7 | 3.5 | 286.8 |
| 224.10 | 223.92 | 1.33 | -2.23 | 2.6 | 300.8 | 1.2 | 24.5 |
| 234.10 | 233.92 | 1.26 | -2.26 | 2.6 | 299.1 | 2.5 | 219.1 |
| 244.10 | 243.92 | 1.23 | -2.20 | 2.5 | 299.1 | 1.2 | 189.1 |
| 254.10 | 253.91 | 0.95 | -2.26 | 2.4 | 292.8 | 1.8 | 202.0 |
| 264.10 | 263.90 | 0.72 | -2.46 | 2.6 | 286.4 | 2.6 | 235.9 |
| 274.10 | 273.89 | 0.65 | -2.95 | 3.0 | 282.4 | 2.6 | 224.3 |
| 284.10 | 283.88 | 0.44 | -3.39 | 3.4 | 277.4 | 3.1 | 257.6 |
| 294.10 | 293.86 | 0.40 | -3.95 | 4.0 | 275.8 | 2.7 | 250.9 |
| 304.10 | 303.85 | 0.62 | -4.32 | 4.4 | 278.2 | 1.9 | 354.6 |
| 314.10 | 313.84 | 0.92 | -4.39 | 4.5 | 281.9 | 3.4 | 303.3 |
| 324.10 | 323.83 | 1.07 | -4.76 | 4.9 | 282.7 | 2.9 | 243.1 |
| 334.10 | 333.82 | 1.15 | -5.00 | 5.1 | 283.0 | 2.1 | 339.9 |
| 344.10 | 343.81 | 1.21 | -5.04 | 5.2 | 283.5 | 2.0 | 228.3 |
| 354.10 | 353.80 | 1.11 | -5.55 | 5.7 | 281.4 | 3.3 | 268.4 |
| 364.10 | 363.78 | 1.32 | -6.03 | 6.2 | 282.3 | 1.3 | 1.9 |
| 374.10 | 373.78 | 1.45 | -6.05 | 6.2 | 283.5 | 0.9 | 209.0 |
| 384.10 | 383.77 | 1.51 | -6.49 | 6.7 | 283.1 | 2.9 | 324.0 |
| 394.10 | 393.76 | 1.86 | -6.68 | 6.9 | 285.6 | 1.8 | 343.2 |
| 404.10 | 403.76 | 2.09 | -6.75 | 7.1 | 287.2 | 2.3 | 330.9 |
| 414.10 | 413.75 | 2.43 | -6.93 | 7.3 | 289.3 | 0.8 | 9.1 |
| 424.10 | 423.74 | 2.40 | -7.19 | 7.6 | 288.5 | 3.3 | 283.4 |
| 434.10 | 433.73 | 2.43 | -7.75 | 8.1 | 287.4 | 3.6 | 288.1 |
| 444.10 | 443.71 | 2.72 | -8.24 | 8.7 | 288.3 | 3.5 | 313.7 |
| 454.10 | 453.70 | 3.08 | -8.53 | 9.1 | 289.8 | 1.1 | 13.0 |
| 464.10 | 463.69 | 2.96 | -8.75 | 9.2 | 288.7 | 3.3 | 266.5 |
| 474.10 | 473.67 | 3.05 | -9.34 | 9.8 | 288.1 | 3.6 | 286.9 |
| 484.10 | 483.66 | 3.34 | -9.73 | 10.3 | 288.9 | 0.9 | 357.0 |
| 494.10 | 493.66 | 3.32 | -9.78 | 10.3 | 288.8 | 0.3 | 251.4 |
| 504.10 | 503.65 | 3.15 | -9.97 | 10.5 | 287.5 | 2.4 | 235.8 |
| 514.10 | 513.64 | 3.12 | -10.51 | 11.0 | 286.5 | 3.1 | 265.1 |
| 524.10 | 523.62 | 3.11 | -11.08 | 11.5 | 285.7 | 3.7 | 281.7 |
| 534.10 | 533.61 | 3.39 | -11.38 | 11.9 | 286.6 | 1.4 | 339.1 |
| 544.10 | 543.60 | 3.67 | -11.53 | 12.1 | 287.6 | 1.6 | 331.7 |
| 554.10 | 553.60 | 3.87 | -11.64 | 12.3 | 288.4 | 1.5 | 333.9 |
| 564.10 | 563.60 | 4.05 | -11.74 | 12.4 | 289.0 | 0.6 | 302.9 |
| 574.10 | 573.60 | 4.10 | -11.81 | 12.5 | 289.1 | 0.6 | 321.6 |
| 584.10 | 583.59 | 4.01 | -11.99 | 12.6 | 288.5 | 3.3 | 257.0 |
| 594.10 | 593.58 | 3.93 | -12.59 | 13.2 | 287.4 | 3.2 | 251.0 |
| 604.10 | 603.56 | 4.17 | -13.11 | 13.8 | 287.6 | 1.8 | 337.2 |
| 614.10 | 613.55 | 4.09 | -13.28 | 13.9 | 287.1 | 2.8 | 237.5 |
| 624.10 | 623.53 | 4.14 | -13.96 | 14.6 | 286.5 | 4.3 | 292.1 |
| 634.10 | 633.50 | 4.51 | -14.62 | 15.3 | 287.1 | 4.3 | 301.7 |
| 644.10 | 643.48 | 4.90 | -15.01 | 15.8 | 288.1 | 1.1 | 347.0 |
| 654.10 | 653.48 | 5.12 | -15.09 | 15.9 | 288.7 | 2.2 | 333.4 |
| 664.10 | 663.48 | 5.20 | -15.16 | 16.0 | 288.9 | 0.3 | 300.6 |
| 674.10 | 673.48 | 5.23 | -15.20 | 16.1 | 289.0 | 0.2 | 304.5 |
| 684.10 | 683.47 | 5.07 | -15.32 | 16.1 | 288.3 | 2.4 | 230.6 |
| 694.10 | 693.47 | 4.81 | -15.55 | 16.3 | 287.2 | 2.3 | 227.4 |
| 704.10 | 703.46 | 4.53 | -15.86 | 16.5 | 286.0 | 3.2 | 247.2 |
| 714.10 | 713.45 | 4.69 | -16.18 | 16.8 | 286.2 | 0.9 | 350.8 |
| 724.10 | 723.45 | 4.67 | -16.26 | 16.9 | 286.0 | 3.4 | 226.9 |
| 734.10 | 733.42 | 4.92 | -16.85 | 17.6 | 286.3 | 3.6 | 303.4 |
| 744.10 | 743.41 | 5.26 | -17.21 | 18.0 | 287.0 | 2.0 | 338.0 |
| 754.10 | 753.40 | 5.44 | -17.47 | 18.3 | 287.3 | 0.6 | 349.1 |
| 764.10 | 763.39 | 5.67 | -17.87 | 18.8 | 287.6 | 3.6 | 287.8 |
| 774.10 | 773.38 | 5.63 | -18.19 | 19.0 | 287.2 | 2.7 | 323.1 |
| 784.10 | 783.36 | 5.89 | -18.56 | 19.5 | 287.6 | 2.5 | 221.6 |
| 794.10 | 793.35 | 6.11 | -18.73 | 19.7 | 288.1 | 3.4 | 310.0 |
| 804.10 | 803.34 | 6.22 | -19.29 | 20.3 | 287.9 | 3.4 | 269.1 |
| 814.10 | 813.32 | 6.17 | -19.86 | 20.8 | 287.3 | 3.3 | 264.4 |
| 824.10 | 823.30 | 6.12 | -20.44 | 21.3 | 286.7 | 3.4 | 263.4 |
| 834.10 | 833.29 | 6.07 | -21.01 | 21.9 | 286.1 | 3.5 | 286.2 |
| 844.10 | 843.28 | 6.33 | -21.20 | 22.1 | 286.6 | 0.8 | 16.5 |
| 854.10 | 853.28 | 6.47 | -21.17 | 22.1 | 287.0 | 1.3 | 1.5 |
| 864.10 | 863.27 | 6.62 | -21.13 | 22.1 | 287.4 | 0.3 | 121.4 |
| 874.10 | 873.27 | 6.46 | -21.44 | 22.4 | 286.8 | 3.1 | 263.9 |
| 884.10 | 883.26 | 6.69 | -21.66 | 22.7 | 287.2 | 0.9 | 27.5 |
| 894.10 | 893.25 | 6.90 | -21.62 | 22.7 | 287.7 | 1.2 | 16.8 |
| 904.10 | 903.25 | 7.10 | -21.59 | 22.7 | 288.2 | 1.3 | 3.5 |
| 914.10 | 913.25 | 7.23 | -21.54 | 22.7 | 288.6 | 0.5 | 136.3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 904.10 | 903.25 | 7.10 | -21.59 | 22.7 | 288.2 | 1.3 | 3.5 |
| 914.10 | 913.25 | 7.23 | -21.54 | 22.7 | 288.6 | 0.5 | 136.3 |
| 924.10 | 923.25 | 7.07 | -21.57 | 22.7 | 288.1 | 2.4 | 245.9 |
| 934.10 | 933.24 | 7.08 | -21.91 | 23.0 | 287.9 | 3.0 | 267.7 |
| 944.10 | 943.22 | 7.29 | -22.30 | 23.5 | 288.1 | 1.7 | 4.2 |
| 954.10 | 953.22 | 7.26 | -22.29 | 23.4 | 288.1 | 2.6 | 226.7 |
| 964.10 | 963.21 | 7.38 | -22.72 | 23.9 | 288.0 | 1.8 | 359.7 |
| 974.10 | 973.20 | 7.64 | -22.68 | 23.9 | 288.6 | 1.3 | 19.4 |
| 984.10 | 983.20 | 7.58 | -22.69 | 23.9 | 288.5 | 2.6 | 256.2 |
| 994.10 | 993.19 | 7.84 | -22.94 | 24.2 | 288.9 | 1.4 | 20.0 |
| 1004.10 | 1003.19 | 7.80 | -22.89 | 24.2 | 288.8 | 1.4 | 206.0 |
| 1014.10 | 1013.18 | 7.73 | -23.32 | 24.6 | 288.3 | 3.3 | 303.8 |
| 1024.10 | 1023.17 | 7.89 | -23.33 | 24.6 | 288.7 | 1.0 | 174.7 |
| 1034.10 | 1033.16 | 7.87 | -23.79 | 25.1 | 288.3 | 3.4 | 307.8 |
| 1044.10 | 1043.16 | 8.14 | -23.83 | 25.2 | 288.9 | 0.8 | 57.9 |
| 1054.10 | 1053.15 | 8.19 | -24.00 | 25.4 | 288.8 | 1.6 | 8.5 |
| 1064.10 | 1063.14 | 8.14 | -24.10 | 25.4 | 288.7 | 3.0 | 271.7 |
| 1074.10 | 1073.13 | 8.41 | -24.41 | 25.8 | 289.0 | 1.7 | 10.5 |
| 1084.10 | 1083.12 | 8.34 | -24.63 | 26.0 | 288.7 | 3.2 | 264.6 |
| 1094.10 | 1093.11 | 8.65 | -24.97 | 26.4 | 289.1 | 2.2 | 353.0 |
| 1104.10 | 1103.11 | 8.85 | -24.92 | 26.4 | 289.5 | 0.5 | 122.0 |
| 1114.10 | 1113.10 | 8.94 | -25.10 | 26.6 | 289.6 | 1.2 | 25.9 |
| 1124.10 | 1123.10 | 8.97 | -25.00 | 26.6 | 289.7 | 0.5 | 99.6 |
| 1134.10 | 1133.10 | 8.98 | -24.91 | 26.5 | 289.8 | 0.6 | 87.3 |
| 1144.10 | 1143.10 | 8.83 | -24.93 | 26.4 | 289.5 | 1.9 | 231.5 |
| 1154.10 | 1153.08 | 9.06 | -25.22 | 26.8 | 289.8 | 1.6 | 13.1 |
| 1164.10 | 1163.08 | 9.17 | -25.09 | 26.7 | 290.1 | 0.7 | 68.1 |
| 1174.10 | 1173.08 | 9.11 | -25.30 | 26.9 | 289.8 | 3.2 | 283.9 |
| 1184.10 | 1183.06 | 9.27 | -25.83 | 27.4 | 289.7 | 3.2 | 284.1 |
| 1194.10 | 1193.05 | 9.44 | -26.37 | 28.0 | 289.7 | 3.3 | 290.7 |
| 1204.10 | 1203.04 | 9.55 | -26.72 | 28.4 | 289.7 | 1.4 | 292.5 |
| 1214.10 | 1213.03 | 9.69 | -26.98 | 28.7 | 289.8 | 2.3 | 309.4 |
| 1224.10 | 1223.02 | 9.89 | -27.38 | 29.1 | 289.9 | 2.9 | 295.4 |
| 1234.10 | 1233.01 | 10.14 | -27.86 | 29.7 | 290.0 | 3.5 | 297.2 |
| 1244.10 | 1242.99 | 10.39 | -28.43 | 30.3 | 290.1 | 4.0 | 289.6 |
| 1254.10 | 1252.96 | 10.58 | -29.17 | 31.0 | 289.9 | 5.1 | 272.9 |
| 1264.10 | 1262.92 | 10.71 | -30.07 | 31.9 | 289.6 | 6.0 | 268.6 |
| 1274.10 | 1272.85 | 10.78 | -31.18 | 33.0 | 289.1 | 6.8 | 274.8 |
| 1284.10 | 1282.77 | 10.80 | -32.43 | 34.2 | 288.4 | 7.6 | 268.2 |
| 1294.10 | 1292.68 | 10.73 | -33.83 | 35.5 | 287.6 | 8.4 | 264.9 |
| 1304.10 | 1302.56 | 10.54 | -35.33 | 36.9 | 286.6 | 9.2 | 255.9 |
| 1314.10 | 1312.41 | 10.24 | -37.01 | 38.4 | 285.5 | 10.4 | 260.8 |
| 1324.10 | 1322.24 | 9.93 | -38.81 | 40.1 | 284.4 | 10.9 | 258.1 |
| 1334.10 | 1332.04 | 9.54 | -40.76 | 41.9 | 283.2 | 11.9 | 262.1 |
| 1344.10 | 1341.82 | 9.16 | -42.80 | 43.8 | 282.1 | 12.1 | 265.2 |
| 1354.10 | 1351.58 | 8.76 | -44.94 | 45.8 | 281.0 | 13.1 | 257.6 |
| 1364.10 | 1361.31 | 8.30 | -47.20 | 47.9 | 280.0 | 13.4 | 260.7 |
| 1374.10 | 1371.04 | 7.86 | -49.46 | 50.1 | 279.0 | 13.4 | 258.3 |
| 1384.10 | 1380.77 | 7.45 | -51.75 | 52.3 | 278.2 | 13.5 | 262.6 |
| 1394.10 | 1390.48 | 7.02 | -54.08 | 54.5 | 277.4 | 13.8 | 259.5 |
| 1404.10 | 1400.19 | 6.58 | -56.43 | 56.8 | 276.7 | 13.8 | 259.9 |
| 1414.10 | 1409.90 | 6.16 | -58.79 | 59.1 | 276.0 | 13.9 | 259.6 |
| 1424.10 | 1419.60 | 5.70 | -61.17 | 61.4 | 275.3 | 14.2 | 259.9 |
| 1434.10 | 1429.31 | 5.27 | -63.48 | 63.7 | 274.7 | 13.5 | 257.3 |
| 1444.10 | 1439.03 | 4.75 | -65.80 | 66.0 | 274.1 | 12.4 | 256.7 |
| 1454.10 | 1448.74 | 4.28 | -68.12 | 68.3 | 273.6 | 13.7 | 259.4 |
| 1464.10 | 1458.45 | 3.82 | -70.45 | 70.6 | 273.1 | 13.7 | 259.6 |
| 1474.10 | 1468.17 | 3.32 | -72.77 | 72.8 | 272.6 | 13.9 | 258.3 |
| 1484.10 | 1477.86 | 2.78 | -75.14 | 75.2 | 272.1 | 14.3 | 258.8 |
| 1494.10 | 1487.57 | 2.35 | -77.48 | 77.5 | 271.7 | 13.9 | 261.6 |
| 1504.10 | 1497.26 | 1.78 | -79.85 | 79.9 | 271.3 | 14.2 | 241.6 |
| 1514.10 | 1506.94 | 1.29 | -82.31 | 82.3 | 270.9 | 14.7 | 258.4 |
| 1524.10 | 1516.62 | 0.83 | -84.79 | 84.8 | 270.6 | 14.9 | 259.6 |
| 1534.10 | 1526.30 | 0.41 | -87.25 | 87.3 | 270.3 | 14.5 | 260.6 |
| 1544.10 | 1535.98 | -0.00 | -89.73 | 89.7 | 270.0 | 14.5 | 260.6 |
| 1554.10 | 1545.66 | -0.41 | -92.21 | 92.2 | 269.7 | 14.6 | 260.9 |
| 1564.10 | 1555.33 | -0.83 | -94.70 | 94.7 | 269.5 | 14.8 | 261.4 |
| 1574.10 | 1565.01 | -1.25 | -97.21 | 97.2 | 269.3 | 14.7 | 260.1 |
| 1584.10 | 1574.67 | -1.66 | -99.73 | 99.7 | 269.0 | 14.8 | 261.0 |
| 1594.10 | 1584.34 | -2.07 | -102.27 | 102.3 | 268.8 | 15.0 | 260.7 |
| 1604.10 | 1594.00 | -2.49 | -104.82 | 104.9 | 268.6 | 15.0 | 261.0 |
| 1614.10 | 1603.65 | -2.90 | -107.39 | 107.4 | 268.5 | 15.1 | 260.4 |
| 1624.10 | 1613.30 | -3.32 | -109.98 | 110.0 | 268.3 | 15.1 | 260.0 |
| 1634.10 | 1622.95 | -3.74 | -112.57 | 112.6 | 268.1 | 15.2 | 260.0 |
| 1644.10 | 1632.59 | -4.16 | -115.19 | 115.3 | 267.9 | 15.5 | 261.5 |
| 1654.10 | 1642.23 | -4.55 | -117.84 | 117.9 | 267.8 | 15.5 | 260.4 |
| 1664.10 | 1651.86 | -4.96 | -120.48 | 120.6 | 267.6 | 15.6 | 261.2 |
| 1674.10 | 1661.49 | -5.35 | -123.15 | 123.3 | 267.5 | 15.7 | 261.3 |
| 1684.10 | 1671.12 | -5.74 | -125.84 | 126.0 | 267.4 | 15.8 | 261.8 |
| 1694.10 | 1680.76 | -6.16 | -128.41 | 128.6 | 267.3 | 15.1 | 274.6 |
| 1704.10 | 1690.40 | -6.55 | -131.01 | 131.2 | 267.1 | 15.9 | 258.7 |
| 1714.10 | 1700.03 | -7.02 | -133.64 | 133.8 | 267.0 | 15.5 | 259.9 |
| 1724.10 | 1709.67 | -7.51 | -136.28 | 136.5 | 266.8 | 15.7 | 257.2 |
| 1734.10 | 1719.29 | -7.97 | -138.94 | 139.2 | 266.7 | 16.0 | 261.7 |
| 1744.10 | 1728.90 | -8.36 | -141.68 | 141.9 | 266.6 | 16.1 | 262.0 |
| 1754.10 | 1738.51 | -8.74 | -144.42 | 144.7 | 266.5 | 16.1 | 262.2 |
| 1764.10 | 1748.12 | -9.12 | -147.17 | 147.5 | 266.5 | 16.1 | 262.1 |
| 1774.10 | 1757.72 | -9.48 | -149.92 | 150.2 | 266.4 | 15.8 | 266.3 |
| 1784.10 | 1767.33 | -9.80 | -152.65 | 153.0 | 266.3 | 15.7 | 266.6 |
| 1794.10 | 1776.95 | -10.21 | -155.32 | 155.7 | 266.2 | 16.3 | 262.3 |
| 1804.10 | 1786.55 | -10.58 | -158.11 | 158.5 | 266.2 | 16.2 | 261.9 |
| 1814.10 | 1796.15 | -10.92 | -160.89 | 161.3 | 266.1 | 16.6 | 262.8 |
| 1824.10 | 1805.74 | -11.24 | -163.69 | 164.1 | 266.1 | 16.5 | 264.0 |
| 1834.10 | 1815.33 | -11.52 | -166.52 | 166.9 | 266.0 | 16.6 | 263.7 |
| 1844.10 | 1824.91 | -11.80 | -169.36 | 169.8 | 266.0 | 16.6 | 265.7 |
| 1854.10 | 1834.51 | -12.12 | -172.12 | 172.5 | 266.0 | 16.2 | 262.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1674.10 | 1661.49 | -5.35 | -123.15 | 123.3 | 267.5 | 15.7 | 261.3 |
| 1684.10 | 1671.12 | -5.74 | -125.94 | 126.0 | 267.4 | 15.6 | 261.8 |
| 1694.10 | 1680.76 | -6.16 | -128.41 | 128.6 | 267.3 | 15.1 | 274.6 |
| 1704.10 | 1690.40 | -6.55 | -131.01 | 131.2 | 267.1 | 15.9 | 258.7 |
| 1714.10 | 1700.03 | -7.02 | -133.64 | 133.8 | 267.0 | 15.5 | 259.9 |
| 1724.10 | 1709.67 | -7.51 | -136.28 | 136.5 | 266.8 | 15.7 | 257.2 |
| 1734.10 | 1719.29 | -7.97 | -138.94 | 139.2 | 266.7 | 16.0 | 261.7 |
| 1744.10 | 1728.90 | -8.36 | -141.68 | 141.9 | 266.6 | 16.1 | 262.0 |
| 1754.10 | 1738.51 | -8.74 | -144.42 | 144.7 | 266.5 | 16.1 | 262.2 |
| 1764.10 | 1748.12 | -9.12 | -147.17 | 147.5 | 266.5 | 16.1 | 262.1 |
| 1774.10 | 1757.72 | -9.48 | -149.92 | 150.2 | 266.4 | 15.8 | 266.3 |
| 1784.10 | 1767.33 | -9.80 | -152.65 | 153.0 | 266.3 | 15.7 | 266.6 |
| 1794.10 | 1776.95 | -10.21 | -155.32 | 155.7 | 266.2 | 16.3 | 262.3 |
| 1804.10 | 1786.55 | -10.58 | -158.11 | 158.5 | 266.2 | 16.2 | 261.9 |
| 1814.10 | 1796.15 | -10.92 | -160.89 | 161.3 | 266.1 | 16.6 | 262.8 |
| 1824.10 | 1805.74 | -11.24 | -163.69 | 164.1 | 266.1 | 16.5 | 264.0 |
| 1834.10 | 1815.33 | -11.52 | -166.52 | 166.9 | 266.0 | 16.6 | 263.7 |
| 1844.10 | 1824.91 | -11.80 | -169.36 | 169.8 | 266.0 | 16.6 | 265.7 |
| 1854.10 | 1834.51 | -12.12 | -172.12 | 172.5 | 266.0 | 16.2 | 262.1 |
| 1864.10 | 1844.09 | -12.49 | -174.93 | 175.4 | 265.9 | 16.3 | 276.9 |
| 1874.10 | 1853.70 | -12.86 | -177.56 | 178.0 | 265.9 | 16.6 | 271.3 |
| 1884.10 | 1863.29 | -13.26 | -180.27 | 180.8 | 265.8 | 16.9 | 267.7 |
| 1894.10 | 1872.85 | -13.53 | -183.15 | 183.7 | 265.8 | 18.1 | 262.0 |
| 1904.10 | 1882.42 | -13.92 | -186.02 | 186.5 | 265.7 | 17.0 | 260.0 |
| 1914.10 | 1891.99 | -14.33 | -188.90 | 189.4 | 265.7 | 17.2 | 260.9 |
| 1924.10 | 1901.61 | -14.71 | -191.35 | 191.9 | 265.6 | 0.0 | 0.0 |
| 1922.40 | 1899.91 | -14.71 | -191.35 | 191.9 | 265.6 | 17.5 | 261.3 |

Well: **T39D**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 32 | 24" | | | X | 6/12/08 | |
| Surface | 16" | 341.4 | 20" | 408.9 | X | | 6/16/08 | Basket@217' |
| Water Protection | 13 3/8" | 582.95 | 15 3/8" | 239.7 | X | | 6/17/08 | Basket@85' |
| Coal Protection | 13 3/8" | 582.95 | 15 3/8" | 239.7 | X | | 6/17/08 | Basket@85' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE T-39-D

RIG #: 99

LOCATION: BUCH VA

DATE STARTED: 6/13/2008

DATE COMPLETED: 6/24/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 32 | 32 | |
| 32 | 58 | 26 | SAND/SHALE |
| 58 | 89 | 31 | SAND |
| 89 | 120 | 31 | SAND/COAL |
| 120 | 151 | 31 | |
| 151 | 182 | 31 | SAND STONE |
| 182 | 213 | 31 | SAND STONE |
| 213 | 243.1 | 30.1 | SANDY SHALE/SAND STONE |
| 243.1 | 274.75 | 31.65 | SAND STONE/SANDY SHALE |
| 274.75 | 306 | 31.25 | SAND STONE |
| 306 | 338 | 32 | SAND |
| 338 | 369 | 31 | SAND STONE/SANDY SHALE |
| 369 | 401 | 32 | SANDY SHALE/COAL/SAND STONE/COAL |
| 401 | 432 | 31 | SAND STONE/COAL STREAK/SAND STONE |
| 432 | 464 | 32 | SAND STONE/COAL/SAND STONE |
| 464 | 495 | 31 | SAND STONE |
| 495 | 527 | 32 | SANDY SHALE/COAL STREAK/SAND STONE |
| 527 | 559 | 32 | SAND STONE/COAL/SAND STONE |
| 559 | 590 | 31 | SAND STONE |
| 590 | 622 | 32 | |
| 622 | 677 | 55 | SANDY SHALE |
| 677 | 709 | 32 | SAND STONE/SANDY SHALE |
| 709 | 731 | 22 | SAND SHALE |
| 731 | 762 | 31 | SHALE/SAND |
| 762 | 794 | 32 | SHALE/COAL |
| 794 | 825 | 31 | SAND |
| 825 | 857 | 32 | SAND SHALE |
| 857 | 889 | 32 | SAND |
| 889 | 920 | 31 | SAND SHALE |
| 920 | 952 | 32 | SHALE/COAL |
| 952 | 983 | 31 | SAND/SHALE |
| 983 | 1015 | 32 | SAND/SHALE/COAL |
| 1015 | 1047 | 32 | SAND/SHALE/COAL |

| | | |
|---|---|---|
| 1047 | 1078 | 31 SAND/SHALE/COAL |
| 1078 | 1109 | 31 SAND |
| 1109 | 1141 | 32 SAND/COAL |
| 1141 | 1172 | 31 SAND/SHALE |
| 1172 | 1204 | 32 SHALE |
| 1204 | 1217 | 13 SAND/SHALE |
| 1217 | 1280 | 63 SAND/SHALE |
| 1280 | 1311 | 31 SAND/COAL |
| 1311 | 1343 | 32 SAND COAL |
| 1343 | 1360 | 17 SAND |
| 1360 | 1379 | 19 SAND/SHALE/COAL |
| 1379 | 1410 | 31 SAND/SHALE |
| 1410 | 1442 | 32 SAND/SHALE |
| 1442 | 1474 | 32 SAND/COAL |
| 1474 | 1505 | 31 SAND/COAL/SHALE |
| 1505 | 1537 | 32 SAND/SHALE |
| 1537 | 1569 | 32 SHALE/SAND |
| 1569 | 1600 | 31 SHALE/SAND |
| 1600 | 1631 | 31 SHALE/SAND |
| 1631 | 1663 | 32 SHALE/SAND |
| 1663 | 1695 | 32 SHALE/SAND/COAL |
| 1695 | 1726 | 31 SAND/COAL |
| 1726 | 1758 | 32 SAND/SHALE/COAL |
| 1758 | 1789 | 31 SAND/SHALE |
| 1789 | 1821 | 32 SAND/SHALE |
| 1821 | 1853 | 32 SAND/SHALE/COAL |
| 1853 | 1884 | 31 SAND/SHALE |
| 1884 | 1916 | 32 SAND/SHALE |

1916' TOTAL DEPTH
32' OF 22" CASING
341.4' OF 16" CASING
582.95' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1517 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3543 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 6/30/2008 |
| **Driller's Total Depth:** | 1957.00 | **Log's Total Depth:** | 1951.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 11/11/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 11/11/2008 | | |
| Status: | | Date: | 11/12/2008 |
| Final PDF Date: | 3/26/2009 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1569 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3543 |
| **Operations Name:** | CBM T39E W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 6/18/2008

Drilling Contractor: Noah Horn

Date drilling completed: 6/30/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1957.00

Log Total Depth (feet): 1951.02

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1016971.20

Permitted State Plane Y: 330161.32

Final Plat State Plane X: 1016970.82

Final Plat State Plane Y: 330160.58

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T39E PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T39E EXHIBIT A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | T39E Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: caliper gamma density temp deviation

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T39E DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | T39E Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

Void at 265' - 267'; 16" casing cemented on backside to surface.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| Drill Data | T39E DRILL DATA.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 11/11/2008

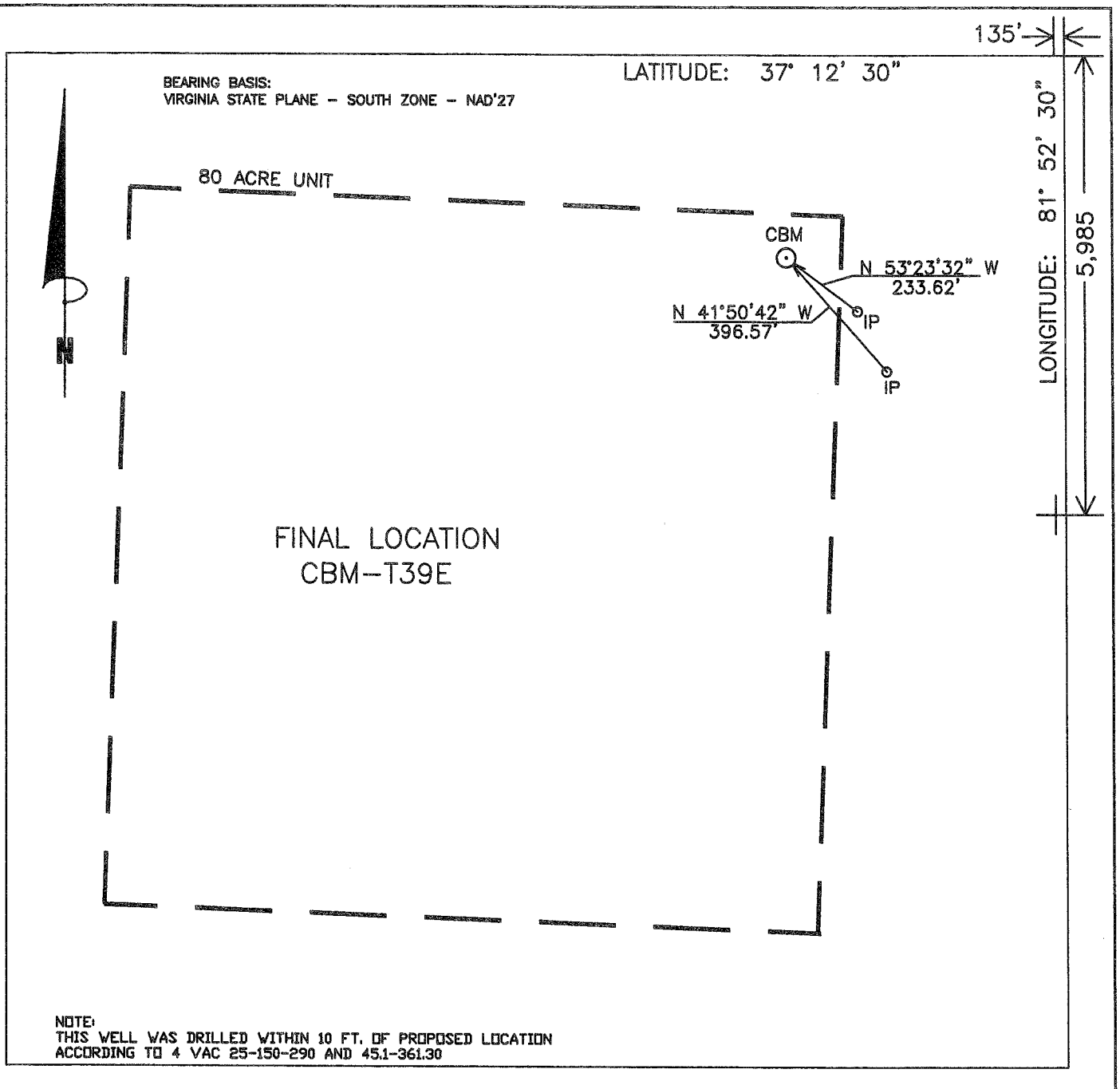
Signed By: Leslie Arrington Title: Director Environmental Permitting

## INTERNAL USE ONLY

Submit Date: 11/11/2008

Status: A Date: 11/12/2008

Final PDF Date: 12/16/2008




# WELL LOCATION PLAT

T39EFNL
2N25/08-271/49

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-T39E

TRACT NUMBER COAL MOUNTAIN MINING QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): N 330,160.58 E 1,016,970.82

ELEVATION: 2404.27' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 06-30-07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
7/1/08
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 10/96

T39E.CMP
Exhibit A

Well Name: 08 CBM T39E
SURFACE ELEV: 2404.27 EASTING: 1016970.82 NORTHING: 330160.58

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| AL2 | 134.10 | 135.00 | 2270.17 | 0.90 | |
| | 135.00 | 242.10 | 2269.27 | 107.10 | |
| RA1 | 242.10 | 243.80 | 2162.17 | 1.70 | |
| | 243.80 | 266.10 | 2160.47 | 22.30 | |
| RA2 | 266.10 | 270.00 | 2138.17 | 3.90 | MINED OUT |
| | 270.00 | 312.80 | 2134.27 | 42.80 | |
| RA3 | 312.80 | 314.30 | 2091.47 | 1.50 | |
| | 314.30 | 316.20 | 2089.97 | 1.90 | |
| COAL | 316.20 | 316.90 | 2088.07 | 0.70 | |
| | 316.90 | 323.50 | 2087.37 | 6.60 | |
| COAL | 323.50 | 324.00 | 2080.77 | 0.50 | |
| | 324.00 | 397.60 | 2080.27 | 73.60 | |
| JB1 | 397.60 | 399.80 | 2006.67 | 2.20 | |
| | 399.80 | 440.30 | 2004.47 | 40.50 | |
| JB3 | 440.30 | 443.90 | 1963.97 | 3.60 | |
| | 443.90 | 535.40 | 1960.37 | 91.50 | |
| TI | 535.40 | 536.00 | 1868.87 | 0.60 | |
| | 536.00 | 648.10 | 1868.27 | 112.10 | |
| *US1 | 648.10 | 648.80 | 1756.17 | 0.70 | |
| | 648.80 | 779.40 | 1755.47 | 130.60 | |
| *US2 | 779.40 | 780.30 | 1624.87 | 0.90 | |
| | 780.30 | 987.00 | 1623.97 | 206.70 | |
| *SE2 | 987.00 | 987.80 | 1417.27 | 0.80 | |
| | 987.80 | 1033.00 | 1416.47 | 45.20 | |
| *LS1 | 1033.00 | 1034.80 | 1371.27 | 1.80 | |
| | 1034.80 | 1085.30 | 1369.47 | 50.50 | |
| *LS3 | 1085.30 | 1086.90 | 1318.97 | 1.60 | |
| | 1086.90 | 1147.20 | 1317.37 | 60.30 | |
| *UH3 | 1147.20 | 1148.30 | 1257.07 | 1.10 | |
| | 1148.30 | 1208.00 | 1255.97 | 59.70 | |
| *MH1 | 1208.00 | 1208.90 | 1196.27 | 0.90 | |
| | 1208.90 | 1296.20 | 1195.37 | 87.30 | |
| *COAL | 1296.20 | 1298.10 | 1108.07 | 1.90 | |
| | 1298.10 | 1309.40 | 1106.17 | 11.30 | |
| *P11 | 1309.40 | 1311.20 | 1094.87 | 1.80 | |
| | 1311.20 | 1343.90 | 1093.07 | 32.70 | |
| *P10 | 1343.90 | 1344.80 | 1060.37 | 0.90 | |
| | 1344.80 | 1390.50 | 1059.47 | 45.70 | |
| *LH3 | 1390.50 | 1391.00 | 1013.77 | 0.50 | |
| | 1391.00 | 1472.10 | 1013.27 | 81.10 | |
| *P92 | 1472.10 | 1473.30 | 932.17 | 1.20 | |
| | 1473.30 | 1494.00 | 930.97 | 20.70 | |
| *P71 | 1494.00 | 1495.00 | 910.27 | 1.00 | |
| | 1495.00 | 1496.50 | 909.27 | 1.50 | |
| *COAL | 1496.50 | 1497.00 | 907.77 | 0.50 | |
| | 1497.00 | 1540.00 | 907.27 | 43.00 | |
| *P72 | 1540.00 | 1540.80 | 864.27 | 0.80 | |
| | 1540.80 | 1748.00 | 863.47 | 207.20 | |
| *P51 | 1748.00 | 1748.90 | 656.27 | 0.90 | |
| | 1748.90 | 1759.50 | 655.37 | 10.60 | |
| *COAL | 1759.50 | 1760.20 | 644.77 | 0.70 | |
| | 1760.20 | 1795.00 | 644.07 | 34.80 | |
| *P52 | 1795.00 | 1796.00 | 609.27 | 1.00 | |
| | 1796.00 | 1883.50 | 608.27 | 87.50 | |
| *P42 | 1883.50 | 1884.20 | 520.77 | 0.70 | |
| | 1884.20 | 1957.00 | 520.07 | 72.80 | |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\T39E.CMP
DATE: 07/09/08

Well: **T39E**

## Oil & Gas Show

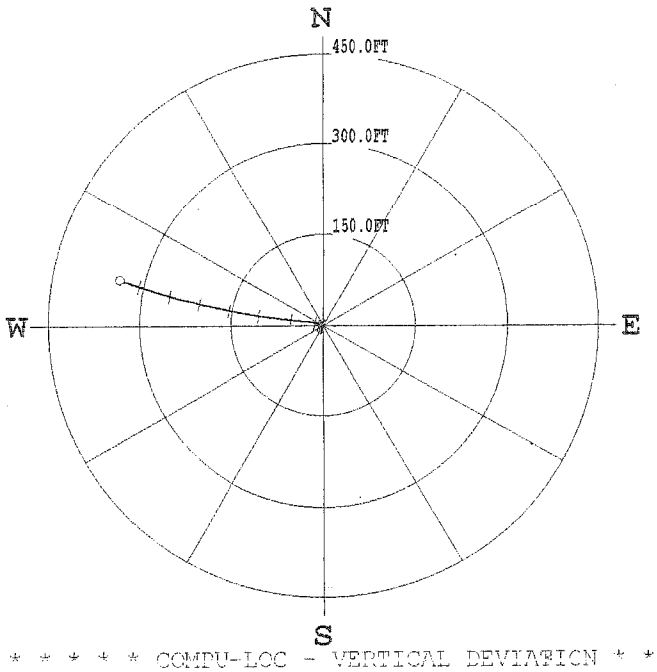
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 1033.0 | 1473.3 | 440.3 | | | |
| Pocahontas | 1494.0 | 1796.0 | 302.0 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

LIENT: Consol Energy
OCATION:
OLE ID: 08-CNX-T-39-E
ATE OF LOG: 06/30/08
ROBE: 9136CA 956

MAG DECL: -6.9

SCALE: 150 FT/IN
TRUE DEPTH: 1889.57 FT
AZIMUTH: 282.5
DISTANCE: 340.1 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 08-CNX-T-39-E
DATE OF LOG : 06/30/08
PROBE : 9136CA , 956
DEPTH UNITS : FEET
LOG: 08-CNX-T-39-E_06-30-08_04-06_9136CA_.02_-0.02_1944.05_DEVI.log

| ABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | 0.40 | -0.65 | 0.8 | 301.8 | 1.4 | 317.3 |
| 60.0 | 59.98 | 0.50 | -0.88 | 1.0 | 299.4 | 1.5 | 273.9 |
| 70.0 | 69.98 | 0.44 | -1.12 | 1.2 | 291.3 | 1.5 | 233.8 |
| 80.0 | 79.98 | 0.32 | -1.35 | 1.4 | 283.2 | 1.5 | 243.8 |
| 90.0 | 89.97 | 0.21 | -1.58 | 1.6 | 277.7 | 1.6 | 243.6 |
| 100.0 | 99.97 | 0.02 | -1.74 | 1.7 | 270.6 | 1.5 | 202.7 |
| 110.0 | 109.97 | -0.20 | -1.87 | 1.9 | 263.9 | 1.5 | 213.7 |
| 120.0 | 119.96 | -0.43 | -2.00 | 2.0 | 257.9 | 1.4 | 207.4 |
| 130.0 | 129.96 | -0.66 | -2.11 | 2.2 | 252.8 | 1.5 | 210.1 |
| 140.0 | 139.96 | -0.87 | -2.28 | 2.4 | 249.1 | 1.5 | 209.0 |
| 150.0 | 149.95 | -1.07 | -2.46 | 2.7 | 246.4 | 1.7 | 243.3 |
| 160.0 | 159.95 | -1.27 | -2.68 | 3.0 | 244.7 | 1.7 | 221.3 |
| 170.0 | 169.94 | -1.50 | -2.83 | 3.2 | 242.2 | 1.6 | 207.0 |
| 180.0 | 179.94 | -1.74 | -2.96 | 3.4 | 239.5 | 1.7 | 227.5 |
| 190.0 | 189.94 | -1.97 | -3.08 | 3.7 | 237.4 | 1.5 | 191.5 |
| 200.0 | 199.93 | -2.23 | -3.10 | 3.8 | 234.3 | 1.5 | 181.6 |
| 210.0 | 209.93 | -2.46 | -3.04 | 3.9 | 231.0 | 1.3 | 160.2 |
| 220.0 | 219.93 | -2.62 | -2.89 | 3.9 | 227.7 | 1.5 | 123.4 |
| 230.0 | 229.93 | -2.72 | -2.71 | 3.8 | 224.9 | 1.3 | 124.2 |
| 240.0 | 239.92 | -2.78 | -2.55 | 3.8 | 222.6 | 0.9 | 92.9 |
| 250.0 | 249.92 | -2.79 | -2.37 | 3.7 | 220.4 | 1.1 | 106.6 |
| 260.0 | 259.92 | -2.83 | -2.18 | 3.6 | 217.6 | 1.1 | 72.7 |
| 270.0 | 269.92 | -2.77 | -2.01 | 3.4 | 215.9 | 1.5 | 86.2 |
| 280.0 | 279.92 | -2.74 | -1.81 | 3.3 | 213.3 | 1.2 | 74.9 |
| 290.0 | 289.91 | -2.67 | -1.63 | 3.1 | 211.4 | 1.1 | 52.3 |
| 300.0 | 299.91 | -2.64 | -1.43 | 3.0 | 208.5 | 1.2 | 103.6 |
| 310.0 | 309.91 | -2.64 | -1.24 | 2.9 | 205.2 | 1.1 | 73.0 |
| 320.0 | 319.91 | -2.59 | -1.07 | 2.8 | 202.4 | 1.1 | 61.5 |
| 330.0 | 329.91 | -2.62 | -0.90 | 2.8 | 198.9 | 1.3 | 126.4 |
| 340.0 | 339.90 | -2.63 | -0.65 | 2.7 | 193.8 | 2.0 | 42.3 |
| 350.0 | 349.90 | -2.74 | -0.83 | 2.9 | 196.9 | 1.7 | 260.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 230.0 | 229.93 | -2.72 | -2.71 | 3.8 | 224.9 | 1.3 | 124.2 |
| 240.0 | 239.92 | -2.78 | -2.55 | 3.8 | 222.6 | 0.9 | 92.9 |
| 250.0 | 249.92 | -2.79 | -2.37 | 3.7 | 220.4 | 1.1 | 106.6 |
| 260.0 | 259.92 | -2.83 | -2.18 | 3.6 | 217.6 | 1.1 | 72.7 |
| 270.0 | 269.92 | -2.77 | -2.01 | 3.4 | 215.9 | 1.5 | 86.2 |
| 280.0 | 279.92 | -2.74 | -1.81 | 3.3 | 213.3 | 1.2 | 74.9 |
| 290.0 | 289.91 | -2.67 | -1.63 | 3.1 | 211.4 | 1.1 | 52.3 |
| 300.0 | 299.91 | -2.64 | -1.43 | 3.0 | 208.5 | 1.2 | 103.6 |
| 310.0 | 309.91 | -2.64 | -1.24 | 2.9 | 205.2 | 1.1 | 73.0 |
| 320.0 | 319.91 | -2.59 | -1.07 | 2.8 | 202.4 | 1.1 | 61.5 |
| 330.0 | 329.91 | -2.62 | -0.90 | 2.8 | 198.9 | 1.3 | 126.4 |
| 340.0 | 339.90 | -2.63 | -0.65 | 2.7 | 193.8 | 2.0 | 42.3 |
| 350.0 | 349.90 | -2.74 | -0.83 | 2.9 | 196.9 | 1.7 | 260.5 |
| 360.0 | 359.89 | -2.85 | -1.09 | 3.1 | 201.0 | 1.5 | 228.2 |
| 370.0 | 369.89 | -2.96 | -1.36 | 3.3 | 204.6 | 1.7 | 250.4 |
| 380.0 | 379.88 | -3.05 | -1.66 | 3.5 | 208.5 | 1.6 | 248.6 |
| 390.0 | 389.88 | -3.18 | -1.91 | 3.7 | 211.0 | 1.8 | 250.3 |
| 400.0 | 399.88 | -3.30 | -2.21 | 4.0 | 213.8 | 2.2 | 262.1 |
| 410.0 | 409.87 | -3.43 | -2.49 | 4.2 | 216.0 | 1.7 | 238.0 |
| 420.0 | 419.86 | -3.49 | -2.82 | 4.5 | 218.9 | 1.8 | 243.4 |
| 430.0 | 429.86 | -3.59 | -3.10 | 4.7 | 220.9 | 2.3 | 278.8 |
| 440.0 | 439.85 | -3.64 | -3.41 | 5.0 | 223.2 | 1.7 | 254.3 |
| 450.0 | 449.85 | -3.63 | -3.75 | 5.2 | 226.0 | 2.0 | 264.3 |
| 460.0 | 459.84 | -3.68 | -4.07 | 5.5 | 227.9 | 1.8 | 262.1 |
| 470.0 | 469.84 | -3.70 | -4.39 | 5.7 | 229.9 | 1.8 | 270.2 |
| 480.0 | 479.83 | -3.66 | -4.72 | 6.0 | 232.2 | 2.0 | 283.3 |
| 490.0 | 489.83 | -3.61 | -5.04 | 6.2 | 234.4 | 1.7 | 277.9 |
| 500.0 | 499.82 | -3.44 | -5.33 | 6.3 | 237.2 | 2.1 | 311.7 |
| 510.0 | 509.81 | -3.14 | -5.55 | 6.4 | 240.5 | 2.2 | 336.7 |
| 520.0 | 519.81 | -2.87 | -5.75 | 6.4 | 243.5 | 1.8 | 352.2 |
| 530.0 | 529.80 | -2.54 | -5.88 | 6.4 | 246.7 | 2.2 | 332.7 |
| 540.0 | 539.80 | -2.21 | -6.00 | 6.4 | 249.8 | 1.8 | 350.5 |
| 550.0 | 549.79 | -1.88 | -6.02 | 6.3 | 252.7 | 1.8 | 3.1 |
| 560.0 | 559.79 | -1.58 | -5.98 | 6.2 | 255.2 | 1.7 | 4.3 |
| 570.0 | 569.78 | -1.33 | -5.88 | 6.0 | 257.2 | 1.5 | 34.2 |
| 580.0 | 579.78 | -1.11 | -5.76 | 5.9 | 259.1 | 1.4 | 29.9 |
| 590.0 | 589.78 | -0.93 | -5.60 | 5.7 | 260.6 | 1.3 | 44.3 |
| 600.0 | 599.77 | -0.75 | -5.45 | 5.5 | 262.1 | 1.4 | 24.8 |
| 610.0 | 609.77 | -0.91 | -5.45 | 5.5 | 260.6 | 0.7 | 201.9 |
| 620.0 | 619.77 | -1.00 | -5.53 | 5.6 | 259.7 | 0.7 | 203.8 |
| 630.0 | 629.77 | -1.11 | -5.61 | 5.7 | 258.8 | 0.9 | 212.3 |
| 640.0 | 639.77 | -1.22 | -5.70 | 5.8 | 257.9 | 0.8 | 225.0 |
| 650.0 | 649.77 | -1.18 | -5.80 | 5.9 | 258.5 | 0.7 | 323.7 |
| 660.0 | 659.76 | -1.02 | -6.07 | 6.2 | 260.5 | 2.2 | 302.8 |
| 670.0 | 669.76 | -0.84 | -6.38 | 6.4 | 262.5 | 2.2 | 301.7 |
| 680.0 | 679.75 | -0.65 | -6.69 | 6.7 | 264.4 | 2.0 | 300.5 |
| 690.0 | 689.74 | -0.45 | -6.98 | 7.0 | 266.3 | 2.0 | 301.9 |
| 700.0 | 699.74 | -0.27 | -7.27 | 7.3 | 267.9 | 2.0 | 300.5 |
| 710.0 | 709.73 | -0.06 | -7.56 | 7.6 | 269.5 | 2.1 | 308.3 |
| 720.0 | 719.72 | 0.17 | -7.85 | 7.9 | 271.2 | 2.0 | 306.8 |
| 730.0 | 729.72 | 0.40 | -8.14 | 8.2 | 272.8 | 2.1 | 307.8 |
| 740.0 | 739.71 | 0.64 | -8.44 | 8.5 | 274.4 | 2.2 | 309.5 |
| 750.0 | 749.70 | 0.91 | -8.71 | 8.8 | 276.0 | 2.1 | 314.9 |
| 760.0 | 759.70 | 1.08 | -8.48 | 8.6 | 277.2 | 2.0 | 51.8 |
| 770.0 | 769.69 | 1.23 | -8.37 | 8.5 | 278.4 | 0.9 | 35.3 |
| 780.0 | 779.69 | 1.38 | -8.28 | 8.4 | 279.4 | 0.9 | 31.1 |
| 790.0 | 789.69 | 1.49 | -8.18 | 8.3 | 280.3 | 0.9 | 46.7 |
| 800.0 | 799.69 | 1.60 | -8.07 | 8.2 | 281.2 | 0.8 | 45.4 |
| 810.0 | 809.69 | 1.71 | -7.99 | 8.2 | 282.1 | 1.1 | 5.0 |
| 820.0 | 819.69 | 1.90 | -7.96 | 8.2 | 283.4 | 1.2 | 0.7 |
| 830.0 | 829.69 | 2.09 | -8.00 | 8.3 | 284.7 | 1.2 | 339.7 |
| 840.0 | 839.68 | 2.29 | -8.14 | 8.5 | 285.7 | 2.0 | 307.8 |
| 850.0 | 849.67 | 2.50 | -8.47 | 8.8 | 286.5 | 2.9 | 293.7 |
| 860.0 | 859.66 | 2.57 | -9.04 | 9.4 | 285.9 | 4.0 | 269.1 |
| 870.0 | 869.62 | 2.83 | -9.85 | 10.2 | 286.0 | 5.9 | 282.9 |
| 880.0 | 879.56 | 3.12 | -10.87 | 11.3 | 286.0 | 6.1 | 284.6 |
| 890.0 | 889.48 | 3.35 | -12.08 | 12.5 | 285.5 | 7.8 | 277.8 |
| 900.0 | 899.38 | 3.62 | -13.48 | 14.0 | 285.0 | 8.5 | 276.6 |
| 910.0 | 909.26 | 3.95 | -15.03 | 15.5 | 284.7 | 9.6 | 287.7 |
| 920.0 | 919.11 | 4.21 | -16.71 | 17.2 | 284.1 | 10.3 | 275.6 |
| 930.0 | 928.93 | 4.50 | -18.54 | 19.1 | 283.6 | 11.2 | 276.2 |
| 940.0 | 938.73 | 4.77 | -20.53 | 21.1 | 283.1 | 12.3 | 278.9 |
| 950.0 | 948.50 | 5.09 | -22.65 | 23.2 | 282.7 | 12.6 | 275.3 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 900.0 | 899.38 | 3.62 | -13.48 | 14.0 | 285.0 | 8.5 | 276.6 |
| 910.0 | 909.26 | 3.95 | -15.03 | 15.5 | 284.7 | 9.6 | 287.7 |
| 920.0 | 919.11 | 4.21 | -16.71 | 17.2 | 284.1 | 10.3 | 275.6 |
| 930.0 | 928.93 | 4.50 | -18.54 | 19.1 | 283.6 | 11.2 | 276.2 |
| 940.0 | 938.73 | 4.77 | -20.53 | 21.1 | 283.1 | 12.3 | 278.9 |
| 950.0 | 948.50 | 5.09 | -22.65 | 23.2 | 282.7 | 12.6 | 275.3 |
| 960.0 | 958.24 | 5.42 | -24.90 | 25.5 | 282.3 | 13.6 | 281.9 |
| 970.0 | 967.94 | 5.79 | -27.28 | 27.9 | 282.0 | 14.2 | 274.0 |
| 980.0 | 977.62 | 5.94 | -29.78 | 30.4 | 281.3 | 14.9 | 272.1 |
| 990.0 | 987.27 | 6.14 | -32.39 | 33.0 | 280.7 | 15.7 | 277.9 |
| 1000.0 | 996.88 | 6.46 | -35.15 | 35.7 | 280.4 | 16.5 | 276.0 |
| 1010.0 | 1006.45 | 6.82 | -38.02 | 38.6 | 280.2 | 17.0 | 274.4 |
| 1020.0 | 1015.99 | 7.04 | -41.01 | 41.6 | 279.7 | 17.8 | 275.3 |
| 1030.0 | 1025.49 | 7.23 | -44.11 | 44.7 | 279.3 | 18.5 | 277.3 |
| 1040.0 | 1034.96 | 7.50 | -47.32 | 47.9 | 279.0 | 19.0 | 274.1 |
| 1050.0 | 1044.39 | 7.87 | -50.61 | 51.2 | 278.8 | 19.4 | 277.6 |
| 1060.0 | 1053.83 | 8.22 | -53.89 | 54.5 | 278.7 | 19.4 | 277.5 |
| 1070.0 | 1063.27 | 8.64 | -57.16 | 57.8 | 278.6 | 19.3 | 281.9 |
| 1080.0 | 1072.72 | 9.15 | -60.40 | 61.1 | 278.6 | 19.2 | 271.5 |
| 1090.0 | 1082.18 | 9.43 | -63.64 | 64.3 | 278.4 | 19.0 | 278.3 |
| 1100.0 | 1091.61 | 9.83 | -66.92 | 67.6 | 278.4 | 19.4 | 276.9 |
| 1110.0 | 1101.05 | 10.23 | -70.20 | 70.9 | 278.3 | 19.4 | 280.1 |
| 1120.0 | 1110.48 | 10.59 | -73.51 | 74.3 | 278.2 | 19.3 | 274.4 |
| 1130.0 | 1119.90 | 11.02 | -76.82 | 77.6 | 278.2 | 19.7 | 278.2 |
| 1140.0 | 1129.33 | 11.44 | -80.13 | 80.9 | 278.1 | 19.6 | 280.3 |
| 1150.0 | 1138.75 | 11.92 | -83.45 | 84.3 | 278.1 | 19.6 | 271.7 |
| 1160.0 | 1148.17 | 12.36 | -86.77 | 87.6 | 278.1 | 19.7 | 276.3 |
| 1170.0 | 1157.59 | 12.80 | -90.10 | 91.0 | 278.1 | 19.4 | 277.9 |
| 1180.0 | 1167.03 | 13.26 | -93.37 | 94.3 | 278.1 | 19.3 | 278.2 |
| 1190.0 | 1176.47 | 13.74 | -96.63 | 97.6 | 278.1 | 19.2 | 280.3 |
| 1200.0 | 1185.92 | 14.28 | -99.85 | 100.9 | 278.1 | 19.0 | 278.4 |
| 1210.0 | 1195.38 | 14.80 | -103.05 | 104.1 | 278.2 | 18.8 | 278.0 |
| 1220.0 | 1204.85 | 15.32 | -106.23 | 107.3 | 278.2 | 18.9 | 278.6 |
| 1230.0 | 1214.32 | 15.83 | -109.41 | 110.5 | 278.2 | 18.9 | 279.5 |
| 1240.0 | 1223.79 | 16.38 | -112.58 | 113.8 | 278.3 | 18.6 | 280.7 |
| 1250.0 | 1233.27 | 16.90 | -115.71 | 116.9 | 278.3 | 18.5 | 277.8 |
| 1260.0 | 1242.76 | 17.43 | -118.82 | 120.1 | 278.3 | 18.4 | 280.7 |
| 1270.0 | 1252.25 | 17.99 | -121.91 | 123.2 | 278.4 | 18.3 | 280.8 |
| 1280.0 | 1261.75 | 18.53 | -124.98 | 126.3 | 278.4 | 18.1 | 282.2 |
| 1290.0 | 1271.25 | 19.13 | -128.05 | 129.5 | 278.5 | 18.1 | 278.6 |
| 1300.0 | 1280.76 | 19.66 | -131.09 | 132.6 | 278.5 | 17.9 | 279.8 |
| 1310.0 | 1290.27 | 20.35 | -134.11 | 135.7 | 278.6 | 18.2 | 278.2 |
| 1320.0 | 1299.78 | 20.65 | -137.18 | 138.7 | 278.6 | 18.2 | 281.1 |
| 1330.0 | 1309.27 | 21.27 | -140.27 | 141.9 | 278.6 | 18.3 | 281.3 |
| 1340.0 | 1318.77 | 21.98 | -143.31 | 145.0 | 278.7 | 18.2 | 284.2 |
| 1350.0 | 1328.27 | 22.50 | -146.38 | 148.1 | 278.7 | 18.1 | 279.7 |
| 1360.0 | 1337.76 | 23.09 | -149.46 | 151.2 | 278.8 | 18.5 | 281.3 |
| 1370.0 | 1347.26 | 23.64 | -152.55 | 154.4 | 278.8 | 18.5 | 281.8 |
| 1380.0 | 1356.74 | 24.32 | -155.65 | 157.5 | 278.9 | 18.3 | 279.1 |
| 1390.0 | 1366.23 | 24.94 | -158.75 | 160.7 | 278.9 | 18.7 | 282.7 |
| 1400.0 | 1375.71 | 25.49 | -161.85 | 163.8 | 279.0 | 18.6 | 282.3 |
| 1410.0 | 1385.18 | 26.14 | -164.99 | 167.0 | 279.0 | 18.7 | 280.7 |
| 1420.0 | 1394.65 | 26.89 | -168.11 | 170.2 | 279.1 | 18.7 | 287.6 |
| 1430.0 | 1404.12 | 27.58 | -171.23 | 173.4 | 279.2 | 18.6 | 274.4 |
| 1440.0 | 1413.60 | 28.15 | -174.36 | 176.6 | 279.2 | 18.8 | 286.1 |
| 1450.0 | 1423.07 | 28.89 | -177.48 | 179.8 | 279.2 | 18.9 | 283.4 |
| 1460.0 | 1432.54 | 29.53 | -180.62 | 183.0 | 279.3 | 18.6 | 279.9 |
| 1470.0 | 1442.02 | 30.45 | -183.68 | 186.2 | 279.4 | 18.6 | 290.0 |
| 1480.0 | 1451.50 | 30.95 | -186.79 | 189.3 | 279.4 | 18.4 | 281.3 |
| 1490.0 | 1460.99 | 31.63 | -189.88 | 192.5 | 279.5 | 18.5 | 281.3 |
| 1500.0 | 1470.47 | 32.36 | -192.97 | 195.7 | 279.5 | 18.5 | 282.7 |
| 1510.0 | 1479.95 | 33.05 | -196.10 | 198.9 | 279.6 | 18.8 | 283.0 |
| 1520.0 | 1489.41 | 33.73 | -199.25 | 202.1 | 279.6 | 18.9 | 282.4 |
| 1530.0 | 1498.87 | 34.48 | -202.39 | 205.3 | 279.7 | 18.8 | 283.3 |
| 1540.0 | 1508.34 | 35.32 | -205.51 | 208.5 | 279.8 | 18.7 | 285.1 |
| 1550.0 | 1517.81 | 36.06 | -208.64 | 211.7 | 279.8 | 18.7 | 283.5 |
| 1560.0 | 1527.28 | 36.81 | -211.76 | 214.9 | 279.9 | 18.7 | 283.8 |
| 1570.0 | 1536.75 | 37.61 | -214.86 | 218.1 | 279.9 | 18.7 | 284.6 |
| 1580.0 | 1546.23 | 38.44 | -217.95 | 221.3 | 280.0 | 18.5 | 281.7 |
| 1590.0 | 1555.70 | 39.20 | -221.06 | 224.5 | 280.1 | 18.8 | 285.2 |
| 1600.0 | 1565.17 | 40.01 | -224.16 | 227.7 | 280.1 | 18.7 | 283.5 |
| 1610.0 | 1574.64 | 39.96 | -226.35 | 229.8 | 280.0 | 18.8 | 285.5 |
| 1620.0 | 1584.10 | 40.82 | -229.46 | 233.1 | 280.1 | 18.9 | 285.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1520.0 | 1489.41 | | | | | | |
| 1530.0 | 1498.87 | 34.48 | -202.39 | 205.3 | 279.7 | 18.8 | 283.5 |
| 1540.0 | 1508.34 | 35.32 | -205.51 | 208.5 | 279.8 | 18.7 | 285.1 |
| 1550.0 | 1517.81 | 36.06 | -208.64 | 211.7 | 279.8 | 18.7 | 283.5 |
| 1560.0 | 1527.28 | 36.81 | -211.76 | 214.9 | 279.9 | 18.7 | 283.8 |
| 1570.0 | 1536.75 | 37.61 | -214.86 | 218.1 | 279.9 | 18.7 | 284.6 |
| 1580.0 | 1546.23 | 38.44 | -217.95 | 221.3 | 280.0 | 18.5 | 281.7 |
| 1590.0 | 1555.70 | 39.20 | -221.06 | 224.5 | 280.1 | 18.8 | 285.2 |
| 1600.0 | 1565.17 | 40.01 | -224.16 | 227.7 | 280.1 | 18.7 | 283.5 |
| 1610.0 | 1574.64 | 39.96 | -226.35 | 229.8 | 280.0 | 18.8 | 285.5 |
| 1620.0 | 1584.10 | 40.82 | -229.46 | 233.1 | 280.1 | 18.9 | 285.0 |
| 1630.0 | 1593.57 | 41.66 | -232.59 | 236.3 | 280.2 | 18.9 | 285.3 |
| 1640.0 | 1603.03 | 42.53 | -235.71 | 239.5 | 280.2 | 18.9 | 284.2 |
| 1650.0 | 1612.48 | 43.41 | -238.85 | 242.8 | 280.3 | 19.0 | 285.1 |
| 1660.0 | 1621.93 | 44.31 | -241.99 | 246.0 | 280.4 | 19.1 | 285.6 |
| 1670.0 | 1631.38 | 45.21 | -245.15 | 249.3 | 280.4 | 19.2 | 286.0 |
| 1680.0 | 1640.82 | 46.13 | -248.31 | 252.6 | 280.5 | 19.5 | 284.7 |
| 1690.0 | 1650.25 | 47.08 | -251.49 | 255.9 | 280.6 | 19.4 | 287.0 |
| 1700.0 | 1659.68 | 48.03 | -254.67 | 259.2 | 280.7 | 19.5 | 287.2 |
| 1710.0 | 1669.11 | 49.02 | -257.85 | 262.5 | 280.8 | 19.5 | 289.3 |
| 1720.0 | 1678.54 | 50.05 | -261.02 | 265.8 | 280.9 | 19.4 | 286.7 |
| 1730.0 | 1687.98 | 51.02 | -264.18 | 269.1 | 280.9 | 19.1 | 286.9 |
| 1740.0 | 1697.42 | 51.99 | -267.32 | 272.3 | 281.0 | 19.2 | 286.9 |
| 1750.0 | 1706.87 | 52.98 | -270.45 | 275.6 | 281.1 | 19.2 | 286.5 |
| 1760.0 | 1716.31 | 53.94 | -273.60 | 278.9 | 281.2 | 19.2 | 286.8 |
| 1770.0 | 1725.75 | 54.97 | -276.73 | 282.1 | 281.2 | 19.2 | 287.1 |
| 1780.0 | 1735.19 | 55.97 | -279.87 | 285.4 | 281.3 | 19.3 | 287.8 |
| 1790.0 | 1744.63 | 56.98 | -283.02 | 288.7 | 281.4 | 19.3 | 287.8 |
| 1800.0 | 1754.07 | 58.01 | -286.15 | 292.0 | 281.5 | 19.3 | 289.3 |
| 1810.0 | 1763.51 | 58.98 | -289.31 | 295.3 | 281.5 | 19.3 | 286.5 |
| 1820.0 | 1772.94 | 60.02 | -292.49 | 298.6 | 281.6 | 19.7 | 288.7 |
| 1830.0 | 1782.36 | 61.10 | -295.66 | 301.9 | 281.7 | 19.6 | 289.7 |
| 1840.0 | 1791.78 | 62.18 | -298.83 | 305.2 | 281.8 | 19.5 | 287.6 |
| 1850.0 | 1801.20 | 63.26 | -302.01 | 308.6 | 281.8 | 19.7 | 288.0 |
| 1860.0 | 1810.62 | 64.32 | -305.19 | 311.9 | 281.9 | 19.6 | 288.9 |
| 1870.0 | 1820.03 | 65.39 | -308.38 | 315.2 | 282.0 | 19.7 | 289.0 |
| 1880.0 | 1829.44 | 66.59 | -311.55 | 318.6 | 282.1 | 19.9 | 289.8 |
| 1890.0 | 1838.85 | 67.60 | -314.78 | 322.0 | 282.1 | 19.6 | 286.9 |
| 1900.0 | 1848.25 | 68.74 | -317.99 | 325.3 | 282.2 | 20.0 | 288.3 |
| 1910.0 | 1857.64 | 69.85 | -321.24 | 328.7 | 282.3 | 20.3 | 288.4 |
| 1920.0 | 1867.02 | 71.06 | -324.48 | 332.2 | 282.4 | 20.3 | 290.3 |
| 1930.0 | 1876.41 | 72.22 | -327.74 | 335.6 | 282.4 | 20.4 | 291.0 |
| 1940.0 | 1885.78 | 73.41 | -331.00 | 339.0 | 282.5 | 20.3 | 287.9 |
| 1944.1 | 1889.59 | 73.58 | -332.09 | 340.1 | 282.5 | 0.0 | 0.0 |

Well: **T39E**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 31 | 24" | | | X | 6/18/08 | |
| Surface | 16" | 339.6 | 20" | 396 | X | | 6/19/08 | Basket@220' |
| Water Protection | 13 3/8" | 591.65 | 15 3/8" | 228 | X | | 6/23/08 | Basket@85' |
| Coal Protection | 13 3/8" | 591.65 | 15 3/8" | 228 | X | | 6/23/08 | |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE T39E

RIG #: 87

LOCATION: HORN MT, VA

DATE STARTED: 6/18/2008

DATE COMPLETED: 6/30/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 31 | 31 | SAND/SHALE |
| 31 | 57 | 26 | SAND/SHALE |
| 57 | 87 | 30 | SAND/SHALE |
| 87 | 117 | 30 | SAND/SHALE |
| 117 | 148 | 31 | SAND/COAL |
| 148 | 179 | 31 | SAND |
| 179 | 211 | 32 | SAND |
| 211 | 243 | 32 | SAND/SANDY SHALE |
| 243 | 274 | 31 | SAND/SANDY SHALE |
| 274 | 305 | 31 | SAND |
| 305 | 337 | 32 | SHALE/SAND |
| 337 | 368 | 31 | SAND |
| 368 | 400 | 32 | SAND/SHALE/COAL |
| 400 | 432 | 32 | SAND |
| 432 | 463 | 31 | SAND/COAL |
| 463 | 495 | 32 | SAND |
| 495 | 527 | 32 | SAND |
| 527 | 558 | 31 | SAND |
| 558 | 590 | 32 | SAND |
| 590 | 610 | 20 | |
| 610 | 624 | 14 | SHALE |
| 624 | 656 | 32 | SAND/SHALE |
| 656 | 688 | 32 | SAND |
| 688 | 719 | 31 | SAND |
| 719 | 751 | 32 | SAND |
| 751 | 783 | 32 | SAND |
| 783 | 814 | 31 | SAND/SANDY SHALE |
| 814 | 824 | 10 | SANDY SHALE |
| 824 | 855 | 31 | SHALE |
| 855 | 886 | 31 | SAND/SHALE |
| 886 | 918 | 32 | SAND |
| 918 | 950 | 32 | SANDY SHALE/SAND |
| 950 | 981 | 31 | SAND |

| | | | |
|---|---|---|---|
| 981 | 1013 | 32 | SAND/COAL/SHALE |
| 1013 | 1045 | 32 | SANDY SHALE/COAL |
| 1045 | 1047 | 2 | SAND/SHALE |
| 1047 | 1078 | 31 | SAND |
| 1078 | 1110 | 32 | SAND/COAL/SHALE |
| 1110 | 1142 | 32 | SAND |
| 1142 | 1173 | 31 | SAND/COAL/SHALE |
| 1173 | 1205 | 32 | SAND/SANDY SHALE |
| 1205 | 1236 | 31 | SAND/COAL/SHALE |
| 1236 | 1268 | 32 | SHALE |
| 1268 | 1310 | 42 | SANDY SHALE |
| 1310 | 1331 | 21 | SANDY SHALE |
| 1331 | 1363 | 32 | SHALE/SAND |
| 1363 | 1394 | 31 | SAND/SANDY SHALE |
| 1394 | 1426 | 32 | SAND/SHALE |
| 1426 | 1456 | 30 | SAND/SHALE |
| 1456 | 1487 | 31 | SAND/SHALE/COAL |
| 1487 | 1519 | 32 | SAND/SHALE |
| 1519 | 1550 | 31 | SAND/SHALE |
| 1550 | 1581 | 31 | SAND/SHALE |
| 1581 | 1613 | 32 | SAND/SHALE/COAL |
| 1613 | 1644 | 31 | SAND |
| 1644 | 1676 | 32 | SAND |
| 1676 | 1707 | 31 | SAND |
| 1707 | 1739 | 32 | SAND/SHALE |
| 1739 | 1770 | 31 | SAND/SHALE |
| 1770 | 1800 | 30 | SAND/SHALE |
| 1800 | 1832 | 32 | SHALE/COAL |
| 1832 | 1864 | 32 | SAND |
| 1864 | 1894 | 30 | SAND/SHALE |
| 1894 | 1926 | 32 | SAND/SHALE |
| 1926 | 1957 | 31 | SAND/SHALE |

1957' TOTAL DEPTH
31' OF 22" CASING
339.6' OF 16" CASING
591.65' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1310 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3808 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 3/21/2008 |
| **Driller's Total Depth:** | 1649.00 | **Log's Total Depth:** | 1660.10 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/4/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 6/4/2008 | | |
| Status: | | Date: | 6/5/2008 |
| Final PDF Date: | 6/12/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1351 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3808 |
| **Operations Name:** | CBM T39F W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 3/13/2008

Drilling Contractor: Noah Horn

Date drilling completed: 3/21/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1649.00

Log Total Depth (feet): 1660.08

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1015433.60

Permitted State Plane Y: 328697.08

Final Plat State Plane X: 1015439.15

Final Plat State Plane Y: 328696.39

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T39F Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T39F Exhibit A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | T39F Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T39F Deviation.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | T39F Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

Void at 165'; 16" casing cemented on backside to surface.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| Description | |
|---|---|
| Drill Data | T39F Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/4/2008

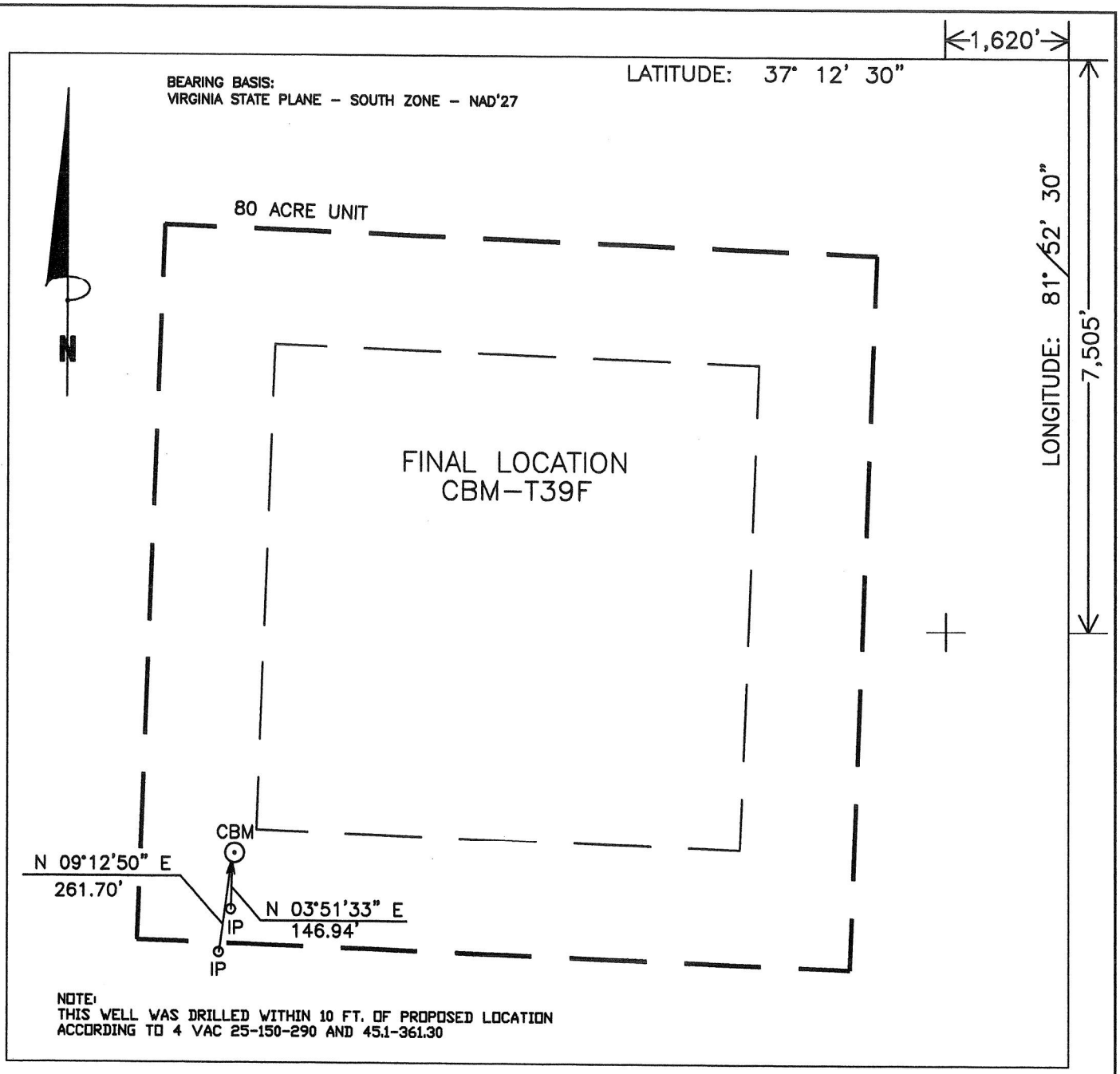
Signed By: Leslie Arrington Title: Director Environmental Permitting

## INTERNAL USE ONLY

Submit Date: 6/4/2008

Status: A Date: 6/5/2008

Final PDF Date: 6/12/2008




# WELL LOCATION PLAT

T39FFNL
2N30/98–667/01

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T39F

TRACT NUMBER CMMC QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 328,696.39 E 1,015,439.15

ELEVATION: 2134.51' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 03–21–08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DRP
DANNY R. PRICE
Lic. No. 008540
3/24/08
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

T39F.CMP
Exhibit A

Well Name: 08 CBM T39F
SURFACE ELEV: 2134.51 EASTING: 1015439.15 NORTHING: 328696.39

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA3 | 45.70 | 46.70 | 2088.81 | 1.00 | |
| | 46.70 | 50.80 | 2087.81 | 4.10 | |
| COAL | 50.80 | 52.80 | 2083.71 | 2.00 | |
| | 52.80 | 56.90 | 2081.71 | 4.10 | |
| COAL | 56.90 | 57.60 | 2077.61 | 0.70 | |
| | 57.60 | 124.00 | 2076.91 | 66.40 | |
| JB1 | 124.00 | 126.90 | 2010.51 | 2.90 | |
| | 126.90 | 165.00 | 2007.61 | 38.10 | |
| JB3 | 165.00 | 169.20 | 1969.51 | 4.20 | MINED OUT |
| | 169.20 | 258.20 | 1965.31 | 89.00 | |
| TI | 258.20 | 258.80 | 1876.31 | 0.60 | |
| | 258.80 | 364.90 | 1875.71 | 106.10 | |
| US1 | 364.90 | 365.80 | 1769.61 | 0.90 | |
| | 365.80 | 447.90 | 1768.71 | 82.10 | |
| COAL | 447.90 | 449.20 | 1686.61 | 1.30 | |
| | 449.20 | 485.20 | 1685.31 | 36.00 | |
| *US2 | 485.20 | 485.90 | 1649.31 | 0.70 | |
| | 485.90 | 605.70 | 1648.61 | 119.80 | |
| *GC2 | 605.70 | 606.40 | 1528.81 | 0.70 | |
| | 606.40 | 671.20 | 1528.11 | 64.80 | |
| *SE1 | 671.20 | 672.00 | 1463.31 | 0.80 | |
| | 672.00 | 708.30 | 1462.51 | 36.30 | |
| *SE2 | 708.30 | 710.40 | 1426.21 | 2.10 | |
| | 710.40 | 750.90 | 1424.11 | 40.50 | |
| *LS1 | 750.90 | 752.80 | 1383.61 | 1.90 | |
| | 752.80 | 769.00 | 1381.71 | 16.20 | |
| *LS2 | 769.00 | 769.80 | 1365.51 | 0.80 | |
| | 769.80 | 797.60 | 1364.71 | 27.80 | |
| *UH1 | 797.60 | 798.70 | 1336.91 | 1.10 | |
| | 798.70 | 863.20 | 1335.81 | 64.50 | |
| *UH3 | 863.20 | 865.80 | 1271.31 | 2.60 | |
| | 865.80 | 917.00 | 1268.71 | 51.20 | |
| *MH1 | 917.00 | 919.10 | 1217.51 | 2.10 | |
| | 919.10 | 985.00 | 1215.41 | 65.90 | |
| *MH2 | 985.00 | 986.90 | 1149.51 | 1.90 | |
| | 986.90 | 1021.70 | 1147.61 | 34.80 | |
| *P11 | 1021.70 | 1024.50 | 1112.81 | 2.80 | |
| | 1024.50 | 1045.10 | 1110.01 | 20.60 | |
| *P10 | 1045.10 | 1047.00 | 1089.41 | 1.90 | |
| | 1047.00 | 1108.10 | 1087.51 | 61.10 | |
| *LH2 | 1108.10 | 1109.00 | 1026.41 | 0.90 | |
| | 1109.00 | 1179.60 | 1025.51 | 70.60 | |
| *P91 | 1179.60 | 1180.90 | 954.91 | 1.30 | |
| | 1180.90 | 1208.80 | 953.61 | 27.90 | |
| *P92 | 1208.80 | 1209.90 | 925.71 | 1.10 | |
| | 1209.90 | 1266.10 | 924.61 | 56.20 | |
| *P71 | 1266.10 | 1267.10 | 868.41 | 1.00 | |
| | 1267.10 | 1322.00 | 867.41 | 54.90 | |
| *COAL | 1322.00 | 1322.90 | 812.51 | 0.90 | |
| | 1322.90 | 1444.80 | 811.61 | 121.90 | |
| *P62 | 1444.80 | 1445.10 | 689.71 | 0.30 | |
| | 1445.10 | 1477.60 | 689.41 | 32.50 | |
| *P51 | 1477.60 | 1478.60 | 656.91 | 1.00 | |
| | 1478.60 | 1568.10 | 655.91 | 89.50 | |
| *P41 | 1568.10 | 1569.50 | 566.41 | 1.40 | |
| | 1569.50 | 1660.08 | 565.01 | 90.58 | |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\T39F.CMP
DATE: 05/20/08

Well: **T39F**

## Oil & Gas Show

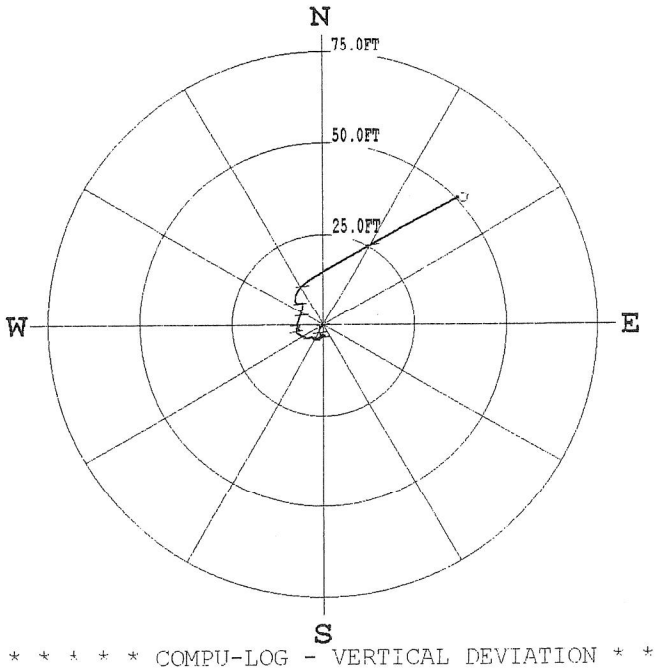
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 708.3 | 1209.9 | 501.6 | | | |
| Pocahontas | 1266.1 | 1569.5 | 303.4 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

IENT: Consol Energy
CATION:
LE ID: 08-CNX-T-39-F
TE OF LOG: 03/21/08
OBE: 9136CA 956

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1652.93 FT
AZIMUTH: 47.8
DISTANCE: 51.5 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
LOG: 08-CNX-T-39-F_03-21-08_18-30_9136CA_.02_-0.02_1657.97_DEVI.log

HOLE ID. : 08-CNX-T-39-F
DATE OF LOG : 03/21/08
PROBE : 9136CA , 956
DEPTH UNITS : FEET

| ABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | -0.71 | -0.48 | 0.9 | 214.2 | 1.3 | 230.1 |
| 60.0 | 59.98 | -0.85 | -0.67 | 1.1 | 218.2 | 1.3 | 219.6 |
| 70.0 | 69.98 | -1.04 | -0.78 | 1.3 | 216.7 | 1.2 | 207.4 |
| 80.0 | 79.98 | -1.22 | -0.79 | 1.5 | 213.1 | 0.8 | 185.0 |
| 90.0 | 89.98 | -1.38 | -0.83 | 1.6 | 211.2 | 1.1 | 211.0 |
| 100.0 | 99.98 | -1.52 | -0.96 | 1.8 | 212.2 | 1.2 | 223.2 |
| 110.0 | 109.98 | -1.68 | -1.01 | 2.0 | 211.1 | 0.8 | 189.0 |
| 120.0 | 119.97 | -1.83 | -1.05 | 2.1 | 209.8 | 0.9 | 199.0 |
| 130.0 | 129.97 | -1.99 | -1.10 | 2.3 | 208.9 | 0.9 | 196.4 |
| 140.0 | 139.97 | -2.17 | -1.12 | 2.4 | 207.2 | 1.2 | 168.2 |
| 150.0 | 149.97 | -2.29 | -1.02 | 2.5 | 204.0 | 0.7 | 126.5 |
| 160.0 | 159.97 | -2.45 | -0.97 | 2.6 | 201.6 | 1.0 | 180.4 |
| 170.0 | 169.97 | -2.59 | -0.90 | 2.7 | 199.2 | 1.4 | 166.3 |
| 180.0 | 179.97 | -2.75 | -0.83 | 2.9 | 196.8 | 1.0 | 154.8 |
| 190.0 | 189.96 | -2.90 | -0.79 | 3.0 | 195.1 | 0.7 | 186.6 |
| 200.0 | 199.96 | -3.05 | -0.70 | 3.1 | 193.0 | 1.2 | 104.8 |
| 210.0 | 209.96 | -3.09 | -0.57 | 3.1 | 190.5 | 1.1 | 71.7 |
| 220.0 | 219.96 | -3.04 | -0.39 | 3.1 | 187.4 | 1.0 | 84.4 |
| 230.0 | 229.96 | -3.02 | -0.21 | 3.0 | 184.0 | 1.1 | 73.3 |
| 240.0 | 239.96 | -2.99 | -0.03 | 3.0 | 180.6 | 1.1 | 87.0 |
| 250.0 | 249.95 | -3.00 | 0.15 | 3.0 | 177.1 | 1.1 | 96.6 |
| 260.0 | 259.95 | -3.08 | 0.32 | 3.1 | 174.1 | 1.1 | 130.8 |
| 270.0 | 269.95 | -3.15 | 0.49 | 3.2 | 171.2 | 1.1 | 133.0 |
| 280.0 | 279.95 | -3.32 | 0.47 | 3.4 | 171.9 | 1.2 | 155.4 |
| 290.0 | 289.94 | -3.50 | 0.42 | 3.5 | 173.2 | 1.5 | 238.9 |
| 300.0 | 299.94 | -3.56 | 0.16 | 3.6 | 177.4 | 1.4 | 228.9 |
| 310.0 | 309.94 | -3.64 | -0.05 | 3.6 | 180.9 | 1.7 | 290.8 |
| 320.0 | 319.93 | -3.63 | -0.33 | 3.6 | 185.2 | 1.7 | 246.0 |
| 330.0 | 329.93 | -3.51 | -0.61 | 3.6 | 189.8 | 1.8 | 328.8 |
| 340.0 | 339.93 | -3.32 | -0.55 | 3.4 | 189.3 | 1.0 | 57.4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 230.0 | 229.96 | -3.02 | -0.21 | 3.0 | 184.0 | 1.1 | 73.3 |
| 240.0 | 239.96 | -2.99 | -0.03 | 3.0 | 180.6 | 1.1 | 87.0 |
| 250.0 | 249.95 | -3.00 | 0.15 | 3.0 | 177.1 | 1.1 | 96.6 |
| 260.0 | 259.95 | -3.08 | 0.32 | 3.1 | 174.1 | 1.1 | 130.8 |
| 270.0 | 269.95 | -3.15 | 0.49 | 3.2 | 171.2 | 1.1 | 133.0 |
| 280.0 | 279.95 | -3.32 | 0.47 | 3.4 | 171.9 | 1.2 | 155.4 |
| 290.0 | 289.94 | -3.50 | 0.42 | 3.5 | 173.2 | 1.5 | 238.9 |
| 300.0 | 299.94 | -3.56 | 0.16 | 3.6 | 177.4 | 1.4 | 228.9 |
| 310.0 | 309.94 | -3.64 | -0.05 | 3.6 | 180.9 | 1.7 | 290.8 |
| 320.0 | 319.93 | -3.63 | -0.33 | 3.6 | 185.2 | 1.7 | 246.0 |
| 330.0 | 329.93 | -3.51 | -0.61 | 3.6 | 189.8 | 1.8 | 328.8 |
| 340.0 | 339.93 | -3.32 | -0.55 | 3.4 | 189.3 | 1.0 | 57.4 |
| 350.0 | 349.92 | -3.25 | -0.38 | 3.3 | 186.8 | 1.0 | 65.5 |
| 360.0 | 359.92 | -3.18 | -0.22 | 3.2 | 184.0 | 1.0 | 88.8 |
| 370.0 | 369.92 | -3.19 | -0.04 | 3.2 | 180.8 | 1.0 | 85.8 |
| 380.0 | 379.92 | -3.18 | 0.14 | 3.2 | 177.6 | 1.1 | 157.8 |
| 390.0 | 389.92 | -3.33 | 0.23 | 3.3 | 176.0 | 1.1 | 160.7 |
| 400.0 | 399.91 | -3.51 | 0.22 | 3.5 | 176.4 | 1.6 | 262.6 |
| 410.0 | 409.91 | -3.62 | 0.10 | 3.6 | 178.5 | 1.3 | 184.3 |
| 420.0 | 419.91 | -3.70 | -0.12 | 3.7 | 181.9 | 1.8 | 267.8 |
| 430.0 | 429.90 | -3.81 | -0.39 | 3.8 | 185.9 | 1.6 | 242.5 |
| 440.0 | 439.90 | -3.84 | -0.70 | 3.9 | 190.3 | 1.9 | 287.2 |
| 450.0 | 449.89 | -3.73 | -0.90 | 3.8 | 193.5 | 1.8 | 248.2 |
| 460.0 | 459.89 | -3.60 | -0.91 | 3.7 | 194.1 | 1.1 | 71.6 |
| 470.0 | 469.89 | -3.58 | -0.73 | 3.6 | 191.5 | 1.1 | 44.4 |
| 480.0 | 479.89 | -3.69 | -0.63 | 3.7 | 189.6 | 1.2 | 180.2 |
| 490.0 | 489.88 | -3.90 | -0.67 | 4.0 | 189.7 | 1.4 | 201.4 |
| 500.0 | 499.88 | -4.04 | -0.90 | 4.1 | 192.5 | 1.3 | 198.6 |
| 510.0 | 509.87 | -4.20 | -1.11 | 4.3 | 194.8 | 1.5 | 216.9 |
| 520.0 | 519.87 | -4.25 | -1.40 | 4.5 | 198.3 | 2.3 | 295.9 |
| 530.0 | 529.86 | -4.22 | -1.72 | 4.6 | 202.2 | 1.9 | 255.9 |
| 540.0 | 539.86 | -4.34 | -2.01 | 4.8 | 204.9 | 2.0 | 266.8 |
| 550.0 | 549.85 | -4.23 | -2.35 | 4.8 | 209.1 | 2.2 | 308.7 |
| 560.0 | 559.84 | -4.01 | -2.68 | 4.8 | 213.8 | 2.3 | 314.8 |
| 570.0 | 569.84 | -3.76 | -3.00 | 4.8 | 218.6 | 2.3 | 301.8 |
| 580.0 | 579.83 | -3.58 | -3.05 | 4.7 | 220.4 | 1.1 | 124.3 |
| 590.0 | 589.83 | -3.65 | -3.20 | 4.9 | 221.2 | 1.8 | 267.8 |
| 600.0 | 599.82 | -3.65 | -3.54 | 5.1 | 224.1 | 1.8 | 258.4 |
| 610.0 | 609.82 | -3.82 | -3.75 | 5.4 | 224.5 | 1.7 | 236.2 |
| 620.0 | 619.81 | -3.88 | -4.07 | 5.6 | 226.4 | 1.8 | 248.2 |
| 630.0 | 629.80 | -3.91 | -4.42 | 5.9 | 228.5 | 2.1 | 269.8 |
| 640.0 | 639.80 | -3.88 | -4.78 | 6.2 | 230.9 | 2.3 | 304.1 |
| 650.0 | 649.79 | -3.58 | -5.04 | 6.2 | 234.6 | 2.4 | 279.9 |
| 660.0 | 659.78 | -3.43 | -5.40 | 6.4 | 237.5 | 2.3 | 324.6 |
| 670.0 | 669.78 | -3.22 | -5.35 | 6.2 | 238.9 | 1.1 | 73.3 |
| 680.0 | 679.77 | -3.46 | -5.34 | 6.4 | 237.0 | 1.9 | 233.8 |
| 690.0 | 689.77 | -3.43 | -5.65 | 6.6 | 238.7 | 2.4 | 312.7 |
| 700.0 | 699.76 | -3.35 | -5.99 | 6.9 | 240.8 | 2.3 | 301.7 |
| 710.0 | 709.75 | -3.08 | -6.27 | 7.0 | 243.8 | 2.5 | 299.2 |
| 720.0 | 719.74 | -2.84 | -6.62 | 7.2 | 246.8 | 2.5 | 309.9 |
| 730.0 | 729.73 | -2.66 | -7.00 | 7.5 | 249.2 | 2.4 | 294.3 |
| 740.0 | 739.72 | -2.36 | -7.28 | 7.7 | 252.0 | 2.0 | 3.8 |
| 750.0 | 749.72 | -1.97 | -7.35 | 7.6 | 255.0 | 2.3 | 334.0 |
| 760.0 | 759.71 | -1.79 | -7.24 | 7.5 | 256.1 | 1.2 | 55.1 |
| 770.0 | 769.71 | -1.64 | -7.10 | 7.3 | 257.0 | 1.2 | 55.9 |
| 780.0 | 779.71 | -1.63 | -6.92 | 7.1 | 256.8 | 1.1 | 86.2 |
| 790.0 | 789.71 | -1.59 | -6.74 | 6.9 | 256.7 | 1.1 | 102.2 |
| 800.0 | 799.70 | -1.57 | -6.57 | 6.8 | 256.6 | 1.1 | 144.8 |
| 810.0 | 809.70 | -1.60 | -6.90 | 7.1 | 256.9 | 2.1 | 259.9 |
| 820.0 | 819.69 | -1.62 | -7.25 | 7.4 | 257.4 | 2.5 | 313.5 |
| 830.0 | 829.68 | -1.36 | -7.24 | 7.4 | 259.4 | 1.4 | 26.5 |
| 840.0 | 839.68 | -1.18 | -7.09 | 7.2 | 260.5 | 1.2 | 55.3 |
| 850.0 | 849.68 | -1.00 | -6.99 | 7.1 | 261.8 | 1.3 | 34.7 |
| 860.0 | 859.68 | -0.93 | -6.82 | 6.9 | 262.2 | 1.3 | 50.0 |
| 870.0 | 869.68 | -0.80 | -6.64 | 6.7 | 263.1 | 1.2 | 70.2 |
| 880.0 | 879.67 | -0.81 | -6.53 | 6.6 | 263.0 | 2.0 | 247.7 |
| 890.0 | 889.66 | -0.64 | -6.87 | 6.9 | 264.7 | 2.7 | 335.6 |
| 900.0 | 899.65 | -0.34 | -7.16 | 7.2 | 267.3 | 2.0 | 357.4 |
| 910.0 | 909.65 | -0.11 | -7.11 | 7.1 | 269.1 | 1.1 | 20.1 |
| 920.0 | 919.65 | 0.09 | -7.04 | 7.0 | 270.8 | 1.4 | 27.0 |
| 930.0 | 929.65 | 0.31 | -6.94 | 6.9 | 272.5 | 1.3 | 30.7 |
| 940.0 | 939.64 | 0.51 | -6.81 | 6.8 | 274.2 | 1.3 | 35.5 |
| 950.0 | 949.64 | 0.64 | -6.66 | 6.7 | 275.5 | 1.0 | 120.4 |
| 960.0 | 959.63 | 0.76 | -6.77 | 6.8 | 276.4 | 1.6 | 21.3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 860.0 | 859.68 | -0.93 | -6.82 | 6.9 | 262.2 | 1.5 | 56.6 |
| 870.0 | 869.68 | -0.80 | -6.64 | 6.7 | 263.1 | 1.2 | 70.2 |
| 880.0 | 879.67 | -0.81 | -6.53 | 6.6 | 263.0 | 2.0 | 247.7 |
| 890.0 | 889.66 | -0.64 | -6.87 | 6.9 | 264.7 | 2.7 | 335.6 |
| 900.0 | 899.65 | -0.34 | -7.16 | 7.2 | 267.3 | 2.0 | 357.4 |
| 910.0 | 909.65 | -0.11 | -7.11 | 7.1 | 269.1 | 1.1 | 20.1 |
| 920.0 | 919.65 | 0.09 | -7.04 | 7.0 | 270.8 | 1.4 | 27.0 |
| 930.0 | 929.65 | 0.31 | -6.94 | 6.9 | 272.5 | 1.3 | 30.7 |
| 940.0 | 939.64 | 0.51 | -6.81 | 6.8 | 274.2 | 1.3 | 35.5 |
| 950.0 | 949.64 | 0.64 | -6.66 | 6.7 | 275.5 | 1.0 | 120.4 |
| 960.0 | 959.63 | 0.76 | -6.77 | 6.8 | 276.4 | 1.6 | 21.3 |
| 970.0 | 969.63 | 0.98 | -6.71 | 6.8 | 278.3 | 1.4 | 10.9 |
| 980.0 | 979.63 | 1.22 | -6.66 | 6.8 | 280.4 | 1.4 | 14.2 |
| 990.0 | 989.63 | 1.45 | -6.59 | 6.7 | 282.4 | 1.4 | 18.0 |
| 1000.0 | 999.62 | 1.68 | -6.51 | 6.7 | 284.5 | 1.4 | 26.5 |
| 1010.0 | 1009.62 | 1.91 | -6.41 | 6.7 | 286.6 | 1.4 | 19.7 |
| 1020.0 | 1019.62 | 2.14 | -6.30 | 6.7 | 288.7 | 1.4 | 24.6 |
| 1030.0 | 1029.61 | 2.36 | -6.21 | 6.6 | 290.8 | 1.4 | 32.1 |
| 1040.0 | 1039.61 | 2.52 | -6.04 | 6.5 | 292.7 | 1.3 | 53.7 |
| 1050.0 | 1049.61 | 2.63 | -5.86 | 6.4 | 294.1 | 1.0 | 131.3 |
| 1060.0 | 1059.60 | 2.88 | -6.02 | 6.7 | 295.5 | 1.9 | 15.9 |
| 1070.0 | 1069.59 | 3.24 | -6.00 | 6.8 | 298.4 | 1.1 | 18.4 |
| 1080.0 | 1079.59 | 3.47 | -5.95 | 6.9 | 300.3 | 1.5 | 12.7 |
| 1090.0 | 1089.59 | 3.71 | -5.84 | 6.9 | 302.4 | 1.5 | 24.2 |
| 1100.0 | 1099.58 | 3.94 | -5.77 | 7.0 | 304.3 | 1.6 | 19.9 |
| 1110.0 | 1109.58 | 4.12 | -5.60 | 7.0 | 306.3 | 1.4 | 47.0 |
| 1120.0 | 1119.57 | 4.21 | -5.68 | 7.1 | 306.6 | 3.2 | 323.8 |
| 1130.0 | 1129.57 | 4.52 | -5.67 | 7.3 | 308.6 | 1.6 | 5.5 |
| 1140.0 | 1139.56 | 4.76 | -5.65 | 7.4 | 310.1 | 1.2 | 357.9 |
| 1150.0 | 1149.56 | 4.96 | -5.65 | 7.5 | 311.3 | 1.5 | 356.5 |
| 1160.0 | 1159.56 | 5.24 | -5.54 | 7.6 | 313.4 | 1.7 | 11.7 |
| 1170.0 | 1169.55 | 5.48 | -5.49 | 7.8 | 314.9 | 1.2 | 22.4 |
| 1180.0 | 1179.54 | 5.89 | -5.51 | 8.1 | 316.9 | 3.1 | 303.3 |
| 1190.0 | 1189.54 | 5.81 | -5.85 | 8.2 | 314.8 | 2.4 | 256.8 |
| 1200.0 | 1199.53 | 5.87 | -6.31 | 8.6 | 312.9 | 2.7 | 272.3 |
| 1210.0 | 1209.52 | 5.74 | -6.66 | 8.8 | 310.7 | 2.2 | 249.5 |
| 1220.0 | 1219.51 | 5.73 | -7.10 | 9.1 | 308.9 | 2.8 | 284.0 |
| 1230.0 | 1229.49 | 6.12 | -7.37 | 9.6 | 309.7 | 2.9 | 357.4 |
| 1240.0 | 1239.48 | 6.61 | -7.65 | 10.1 | 310.8 | 3.0 | 347.5 |
| 1250.0 | 1249.47 | 6.89 | -7.57 | 10.2 | 312.3 | 1.2 | 20.3 |
| 1260.0 | 1259.47 | 7.12 | -7.53 | 10.4 | 313.4 | 1.7 | 2.6 |
| 1270.0 | 1269.46 | 7.41 | -7.48 | 10.5 | 314.7 | 1.8 | 25.3 |
| 1280.0 | 1279.46 | 7.79 | -7.42 | 10.8 | 316.4 | 2.4 | 4.0 |
| 1290.0 | 1289.45 | 8.20 | -7.39 | 11.0 | 318.0 | 2.3 | 9.8 |
| 1300.0 | 1299.44 | 8.57 | -7.27 | 11.2 | 319.7 | 2.1 | 20.7 |
| 1310.0 | 1309.43 | 8.89 | -7.13 | 11.4 | 321.3 | 2.2 | 31.4 |
| 1320.0 | 1319.42 | 9.29 | -6.90 | 11.6 | 323.4 | 3.1 | 28.5 |
| 1330.0 | 1329.41 | 9.75 | -6.61 | 11.8 | 325.9 | 3.4 | 30.1 |
| 1340.0 | 1339.39 | 10.23 | -6.19 | 12.0 | 328.8 | 4.1 | 41.4 |
| 1350.0 | 1349.36 | 10.78 | -5.68 | 12.2 | 332.2 | 4.6 | 45.9 |
| 1360.0 | 1359.32 | 11.40 | -5.06 | 12.5 | 336.1 | 5.3 | 48.1 |
| 1370.0 | 1369.27 | 12.02 | -4.27 | 12.8 | 340.4 | 6.2 | 51.4 |
| 1380.0 | 1379.21 | 12.69 | -3.38 | 13.1 | 345.1 | 6.4 | 58.4 |
| 1390.0 | 1389.13 | 13.33 | -2.36 | 13.5 | 349.9 | 7.8 | 61.6 |
| 1400.0 | 1399.03 | 14.06 | -1.13 | 14.1 | 355.4 | 8.5 | 56.1 |
| 1410.0 | 1408.91 | 14.82 | 0.19 | 14.8 | 0.7 | 8.9 | 60.6 |
| 1420.0 | 1418.79 | 15.59 | 1.56 | 15.7 | 5.7 | 9.3 | 60.3 |
| 1430.0 | 1428.66 | 16.41 | 2.96 | 16.7 | 10.2 | 9.5 | 59.7 |
| 1440.0 | 1438.52 | 17.22 | 4.40 | 17.8 | 14.3 | 9.6 | 60.3 |
| 1450.0 | 1448.38 | 18.05 | 5.85 | 19.0 | 18.0 | 9.6 | 60.2 |
| 1460.0 | 1458.24 | 18.88 | 7.30 | 20.2 | 21.2 | 9.6 | 60.5 |
| 1470.0 | 1468.10 | 19.68 | 8.77 | 21.5 | 24.0 | 9.6 | 59.9 |
| 1480.0 | 1477.95 | 20.50 | 10.23 | 22.9 | 26.5 | 9.6 | 60.3 |
| 1490.0 | 1487.81 | 21.31 | 11.71 | 24.3 | 28.8 | 9.9 | 61.3 |
| 1500.0 | 1497.67 | 22.12 | 13.21 | 25.8 | 30.8 | 9.8 | 58.8 |
| 1510.0 | 1507.52 | 22.97 | 14.70 | 27.3 | 32.6 | 9.8 | 58.5 |
| 1520.0 | 1517.36 | 23.80 | 16.23 | 28.8 | 34.3 | 10.1 | 61.7 |
| 1530.0 | 1527.21 | 24.63 | 17.78 | 30.4 | 35.8 | 10.2 | 58.5 |
| 1540.0 | 1537.05 | 25.48 | 19.32 | 32.0 | 37.2 | 10.2 | 63.5 |
| 1550.0 | 1546.89 | 26.32 | 20.88 | 33.6 | 38.4 | 10.3 | 62.3 |
| 1560.0 | 1556.73 | 27.15 | 22.47 | 35.2 | 39.6 | 10.4 | 64.4 |
| 1570.0 | 1566.56 | 27.99 | 24.08 | 36.9 | 40.7 | 10.5 | 67.4 |
| 1580.0 | 1576.40 | 28.84 | 25.69 | 38.6 | 41.7 | 10.9 | 62.7 |
| 1590.0 | 1586.22 | 29.70 | 27.34 | 40.4 | 42.6 | 10.6 | 56.2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1500.0 | 1497.67 | 22.12 | 13.21 | 25.8 | 30.8 | 9.8 | 58.8 |
| 1510.0 | 1507.52 | 22.97 | 14.70 | 27.3 | 32.6 | 9.8 | 58.5 |
| 1520.0 | 1517.36 | 23.80 | 16.23 | 28.8 | 34.3 | 10.1 | 61.7 |
| 1530.0 | 1527.21 | 24.63 | 17.78 | 30.4 | 35.8 | 10.2 | 58.5 |
| 1540.0 | 1537.05 | 25.48 | 19.32 | 32.0 | 37.2 | 10.2 | 63.5 |
| 1550.0 | 1546.89 | 26.32 | 20.88 | 33.6 | 38.4 | 10.3 | 62.3 |
| 1560.0 | 1556.73 | 27.15 | 22.47 | 35.2 | 39.6 | 10.4 | 64.4 |
| 1570.0 | 1566.56 | 27.99 | 24.08 | 36.9 | 40.7 | 10.5 | 67.4 |
| 1580.0 | 1576.40 | 28.84 | 25.69 | 38.6 | 41.7 | 10.9 | 62.7 |
| 1590.0 | 1586.22 | 29.70 | 27.34 | 40.4 | 42.6 | 10.6 | 56.2 |
| 1600.0 | 1596.05 | 30.54 | 29.01 | 42.1 | 43.5 | 11.0 | 61.3 |
| 1610.0 | 1605.86 | 31.44 | 30.67 | 43.9 | 44.3 | 11.0 | 64.6 |
| 1620.0 | 1615.68 | 32.34 | 32.35 | 45.7 | 45.0 | 11.2 | 65.2 |
| 1630.0 | 1625.49 | 33.17 | 34.09 | 47.6 | 45.8 | 11.0 | 68.6 |
| 1640.0 | 1635.31 | 34.08 | 35.79 | 49.4 | 46.4 | 11.2 | 60.9 |
| 1650.0 | 1645.12 | 34.93 | 37.50 | 51.3 | 47.0 | 11.0 | 64.3 |
| 1658.0 | 1652.95 | 34.63 | 38.19 | 51.5 | 47.8 | 0.0 | 0.0 |

Well: **T39F**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 18.5 | 24" | | | X | 3/13/2008 | |
| Surface | 16" | 210.5 | 20" | 352.5 | X | | 3/14/2008 | Basket @ 127' |
| Water Protection | 13 3/8" | 463.2 | 15 3/8" | 183.3 | X | | 3/18/2008 | Basket @ 165' |
| Coal Protection | 13 3/8" | 463.2 | 15 3/8" | 183.3 | X | | 3/18/2008 | |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

| | |
|---|---|
| COMPANY | CNX |
| HOLE | T-39F |
| RIG #: | 93 |
| LOCATION: | OSBOURNE MTN., VA |
| DATE STARTED: | 3/13/2008 |
| DATE COMPLETED: | 3/21/2008 |
| ELECTRIC LOGGED: | YES |
| GROUTED: | YES |

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 18.5 | 18.5 | |
| 0 | 36 | 36 | SANDY SHALE |
| 36 | 67 | 31 | SAND/COAL/SANDY SHALE |
| 67 | 98 | 31 | SANDY SHALE/SAND |
| 98 | 129 | 31 | SAND SHALE/COAL |
| 129 | 161 | 32 | SANDSTONE |
| 161 | 193 | 32 | |
| 193 | 224 | 31 | |
| 211 | 243 | 32 | SAND STONE |
| 243 | 274 | 31 | SANDY SHALE/COAL SHALE |
| 274 | 306 | 32 | SHALE/SANDY SHALE |
| 306 | 337 | 31 | SANDSTONE |
| 337 | 369 | 32 | SANDSTONE |
| 369 | 400 | 31 | SANDY SHALE/COAL/SHALE |
| 400 | 432 | 32 | SANDSTONE |
| 432 | 464 | 32 | SANDSTONE/SANDY SHALE |
| 464 | 495 | 31 | SANDY SHALE |
| 497 | 529 | 32 | SANDY SHALE |
| 529 | 560 | 31 | SHALE/SANDY SHALE |
| 560 | 592 | 32 | SANDY SHALE |
| 592 | 624 | 32 | SHALE |
| 624 | 656 | 32 | |
| 656 | 687 | 31 | SHALE |
| 687 | 719 | 32 | SHALE/COAL SHALE |
| 719 | 751 | 32 | SHALE/SANDSTONE |
| 751 | 782 | 31 | SANDSTONE/COAL SHALE |
| 782 | 814 | 32 | SANDSTONE/COAL/SANDSTONE |
| 814 | 846 | 32 | SANDSTONE |
| 846 | 877 | 31 | SANDSTONE/COAL SANDSTONE |
| 877 | 909 | 32 | COAL/SANDSTONE |
| 909 | 941 | 32 | SHALE |
| 941 | 973 | 32 | COAL/SANDSTONE |
| 972 | 1004 | 32 | SANDY SHALE |

| | | | |
|---|---|---|---|
| 1004 | 1036 | 32 | SANDSTONE/ COAL SANDSTONE |
| 1036 | 1067 | 31 | COAL/SHALE/COAL |
| 1067 | 1099 | 32 | SHALE |
| 1099 | 1131 | 32 | SHALE |
| 1131 | 1162 | 31 | SANDSTONE |
| 1162 | 1194 | 32 | SANDSTONE/SANDY SHALE |
| 1194 | 1226 | 32 | SANDY SHALE/COAL |
| 1226 | 1256 | 30 | SANDY SHALE/COAL |
| 1256 | 1287 | 31 | SANDSTONE |
| 1294 | 1325 | 31 | SANDSTONE |
| 1325 | 1357 | 32 | SANDSTONE |
| 1357 | 1389 | 32 | SANDSTONE |
| 1389 | 1428 | 39 | SANDY SHALE |
| 1428 | 1459 | 31 | SANDY SHALE/COAL |
| 1459 | 1491 | 32 | SHALE/COAL |
| 1491 | 1523 | 32 | SHALE/COAL/SANDSTONE |
| 1523 | 1554 | 31 | SANDSTONE |
| 1554 | 1586 | 32 | SANDSTONE |
| 1586 | 1617 | 31 | SANDSTONE |
| 1617 | 1649 | 32 | SANDSTONE |

1649' TOTAL DEPTH
18.5' OF 22" CASING
210.5' OF 16" CASING
463.2' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1311 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3810 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 3/31/2008 |
| **Driller's Total Depth:** | 1647.00 | **Log's Total Depth:** | 1660.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/4/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 6/4/2008 | | |
| Status: | | Date: | 6/5/2008 |
| Final PDF Date: | 6/12/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1352 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3810 |
| **Operations Name:** | CBM T39G W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 3/24/2008

Drilling Contractor: Noah Horn

Date drilling completed: 3/31/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1647.00

Log Total Depth (feet): 1659.96

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1015523.30

Permitted State Plane Y: 329195.51

Final Plat State Plane X: 1015521.50

Final Plat State Plane Y: 329198.79

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | T39G PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| EXHIBIT A | T39G EXHIBIT A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS SHOW | T39G Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| DEVIATION | T39G DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| CASING | T39G Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| DRILL DATA | T39G DRILL DATA.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/4/2008

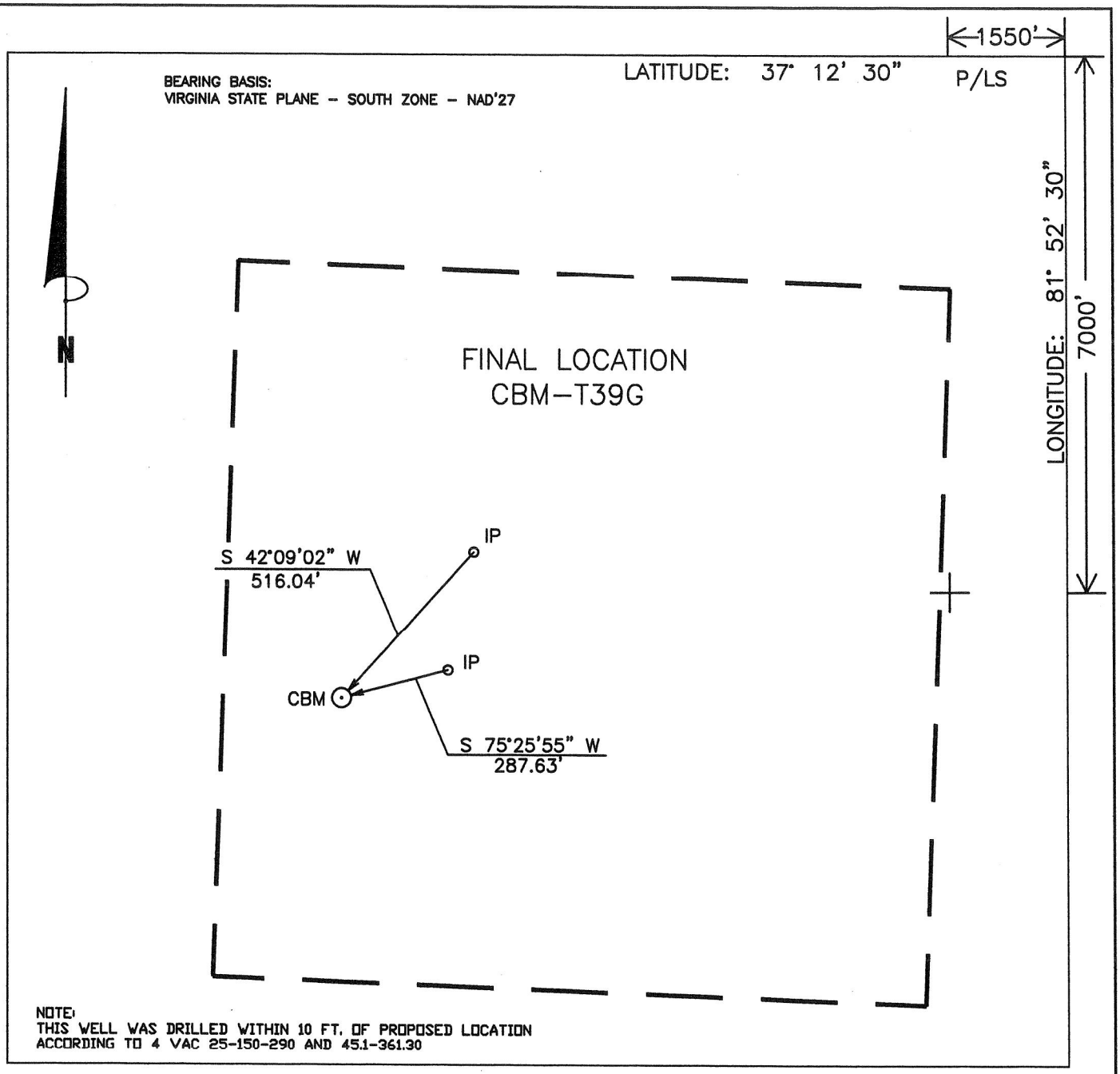
Signed By: Leslie Arrington Title: Director Environmental Permitting

## INTERNAL USE ONLY

Submit Date: 6/4/2008

Status: A Date: 6/5/2008

Final PDF Date: 6/12/2008




# WELL LOCATION PLAT

T39GFNL
2N30/109-667/04

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T39G

TRACT NUMBER CMMC QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 329,198.79 E 1,015,521.50

ELEVATION: 2129.53' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 03-30-08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
3/31/08
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 10/96

T39G.CMP
Exhibit A

Well Name: 08 CBM T39G
SURFACE ELEV: 2129.53 EASTING: 1015521.49 NORTHING: 329198.78

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| JB1 | 126.00 | 129.00 | 2003.53 | 3.00 | |
| | 129.00 | 137.00 | 2000.53 | 8.00 | |
| JB2 | 137.00 | 139.40 | 1992.53 | 2.40 | |
| | 139.40 | 168.00 | 1990.13 | 28.60 | |
| JB3 | 168.00 | 172.10 | 1961.53 | 4.10 | |
| | 172.10 | 185.90 | 1957.43 | 13.80 | |
| COAL | 185.90 | 186.10 | 1943.63 | 0.20 | |
| | 186.10 | 255.00 | 1943.43 | 68.90 | |
| TI | 255.00 | 256.00 | 1874.53 | 1.00 | |
| | 256.00 | 258.30 | 1873.53 | 2.30 | |
| COAL | 258.30 | 259.10 | 1871.23 | 0.80 | |
| | 259.10 | 373.20 | 1870.43 | 114.10 | |
| *US1 | 373.20 | 374.00 | 1756.33 | 0.80 | |
| | 374.00 | 486.10 | 1755.53 | 112.10 | |
| *US2 | 486.10 | 486.90 | 1643.43 | 0.80 | |
| | 486.90 | 605.00 | 1642.63 | 118.10 | |
| *GC2 | 605.00 | 606.00 | 1524.53 | 1.00 | |
| | 606.00 | 667.90 | 1523.53 | 61.90 | |
| *SE1 | 667.90 | 668.90 | 1461.63 | 1.00 | |
| | 668.90 | 708.80 | 1460.63 | 39.90 | |
| *SE2 | 708.80 | 711.00 | 1420.73 | 2.20 | |
| | 711.00 | 752.40 | 1418.53 | 41.40 | |
| *LS1 | 752.40 | 754.90 | 1377.13 | 2.50 | |
| | 754.90 | 768.60 | 1374.63 | 13.70 | |
| *LS2 | 768.60 | 769.20 | 1360.93 | 0.60 | |
| | 769.20 | 801.90 | 1360.33 | 32.70 | |
| *UH1 | 801.90 | 803.20 | 1327.63 | 1.30 | |
| | 803.20 | 865.90 | 1326.33 | 62.70 | |
| *UH3 | 865.90 | 869.80 | 1263.63 | 3.90 | |
| | 869.80 | 914.90 | 1259.73 | 45.10 | |
| *MH1 | 914.90 | 916.90 | 1214.63 | 2.00 | |
| | 916.90 | 1007.20 | 1212.63 | 90.30 | |
| *P11 | 1007.20 | 1010.00 | 1122.33 | 2.80 | |
| | 1010.00 | 1036.80 | 1119.53 | 26.80 | |
| *P10 | 1036.80 | 1038.00 | 1092.73 | 1.20 | |
| | 1038.00 | 1092.00 | 1091.53 | 54.00 | |
| *LH2 | 1092.00 | 1092.30 | 1037.53 | 0.30 | |
| | 1092.30 | 1129.90 | 1037.23 | 37.60 | |
| *COAL | 1129.90 | 1130.50 | 999.63 | 0.60 | |
| | 1130.50 | 1165.00 | 999.03 | 34.50 | |
| *P91 | 1165.00 | 1166.70 | 964.53 | 1.70 | |
| | 1166.70 | 1188.90 | 962.83 | 22.20 | |
| *P92 | 1188.90 | 1189.80 | 940.63 | 0.90 | |
| | 1189.80 | 1230.10 | 939.73 | 40.30 | |
| *COAL | 1230.10 | 1231.90 | 899.43 | 1.80 | |
| | 1231.90 | 1265.10 | 897.63 | 33.20 | |
| *P71 | 1265.10 | 1265.90 | 864.43 | 0.80 | |
| | 1265.90 | 1441.90 | 863.63 | 176.00 | |
| *P62 | 1441.90 | 1442.80 | 687.63 | 0.90 | |
| | 1442.80 | 1472.90 | 686.73 | 30.10 | |
| *P51 | 1472.90 | 1473.80 | 656.63 | 0.90 | |
| | 1473.80 | 1568.90 | 655.73 | 95.10 | |
| *P41 | 1568.90 | 1569.60 | 560.63 | 0.70 | |
| | 1569.60 | 1664.00 | 559.93 | 94.40 | |

GAMMA-CALIPER LOG FROM 0 TO TD.

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\T39G.CMP
DATE: 05/20/08

Well: **T39G**

## Oil & Gas Show

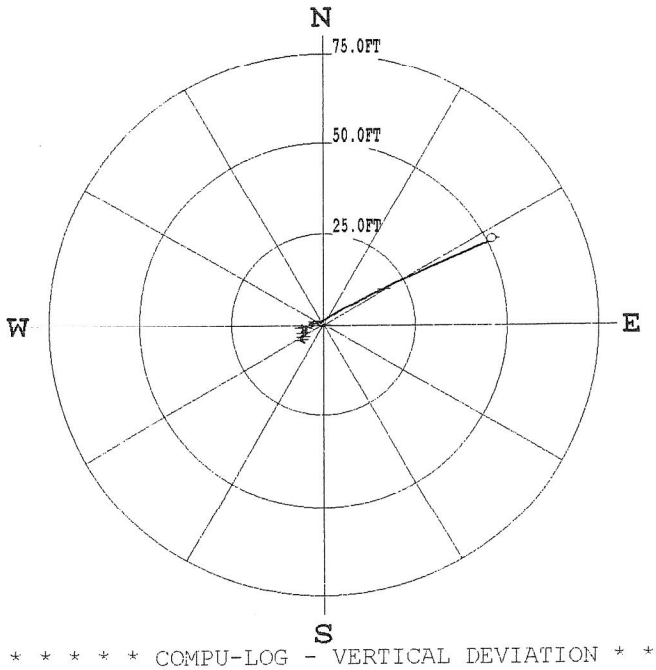
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 605 | 1231.9 | 626.9 | | | |
| Pocahontas | | | 0 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: Consol Energy
LOCATION:
HOLE ID: 08-CNX-T-39-G
DATE OF LOG: 04/01/08
PROBE: 9136CA 962

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1651.86 FT
AZIMUTH: 62.9
DISTANCE: 51.4 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 08-CNX-T-39-G
DATE OF LOG : 04/01/08
PROBE : 9136CA , 962
DEPTH UNITS : FEET
LOG: 08-CNX-T-39-G_04-01-08_00-42_9136CA_.02_-0.02_1658.07_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | -0.20 | -0.22 | 0.3 | 228.3 | 1.3 | 240.9 |
| 60.0 | 59.98 | -0.27 | -0.44 | 0.5 | 238.4 | 1.3 | 246.3 |
| 70.0 | 69.98 | -0.29 | -0.68 | 0.7 | 246.8 | 1.4 | 270.5 |
| 80.0 | 79.98 | -0.28 | -0.92 | 1.0 | 252.8 | 1.5 | 284.0 |
| 90.0 | 89.97 | -0.11 | -1.13 | 1.1 | 264.3 | 1.7 | 327.1 |
| 100.0 | 99.97 | 0.12 | -1.32 | 1.3 | 275.3 | 1.6 | 315.2 |
| 110.0 | 109.97 | 0.28 | -1.54 | 1.6 | 280.4 | 1.6 | 304.1 |
| 120.0 | 119.96 | 0.50 | -1.73 | 1.8 | 286.0 | 1.8 | 327.5 |
| 130.0 | 129.96 | 0.77 | -1.89 | 2.0 | 292.1 | 1.8 | 325.5 |
| 140.0 | 139.95 | 0.99 | -2.08 | 2.3 | 295.4 | 1.6 | 298.6 |
| 150.0 | 149.95 | 1.04 | -2.29 | 2.5 | 294.4 | 1.3 | 251.0 |
| 160.0 | 159.95 | 0.99 | -2.50 | 2.7 | 291.5 | 0.9 | 248.1 |
| 170.0 | 169.95 | 0.88 | -2.64 | 2.8 | 288.5 | 1.0 | 243.8 |
| 180.0 | 179.94 | 0.79 | -2.79 | 2.9 | 285.8 | 1.3 | 244.6 |
| 190.0 | 189.94 | 0.76 | -2.98 | 3.1 | 284.3 | 1.0 | 243.2 |
| 200.0 | 199.94 | 0.66 | -3.12 | 3.2 | 281.8 | 0.8 | 261.0 |
| 210.0 | 209.94 | 0.58 | -3.28 | 3.3 | 280.0 | 1.3 | 228.6 |
| 220.0 | 219.94 | 0.44 | -3.39 | 3.4 | 277.3 | 0.9 | 215.7 |
| 230.0 | 229.93 | 0.32 | -3.54 | 3.6 | 275.2 | 0.9 | 225.2 |
| 240.0 | 239.93 | 0.22 | -3.64 | 3.6 | 273.5 | 0.9 | 227.1 |
| 250.0 | 249.93 | 0.11 | -3.73 | 3.7 | 271.6 | 1.0 | 233.7 |
| 260.0 | 259.93 | -0.03 | -3.81 | 3.8 | 269.6 | 1.0 | 220.7 |
| 270.0 | 269.93 | -0.15 | -3.95 | 3.9 | 267.9 | 0.8 | 223.2 |
| 280.0 | 279.93 | -0.28 | -4.02 | 4.0 | 266.0 | 1.1 | 204.3 |
| 290.0 | 289.93 | -0.42 | -4.05 | 4.1 | 264.1 | 0.9 | 231.0 |
| 300.0 | 299.93 | -0.54 | -4.14 | 4.2 | 262.6 | 0.7 | 180.9 |
| 310.0 | 309.92 | -0.69 | -4.16 | 4.2 | 260.6 | 1.0 | 155.4 |
| 320.0 | 319.92 | -0.83 | -4.10 | 4.2 | 258.6 | 1.1 | 12.2 |
| 330.0 | 329.92 | -0.88 | -3.94 | 4.0 | 257.4 | 1.6 | 84.7 |
| 340.0 | 339.91 | -0.64 | -3.92 | 4.0 | 260.8 | 1.7 | 356.0 |
| 350.0 | 349.91 | -0.33 | -3.85 | 3.9 | 265.1 | 1.6 | 338.7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 210.0 | 209.94 | 0.58 | -3.28 | 3.3 | 280.0 | 1.3 | 228.0 |
| 220.0 | 219.94 | 0.44 | -3.39 | 3.4 | 277.3 | 0.9 | 215.7 |
| 230.0 | 229.93 | 0.32 | -3.54 | 3.6 | 275.2 | 0.9 | 225.2 |
| 240.0 | 239.93 | 0.22 | -3.64 | 3.6 | 273.5 | 0.9 | 227.1 |
| 250.0 | 249.93 | 0.11 | -3.73 | 3.7 | 271.6 | 1.0 | 233.7 |
| 260.0 | 259.93 | -0.03 | -3.81 | 3.8 | 269.6 | 1.0 | 220.7 |
| 270.0 | 269.93 | -0.15 | -3.95 | 3.9 | 267.9 | 0.8 | 223.2 |
| 280.0 | 279.93 | -0.28 | -4.02 | 4.0 | 266.0 | 1.1 | 204.3 |
| 290.0 | 289.93 | -0.42 | -4.05 | 4.1 | 264.1 | 0.9 | 231.0 |
| 300.0 | 299.93 | -0.54 | -4.14 | 4.2 | 262.6 | 0.7 | 190.9 |
| 310.0 | 309.92 | -0.69 | -4.16 | 4.2 | 260.6 | 1.0 | 155.4 |
| 320.0 | 319.92 | -0.83 | -4.10 | 4.2 | 258.6 | 1.1 | 12.2 |
| 330.0 | 329.92 | -0.88 | -3.94 | 4.0 | 257.4 | 1.6 | 84.7 |
| 340.0 | 339.91 | -0.64 | -3.92 | 4.0 | 260.8 | 1.7 | 356.0 |
| 350.0 | 349.91 | -0.33 | -3.85 | 3.9 | 265.1 | 1.6 | 338.7 |
| 360.0 | 359.91 | -0.23 | -4.00 | 4.0 | 266.8 | 1.4 | 273.7 |
| 370.0 | 369.90 | -0.34 | -4.17 | 4.2 | 265.4 | 1.2 | 208.5 |
| 380.0 | 379.90 | -0.50 | -4.24 | 4.3 | 263.2 | 1.2 | 237.9 |
| 390.0 | 389.90 | -0.54 | -4.45 | 4.5 | 263.0 | 1.4 | 283.0 |
| 400.0 | 399.90 | -0.65 | -4.60 | 4.6 | 262.0 | 1.4 | 279.1 |
| 410.0 | 409.89 | -0.55 | -4.82 | 4.9 | 263.5 | 1.5 | 314.0 |
| 420.0 | 419.89 | -0.43 | -5.04 | 5.1 | 265.1 | 1.2 | 258.3 |
| 430.0 | 429.89 | -0.60 | -5.01 | 5.0 | 263.2 | 1.0 | 136.6 |
| 440.0 | 439.89 | -0.70 | -4.82 | 4.9 | 261.8 | 1.4 | 104.4 |
| 450.0 | 449.88 | -0.83 | -4.69 | 4.8 | 260.0 | 1.0 | 144.9 |
| 460.0 | 459.88 | -0.96 | -4.56 | 4.7 | 258.1 | 1.0 | 128.5 |
| 470.0 | 469.88 | -1.12 | -4.47 | 4.6 | 255.9 | 1.6 | 190.9 |
| 480.0 | 479.88 | -1.36 | -4.49 | 4.7 | 253.1 | 1.5 | 142.7 |
| 490.0 | 489.87 | -1.51 | -4.36 | 4.6 | 250.9 | 1.9 | 19.3 |
| 500.0 | 499.87 | -1.30 | -4.56 | 4.7 | 254.1 | 1.8 | 286.5 |
| 510.0 | 509.86 | -1.05 | -4.74 | 4.9 | 257.5 | 1.9 | 302.4 |
| 520.0 | 519.86 | -0.82 | -4.97 | 5.0 | 260.6 | 1.9 | 309.6 |
| 530.0 | 529.85 | -0.60 | -5.21 | 5.2 | 263.4 | 1.9 | 317.5 |
| 540.0 | 539.85 | -0.33 | -5.38 | 5.4 | 266.4 | 1.9 | 318.0 |
| 550.0 | 549.84 | -0.15 | -5.64 | 5.6 | 268.5 | 1.9 | 277.3 |
| 560.0 | 559.84 | -0.25 | -5.91 | 5.9 | 267.5 | 1.9 | 198.4 |
| 570.0 | 569.83 | -0.57 | -5.96 | 6.0 | 264.5 | 1.9 | 194.1 |
| 580.0 | 579.83 | -0.73 | -5.87 | 5.9 | 262.9 | 1.1 | 136.1 |
| 590.0 | 589.83 | -0.89 | -5.79 | 5.9 | 261.3 | 1.0 | 148.6 |
| 600.0 | 599.83 | -1.05 | -5.77 | 5.9 | 259.7 | 1.1 | 212.5 |
| 610.0 | 609.82 | -1.23 | -5.74 | 5.9 | 258.0 | 1.0 | 133.7 |
| 620.0 | 619.82 | -1.39 | -5.70 | 5.9 | 256.3 | 1.1 | 134.1 |
| 630.0 | 629.82 | -1.54 | -5.60 | 5.8 | 254.7 | 1.0 | 146.4 |
| 640.0 | 639.82 | -1.67 | -5.47 | 5.7 | 253.1 | 1.1 | 131.7 |
| 650.0 | 649.82 | -1.78 | -5.33 | 5.6 | 251.5 | 1.2 | 119.7 |
| 660.0 | 659.82 | -1.89 | -5.18 | 5.5 | 249.9 | 1.1 | 120.6 |
| 670.0 | 669.81 | -2.02 | -5.05 | 5.4 | 248.2 | 1.1 | 127.5 |
| 680.0 | 679.81 | -2.13 | -4.88 | 5.3 | 246.4 | 1.1 | 147.4 |
| 690.0 | 689.81 | -2.28 | -4.78 | 5.3 | 244.5 | 1.0 | 147.0 |
| 700.0 | 699.81 | -2.40 | -4.64 | 5.2 | 242.6 | 1.1 | 131.7 |
| 710.0 | 709.81 | -2.56 | -4.57 | 5.2 | 240.8 | 1.5 | 148.8 |
| 720.0 | 719.80 | -2.83 | -4.68 | 5.5 | 238.8 | 1.9 | 221.1 |
| 730.0 | 729.80 | -3.10 | -4.86 | 5.8 | 237.4 | 1.9 | 215.8 |
| 740.0 | 739.79 | -3.33 | -5.08 | 6.1 | 236.8 | 1.9 | 238.0 |
| 750.0 | 749.79 | -3.48 | -5.37 | 6.4 | 237.1 | 1.9 | 249.3 |
| 760.0 | 759.78 | -3.70 | -5.61 | 6.7 | 236.6 | 1.9 | 235.0 |
| 770.0 | 769.77 | -3.89 | -5.86 | 7.0 | 236.4 | 1.9 | 225.3 |
| 780.0 | 779.77 | -4.09 | -6.13 | 7.4 | 236.3 | 1.9 | 225.9 |
| 790.0 | 789.76 | -4.38 | -6.26 | 7.6 | 235.0 | 1.9 | 217.7 |
| 800.0 | 799.76 | -4.53 | -6.20 | 7.7 | 233.9 | 1.2 | 118.5 |
| 810.0 | 809.76 | -4.60 | -6.01 | 7.6 | 232.6 | 1.1 | 102.6 |
| 820.0 | 819.76 | -4.68 | -5.82 | 7.5 | 231.2 | 1.2 | 105.8 |
| 830.0 | 829.75 | -4.75 | -5.62 | 7.4 | 229.8 | 1.3 | 120.7 |
| 840.0 | 839.75 | -4.83 | -5.43 | 7.3 | 228.3 | 1.2 | 130.3 |
| 850.0 | 849.75 | -4.93 | -5.25 | 7.2 | 226.8 | 1.3 | 113.1 |
| 860.0 | 859.75 | -5.07 | -5.20 | 7.3 | 225.8 | 1.3 | 288.7 |
| 870.0 | 869.74 | -4.90 | -5.37 | 7.3 | 227.6 | 1.2 | 276.2 |
| 880.0 | 879.74 | -4.72 | -5.60 | 7.3 | 229.9 | 1.3 | 279.4 |
| 890.0 | 889.73 | -4.45 | -5.74 | 7.3 | 232.2 | 1.9 | 305.4 |
| 900.0 | 899.73 | -4.12 | -5.77 | 7.1 | 234.5 | 1.5 | 305.6 |
| 910.0 | 909.72 | -3.83 | -5.88 | 7.0 | 236.9 | 1.9 | 305.2 |
| 920.0 | 919.72 | -3.96 | -5.96 | 7.2 | 236.4 | 1.2 | 157.5 |
| 930.0 | 929.72 | -4.14 | -5.98 | 7.3 | 235.3 | 1.3 | 133.9 |
| 940.0 | 939.71 | -4.25 | -5.80 | 7.2 | 233.8 | 1.3 | 120.9 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 900.0 | 899.73 | -4.12 | -5.77 | 7.1 | 234.5 | 1.5 | 305.6 |
| 910.0 | 909.72 | -3.83 | -5.88 | 7.0 | 236.9 | 1.9 | 305.2 |
| 920.0 | 919.72 | -3.96 | -5.96 | 7.2 | 236.4 | 1.2 | 157.5 |
| 930.0 | 929.72 | -4.14 | -5.98 | 7.3 | 235.3 | 1.3 | 133.9 |
| 940.0 | 939.71 | -4.25 | -5.80 | 7.2 | 233.8 | 1.3 | 120.9 |
| 950.0 | 949.71 | -4.39 | -5.82 | 7.3 | 233.0 | 1.2 | 272.0 |
| 960.0 | 959.71 | -4.17 | -5.95 | 7.3 | 235.0 | 2.4 | 17.3 |
| 970.0 | 969.70 | -3.84 | -6.02 | 7.1 | 237.5 | 2.1 | 350.6 |
| 980.0 | 979.69 | -3.46 | -5.92 | 6.9 | 239.7 | 2.6 | 48.4 |
| 990.0 | 989.68 | -3.26 | -5.49 | 6.4 | 239.4 | 2.8 | 40.1 |
| 1000.0 | 999.67 | -2.96 | -5.47 | 6.2 | 241.5 | 1.4 | 299.9 |
| 1010.0 | 1009.67 | -2.65 | -5.51 | 6.1 | 244.4 | 2.2 | 357.8 |
| 1020.0 | 1019.66 | -2.36 | -5.64 | 6.1 | 247.3 | 1.9 | 333.9 |
| 1030.0 | 1029.66 | -2.28 | -5.82 | 6.2 | 248.6 | 1.7 | 326.0 |
| 1040.0 | 1039.65 | -2.23 | -5.56 | 6.0 | 248.2 | 1.5 | 118.5 |
| 1050.0 | 1049.65 | -2.32 | -5.35 | 5.8 | 246.5 | 2.5 | 102.9 |
| 1060.0 | 1059.64 | -2.41 | -5.06 | 5.6 | 244.6 | 1.3 | 118.6 |
| 1070.0 | 1069.64 | -2.50 | -4.86 | 5.5 | 242.8 | 1.0 | 96.5 |
| 1080.0 | 1079.63 | -2.56 | -4.59 | 5.3 | 240.9 | 1.9 | 80.1 |
| 1090.0 | 1089.63 | -2.51 | -4.34 | 5.0 | 240.0 | 1.9 | 358.8 |
| 1100.0 | 1099.62 | -2.21 | -4.48 | 5.0 | 243.7 | 1.9 | 322.0 |
| 1110.0 | 1109.62 | -1.90 | -4.52 | 4.9 | 247.2 | 1.9 | 333.1 |
| 1120.0 | 1119.61 | -1.77 | -4.80 | 5.1 | 249.8 | 1.9 | 323.5 |
| 1130.0 | 1129.61 | -1.50 | -4.77 | 5.0 | 252.5 | 1.9 | 42.3 |
| 1140.0 | 1139.60 | -1.23 | -4.78 | 4.9 | 255.6 | 1.9 | 309.6 |
| 1150.0 | 1149.60 | -0.96 | -4.97 | 5.1 | 259.1 | 1.9 | 342.0 |
| 1160.0 | 1159.59 | -0.73 | -5.13 | 5.2 | 261.9 | 1.5 | 301.9 |
| 1170.0 | 1169.59 | -0.50 | -5.28 | 5.3 | 264.5 | 2.4 | 359.0 |
| 1180.0 | 1179.58 | -0.46 | -5.38 | 5.4 | 265.1 | 1.3 | 150.1 |
| 1190.0 | 1189.58 | -0.58 | -5.17 | 5.2 | 263.6 | 1.4 | 104.4 |
| 1200.0 | 1199.58 | -0.61 | -4.95 | 5.0 | 263.0 | 1.4 | 98.0 |
| 1210.0 | 1209.57 | -0.63 | -4.71 | 4.7 | 262.3 | 1.3 | 96.2 |
| 1220.0 | 1219.57 | -0.72 | -4.48 | 4.5 | 260.9 | 1.1 | 98.9 |
| 1230.0 | 1229.57 | -0.73 | -4.24 | 4.3 | 260.2 | 1.5 | 108.0 |
| 1240.0 | 1239.57 | -0.81 | -4.00 | 4.1 | 258.6 | 2.0 | 113.6 |
| 1250.0 | 1249.56 | -0.96 | -3.75 | 3.9 | 255.7 | 1.6 | 126.9 |
| 1260.0 | 1259.55 | -0.99 | -3.40 | 3.5 | 253.7 | 3.0 | 69.3 |
| 1270.0 | 1269.54 | -0.93 | -3.01 | 3.2 | 252.9 | 2.1 | 333.1 |
| 1280.0 | 1279.54 | -0.77 | -3.24 | 3.3 | 256.7 | 1.6 | 306.5 |
| 1290.0 | 1289.53 | -0.48 | -3.10 | 3.1 | 261.3 | 3.0 | 86.5 |
| 1300.0 | 1299.52 | -0.26 | -2.83 | 2.8 | 264.8 | 2.5 | 358.4 |
| 1310.0 | 1309.51 | -0.09 | -3.01 | 3.0 | 268.2 | 1.8 | 320.2 |
| 1320.0 | 1319.50 | 0.14 | -2.96 | 3.0 | 272.6 | 1.4 | 144.5 |
| 1330.0 | 1329.50 | 0.23 | -2.70 | 2.7 | 274.9 | 1.5 | 70.6 |
| 1340.0 | 1339.50 | 0.29 | -2.44 | 2.5 | 276.8 | 1.5 | 79.1 |
| 1350.0 | 1349.49 | 0.34 | -2.19 | 2.2 | 278.9 | 1.7 | 69.2 |
| 1360.0 | 1359.48 | 0.44 | -1.80 | 1.9 | 283.8 | 2.6 | 73.3 |
| 1370.0 | 1369.47 | 0.60 | -1.31 | 1.4 | 294.8 | 3.2 | 72.6 |
| 1380.0 | 1379.45 | 0.81 | -0.77 | 1.1 | 316.5 | 3.7 | 66.9 |
| 1390.0 | 1389.43 | 1.13 | -0.10 | 1.1 | 354.9 | 4.8 | 62.1 |
| 1400.0 | 1399.38 | 1.58 | 0.71 | 1.7 | 24.1 | 5.8 | 59.6 |
| 1410.0 | 1409.32 | 2.18 | 1.64 | 2.7 | 36.9 | 6.4 | 58.4 |
| 1420.0 | 1419.24 | 2.80 | 2.73 | 3.9 | 44.4 | 7.5 | 61.9 |
| 1430.0 | 1429.14 | 3.48 | 3.97 | 5.3 | 48.7 | 8.6 | 60.7 |
| 1440.0 | 1439.02 | 4.26 | 5.32 | 6.8 | 51.3 | 9.4 | 63.2 |
| 1450.0 | 1448.87 | 5.04 | 6.83 | 8.5 | 53.6 | 10.4 | 72.6 |
| 1460.0 | 1458.70 | 5.84 | 8.52 | 10.3 | 55.6 | 11.3 | 64.2 |
| 1470.0 | 1468.49 | 6.77 | 10.29 | 12.3 | 56.7 | 11.7 | 63.0 |
| 1480.0 | 1478.28 | 7.73 | 12.12 | 14.4 | 57.5 | 12.1 | 62.4 |
| 1490.0 | 1488.05 | 8.66 | 14.01 | 16.5 | 58.3 | 12.3 | 64.0 |
| 1500.0 | 1497.82 | 9.52 | 15.97 | 18.6 | 59.2 | 12.3 | 65.6 |
| 1510.0 | 1507.58 | 10.41 | 17.93 | 20.7 | 59.9 | 12.5 | 64.2 |
| 1520.0 | 1517.35 | 11.41 | 19.85 | 22.9 | 60.1 | 12.4 | 66.4 |
| 1530.0 | 1527.11 | 12.25 | 21.85 | 25.0 | 60.7 | 12.6 | 63.8 |
| 1540.0 | 1536.87 | 13.15 | 23.85 | 27.2 | 61.1 | 12.6 | 65.5 |
| 1550.0 | 1546.62 | 14.06 | 25.85 | 29.4 | 61.5 | 12.8 | 64.8 |
| 1560.0 | 1556.37 | 14.95 | 27.87 | 31.6 | 61.8 | 12.8 | 64.6 |
| 1570.0 | 1566.12 | 15.90 | 29.88 | 33.9 | 62.0 | 13.0 | 69.6 |
| 1580.0 | 1575.88 | 16.78 | 31.91 | 36.1 | 62.3 | 12.8 | 67.0 |
| 1590.0 | 1585.62 | 17.64 | 33.99 | 38.3 | 62.6 | 12.9 | 67.0 |
| 1600.0 | 1595.36 | 18.60 | 36.04 | 40.6 | 62.7 | 13.1 | 68.9 |
| 1610.0 | 1605.10 | 19.51 | 38.13 | 42.8 | 62.9 | 13.2 | 65.1 |
| 1620.0 | 1614.83 | 20.44 | 40.22 | 45.1 | 63.1 | 13.2 | 63.9 |
| | | 21.32 | 42.34 | 47.4 | 63.3 | 13.3 | 71.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1500.0 | 1497.82 | 9.52 | 15.97 | 18.6 | 59.2 | 12.3 | 65.6 |
| 1510.0 | 1507.58 | 10.41 | 17.93 | 20.7 | 59.9 | 12.5 | 64.2 |
| 1520.0 | 1517.35 | 11.41 | 19.85 | 22.9 | 60.1 | 12.4 | 66.4 |
| 1530.0 | 1527.11 | 12.25 | 21.85 | 25.0 | 60.7 | 12.6 | 63.8 |
| 1540.0 | 1536.87 | 13.15 | 23.85 | 27.2 | 61.1 | 12.6 | 65.5 |
| 1550.0 | 1546.62 | 14.06 | 25.85 | 29.4 | 61.5 | 12.8 | 64.8 |
| 1560.0 | 1556.37 | 14.95 | 27.87 | 31.6 | 61.8 | 12.8 | 64.6 |
| 1570.0 | 1566.12 | 15.90 | 29.88 | 33.9 | 62.0 | 13.0 | 69.6 |
| 1580.0 | 1575.88 | 16.78 | 31.91 | 36.1 | 62.3 | 12.8 | 67.0 |
| 1590.0 | 1585.62 | 17.64 | 33.99 | 38.3 | 62.6 | 12.9 | 67.0 |
| 1600.0 | 1595.36 | 18.60 | 36.04 | 40.6 | 62.7 | 13.1 | 68.9 |
| 1610.0 | 1605.10 | 19.51 | 38.13 | 42.8 | 62.9 | 13.2 | 65.1 |
| 1620.0 | 1614.83 | 20.44 | 40.22 | 45.1 | 63.1 | 13.2 | 63.9 |
| 1630.0 | 1624.56 | 21.32 | 42.34 | 47.4 | 63.3 | 13.3 | 71.0 |
| 1640.0 | 1634.29 | 22.27 | 44.44 | 49.7 | 63.4 | 13.5 | 67.1 |
| 1650.0 | 1644.02 | 23.25 | 46.53 | 52.0 | 63.4 | 13.3 | 62.5 |
| 1658.1 | 1651.88 | 23.43 | 45.77 | 51.4 | 62.9 | 0.0 | 0.0 |

Well: **T39G**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 24 | 24" | | | X | 3/24/2008 | |
| Surface | 16" | | 20" | | | | | |
| Water Protection | 13 3/8" | 324 | 15 3/8" | 348 | X | | 3/26/2008 | Basket @ 125' |
| Coal Protection | 13 3/8" | 324 | 15 3/8" | 348 | X | | 3/26/2008 | Basket @ 125' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE T-39G

RIG #: 93

LOCATION: OSBOURNE MTN.

DATE STARTED: 3/24/2008

DATE COMPLETED: 3/31/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 36 | 36 | SANDSTONE |
| 36 | 67 | 31 | SANDY SHALE/COAL |
| 67 | 98 | 31 | SANDSTONE |
| 98 | 130 | 32 | SANDY SHALE/COAL |
| 130 | 175 | 45 | |
| 175 | 193 | 18 | |
| 193 | 224 | 31 | SANDSTONE |
| 224 | 256 | 32 | SANDY SHALE/COAL |
| 256 | 288 | 32 | SHALE/COAL |
| 288 | 320 | 32 | SHALE/COAL |
| 320 | 351 | 31 | SANDSTONE |
| 351 | 383 | 32 | SANDSTONE |
| 383 | 385 | 2 | |
| 385 | 416 | 31 | SHALE/COAL |
| 416 | 448 | 32 | SANDSTONE |
| 448 | 479 | 31 | SANDSTONE |
| 479 | 511 | 32 | SANDY SHALE/COAL |
| 511 | 542 | 31 | SANDSTONE |
| 542 | 573 | 31 | SANDSTONE |
| 573 | 574 | 1 | |
| 574 | 606 | 32 | SANDSTONE |
| 606 | 637 | 31 | SANDSTONE/COAL/SHALE |
| 637 | 669 | 32 | SHALE |
| 669 | 701 | 32 | SHALE |
| 701 | 732 | 31 | SHALE/COAL/SHALE |
| 732 | 769 | 37 | SHALE/COAL |
| 769 | 796 | 27 | COAL/SHALE |
| 796 | 827 | 31 | COAL/SANDSTONE/SHALE |
| 827 | 859 | 32 | SANDSTONE |
| 859 | 891 | 32 | SANDSTONE/COAL/SANDSTONE |
| 891 | 922 | 31 | SANDSTONE/SHALE/COAL |
| 922 | 954 | 32 | SHALE/SANDSTONE |
| 954 | 985 | 31 | SANDSTONE |

| | | | |
|---|---|---|---|
| 985 | 1017 | 32 | SHALE/COAL/SANDSTONE |
| 1017 | 1049 | 32 | SANDSTONE/COAL |
| 1049 | 1080 | 31 | SANDSTONE/COAL/SANDSTONE |
| 1080 | 1112 | 32 | SANDSTONE |
| 1112 | 1143 | 31 | SANDSTONE |
| 1143 | 1175 | 32 | |
| 1175 | 1206 | 31 | SANDY SHALE/COAL |
| 1206 | 1238 | 32 | SHALE/COAL |
| 1238 | 1269 | 31 | SANDSTONE |
| 1269 | 1301 | 32 | SANDSTONE |
| 1301 | 1332 | 31 | SANDSTONE |
| 1332 | 1364 | 32 | SANDSTONE |
| 1364 | 1393 | 29 | SANDSTONE |
| 1393 | 1423 | 30 | SANDSTONE |
| 1423 | 1455 | 32 | SHALE/COAL/SANDSTONE |
| 1455 | 1487 | 32 | SANDSTONE |
| 1487 | 1488 | 1 | SANDY SHALE |
| 1488 | 1520 | 32 | SHALE |
| 1520 | 1552 | 32 | SHALE |
| 1552 | 1583 | 31 | SHALE |
| 1583 | 1615 | 32 | SHALE |
| 1615 | 1647 | 32 | SHALE |

1647' TOTAL DEPTH
24' OF 22" CASING
339.4' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1312 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3809 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 4/7/2008 |
| **Driller's Total Depth:** | 1658.00 | **Log's Total Depth:** | 1665.80 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/4/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 6/4/2008 | | |
| Status: | | Date: | 6/5/2008 |
| Final PDF Date: | 6/12/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1353 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3809 |
| **Operations Name:** | CBM T39H W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 4/1/2008

Drilling Contractor: Noah Horn

Date drilling completed: 4/7/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1658.00

Log Total Depth (feet): 1665.75

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1015613.60

Permitted State Plane Y: 329706.75

Final Plat State Plane X: 1015613.59

Final Plat State Plane Y: 329707.35

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | T39H PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| EXHIBIT A | T39H EXHIBIT A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS SHOW | T39H Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| DEVIATION | T39H DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| CASING | T39H Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| DRILL DATA | T39H DRILL DATA.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/4/2008

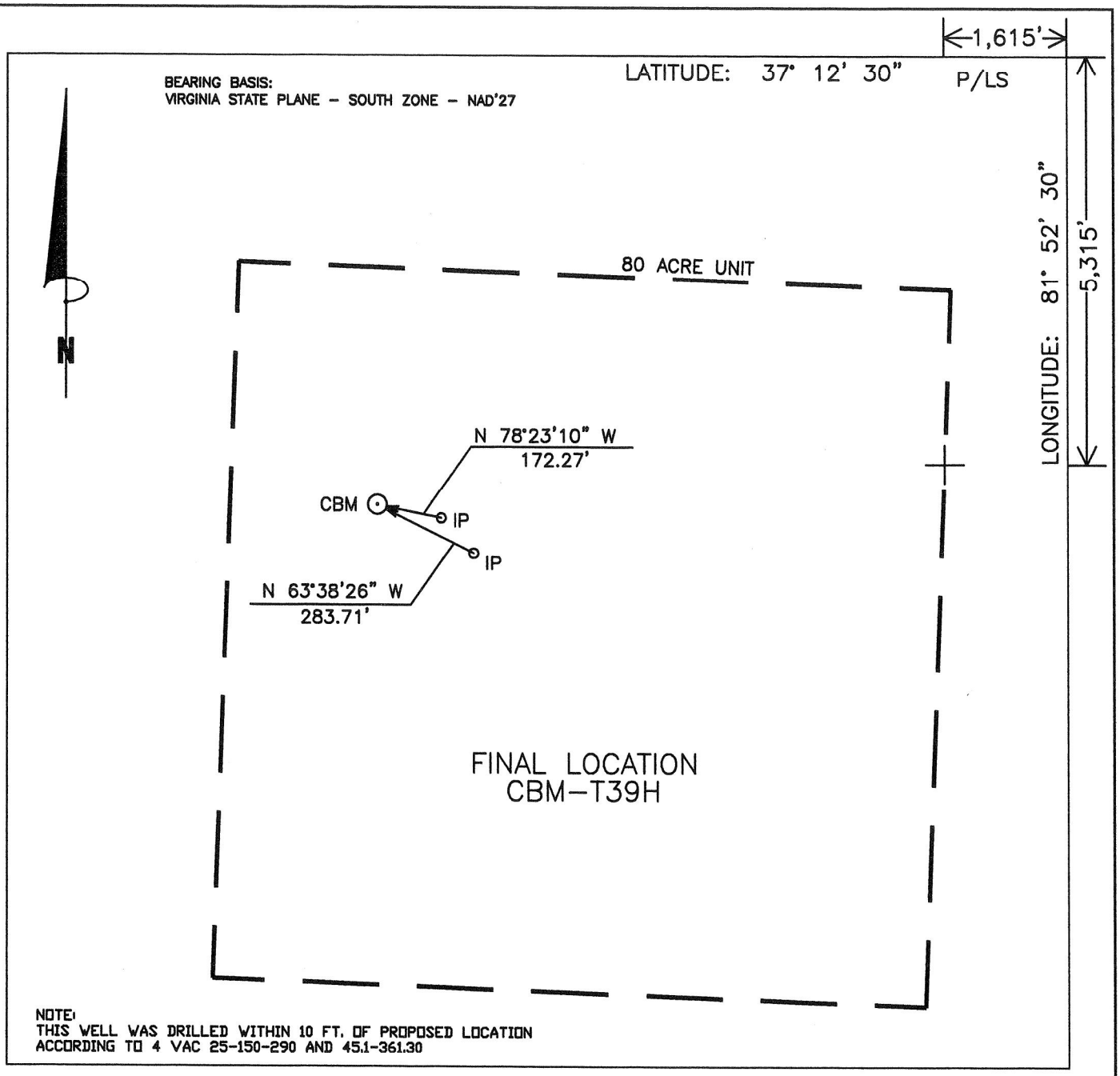
Signed By: Leslie Arrington Title: Director Environmental Permitting

## INTERNAL USE ONLY

Submit Date: 6/4/2008

Status: A Date: 6/5/2008

Final PDF Date: 6/12/2008




# WELL LOCATION PLAT

T39HFNL
2N30/125-667/8

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-T39H

TRACT NUMBER CMMC QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 329,707.35 E 1,015,613.59

ELEVATION: 2129.91' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 04-08-08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

DRP

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
4/8/08
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 10/96

T39H.CMP
Exhibit A

Well Name: 08 CBM T39H
SURFACE ELEV: 2129.91 EASTING: 1015613.59 NORTHING: 329707.35

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 45.00 | 46.50 | 2084.91 | 1.50 | |
| | 46.50 | 48.90 | 2083.41 | 2.40 | |
| COAL | 48.90 | 49.90 | 2081.01 | 1.00 | |
| | 49.90 | 54.80 | 2080.01 | 4.90 | |
| COAL | 54.80 | 56.50 | 2075.11 | 1.70 | |
| | 56.50 | 130.00 | 2073.41 | 73.50 | |
| JB1 | 130.00 | 132.70 | 1999.91 | 2.70 | |
| | 132.70 | 171.40 | 1997.21 | 38.70 | |
| JB3 | 171.40 | 174.90 | 1958.51 | 3.50 | |
| | 174.90 | 266.80 | 1955.01 | 91.90 | |
| TI | 266.80 | 267.20 | 1863.11 | 0.40 | |
| | 267.20 | 270.10 | 1862.71 | 2.90 | |
| COAL | 270.10 | 270.80 | 1859.81 | 0.70 | |
| | 270.80 | 285.00 | 1859.11 | 14.20 | |
| COAL | 285.00 | 285.70 | 1844.91 | 0.70 | |
| | 285.70 | 372.90 | 1844.21 | 87.20 | |
| *US1 | 372.90 | 373.70 | 1757.01 | 0.80 | |
| | 373.70 | 482.20 | 1756.21 | 108.50 | |
| *US2 | 482.20 | 483.10 | 1647.71 | 0.90 | |
| | 483.10 | 605.80 | 1646.81 | 122.70 | |
| *GC2 | 605.80 | 606.70 | 1524.11 | 0.90 | |
| | 606.70 | 664.90 | 1523.21 | 58.20 | |
| *SE1 | 664.90 | 665.90 | 1465.01 | 1.00 | |
| | 665.90 | 700.40 | 1464.01 | 34.50 | |
| *SE2 | 700.40 | 704.60 | 1429.51 | 4.20 | |
| | 704.60 | 744.90 | 1425.31 | 40.30 | |
| *LS1 | 744.90 | 746.90 | 1385.01 | 2.00 | |
| | 746.90 | 762.00 | 1383.01 | 15.10 | |
| *LS2 | 762.00 | 762.80 | 1367.91 | 0.80 | |
| | 762.80 | 790.00 | 1367.11 | 27.20 | |
| *UH1 | 790.00 | 793.30 | 1339.91 | 3.30 | |
| | 793.30 | 854.70 | 1336.61 | 61.40 | |
| *UH3 | 854.70 | 856.10 | 1275.21 | 1.40 | |
| | 856.10 | 909.10 | 1273.81 | 53.00 | |
| *MH1 | 909.10 | 909.60 | 1220.81 | 0.50 | |
| | 909.60 | 974.20 | 1220.31 | 64.60 | |
| *MH2 | 974.20 | 975.00 | 1155.71 | 0.80 | |
| | 975.00 | 1015.10 | 1154.91 | 40.10 | |
| *P11 | 1015.10 | 1017.60 | 1114.81 | 2.50 | |
| | 1017.60 | 1041.80 | 1112.31 | 24.20 | |
| *P10 | 1041.80 | 1042.10 | 1088.11 | 0.30 | |
| | 1042.10 | 1100.80 | 1087.81 | 58.70 | |
| *LH2 | 1100.80 | 1101.60 | 1029.11 | 0.80 | |
| | 1101.60 | 1177.50 | 1028.31 | 75.90 | |
| *P91 | 1177.50 | 1179.00 | 952.41 | 1.50 | |
| | 1179.00 | 1188.10 | 950.91 | 9.10 | |
| *P92 | 1188.10 | 1188.80 | 941.81 | 0.70 | |
| | 1188.80 | 1226.00 | 941.11 | 37.20 | |
| *COAL | 1226.00 | 1227.00 | 903.91 | 1.00 | |
| | 1227.00 | 1265.70 | 902.91 | 38.70 | |
| *P71 | 1265.70 | 1266.10 | 864.21 | 0.40 | |
| | 1266.10 | 1399.00 | 863.81 | 132.90 | |
| *COAL | 1399.00 | 1401.10 | 730.91 | 2.10 | |
| | 1401.10 | 1449.40 | 728.81 | 48.30 | |
| *P62 | 1449.40 | 1450.70 | 680.51 | 1.30 | |
| | 1450.70 | 1481.80 | 679.21 | 31.10 | |
| *P51 | 1481.80 | 1483.20 | 648.11 | 1.40 | |

| | | | | |
|---|---|---|---|---|
| | 1483.20 | 1581.00 | 646.71 | 97.80 |
| *P41 | 1581.00 | 1581.90 | 548.91 | 0.90 |
| | 1581.90 | 1592.20 | 548.01 | 10.30 |
| *P42 | 1592.20 | 1592.90 | 537.71 | 0.70 |
| | 1592.90 | 1665.75 | 537.01 | 72.85 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\T39H.CMP
DATE: 05/20/08

Well: **T39H**

## Oil & Gas Show

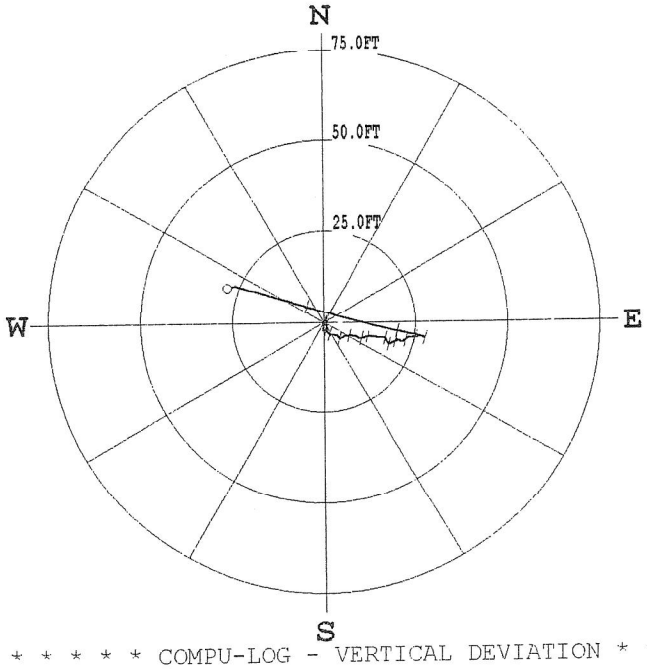
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 664.9 | 1227 | 562.1 | | | |
| Pocahontas | 1399 | 1483.2 | 84.2 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

LIENT: Consol Energy
OCATION:
OLE ID: 08-CNX-T-39-H
ATE OF LOG: 04/08/08
ROBE: 9136CA 962

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1654.97 FT
AZIMUTH: 290.1
DISTANCE: 28.0 FT
+ = 100 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 08-CNX-T-39-H
DATE OF LOG : 04/08/08
PROBE : 9136CA , 962
DEPTH UNITS : FEET
LOG: 08-CNX-T-39-H_04-08-08_01-46_9136CA_.02_-0.02_1663.98_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | -0.49 | 0.67 | 0.8 | 126.1 | 1.5 | 68.0 |
| 60.0 | 59.98 | -0.32 | 0.55 | 0.6 | 120.1 | 1.5 | 290.7 |
| 70.0 | 69.98 | -0.33 | 0.36 | 0.5 | 133.2 | 1.2 | 206.7 |
| 80.0 | 79.98 | -0.30 | 0.52 | 0.6 | 119.7 | 1.3 | 19.3 |
| 90.0 | 89.98 | -0.10 | 0.49 | 0.5 | 101.2 | 1.3 | 335.3 |
| 100.0 | 99.97 | 0.01 | 0.31 | 0.3 | 87.9 | 1.3 | 250.8 |
| 110.0 | 109.97 | -0.11 | 0.15 | 0.2 | 125.1 | 1.2 | 204.4 |
| 120.0 | 119.97 | -0.16 | 0.26 | 0.3 | 121.8 | 1.3 | 20.1 |
| 130.0 | 129.97 | 0.06 | 0.25 | 0.3 | 76.9 | 1.3 | 338.1 |
| 140.0 | 139.96 | 0.19 | 0.10 | 0.2 | 26.5 | 1.1 | 275.5 |
| 150.0 | 149.96 | 0.09 | -0.05 | 0.1 | 328.5 | 1.2 | 210.1 |
| 160.0 | 159.96 | -0.10 | -0.02 | 0.1 | 192.8 | 1.3 | 151.5 |
| 170.0 | 169.96 | -0.27 | 0.13 | 0.3 | 154.4 | 1.5 | 119.5 |
| 180.0 | 179.95 | -0.45 | 0.29 | 0.5 | 147.5 | 1.5 | 129.6 |
| 190.0 | 189.95 | -0.61 | 0.48 | 0.8 | 142.1 | 1.5 | 135.7 |
| 200.0 | 199.95 | -0.80 | 0.59 | 1.0 | 143.8 | 1.1 | 165.8 |
| 210.0 | 209.95 | -0.99 | 0.65 | 1.2 | 146.6 | 1.1 | 160.7 |
| 220.0 | 219.94 | -1.17 | 0.74 | 1.4 | 147.7 | 1.4 | 143.3 |
| 230.0 | 229.94 | -1.35 | 0.77 | 1.6 | 150.1 | 1.0 | 172.1 |
| 240.0 | 239.94 | -1.53 | 0.82 | 1.7 | 151.9 | 1.0 | 171.9 |
| 250.0 | 249.94 | -1.71 | 0.82 | 1.9 | 154.4 | 1.0 | 169.3 |
| 260.0 | 259.94 | -1.89 | 0.84 | 2.1 | 156.1 | 1.1 | 193.4 |
| 270.0 | 269.93 | -2.07 | 0.79 | 2.2 | 159.1 | 1.1 | 193.8 |
| 280.0 | 279.93 | -2.23 | 0.71 | 2.3 | 162.4 | 1.0 | 222.9 |
| 290.0 | 289.93 | -2.35 | 0.58 | 2.4 | 166.2 | 1.0 | 216.0 |
| 300.0 | 299.93 | -2.40 | 0.41 | 2.4 | 170.2 | 1.1 | 243.6 |
| 310.0 | 309.93 | -2.51 | 0.28 | 2.5 | 173.5 | 1.1 | 219.3 |
| 320.0 | 319.93 | -2.41 | 0.15 | 2.4 | 176.4 | 1.0 | 252.4 |
| 330.0 | 329.92 | -2.43 | -0.03 | 2.4 | 180.7 | 1.0 | 260.7 |
| 340.0 | 339.92 | -2.37 | -0.17 | 2.4 | 184.2 | 1.4 | 344.4 |
| | | | | 2.2 | 186.0 | 1.1 | 288.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 220.0 | 219.94 | -1.17 | 0.74 | 1.4 | 147.7 | 1.4 | 143.3 |
| 230.0 | 229.94 | -1.35 | 0.77 | 1.6 | 150.1 | 1.0 | 172.1 |
| 240.0 | 239.94 | -1.53 | 0.82 | 1.7 | 151.9 | 1.0 | 171.9 |
| 250.0 | 249.94 | -1.71 | 0.82 | 1.9 | 154.4 | 1.0 | 169.3 |
| 260.0 | 259.94 | -1.89 | 0.84 | 2.1 | 156.1 | 1.1 | 193.4 |
| 270.0 | 269.93 | -2.07 | 0.79 | 2.2 | 159.1 | 1.1 | 193.8 |
| 280.0 | 279.93 | -2.23 | 0.71 | 2.3 | 162.4 | 1.0 | 222.9 |
| 290.0 | 289.93 | -2.35 | 0.58 | 2.4 | 166.2 | 1.0 | 216.0 |
| 300.0 | 299.93 | -2.40 | 0.41 | 2.4 | 170.2 | 1.1 | 243.6 |
| 310.0 | 309.93 | -2.51 | 0.28 | 2.5 | 173.5 | 1.1 | 219.3 |
| 320.0 | 319.93 | -2.41 | 0.15 | 2.4 | 176.4 | 1.0 | 252.4 |
| 330.0 | 329.92 | -2.43 | -0.03 | 2.4 | 180.7 | 1.0 | 260.7 |
| 340.0 | 339.92 | -2.37 | -0.17 | 2.4 | 184.2 | 1.4 | 344.4 |
| 350.0 | 349.92 | -2.14 | -0.23 | 2.2 | 186.0 | 1.1 | 288.1 |
| 360.0 | 359.91 | -2.29 | 0.22 | 2.3 | 174.6 | 2.3 | 133.9 |
| 370.0 | 369.90 | -2.56 | 0.53 | 2.6 | 168.4 | 2.7 | 127.3 |
| 380.0 | 379.89 | -2.79 | 0.92 | 2.9 | 161.8 | 2.7 | 116.7 |
| 390.0 | 389.88 | -3.06 | 1.22 | 3.3 | 158.2 | 1.9 | 146.4 |
| 400.0 | 399.88 | -3.33 | 1.38 | 3.6 | 157.5 | 1.9 | 145.9 |
| 410.0 | 409.87 | -3.58 | 1.54 | 3.9 | 156.7 | 0.8 | 168.2 |
| 420.0 | 419.87 | -3.68 | 1.58 | 4.0 | 156.8 | 0.8 | 149.4 |
| 430.0 | 429.87 | -3.59 | 1.73 | 4.0 | 154.3 | 1.7 | 66.5 |
| 440.0 | 439.86 | -3.47 | 2.11 | 4.1 | 148.7 | 2.9 | 87.6 |
| 450.0 | 449.84 | -3.54 | 2.64 | 4.4 | 143.2 | 3.1 | 102.2 |
| 460.0 | 459.83 | -3.66 | 3.12 | 4.8 | 139.5 | 3.1 | 106.5 |
| 470.0 | 469.82 | -3.86 | 3.59 | 5.3 | 137.0 | 2.9 | 122.9 |
| 480.0 | 479.81 | -4.13 | 3.87 | 5.7 | 136.8 | 1.9 | 142.3 |
| 490.0 | 489.81 | -4.36 | 4.03 | 5.9 | 137.2 | 0.9 | 151.5 |
| 500.0 | 499.80 | -4.54 | 4.11 | 6.1 | 137.9 | 1.2 | 156.8 |
| 510.0 | 509.80 | -4.66 | 4.16 | 6.2 | 138.3 | 0.3 | 130.4 |
| 520.0 | 519.80 | -4.72 | 4.20 | 6.3 | 138.3 | 0.3 | 123.7 |
| 530.0 | 529.80 | -4.69 | 4.26 | 6.3 | 137.7 | 1.4 | 48.3 |
| 540.0 | 539.80 | -4.52 | 4.55 | 6.4 | 134.8 | 1.9 | 59.2 |
| 550.0 | 549.79 | -4.35 | 4.83 | 6.5 | 132.0 | 1.9 | 57.1 |
| 560.0 | 559.79 | -4.18 | 5.11 | 6.6 | 129.3 | 1.5 | 48.6 |
| 570.0 | 569.78 | -4.01 | 5.37 | 6.7 | 126.7 | 1.9 | 59.4 |
| 580.0 | 579.78 | -3.83 | 5.64 | 6.8 | 124.1 | 2.2 | 69.5 |
| 590.0 | 589.76 | -3.81 | 6.12 | 7.2 | 121.9 | 3.2 | 101.5 |
| 600.0 | 599.75 | -3.81 | 6.65 | 7.7 | 119.8 | 3.0 | 85.9 |
| 610.0 | 609.74 | -3.75 | 7.11 | 8.0 | 117.8 | 3.0 | 93.1 |
| 620.0 | 619.72 | -3.81 | 7.64 | 8.5 | 116.5 | 3.0 | 94.5 |
| 630.0 | 629.71 | -3.86 | 8.14 | 9.0 | 115.4 | 2.9 | 103.1 |
| 640.0 | 639.70 | -3.97 | 8.62 | 9.5 | 114.8 | 2.7 | 99.1 |
| 650.0 | 649.69 | -4.15 | 9.07 | 10.0 | 114.6 | 2.7 | 114.0 |
| 660.0 | 659.68 | -4.39 | 9.40 | 10.4 | 115.0 | 1.8 | 150.5 |
| 670.0 | 669.68 | -4.45 | 9.40 | 10.4 | 115.3 | 0.5 | 321.3 |
| 680.0 | 679.68 | -4.48 | 9.40 | 10.4 | 115.5 | 0.1 | 260.5 |
| 690.0 | 689.68 | -4.43 | 9.47 | 10.5 | 115.0 | 2.7 | 86.1 |
| 700.0 | 699.66 | -4.45 | 9.96 | 10.9 | 114.1 | 2.8 | 111.6 |
| 710.0 | 709.66 | -4.67 | 10.16 | 11.2 | 114.7 | 0.8 | 180.9 |
| 720.0 | 719.66 | -4.70 | 10.17 | 11.2 | 114.8 | 0.6 | 33.5 |
| 730.0 | 729.66 | -4.55 | 10.26 | 11.2 | 113.9 | 1.0 | 38.2 |
| 740.0 | 739.66 | -4.50 | 10.29 | 11.2 | 113.6 | 0.1 | 155.2 |
| 750.0 | 749.66 | -4.47 | 10.31 | 11.2 | 113.4 | 1.0 | 23.5 |
| 760.0 | 759.65 | -4.40 | 10.68 | 11.6 | 112.4 | 3.0 | 97.1 |
| 770.0 | 769.64 | -4.48 | 10.85 | 11.7 | 112.4 | 0.5 | 13.6 |
| 780.0 | 779.64 | -4.31 | 10.97 | 11.8 | 111.5 | 0.9 | 41.1 |
| 790.0 | 789.63 | -4.17 | 11.27 | 12.0 | 110.3 | 2.3 | 65.6 |
| 800.0 | 799.63 | -4.07 | 11.66 | 12.3 | 109.2 | 2.9 | 92.8 |
| 810.0 | 809.61 | -4.00 | 12.13 | 12.8 | 108.2 | 2.7 | 78.7 |
| 820.0 | 819.60 | -3.94 | 12.59 | 13.2 | 107.4 | 2.8 | 96.5 |
| 830.0 | 829.59 | -4.12 | 13.03 | 13.7 | 107.5 | 2.6 | 123.0 |
| 840.0 | 839.58 | -4.18 | 13.50 | 14.1 | 107.2 | 2.8 | 85.3 |
| 850.0 | 849.57 | -4.19 | 14.00 | 14.6 | 106.6 | 2.9 | 92.1 |
| 860.0 | 859.55 | -4.28 | 14.53 | 15.2 | 106.4 | 2.8 | 81.6 |
| 870.0 | 869.54 | -4.28 | 15.03 | 15.6 | 105.9 | 3.2 | 91.9 |
| 880.0 | 879.52 | -4.31 | 15.57 | 16.2 | 105.5 | 3.1 | 104.4 |
| 890.0 | 889.51 | -4.34 | 16.10 | 16.7 | 105.1 | 2.9 | 93.5 |
| 900.0 | 899.50 | -4.51 | 16.52 | 17.1 | 105.3 | 1.7 | 145.0 |
| 910.0 | 909.50 | -4.71 | 16.63 | 17.3 | 105.8 | 1.2 | 155.5 |
| 920.0 | 919.49 | -4.93 | 16.78 | 17.5 | 106.4 | 1.3 | 147.0 |
| 930.0 | 929.49 | -5.12 | 16.90 | 17.7 | 106.8 | 0.6 | 154.6 |
| 940.0 | 939.49 | -5.24 | 16.95 | 17.7 | 107.2 | 1.2 | 147.6 |
| 950.0 | 949.49 | -5.43 | 17.06 | 17.9 | 107.6 | 1.0 | 150.1 |

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|---|---|---|---|---|---|---|---|
| 870.0 | 869.54 | -4.28 | 15.03 | 15.6 | 105.9 | 3.2 | 91.9 |
| 880.0 | 879.52 | -4.31 | 15.57 | 16.2 | 105.5 | 3.1 | 104.4 |
| 890.0 | 889.51 | -4.34 | 16.10 | 16.7 | 105.1 | 2.9 | 93.5 |
| 900.0 | 899.50 | -4.51 | 16.52 | 17.1 | 105.3 | 1.7 | 145.0 |
| 910.0 | 909.50 | -4.71 | 16.63 | 17.3 | 105.8 | 1.2 | 155.5 |
| 920.0 | 919.49 | -4.93 | 16.78 | 17.5 | 106.4 | 1.3 | 147.0 |
| 930.0 | 929.49 | -5.12 | 16.90 | 17.7 | 106.8 | 0.6 | 154.6 |
| 940.0 | 939.49 | -5.24 | 16.95 | 17.7 | 107.2 | 1.2 | 147.6 |
| 950.0 | 949.49 | -5.42 | 17.06 | 17.9 | 107.6 | 1.0 | 150.1 |
| 960.0 | 959.49 | -5.57 | 17.14 | 18.0 | 108.0 | 0.7 | 158.1 |
| 970.0 | 969.48 | -5.74 | 17.23 | 18.2 | 108.4 | 1.2 | 148.3 |
| 980.0 | 979.48 | -5.91 | 17.33 | 18.3 | 108.8 | 1.3 | 149.8 |
| 990.0 | 989.48 | -5.97 | 17.38 | 18.4 | 108.9 | 0.5 | 166.5 |
| 1000.0 | 999.48 | -6.07 | 17.47 | 18.5 | 109.2 | 1.4 | 141.2 |
| 1010.0 | 1009.48 | -6.10 | 17.52 | 18.6 | 109.2 | 0.5 | 148.4 |
| 1020.0 | 1019.48 | -6.15 | 17.58 | 18.6 | 109.3 | 0.7 | 29.9 |
| 1030.0 | 1029.48 | -6.16 | 17.66 | 18.7 | 109.2 | 0.5 | 44.5 |
| 1040.0 | 1039.48 | -6.16 | 17.74 | 18.8 | 109.1 | 0.5 | 79.1 |
| 1050.0 | 1049.48 | -6.17 | 17.81 | 18.8 | 109.1 | 0.3 | 106.2 |
| 1060.0 | 1059.48 | -6.16 | 17.88 | 18.9 | 109.0 | 0.9 | 43.0 |
| 1070.0 | 1069.47 | -5.99 | 18.07 | 19.0 | 108.3 | 1.8 | 48.2 |
| 1080.0 | 1079.47 | -5.82 | 18.42 | 19.3 | 107.5 | 3.1 | 79.1 |
| 1090.0 | 1089.45 | -5.66 | 18.88 | 19.7 | 106.7 | 2.2 | 53.5 |
| 1100.0 | 1099.44 | -5.46 | 19.28 | 20.0 | 105.8 | 2.2 | 52.2 |
| 1110.0 | 1109.43 | -5.25 | 19.65 | 20.3 | 105.0 | 3.2 | 74.5 |
| 1120.0 | 1119.42 | -5.09 | 19.98 | 20.6 | 104.3 | 0.8 | 81.0 |
| 1130.0 | 1129.42 | -5.00 | 20.12 | 20.7 | 104.0 | 0.5 | 82.2 |
| 1140.0 | 1139.42 | -5.06 | 20.26 | 20.9 | 104.0 | 0.6 | 85.8 |
| 1150.0 | 1149.42 | -5.12 | 20.38 | 21.0 | 104.1 | 1.4 | 131.6 |
| 1160.0 | 1159.42 | -5.24 | 20.53 | 21.2 | 104.3 | 1.4 | 122.3 |
| 1170.0 | 1169.42 | -5.37 | 20.72 | 21.4 | 104.5 | 0.9 | 135.8 |
| 1180.0 | 1179.40 | -5.50 | 21.20 | 21.9 | 104.5 | 3.5 | 81.8 |
| 1190.0 | 1189.39 | -5.33 | 21.72 | 22.4 | 103.8 | 2.5 | 55.2 |
| 1200.0 | 1199.38 | -5.10 | 22.06 | 22.6 | 103.0 | 2.4 | 58.6 |
| 1210.0 | 1209.37 | -4.90 | 22.38 | 22.9 | 102.3 | 1.3 | 52.7 |
| 1220.0 | 1219.37 | -4.77 | 22.53 | 23.0 | 102.0 | 1.3 | 46.6 |
| 1230.0 | 1229.37 | -4.66 | 22.70 | 23.2 | 101.6 | 1.5 | 51.7 |
| 1240.0 | 1239.36 | -4.52 | 22.88 | 23.3 | 101.2 | 1.7 | 42.4 |
| 1250.0 | 1249.36 | -4.36 | 23.10 | 23.5 | 100.7 | 3.2 | 86.1 |
| 1260.0 | 1259.34 | -4.29 | 23.67 | 24.1 | 100.3 | 3.4 | 90.4 |
| 1270.0 | 1269.33 | -4.41 | 24.17 | 24.6 | 100.3 | 1.7 | 132.5 |
| 1280.0 | 1279.33 | -4.41 | 24.33 | 24.7 | 100.3 | 1.0 | 56.8 |
| 1290.0 | 1289.32 | -4.26 | 24.54 | 24.9 | 99.8 | 0.8 | 77.0 |
| 1300.0 | 1299.32 | -4.29 | 24.71 | 25.1 | 99.9 | 1.1 | 117.7 |
| 1310.0 | 1309.31 | -4.35 | 25.09 | 25.5 | 99.8 | 3.0 | 68.3 |
| 1320.0 | 1319.30 | -4.16 | 25.50 | 25.8 | 99.3 | 3.3 | 73.4 |
| 1330.0 | 1329.29 | -4.03 | 25.91 | 26.2 | 98.8 | 1.0 | 67.9 |
| 1340.0 | 1339.27 | -4.14 | 26.44 | 26.8 | 98.9 | 3.0 | 99.3 |
| 1350.0 | 1349.26 | -4.17 | 26.93 | 27.3 | 98.8 | 2.7 | 105.3 |
| 1360.0 | 1359.25 | -4.29 | 27.27 | 27.6 | 98.9 | 1.5 | 235.7 |
| 1370.0 | 1369.25 | -4.30 | 27.27 | 27.6 | 99.0 | 1.4 | 168.9 |
| 1380.0 | 1379.25 | -4.33 | 27.39 | 27.7 | 99.0 | 1.0 | 188.4 |
| 1390.0 | 1389.25 | -4.48 | 27.41 | 27.8 | 99.3 | 0.6 | 165.0 |
| 1400.0 | 1399.25 | -4.54 | 27.42 | 27.8 | 99.4 | 0.3 | 153.5 |
| 1410.0 | 1409.25 | -4.52 | 27.42 | 27.8 | 99.4 | 0.2 | 141.3 |
| 1420.0 | 1419.25 | -4.42 | 27.30 | 27.7 | 99.2 | 1.1 | 306.5 |
| 1430.0 | 1429.24 | -4.26 | 27.05 | 27.4 | 98.9 | 2.2 | 294.1 |
| 1440.0 | 1439.23 | -4.12 | 26.60 | 26.9 | 98.8 | 3.5 | 289.8 |
| 1450.0 | 1449.21 | -3.92 | 25.98 | 26.3 | 98.6 | 4.1 | 286.3 |
| 1460.0 | 1459.17 | -3.71 | 25.17 | 25.4 | 98.4 | 5.2 | 276.6 |
| 1470.0 | 1469.12 | -3.48 | 24.17 | 24.4 | 98.2 | 6.2 | 279.0 |
| 1480.0 | 1479.05 | -3.22 | 22.98 | 23.2 | 98.0 | 8.3 | 283.0 |
| 1490.0 | 1488.95 | -2.90 | 21.62 | 21.8 | 97.6 | 8.7 | 282.1 |
| 1500.0 | 1498.82 | -2.59 | 20.07 | 20.2 | 97.4 | 9.3 | 285.6 |
| 1510.0 | 1508.67 | -2.24 | 18.37 | 18.5 | 97.0 | 10.5 | 286.6 |
| 1520.0 | 1518.49 | -1.77 | 16.56 | 16.7 | 96.1 | 11.3 | 283.9 |
| 1530.0 | 1528.28 | -1.28 | 14.59 | 14.6 | 95.0 | 12.2 | 284.1 |
| 1540.0 | 1538.04 | -0.72 | 12.47 | 12.5 | 93.3 | 13.2 | 287.3 |
| 1550.0 | 1547.76 | -0.08 | 10.20 | 10.2 | 90.5 | 14.1 | 281.8 |
| 1560.0 | 1557.44 | 0.59 | 7.78 | 7.8 | 85.7 | 15.0 | 286.9 |
| 1570.0 | 1567.07 | 1.27 | 5.20 | 5.4 | 76.3 | 16.0 | 286.2 |
| 1580.0 | 1576.66 | 2.09 | 2.49 | 3.2 | 50.1 | 16.9 | 288.6 |
| 1590.0 | 1586.21 | 2.92 | -0.35 | 2.9 | 353.2 | 18.0 | 286.3 |
| 1600.0 | 1595.71 | 3.84 | -3.35 | 5.1 | 318.9 | 18.7 | 283.1 |

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|---|---|---|---|---|---|---|---|
| 1510.0 | 1508.67 | -2.24 | 16.57 | 16.7 | 96.1 | 11.3 | 283.9 |
| 1520.0 | 1518.49 | -1.77 | 16.56 | 16.7 | 96.1 | 11.3 | 283.9 |
| 1530.0 | 1528.28 | -1.28 | 14.59 | 14.6 | 95.0 | 12.2 | 284.1 |
| 1540.0 | 1538.04 | -0.72 | 12.47 | 12.5 | 93.3 | 13.2 | 287.3 |
| 1550.0 | 1547.76 | -0.08 | 10.20 | 10.2 | 90.5 | 14.1 | 281.8 |
| 1560.0 | 1557.44 | 0.59 | 7.78 | 7.8 | 85.7 | 15.0 | 286.9 |
| 1570.0 | 1567.07 | 1.27 | 5.20 | 5.4 | 76.3 | 16.0 | 286.2 |
| 1580.0 | 1576.66 | 2.09 | 2.49 | 3.2 | 50.1 | 16.9 | 288.6 |
| 1590.0 | 1586.21 | 2.92 | -0.35 | 2.9 | 353.2 | 18.0 | 286.3 |
| 1600.0 | 1595.71 | 3.84 | -3.35 | 5.1 | 318.9 | 18.7 | 283.1 |
| 1610.0 | 1605.14 | 4.82 | -6.52 | 8.1 | 306.5 | 19.7 | 284.9 |
| 1620.0 | 1614.51 | 5.90 | -9.82 | 11.5 | 301.0 | 20.9 | 281.7 |
| 1630.0 | 1623.82 | 6.86 | -13.34 | 15.0 | 297.2 | 21.8 | 287.7 |
| 1640.0 | 1633.07 | 8.04 | -16.94 | 18.7 | 295.4 | 22.9 | 290.0 |
| 1650.0 | 1642.26 | 9.05 | -20.75 | 22.6 | 293.6 | 24.1 | 284.2 |
| 1660.0 | 1651.36 | 10.01 | -24.66 | 26.6 | 292.1 | 24.8 | 252.9 |
| 1664.0 | 1654.97 | 9.59 | -26.28 | 28.0 | 290.0 | 25.0 | 247.3 |

Well: **T39H**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 18 | 24" | | | X | 4/3/2008 | |
| Surface | 16" | | 20" | | | | | |
| Water Protection | 13 3/8" | 340.65 | 15 3/8" | 197.4 | X | | 4/4/2008 | Basket @ 88' |
| Coal Protection | 13 3/8" | 340.65 | 15 3/8" | 197.4 | X | | 4/4/2008 | Basket @ 88' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE T-39H

RIG #: 799

LOCATION: OSBORNE MTN. - HURRICANE BR.

DATE STARTED: 4/1/2008

DATE COMPLETED: 4/7/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 18 | 18 | |
| 18 | 27 | 9 | SANDSTONE |
| 27 | 58 | 31 | SANDSTONE |
| 58 | 89 | 31 | SAND/SHALE |
| 89 | 120 | 31 | SANDSTONE |
| 120 | 151 | 31 | SAND/SHALE |
| 151 | 182 | 31 | SAND/SHALE |
| 182 | 213 | 31 | SAND/SHALE |
| 213 | 243 | 30 | SANDSTONE |
| 243 | 275 | 32 | SANDY SHALE/COAL |
| 275 | 307 | 32 | SANDSTONE |
| 307 | 339 | 32 | SANDSTONE/SANDY SHALE |
| 339 | 370 | 31 | SANDSTONE/SANDY SHALE |
| 370 | 378 | 8 | SHALE |
| 378 | 409 | 31 | SHALE/SAND |
| 409 | 440 | 31 | SHALE/SAND |
| 440 | 471 | 31 | SHALE/SAND |
| 471 | 501 | 30 | SHALE/SAND/COAL |
| 501 | 533 | 32 | SHALE/SAND |
| 533 | 565 | 32 | SHALE/SAND |
| 565 | 597 | 32 | SHALE/SAND |
| 597 | 628 | 31 | SHALE/SAND |
| 628 | 660 | 32 | SHALE/SAND |
| 660 | 692 | 32 | SHALE/SAND/COAL |
| 692 | 723 | 31 | SAND/SHALE |
| 723 | 755 | 32 | SAND/SHALE |
| 755 | 786 | 31 | SAND/SHALE |
| 786 | 818 | 32 | SHALE/COAL |
| 818 | 849 | 31 | SHALE |
| 849 | 871 | 22 | SHALE |
| 871 | 902 | 31 | SAND/SHALE |
| 902 | 934 | 32 | SHALE/COAL |
| 934 | 966 | 32 | SHALE |
| 966 | 997 | 31 | SHALE/COAL |

| | | | |
|---|---|---|---|
| 997 | 1029 | 32 | SHALE/SAND/COAL |
| 1029 | 1060 | 31 | SHALE/COAL |
| 1060 | 1092 | 32 | SAND/SHALE |
| 1092 | 1124 | 32 | SHALE/COAL |
| 1124 | 1155 | 31 | SHALE/COAL |
| 1155 | 1187 | 32 | SAND/SHALE/COAL |
| 1187 | 1219 | 32 | SAND/SHALE/COAL |
| 1219 | 1250 | 31 | SHALE/COAL/SAND |
| 1250 | 1282 | 32 | SHALE/SAND/COAL |
| 1282 | 1313 | 31 | SHALE/SAND/COAL |
| 1313 | 1345 | 32 | SHALE/SAND/COAL |
| 1345 | 1376 | 31 | SANDSTONE |
| 1376 | 1408 | 32 | SAND/SHALE/COAL |
| 1408 | 1440 | 32 | SAND/SHALE |
| 1440 | 1471 | 31 | SHALE/SAND |
| 1471 | 1503 | 32 | SANDY/SHALE/COAL |
| 1503 | 1535 | 32 | SANDSTONE |
| 1535 | 1567 | 32 | SANDSTONE/COAL |
| 1567 | 1598 | 31 | SAND/SHALE/COAL |
| 1598 | 1630 | 32 | SAND/SHALE |
| 1630 | 1658 | 28 | SHALE/SAND |

1658' TOTAL DEPTH
18' OF 22" CASING
340.65' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 373
**Company:** CNX Gas Company LLC
**File Number:** BU-3254
**Operations Name:** CBM U37E W/PL
**Operation Type:** Coalbed/Pipeline
**Completion Report Type:** Original

# COMPLETION REPORT (DGO-GO-15)

**Well Type:** Coalbed/Pipeline **Date Well Completed:** 1/11/2007
**Driller's Total Depth:** 1,896 **Log's Total Depth:** 1,902

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

☐ Stimulated ☐ Not Stimulated ☑ Gob

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 5/24/2007 2:26:16 PM *(Company)*

By: Leslie K Arrington Title: Manger Environmental Permitting *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 5/24/2007

Status: Inspr Approved Date: 10/9/2007

Final PDF Date: 10/9/2007

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 406 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3254 |
| **Operations Name:** | CBM U37E W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 1/3/2007
Drilling Contractor: Noah Horn
Date drilling completed: 1/11/2007
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,896
Log Total Depth (feet): 1,902
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,013,217
Final Plat State Plane X: 1,013,217
Permitted State Plane Y: 327,924
Final Plat State Plane Y: 327,925
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | U37E Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | U37E Exhibit A.doc |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | U37E Gas Show.doc |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper Density Deviation Temp Gamma

Did logs disclose vertical locations of a coal seam? ☑ Yes ☐ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | U37E Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | U37E Casing.doc |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

Mine Void @ 275' - 280'

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | U37E Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 5/24/2007 *(Company)*

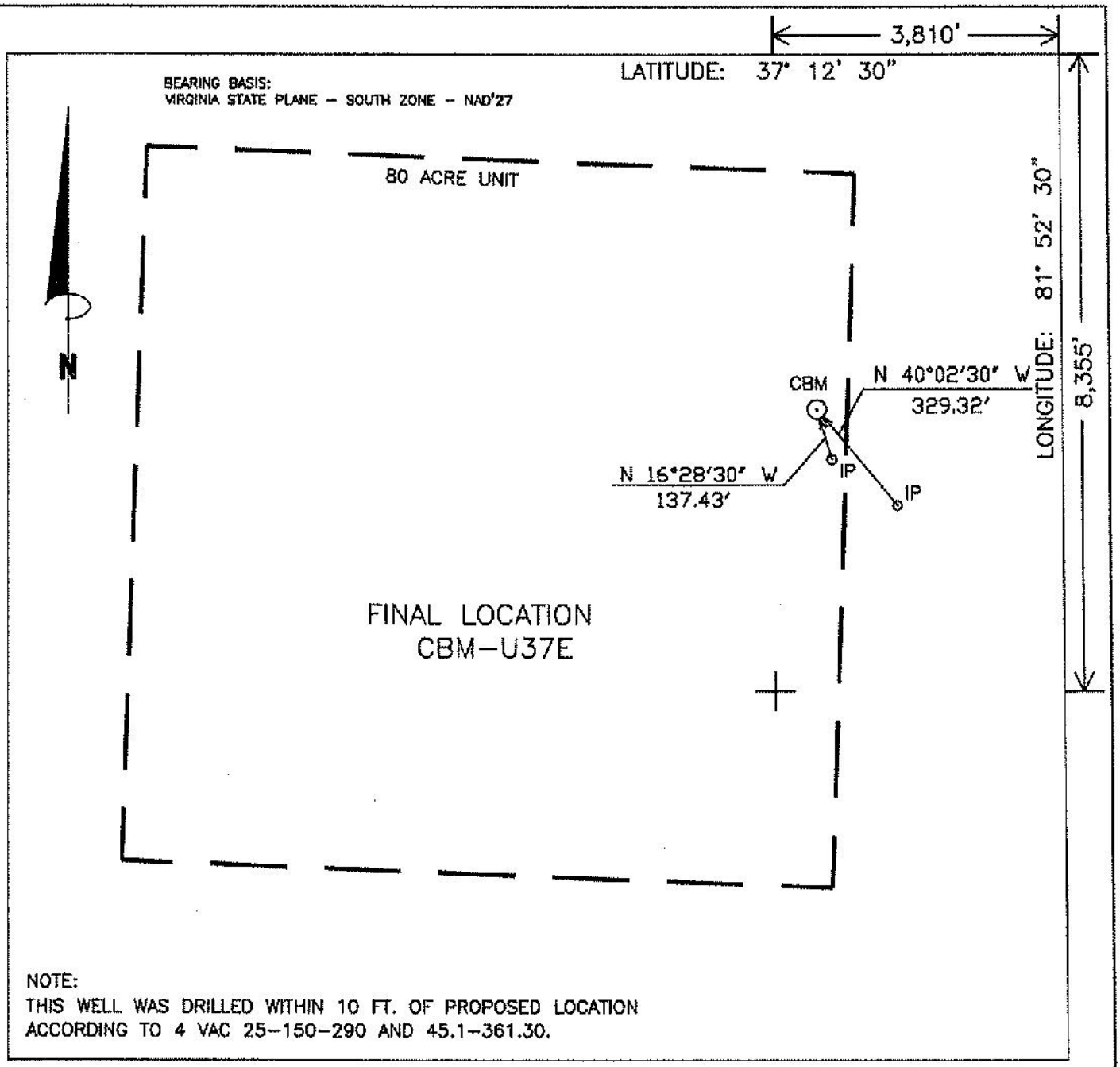
Signed By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 5/24/2007

Status: Inspr Approved Date: 6/11/2007

Final PDF Date: 7/2/2007




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

U37EFNL
2N24/68–556/48

# WELL LOCATION PLAT

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–U37E

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 327,925.11 E 1,013,216.61

ELEVATION: 2393.12' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONTROL BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 01–05–07

THIS PLAT IS A NEW PLAT ____; AN UPDATED PLAT ____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

D R Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. B. PRICE
LICENSE No.
8540
1-5-07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

# Exhibit A

Well Name: 07 CBM U37E
SURFACE ELEV: 2393.12  EASTING: 1013216.61  NORTHING:  327925.11

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| AL1 | 118.50 | 119.50 | 2274.62 | 1.00 | |
| | 119.50 | 133.00 | 2273.62 | 13.50 | |
| AL2 | 133.00 | 134.10 | 2260.12 | 1.10 | |
| | 134.10 | 249.30 | 2259.02 | 115.20 | |
| RA1 | 249.30 | 251.90 | 2143.82 | 2.60 | |
| | 251.90 | 275.00 | 2141.22 | 23.10 | |
| RA2 | 275.00 | 279.80 | 2118.12 | 4.80 | MINED OUT |
| | 279.80 | 297.50 | 2113.32 | 17.70 | |
| RA3 | 297.50 | 299.50 | 2095.62 | 2.00 | |
| | 299.50 | 382.00 | 2093.62 | 82.50 | |
| JB1 | 382.00 | 384.00 | 2011.12 | 2.00 | |
| | 384.00 | 424.90 | 2009.12 | 40.90 | |
| JB3 | 424.90 | 427.50 | 1968.22 | 2.60 | |
| | 427.50 | 523.20 | 1965.62 | 95.70 | |
| TI | 523.20 | 524.50 | 1869.92 | 1.30 | |
| | 524.50 | 646.10 | 1868.62 | 121.60 | |
| *US1 | 646.10 | 647.50 | 1747.02 | 1.40 | |
| | 647.50 | 740.00 | 1745.62 | 92.50 | |
| *COAL | 740.00 | 740.40 | 1653.12 | 0.40 | |
| | 740.40 | 746.40 | 1652.72 | 6.00 | |
| *US2 | 746.40 | 747.00 | 1646.72 | 0.60 | |
| | 747.00 | 866.10 | 1646.12 | 119.10 | |
| *COAL | 866.10 | 867.10 | 1527.02 | 1.00 | |
| | 867.10 | 919.00 | 1526.02 | 51.90 | |
| *SE1 | 919.00 | 919.70 | 1474.12 | 0.70 | |
| | 919.70 | 953.50 | 1473.42 | 33.80 | |
| *SE2 | 953.50 | 955.00 | 1439.62 | 1.50 | |
| | 955.00 | 994.80 | 1438.12 | 39.80 | |
| *LS1 | 994.80 | 996.10 | 1398.32 | 1.30 | |
| | 996.10 | 1003.00 | 1397.02 | 6.90 | |
| *COAL | 1003.00 | 1003.20 | 1390.12 | 0.20 | |
| | 1003.20 | 1010.00 | 1389.92 | 6.80 | |
| *LS2 | 1010.00 | 1011.00 | 1383.12 | 1.00 | |
| | 1011.00 | 1052.50 | 1382.12 | 41.50 | |
| *UH1 | 1052.50 | 1053.50 | 1340.62 | 1.00 | |
| | 1053.50 | 1113.60 | 1339.62 | 60.10 | |
| *UH2 | 1113.60 | 1115.80 | 1279.52 | 2.20 | |
| | 1115.80 | 1165.90 | 1277.32 | 50.10 | |
| *MH1 | 1165.90 | 1167.30 | 1227.22 | 1.40 | |
| | 1167.30 | 1229.00 | 1225.82 | 61.70 | |
| *MH2 | 1229.00 | 1230.00 | 1164.12 | 1.00 | |
| | 1230.00 | 1275.40 | 1163.12 | 45.40 | |
| *P11 | 1275.40 | 1279.00 | 1117.72 | 3.60 | |
| | 1279.00 | 1301.80 | 1114.12 | 22.80 | |
| *P10 | 1301.80 | 1303.70 | 1091.32 | 1.90 | |
| | 1303.70 | 1358.20 | 1089.42 | 54.50 | |
| *LH2 | 1358.20 | 1359.70 | 1034.92 | 1.50 | |

| | | | | |
|---|---|---|---|---|
| | 1359.70 | 1430.40 | 1033.42 | 70.70 |
| *P91 | 1430.40 | 1432.00 | 962.72 | 1.60 |
| | 1432.00 | 1440.50 | 961.12 | 8.50 |
| *P92 | 1440.50 | 1441.70 | 952.62 | 1.20 |
| | 1441.70 | 1442.80 | 951.42 | 1.10 |
| *P92 | 1442.80 | 1443.80 | 950.32 | 1.00 |
| | 1443.80 | 1452.80 | 949.32 | 9.00 |
| *COAL | 1452.80 | 1453.60 | 940.32 | 0.80 |
| | 1453.60 | 1489.10 | 939.52 | 35.50 |
| *COAL | 1489.10 | 1489.90 | 904.02 | 0.80 |
| | 1489.90 | 1517.90 | 903.22 | 28.00 |
| *P82 | 1517.90 | 1518.90 | 875.22 | 1.00 |
| | 1518.90 | 1702.50 | 874.22 | 183.60 |
| *P62 | 1702.50 | 1703.00 | 690.62 | 0.50 |
| | 1703.00 | 1736.00 | 690.12 | 33.00 |
| *P51 | 1736.00 | 1737.40 | 657.12 | 1.40 |
| | 1737.40 | 1833.00 | 655.72 | 95.60 |
| *P41 | 1833.00 | 1834.10 | 560.12 | 1.10 |
| | 1834.10 | 1902.38 | 559.02 | 68.28 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\U37E.CMP
DATE: 02/07/07

# Oil & Gas Show

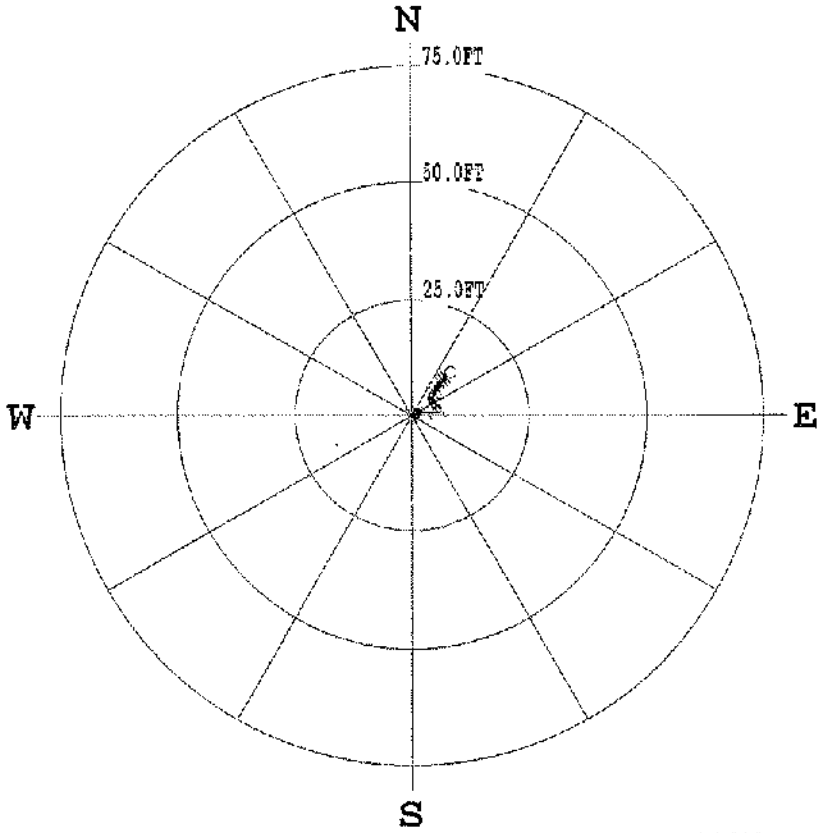
| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Lee/Norton | 646 | 1519 | 873 | | | |
| Pocahontas | 1736 | 1834 | 98 | | | |
| Total | | | | No Show | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

LIENT: CNX Gas
OCATION:
OLE ID: 07-CNX-U-37-E
ATE OF LOG: 01/11/07
ROBE: 0019C 732

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1895.82 FT
AZIMUTH: 42.2
DISTANCE: 12.4 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX Gas
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 07-CNX-U-37-E
DATE OF LOG : 01/11/07
PROBE : 0019C , 732
DEPTH UNITS : FEET
LOG: 07-CNX-U-37-E_01-11-07_16-03_0019C_.02_-9.17_1897.64_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGE |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | 0.49 | 0.56 | 0.6 | 70.9 | 1.4 | 337.4 |
| 60.0 | 59.99 | 0.39 | 0.40 | 0.6 | 45.8 | 1.5 | 298.5 |
| 70.0 | 69.99 | 0.41 | 0.16 | 0.4 | 21.5 | 1.4 | 246.4 |
| 80.0 | 79.98 | 0.19 | 0.07 | 0.2 | 20.9 | 1.4 | 171.6 |
| 90.0 | 89.98 | -0.04 | 0.16 | 0.2 | 104.2 | 1.4 | 144.9 |
| 100.0 | 99.98 | -0.24 | 0.31 | 0.4 | 127.4 | 1.5 | 130.1 |
| 110.0 | 109.97 | -0.40 | 0.51 | 0.6 | 128.6 | 1.5 | 120.3 |
| 120.0 | 119.97 | -0.53 | 0.73 | 0.9 | 126.0 | 1.4 | 113.4 |
| 130.0 | 129.97 | -0.61 | 0.98 | 1.2 | 122.0 | 1.6 | 107.7 |
| 140.0 | 139.96 | -0.60 | 1.24 | 1.4 | 115.9 | 1.5 | 64.6 |
| 150.0 | 149.96 | -0.44 | 1.45 | 1.5 | 106.8 | 1.6 | 29.4 |
| 160.0 | 159.96 | -0.17 | 1.55 | 1.6 | 96.2 | 1.7 | 9.0 |
| 170.0 | 169.95 | 0.12 | 1.50 | 1.5 | 85.4 | 1.9 | 335.5 |
| 180.0 | 179.95 | 0.37 | 1.32 | 1.4 | 74.2 | 2.1 | 309.8 |
| 190.0 | 189.94 | 0.44 | 1.05 | 1.1 | 67.3 | 1.6 | 259.3 |
| 200.0 | 199.94 | 0.29 | 0.86 | 0.9 | 71.1 | 1.1 | 202.7 |
| 210.0 | 209.94 | 0.13 | 0.94 | 1.0 | 82.3 | 1.1 | 101.4 |

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | Cemented To Surface No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22” | 20’ | 24” | | | X | 1/3/2007 | |
| Surface | 16” | 329.5’ | 20” | 360 | | X | 1/4/2007 | Basket @ 75’ |
| Water Protection | 13 3/8” | 577.45’ | 15 3/8” | 223 | X | | 1/8/2007 | Basket @ 80’ |
| Coal Protection | | | | | | | | |
| Other Casing And Tubing Left In Well | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** CNX **HOLE #:** U-37E

**LOCATION:** OSBORNE MTN, VA **DRILL RIG #:** 87

**DATE STARTED:** 01-03-07 **DATED COMPLETED:** 01-11-07

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | THICKNESS | | STRATA REMARKS |
|---|---|---|---|
| 0 | 20 | 20 | |
| 20 | 35 | 15 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE |
| 35 | 64 | 29 | SANDY SHALE/SAND STONE/SANDY SHALE/SAND STONE |
| 64 | 93 | 29 | SAND STONE/SANDY SHALE STR /COAL STR |
| 93 | 122 | 29 | SAND STONE |
| 122 | 153 | 31 | COAL/SANDY SHALE/SAND STONE |
| 153 | 216 | 63 | SAND STONE |
| 216 | 248 | 32 | SAND STONE/COAL/SANDY SHALE |
| 248 | 276 | 28 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 276 | 280 | 4 | VOID |
| 280 | 311 | 31 | SANDY SHALE/COAL/SANDY SHALE |
| 311 | 343 | 32 | SANDY SHALE/SAND STONE |
| 343 | 437 | 94 | SAND STONE |
| 437 | 468 | 31 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE |
| 468 | 499 | 31 | SANDY SHALE/SAND STONE |
| 499 | 529 | 30 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE |
| 529 | 561 | 32 | SANDY SHALE/SAND STONE |
| 561 | 593 | 32 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE |
| 593 | 610 | 17 | SANDY SHALE |
| 610 | 633 | 23 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 633 | 665 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 665 | 696 | 31 | SANDY SHALE/SAND STONE |
| 696 | 760 | 64 | SAND STONE/SANDY SHALE STRKS |
| 760 | 791 | 31 | SANDY SHALE/COAL/SANDY SHALE |
| 791 | 823 | 32 | SANDY SHALE (POSS COAL) |
| 823 | 854 | 31 | SANDY SHALE/SAND STONE STR |
| 854 | 884 | 30 | SANDY SHALE |
| 884 | 916 | 32 | SANDY SHALE |
| 916 | 948 | 32 | SANDY SHALE/COAL/SANDY SHALE /SAND STONE STR/SANDY SHALE |
| 948 | 979 | 31 | SANDY SHALE |
| 979 | 1011 | 32 | SANDY SHALE/COAL/SANDY SHALE/SAND STONE |
| 1011 | 1043 | 32 | SAND STONE/SANDY SHALE |
| 1043 | 1106 | 63 | SAND STONE |
| 1106 | 1138 | 32 | SAND STONE/SANDY SHALE /COAL /SAND STONE |
| 1138 | 1169 | 31 | SAND STONE/SANDY SHALE |

| | | | |
|---|---|---|---|
| 1169 | 1201 | 32 | SANDY SHALE |
| 1201 | 1233 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 1233 | 1264 | 31 | SANDY SHALE |
| 1264 | 1296 | 32 | SANDY SHALE/SAND STONE |
| 1296 | 1327 | 31 | SAND STONE |
| 1327 | 1359 | 32 | SAND STONE STR/SANDY SHALE |
| 1359 | 1390 | 31 | SANDY SHALE |
| 1390 | 1424 | 34 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1424 | 1454 | 30 | SANDY SHALE/COAL/SANDY SHALE |
| 1454 | 1485 | 31 | SANDY SHALE |
| 1485 | 1517 | 32 | SANDY SHALE/COAL/SAND STONE |
| 1517 | 1549 | 32 | SAND STONE/COAL/SANDY SHALE/SAND |
| STONE | | | |
| 1549 | 1580 | 31 | SAND STONE |
| 1580 | 1612 | 32 | SAND STONE |
| 1612 | 1643 | 31 | SAND STONE/SANDY SHALE/SAND STONE |
| 1643 | 1675 | 32 | SAND STONE |
| 1675 | 1706 | 31 | SAND STONE/SANDY SHALE/SAND STONE |
| 1706 | 1738 | 32 | SAND STONE/SANDY SHALE /COAL /SANDY |
| SHALE | | | |
| 1738 | 1770 | 32 | SANDY SHALE/COAL/SANDY SHALE STR |
| 1770 | 1833 | 63 | SANDY SHALE |
| 1833 | 1865 | 32 | SANDY SHALE/COAL/SANDY SHALE/SAND |
| STONE | | | |
| 1865 | 1896 | 31 | SAND STONE/SANDY SHALE |

1896.00 FT. TOTAL DEPTH
20.00 FT. OF 22" CASING
329.50 FT. OF 16" CASING
577.45 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 3888 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1175 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coal Bed | **Date Well Completed:** | 8/14/1997 |
| **Driller's Total Depth:** | 1752.10 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: £ Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| U38 | BU-1175 STIM.pdf |

## 3. Final Production

| Description | FileName |
|---|---|
| U38 | BU-1175 STIM.pdf |

## 4. Comments

*Notes:*

[7/2/2013, jsa]
Information inserted by DGO [6/25/2013, jhh]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/28/2013 | *(Company)* |
| By: | Leslie Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/28/2013 | | |
| Status: | Approved | Date: | 7/2/2013 |
| Final PDF Date: | 7/2/2013 | | |

BH-1175
U-38

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-U-38
Permit #: 3409

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 8/14/97 Total Depth of Well: 1752.1'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** MH, UH, LS, S Formation Stimulated With: 417 MSCF N2, 345 bbl water
286 sx 20/40 and 140 sx 12/20
Perforated: 701 TO 912 No. of Perforations: 52 Perforation Size: .70" EHD
Formation Broke Down at: 1622 PSIG Average Injection Rate 30 BPM
ISIP 1825 PSIG 5 MIN SIP 1002 PSIG Average Injection Pressure: 2457 PSIG
Date stimulated: 8/14.

**Zone 5:** _____ Formation Stimulated With: _____
_____
Perforated: __ TO ____ No. ofPerforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG __ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

**Zone 6:** _____ Formation Stimulated With: _____
_____
Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ____ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (4) | NA | | | | |
| Zone (5) | | | | | |
| Zone (6) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

B4-1175

U-38

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-U-38
Permit #: 3409

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 8/14/97 Total Depth of Well: 1752.1'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 637 MSCF N2, 453 bbl water
502 sx 20/40 and 305 sx 12/20
Perforated: 1651 TO 1656 No. of Perforations: OH Perforation Size: NA
Formation Broke Down at: 2186 PSIG Average Injection Rate 30 BPM
ISIP 1628 PSIG 5 MIN SIP 1598 PSIG Average Injection Pressure: 2436 PSIG
Date stimulated: 8/14.

**Zone 2:** P4, P5, P6, P7, P9 Formation Stimulated With: 612 MSCF N2, 408 bbl water
402 sx 20/40 and 202 sx 12/20
Perforated: 1174 TO 1572 No. of Perforations: 48 Perforation Size: .70" EHD
Formation Broke Down at: 2247 PSIG Average Injection Rate 30 BPM
ISIP 1705 PSIG 5 MIN SIP 1341 PSIG Average Injection Pressure: 2934 PSIG
Date stimulated: 8/14.

**Zone 3:** P10, P11, LH3, MH Formation Stimulated With: 395 MSCF N2, 337 bbl water
338 sx 20/40 and 167 sx 12/20
Perforated: 985 TO 1096 No. of Perforations: 36 Perforation Size: .70" EHD
Formation Broke Down at: 2112 PSIG Average Injection Rate 30 BPM
ISIP 1222 PSIG 5 MIN SIP 970 PSIG Average Injection Pressure: 2084 PSIG
Date stimulated: 8/14.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | NA | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

BH-1175
U-38

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-U-38
Permit #: 3409

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 8/14/97 Total Depth of Well: 1752.1'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** MH, UH, LS, S Formation Stimulated With: 417 MSCF N2, 345 bbl water
286 sx 20/40 and 140 sx 12/20
Perforated: 701 TO 912 No. of Perforations: 52 Perforation Size: .70" EHD
Formation Broke Down at: 1622 PSIG Average Injection Rate 30 BPM
ISIP 1825 PSIG 5 MIN SIP 1002 PSIG Average Injection Pressure: 2457 PSIG
Date stimulated: 8/14.

**Zone 5:** _____ Formation Stimulated With: _____
_____
Perforated: __ TO ____ No. ofPerforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG __ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

**Zone 6:** _____ Formation Stimulated With: _____
_____
Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ____ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (4) | NA | | | | |
| Zone (5) | | | | | |
| Zone (6) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

B4-1175

U-38

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-U-38
Permit #: 3409

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 8/14/97 Total Depth of Well: 1752.1'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 637 MSCF N2, 453 bbl water
502 sx 20/40 and 305 sx 12/20
Perforated: 1651 TO 1656 No. of Perforations: OH Perforation Size: NA
Formation Broke Down at: 2186 PSIG Average Injection Rate 30 BPM
ISIP 1628 PSIG 5 MIN SIP 1598 PSIG Average Injection Pressure: 2436 PSIG
Date stimulated: 8/14.

**Zone 2:** P4, P5, P6, P7, P9 Formation Stimulated With: 612 MSCF N2, 408 bbl water
402 sx 20/40 and 202 sx 12/20
Perforated: 1174 TO 1572 No. of Perforations: 48 Perforation Size: .70" EHD
Formation Broke Down at: 2247 PSIG Average Injection Rate 30 BPM
ISIP 1705 PSIG 5 MIN SIP 1341 PSIG Average Injection Pressure: 2934 PSIG
Date stimulated: 8/14.

**Zone 3:** P10, P11, LH3, MH Formation Stimulated With: 395 MSCF N2, 337 bbl water
338 sx 20/40 and 167 sx 12/20
Perforated: 985 TO 1096 No. of Perforations: 36 Perforation Size: .70" EHD
Formation Broke Down at: 2112 PSIG Average Injection Rate 30 BPM
ISIP 1222 PSIG 5 MIN SIP 970 PSIG Average Injection Pressure: 2084 PSIG
Date stimulated: 8/14.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | NA | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 3888 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1175 |
| **Operations Name:** | PGP U38 W/PL |
| **Operation Type:** | Coal Bed |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 7/14/1997

Drilling Contractor: Noah Horn

Date drilling completed: 7/17/1997

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 1752.10

Log Total Depth (feet): 0.00

Coal Seam At Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10497381.9000

Permitted State Plane Y: 3608914.4000

Final Plat State Plane X: 10497381.9980

Final Plat State Plane Y: 3608914.2790

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| U38 | BU-1175 PLAT.pdf |

**3. Geological Data**

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| U38 | BU-1175 COAL.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| U38 | BU-1175 GS.pdf |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: Deviation/Gamma/Calipier

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|
| U38 | BU-1175 CASING.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|---|---|
| U38 | BU-1175 CASING.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By:

List of Attached Items:

| Description | FileName |
|---|---|
| U38 | BU-1175 LOG.pdf |

## 9. Comments

[7/2/2013, jsa]
Information inserted by DGO [6/25/2013, jhh]

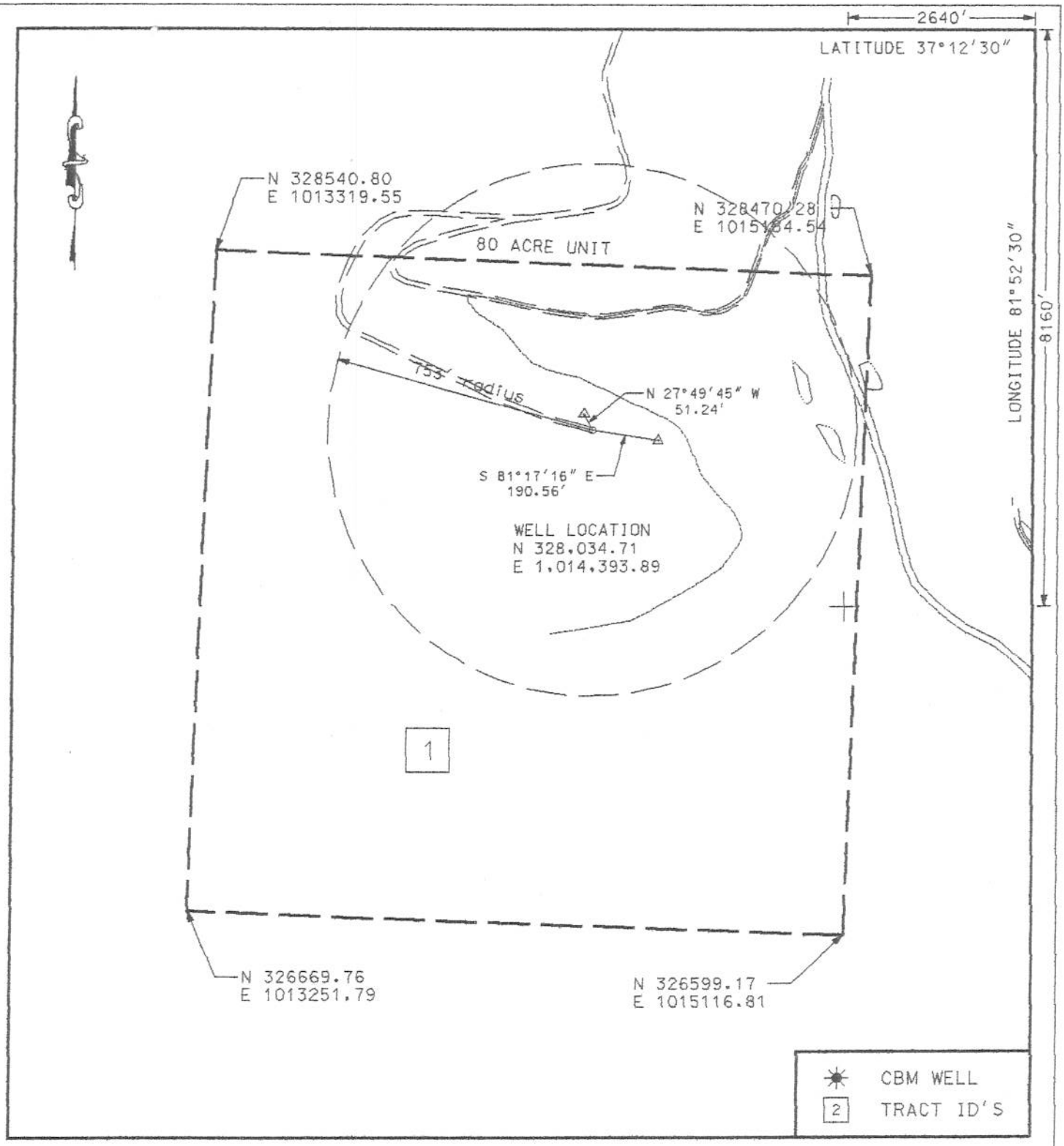
## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/28/2013

Signed By: Leslie Arrington Title: **********

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/28/2013 | | |
| Status: | A | Date: | 7/2/2013 |
| Final PDF Date: | 11/8/2013 | | |




# WELL LOCATION PLAT

Company Pocahontas Gas Partnership Well Name and Number CBM-PGP-U38

Tract No. Coal Mountain Elevation 2135.79' Quadrangle Keen Mountain

County Buchanan District Garden Scale: 1" = 400' Date 7/23/97

This plat is a new plat ____ ; an updated plat ____ ; or a final plat X

\+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

Form DGO-GO-7
Rev. 9/91

_____ (Affix Seal)

Licensed Professional Engineer or Licensed Land Surveyor

Exhibit A

Well Name: 97-PGP-U38
Elevation: 2135.79

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA3 | 34.30 | 36.00 | 2101.49 | 1.70 | |
| | 36.00 | 115.40 | 2099.79 | 79.40 | |
| JB1 | 115.40 | 117.30 | 2020.39 | 1.90 | |
| | 117.30 | 153.10 | 2018.49 | 35.80 | |
| JB3 | 153.10 | 155.40 | 1982.69 | 2.30 | |
| | 155.40 | 249.40 | 1980.39 | 94.00 | |
| TI | 249.40 | 250.90 | 1886.39 | 1.50 | |
| | 250.90 | 483.90 | 1884.89 | 233.00 | |
| US2 | 483.90 | 484.50 | 1651.89 | 0.60 | |
| | 484.50 | 663.00 | 1651.29 | 178.50 | |
| SE1 | 663.00 | 664.10 | 1472.79 | 1.10 | |
| | 664.10 | 700.40 | 1471.69 | 36.30 | |
| SE2 | 700.40 | 701.60 | 1435.39 | 1.20 | |
| | 701.60 | 702.40 | 1434.19 | 0.80 | |
| SE3 | 702.40 | 702.80 | 1433.39 | 0.40 | |
| | 702.80 | 744.10 | 1432.99 | 41.30 | |
| LS1 | 744.10 | 746.30 | 1391.69 | 2.20 | |
| | 746.30 | 756.90 | 1389.49 | 10.60 | |
| LS2 | 756.90 | 757.70 | 1378.89 | 0.80 | |
| | 757.70 | 802.80 | 1378.09 | 45.10 | |
| UH1 | 802.80 | 804.00 | 1332.99 | 1.20 | |
| | 804.00 | 855.00 | 1331.79 | 51.00 | |
| UH3 | 855.00 | 856.00 | 1280.79 | 1.00 | |
| | 856.00 | 910.00 | 1279.79 | 54.00 | |
| MH1 | 910.00 | 911.90 | 1225.79 | 1.90 | |
| | 911.90 | 985.00 | 1223.89 | 73.10 | |
| MH2 | 985.00 | 986.40 | 1150.79 | 1.40 | |
| | 986.40 | 1015.00 | 1149.39 | 28.60 | |
| P11 | 1015.00 | 1017.10 | 1120.79 | 2.10 | |
| | 1017.10 | 1040.00 | 1118.69 | 22.90 | |
| P10 | 1040.00 | 1041.10 | 1095.79 | 1.10 | |
| | 1041.10 | 1094.90 | 1094.69 | 53.80 | |
| LH3 | 1094.90 | 1095.80 | 1040.89 | 0.90 | |
| | 1095.80 | 1174.00 | 1039.99 | 78.20 | |
| P91 | 1174.00 | 1175.20 | 961.79 | 1.20 | |
| | 1175.20 | 1204.80 | 960.59 | 29.60 | |
| P92 | 1204.80 | 1205.90 | 930.99 | 1.10 | |
| | 1205.90 | 1259.00 | 929.89 | 53.10 | |
| P71 | 1259.00 | 1259.80 | 876.79 | 0.80 | |
| | 1259.80 | 1425.10 | 875.99 | 165.30 | |
| P61 | 1425.10 | 1425.50 | 710.69 | 0.40 | |
| | 1425.50 | 1444.90 | 710.29 | 19.40 | |
| P62 | 1444.90 | 1445.20 | 690.89 | 0.30 | |
| | 1445.20 | 1476.00 | 690.59 | 30.80 | |
| P51 | 1476.00 | 1477.80 | 659.79 | 1.80 | |
| | 1477.80 | 1570.00 | 657.99 | 92.20 | |
| P42 | 1570.00 | 1571.20 | 565.79 | 1.20 | |
| | 1571.20 | 1650.50 | 564.59 | 79.30 | |
| P3 | 1650.50 | 1657.70 | 485.29 | 7.20 | |

| | | | |
|---|---|---|---|
| 1657.70 | 1696.90 | 478.09 | 39.20 |
| 1696.90 | 1697.90 | 438.89 | 1.00 |
| 1697.90 | 1753.00 | 437.89 | 55.10 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION

BO-175

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP-U38
Permit #: 3409

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## DRILLING REPORT

Pursuant to VR-480-05-22.1, s 1.36, the undersigned Permittee submits this report on Well CBM- PGP-U38 in the Garden District of the Buchanan City/County, Virginia on this 10 day, October month, 19 97.

LOCATION

City/County: Buchanan District: Garden
Surface Elevation: 2135.79' Elevation of Kelly Bushing: _____ Quadrangle: Keen Mountain
---- Ft. S. of Latitude ----- and ---- Ft. W. of Longitude -----

or, State Plane Coordinates: Zone 5 N 328,034.71 E 1,014,393.89

Attach a final location plat as required by VR 480-05-22.1, s 1.36.

DRILLING DATA

Date Drilling Commenced: July 14, 1997 Drilling Contractor: Noah Horn
Date Drilling Completed: July 17, 1997 Rig Type: x Rotary __ Cable Tool
Total Depth of Well: 1752.10'

ENTERED

GEOLOGICAL DATA

Fresh Water at: N/R Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM

Salt Water at: ____ Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM

COAL SEAMS:

| NAME | TOP | BOTTOM | THICKNESS | MINING IN AREA YES | NO | MINED OUT |
|---|---|---|---|---|---|---|
| See DGO-GO-14, Exhibit A | | | | | | |

GAS AND OIL SHOWS:

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 407.55' | 1752.10' | 1344.55' | | | |

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP- U38
Permit #: 3409

Cuttings or samples are __ are not x available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have __ have not x been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes x No _____

SURVEY RESULTS*:

* See Deviation Survey

CASING AND TUBING

| | SIZE | TOP | BOTTOM | CEMENT USED LENGTH | DATE IN CU/FT | PACKERS OR BRIDGE PLUGS CEMENTED | KIND | SIZE | SET AT |
|---|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0 | 19.00' | 19.00' | | | | | |
| Surface | 13 3/8" | 0 | 19.00' | 19.00' | | | | | |
| Water Protection | 8 5/8" | 0 | 407.55' | 407.55' | 7/15/97 | 120 Std | Cement to Surface | | |
| Coal Protection | 8 5/8" | 0 | 407.55' | 407.55' | | | | | |
| Other Casing and Tubing Left In Well | 5 1/2" | 0 | 1638.65' | 1638.65' | 7/29/97 | 120 Std<br>120 H.L. | Cement to Surface | | |

Liners

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.
Basket at 61.20'

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP- U38
Permit #: 3409

Cuttings or samples are __ are not x available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have __ have not x been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes x No _____

SURVEY RESULTS*:

* See Deviation Survey

CASING AND TUBING

| | SIZE | TOP | BOTTOM | CEMENT USED LENGTH | DATE IN CU/FT | PACKERS OR BRIDGE PLUGS CEMENTED | KIND | SIZE | SET AT |
|---|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0 | 19.00' | 19.00' | | | | | |
| Surface | 13 3/8" | 0 | 19.00' | 19.00' | | | | | |
| Water Protection | 8 5/8" | 0 | 407.55' | 407.55' | 7/15/97 | 120 Std | Cement to Surface | | |
| Coal Protection | 8 5/8" | 0 | 407.55' | 407.55' | | | | | |
| Other Casing and Tubing Left In Well | 5 1/2" | 0 | 1638.65' | 1638.65' | 7/29/97 | 120 Std<br>120 H.L. | Cement to Surface | | |

Liners

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.
Basket at 61.20'

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-U38
Permit #: 3409

# DRILLER'S LOG

Compiled by - Noah Horn

| Geologic Age | Formation | General Lithology | Color | Depth Top | Depth Bottom | Thickness | Remarks |
|---|---|---|---|---|---|---|---|
| | | OVERBURDEN | | 0 | 19 | | |
| | | SHALE | | 19 | 70 | | |
| | | SANDY SHALE | | 70 | 130 | | |
| | | COAL | | 130 | 131.5 | | |
| | | SHALE | | 131.5 | 160 | | |
| | | SAND | | 160 | 220 | | |
| Pennsylvanian | Pocahontas | SANDY SHALE | | 220 | 250 | | |
| | | SHALE | | 250 | 310 | | |
| | | SAND | | 310 | 340 | | |
| | | SHALE | | 340 | 370 | | |
| | | SAND | | 370 | 385 | | |
| | | SAND | | 385 | 415 | | |
| | | SAND | | 415 | 510 | | |
| | | SANDY SHALE | | 510 | 570 | | |
| | | SHALE | | 570 | 630 | | |
| | | SANDY SHALE | | 630 | 660 | | |
| | | SAND | | 660 | 720 | | |
| | | SHALE | | 720 | 765 | | |
| | | SAND | | 765 | 810 | | |
| | | COAL | | 810 | 811 | | |
| | | SAND | | 811 | 870 | | |
| | | COAL | | 870 | 871 | | |
| | | SAND W/ SHALE | | 871 | 900 | | |
| | | SHALE | | 900 | 930 | | |
| | | SAND W/ SHALE | | 930 | 960 | | |
| | | SHALE | | 960 | 1010 | | |
| | | COAL | | 1010 | 1011 | | |
| | | SHALE | | 1011 | 1020 | | |
| | | SANDY SHALE | | 1020 | 1050 | | |
| | | COAL | | 1050 | 1051 | | |
| | | SAND | | 1051 | 1110 | | |
| | | SAND | | 1110 | 1140 | | |
| | | COAL | | 1140 | 1141 | | |
| | | SAND W/ SHALE | | 1141 | 1170 | | |
| | | SHALE | | 1170 | 1190 | | |
| | | COAL | | 1190 | 1192 | | |
| | | SHALE | | 1192 | 1210 | | |
| | | COAL | | 1210 | 1211 | | |
| | | SAND | | 1211 | 1230 | | |
| | | SAND | | 1230 | 1290 | | |
| | | SAND W/ SNDY SHLE | | 1290 | 1335 | | |
| | | SHALE | | 1335 | 1350 | | |
| | | SAND | | 1350 | 1380 | | |
| | | SNADY SHALE | | 1380 | 1440 | | |
| | | SAND | | 1440 | 1470 | | |
| | | SHALE | | 1470 | 1500 | | |
| | | SAND | | 1500 | 1590 | | |
| | | SANDY SHALE | | 1590 | 1640 | | |
| | | SHALE | | 1640 | 1652 | | |
| | | COAL | | 1652 | 1657 | | |
| | | SANDY SHALE | | 1657 | 1680 | | |
| | | SAND | | 1680 | 1710 | | |
| | | SANDY SHALE | | 1710 | 1740 | | |
| | | SAND | | 1740 | 1780 | | |

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Thompson (Signature)



Form DGO-GO-14
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 4974 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1544 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 5/25/1999 |
| **Driller's Total Depth:** | 1920.80 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: R Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| STIM | BU-1544 stim.pdf |
| STIM | BU-1544 stim_0328201414073500.pdf |

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

[4/29/2014, jsa]
Material inserted by DGO [3/24/2014, jhh]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 4/1/2014 | *(Company)* |
| By: | Leslie Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 4/1/2014 | | |
| Status: | Approved | Date: | 4/29/2014 |
| Final PDF Date: | 4/29/2014 | | |

BU-1544

Department of Mines, Minerals and Energy
Division of Gas and Oil

ENTERED

Operations Name: CBM-U-38A
Permit #: 4084

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

**COMPLETION REPORT**

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 5/25/99 Total Depth of Well: 1920.7'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 511 MSCF N2, 363 bbl water, 530 sx 16/30

Perforated: 1627 TO 1633 No. of Perforations: 24 Perforation Size: .70" EHD
Formation Broke Down at: 3100 PSIG Average Injection Rate 30 BPM
ISIP 1488 PSIG 5 MIN SIP 1304 PSIG Average Injection Pressure: 2681 PSIG
Date stimulated: 5/25/99.

**Zone 2:** P4-1,P5-1,P6-2,P6-1,C,P8-2,P8-1 Formation Stimulated With: 346 MSCF N2, 269 bbl water, 405 sx 16/30

Perforated: 1196 TO 1545 No. of Perforations: 56 Perforation Size: .70" EHD
Formation Broke Down at: 2747 PSIG Average Injection Rate 30 BPM
ISIP 1295 PSIG 5 MIN SIP 1215 PSIG Average Injection Pressure: 2289 PSIG
Date stimulated: 5/25/99.

**Zone 3:** P9-2,P9-1,LH2,P10,P11,MH2 Formation Stimulated With: 338 MSCF N2, 296 bbl water, 505 sx 16/30

Perforated: 959 TO 1175 No. of Perforations: 52 Perforation Size: .70" EHD
Formation Broke Down at: 1831 PSIG Average Injection Rate 30 BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: 2190 PSIG
Date stimulated: 5/25/99. **Well sanded off!**

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: CONSOL Inc. (Company)
By: Leslie K. Quinn, Jr. (Signature)

Form DGO-GO-15
Rev 9/91

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-U-38A
Permit #: 4084

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 5/25/99 Total Depth of Well: 1920.7'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** MH1,UH3,UH2,UH1,LS2,LS1 Formation Stimulated With: 425 MSCF N2, 341 bbl water, 520 sx 16/30

Perforated: 708 TO 891 No. of Perforations: 48 Perforation Size: .70" EHD
Formation Broke Down at: 2449 PSIG Average Injection Rate 30 BPM
ISIP 1388 PSIG 5 MIN SIP 1228 PSIG Average Injection Pressure: 2561 PSIG
Date stimulated: 5/25/99.

**Zone 2:** _____ Formation Stimulated With: _____

Perforated: ____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

**Zone 3:** _____ Formation Stimulated With: _____

Perforated: ____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: CONSOL Inc. (Company)
By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 4972 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1544 |
| **Operations Name:** | PGP U38A W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 3/30/1999

Drilling Contractor: Noah Horn Well Drilling

Date drilling completed: 4/2/1999

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 1920.79

Log Total Depth (feet): 0.00

Coal Seam at Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10497388.0000

Permitted State Plane Y: 3607736.6200

Final Plat State Plane X: 10497387.9940

Final Plat State Plane Y: 3607736.5930

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | BU-1544 plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|
| 300 | 2 | INCH |

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| COAL | BU-1544 coal.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS | BU-1544 gs.pdf |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Gamma/Caliper/Deviation/Resistivity

Did logs disclose vertical locations of a coal seam? R

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|

## 6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|---|---|
| CASING | BU-1544 casing.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By:

List of Attached Items:

| Description | FileName |
|---|---|
| LOG | BU-1544 log.pdf |

## 9. Comments

[4/29/2014, jsa]
Material inserted by DGO [3/24/2014, jhh]

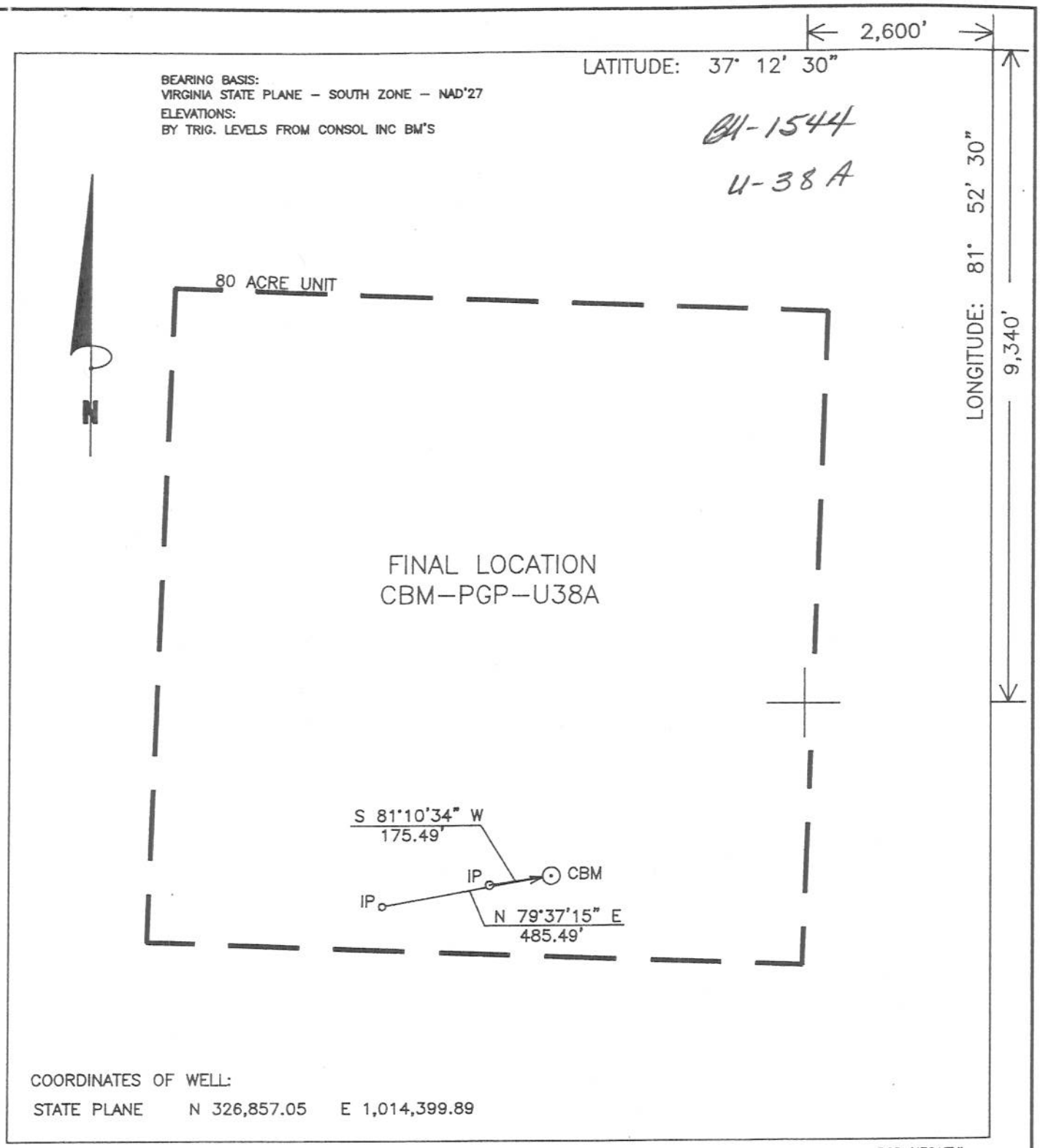
## 10. Signature

Permitee: CNX Gas Company LLC Date: 4/1/2014

Signed By: Leslie Arrington Title: **********

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 4/1/2014 | | |
| Status: | A | Date: | 4/29/2014 |
| Final PDF Date: | 4/29/2014 | | |




COORDINATES OF WELL:

STATE PLANE N 326,857.05 E 1,014,399.89

# WELL LOCATION PLAT

PGP U38AFNL
PGP3/49– 9901/02

Company POCAHONTAS GAS PARTNERSHIP Well Name and Number CBM–PGP–U38A

Tract No. COAL MTN. TRUST Elevation 2110.73 Quadrangle KEEN MOUNTAIN

County BUCHANAN District GARDEN Scale: 1" = 400' Date 03-31-99

This Plat is a new plat ____; an updated plat ____; or a final location plat X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

DRPrice

Licensed Professional Engineer or Licensed Land Surveyor

COMMONWEALTH OF VIRGINIA
DRP
D. R. PRICE
(Affix Seal)
LICENSE No.
8540
3/31/99
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 9/91

# Exhibit A

Well Name: 99-BPC-U-38-A
SURFACE ELEV: 2110.73 EASTING: 1014399.89 NORTHING: 326857.05

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| JB1 | 88.60 | 91.50 | 2022.13 | 2.90 | |
| | 91.50 | 129.00 | 2019.23 | 37.50 | |
| JB3 | 129.00 | 133.00 | 1981.73 | 4.00 | |
| | 133.00 | 218.80 | 1977.73 | 85.80 | |
| T1 | 218.80 | 220.00 | 1891.93 | 1.20 | |
| | 220.00 | 220.50 | 1890.73 | 0.50 | |
| TI | 220.50 | 221.00 | 1890.23 | 0.50 | |
| | 221.00 | 313.40 | 1889.73 | 92.40 | |
| COAL | 313.40 | 314.00 | 1797.33 | 0.60 | |
| | 314.00 | 337.80 | 1796.73 | 23.80 | |
| US1 | 337.80 | 338.60 | 1772.93 | 0.80 | |
| | 338.60 | 450.00 | 1772.13 | 111.40 | |
| US2 | 450.00 | 451.00 | 1660.73 | 1.00 | |
| | 451.00 | 630.00 | 1659.73 | 179.00 | |
| *SE1 | 630.00 | 631.00 | 1480.73 | 1.00 | |
| | 631.00 | 666.90 | 1479.73 | 35.90 | |
| *SE2 | 666.90 | 669.00 | 1443.83 | 2.10 | |
| | 669.00 | 708.00 | 1441.73 | 39.00 | |
| *LS1 | 708.00 | 710.00 | 1402.73 | 2.00 | |
| | 710.00 | 721.90 | 1400.73 | 11.90 | |
| *LS2 | 721.90 | 723.00 | 1388.83 | 1.10 | |
| | 723.00 | 764.90 | 1387.73 | 41.90 | |
| *UH1 | 764.90 | 766.30 | 1345.83 | 1.40 | |
| | 766.30 | 822.10 | 1344.43 | 55.80 | |
| *UH2 | 822.10 | 824.00 | 1288.63 | 1.90 | |
| | 824.00 | 832.00 | 1286.73 | 8.00 | |
| *UH3 | 832.00 | 833.00 | 1278.73 | 1.00 | |
| | 833.00 | 889.00 | 1277.73 | 56.00 | |
| *MH1 | 889.00 | 891.00 | 1221.73 | 2.00 | |
| | 891.00 | 958.60 | 1219.73 | 67.60 | |
| *MH2 | 958.60 | 959.70 | 1152.13 | 1.10 | |
| | 959.70 | 960.40 | 1151.03 | 0.70 | |
| *MH2 | 960.40 | 961.10 | 1150.33 | 0.70 | |
| | 961.10 | 994.20 | 1149.63 | 33.10 | |
| *P11 | 994.20 | 996.50 | 1116.53 | 2.30 | |
| | 996.50 | 997.00 | 1114.23 | 0.50 | |
| *P11 | 997.00 | 997.50 | 1113.73 | 0.50 | |
| | 997.50 | 1018.80 | 1113.23 | 21.30 | |
| *P10 | 1018.80 | 1020.10 | 1091.93 | 1.30 | |
| | 1020.10 | 1084.50 | 1090.63 | 64.40 | |
| *LH2 | 1084.50 | 1085.60 | 1026.23 | 1.10 | |
| | 1085.60 | 1157.50 | 1025.13 | 71.90 | |
| *P91 | 1157.50 | 1159.10 | 953.23 | 1.60 | |
| | 1159.10 | 1173.00 | 951.63 | 13.90 | |
| *P92 | 1173.00 | 1174.00 | 937.73 | 1.00 | |
| | 1174.00 | 1195.80 | 936.73 | 21.80 | |
| *P81 | 1195.80 | 1197.30 | 914.93 | 1.50 | |
| | 1197.30 | 1207.00 | 913.43 | 9.70 | |
| *COAL | 1207.00 | 1207.80 | 903.73 | 0.80 | |
| | 1207.80 | 1252.00 | 902.93 | 44.20 | |

| | | | | |
|---|---|---|---|---|
| *P82 | 1252.00 | 1253.90 | 858.73 | 1.90 |
| | 1253.90 | 1318.00 | 856.83 | 64.10 |
| *COAL | 1318.00 | 1319.00 | 792.73 | 1.00 |
| | 1319.00 | 1396.10 | 791.73 | 77.10 |
| *P61 | 1396.10 | 1397.00 | 714.63 | 0.90 |
| | 1397.00 | 1414.00 | 713.73 | 17.00 |
| *P62 | 1414.00 | 1414.90 | 696.73 | 0.90 |
| | 1414.90 | 1448.80 | 695.83 | 33.90 |
| *P51 | 1448.80 | 1451.00 | 661.93 | 2.20 |
| | 1451.00 | 1543.20 | 659.73 | 92.20 |
| *P41 | 1543.20 | 1544.10 | 567.53 | 0.90 |
| | 1544.10 | 1626.40 | 566.63 | 82.30 |
| *P3 | 1626.40 | 1632.90 | 484.33 | 6.50 |
| | 1632.90 | 1677.90 | 477.83 | 45.00 |
| *P21 | 1677.90 | 1679.20 | 432.83 | 1.30 |
| | 1679.20 | 1748.70 | 431.53 | 69.50 |
| *P01 | 1748.70 | 1749.50 | 362.03 | 0.80 |
| | 1749.50 | 1819.80 | 361.23 | 70.30 |
| *SJ2 | 1819.80 | 1821.00 | 290.93 | 1.20 |
| | 1821.00 | 1925.60 | 289.73 | 104.60 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION.
SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE WELL'S PROXIMITY TO HURRICANE BRANCH.
FILE: C:\GAS\U38A.CMP
DATE: 04/08/99

Gas and Oil Shows

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 221.00' | 1920.7' | 1699.7' | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Cuttings or samples: _____ are __X__ are not available for examination by a member of the Virginia Division of Mineral Resources

Cuttings or samples: _____ have __X__ have not been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS

List logs ran on wellbore: Gamma, Caliper, Resistivity, Deviation

Did logs disclose vertical location of a coal seam? __X__ Yes _____ No

SURVEY RESULTS

| Depth Of Survey | Direction/Distance/ Degrees From True Vertical | Depth Of Survey | Direction/Distance Degrees From True Vertical |
|---|---|---|---|
| See Deviation Survey | | | |

Use additional sheets as necessary

## CASING AND TUBING PROGRAM

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | Cemented To Surface No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 7" | 0–21' | 8 ¾" | | | | | |
| Surface | 7" | 0–21' | 8 ¾" | | | | | |
| Water Protection | 4 ½" | 0-1915.33 | 6 ½" | 190 | X | | 04-02-99 | |
| Coal Protection | 4 ½" | 0-1915.33 | 6 ½" | 190 | X | | 04-02-99 | |
| Other Casing And Tubing Left In Well | | | | | | | | |
| Liners | | | | | | | | |

REMARKS: Shut down fishing jobs, depths and dates, caving, lost circulation, etc.: _____

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

Form DGO-GO-14
Rev. 10/96

# DRILL DATA HOLE -- NOAH HORN WELL DRILLING, INC.

COMPANY: PGP

HOLE NO.: U-38A

LOCATION: Osborne Mountain

DRILL: Rig #23

DATE STARTED: 03-30-99

ELECTRIC LOGGED: Yes

DATE COMPLETED: 04-02-99

GROUTED: Yes

| DEPTH | | THICKNESS | STRATA | REMARKS |
|---|---|---|---|---|
| FROM | TO | FT. | DESCRIPTION | VOIDS, ETC. |
| 0.00 | 20.00 | 20.00 | OVERBURDEN | 21' of 7" CASING |
| 20.00 | 25.00 | 5.00 | SANDSTONE | 6 ½" HOLE |
| 25.00 | 58.00 | 35.00 | SANDY SHALE | |
| 58.00 | 89.00 | 31.00 | SANDY SHALE | |
| 89.00 | 120.00 | 31.00 | SANDSTONE | |
| 120.00 | 151.00 | 31.00 | SANDY SHALE / COAL | |
| 151.00 | 182.00 | 31.00 | SANDY SHALE | |
| 182.00 | 212.00 | 30.00 | SANDSTONE | |
| 212.00 | 242.00 | 30.00 | SANDSTONE | |
| 242.00 | 272.00 | 30.00 | SANDSTONE | |
| 272.00 | 302.00 | 30.00 | SANDY SHALE | |
| 302.00 | 332.00 | 30.00 | SANDY SHALE | |
| 332.00 | 362.00 | 30.00 | SANDSTONE | |
| 362.00 | 392.00 | 30.00 | SANDY SHALE | |
| 392.00 | 422.00 | 30.00 | SANDSTONE | |
| 422.00 | 452.00 | 30.00 | SANDY SHALE | |
| 452.00 | 482.00 | 30.00 | SHALE | |
| 482.00 | 512.00 | 30.00 | SHALE | |
| 512.00 | 542.00 | 30.00 | SANDY SHALE | |
| 542.00 | 572.00 | 30.00 | SANDY SHALE | |
| 572.00 | 602.00 | 30.00 | SANDY SHALE | |
| 602.00 | 632.00 | 30.00 | SANDSTONE / COAL | |
| 632.00 | 662.00 | 30.00 | SANDSTONE | |
| 662.00 | 692.00 | 30.00 | SANDSTONE / COAL | |
| 692.00 | 722.00 | 30.00 | SANDY SHALE / COAL | |
| 722.00 | 752.00 | 30.00 | SANDSTONE | |
| 752.00 | 782.00 | 30.00 | SANDSTONE / COAL | |
| 782.00 | 812.00 | 30.00 | SANDSTONE | |
| 812.00 | 842.00 | 30.00 | SANDSTONE / COAL / SHALE | |
| 842.00 | 872.00 | 30.00 | SANDY SHALE | |
| 872.00 | 902.00 | 30.00 | SANDY SHALE / COAL | |
| 902.00 | 932.00 | 30.00 | SHALE | |

| FROM | TO | FT. | DESCRIPTION | |
|---|---|---|---|---|
| 932.00 | 962.00 | 30.00 | SHALE / COAL | |
| 962.00 | 992.00 | 30.00 | SANDSTONE | |
| 992.00 | 1022.00 | 30.00 | SANDSTONE | |
| 1022.00 | 1052.00 | 30.00 | SANDY SHALE | |
| 1052.00 | 1082.00 | 30.00 | SANDSTONE | |
| 1082.00 | 1112.00 | 30.00 | SANDY SHALE | |
| 1112.00 | 1142.00 | 30.00 | SANDSTONE | |
| 1142.00 | 1172.00 | 30.00 | SANDY SHALE | |
| 1172.00 | 1202.00 | 30.00 | SANDY SHALE | |
| 1202.00 | 1232.00 | 30.00 | SANDSTONE | |
| 1232.00 | 1262.00 | 30.00 | SANDY SHALE | |
| 1262.00 | 1292.00 | 30.00 | SANDSTONE | |
| 1292.00 | 1322.00 | 30.00 | SANDY SHALE | |
| 1322.00 | 1352.00 | 30.00 | SANDY SHALE | |
| 1352.00 | 1382.00 | 30.00 | SANDY SHALE | |
| 1382.00 | 1412.00 | 30.00 | SANDSTONE | |
| 1412.00 | 1442.00 | 30.00 | SANDSTONE | |
| 1442.00 | 1472.00 | 30.00 | SANDSTONE / COAL / SHALE | |
| 1472.00 | 1502.00 | 30.00 | SANDY SHALE | |
| 1502.00 | 1532.00 | 30.00 | SANDSTONE | |
| 1532.00 | 1562.00 | 30.00 | SANDSTONE / COAL SHALE | |
| 1562.00 | 1592.00 | 30.00 | SANDY SHALE / SANDSTONE | |
| 1592.00 | 1622.00 | 30.00 | SANDSTONE | |
| 1622.00 | 1628.00 | 6.00 | SANDY SHALE | |
| 1628.00 | 1635.00 | 7.00 | COAL P-3 | |
| 1635.00 | 1652.00 | 17.00 | SANDY SHALE | |
| 1652.00 | 1682.00 | 30.00 | SANDSTONE | |
| 1682.00 | 1712.00 | 30.00 | SANDY SHALE | |
| 1712.00 | 1742.00 | 30.00 | SANDSTONE | |
| 1742.00 | 1772.00 | 30.00 | SANDSTONE | |
| 1772.00 | 1802.00 | 30.00 | SANDY SHALE | |
| 1802.00 | 1832.00 | 30.00 | SANDSTONE | |
| 1832.00 | 1862.00 | 30.00 | SANDY SHALE | |
| 1862.00 | 1892.00 | 30.00 | SANDY SHALE | |
| 1892.00 | 1922.00 | 30.00 | SANDSTONE | 1917.00' OF 4 ½" Casing |

1922.00 FT. TOTAL DEPTH
21.00 FT. OF 7" CASING
1917.00 FT. OF 4 ½" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 4976 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1542 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 5/26/1999 |
| **Driller's Total Depth:** | 2017.50 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: R Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| STIM | BU-1542 stim.pdf |

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

[4/28/2014, jsa]
Material inserted by DGO [3/24/2014, jhh]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 3/28/2014 | *(Company)* |
| By: | Leslie Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 3/28/2014 | | |
| Status: | Approved | Date: | 4/28/2014 |
| Final PDF Date: | 4/28/2014 | | |

BU-1542

Department of Mines, Minerals and Energy
Division of Gas and Oil

ENTERED

Operations Name: CBM-PGP-U38C
Permit #: 4082

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 5/26/99 Total Depth of Well: 2017.5'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 533 MSCF N2, 375 bbl water, 520 sx 16/30

Perforated: 1648 TO 1653 No. of Perforations: 20 Perforation Size: .70" EHD
Formation Broke Down at: 3284 PSIG Average Injection Rate 30 BPM
ISIP 2081 PSIG 5 MIN SIP 1819 PSIG Average Injection Pressure: 2884 PSIG
Date stimulated: 5/26/99.

**Zone 2:** P4-1,P5-1,P6-2,P8-2 Formation Stimulated With: 302 MSCF N2, 220 bbl water, 285 sx 16/30

Perforated: 1255 TO 1565 No. of Perforations: 36 Perforation Size: .70" EHD
Formation Broke Down at: 3827 PSIG Average Injection Rate 30 BPM
ISIP 1908 PSIG 5 MIN SIP 1709 PSIG Average Injection Pressure: 2426 PSIG
Date stimulated: 5/26/99.

**Zone 3:** P8-1,C,P9-2,P9-1 Formation Stimulated With: 358 MSCF N2, 299 bbl water, 328 sx 16/30

Perforated: 1167 TO 1224 No. of Perforations: 32 Perforation Size: .70" EHD
Formation Broke Down at: 3146 PSIG Average Injection Rate 30 BPM
ISIP 1375 PSIG 5 MIN SIP 1251 PSIG Average Injection Pressure: 2933 PSIG
Date stimulated: 5/26/99.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Judith K. Armstrong (Signature)

Form DGO-GO-15
Rev 9/91

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-U38C
Permit #: 4082

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 5/26/99 Total Depth of Well: 2017.5'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 4:** LH2,P10,P11,MH2 Formation Stimulated With: 335 MSCF N2, 272 bbl water, 400 sx 16/30

Perforated: 966 TO 1098 No. of Perforations: 36 Perforation Size: .70" EHD
Formation Broke Down at: 2273 PSIG Average Injection Rate 30 BPM
ISIP 1904 PSIG 5 MIN SIP 1594 PSIG Average Injection Pressure: 2307 PSIG
Date stimulated: 5/26/99.

**Zone 5:** MH1,UH2,UH1,LS2,LS1 Formation Stimulated With: 431 MSCF N2, 356 bbl water, 455 sx 16/30

Perforated: 738 TO 904 No. of Perforations: 40 Perforation Size: .70" EHD
Formation Broke Down at: 2623 PSIG Average Injection Rate 30 BPM
ISIP 1637 PSIG 5 MIN SIP 1458 PSIG Average Injection Pressure: 2413 PSIG
Date stimulated: 5/26/99.

**Zone 3:** _____ Formation Stimulated With: _____

Perforated: ____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate _____ BPM
ISIP _____ PSIG ___ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____.

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 4974 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1542 |
| **Operations Name:** | PGP U38C W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 4/5/1999

Drilling Contractor: Noah Horn Well Drilling

Date drilling completed: 4/8/1999

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 2017.50

Log Total Depth (feet): 0.00

Coal Seam at Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10496593.9700

Permitted State Plane Y: 3609322.6000

Final Plat State Plane X: 10496593.8760

Final Plat State Plane Y: 3609322.8380

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | BU-1542 plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|
| 110 | 1 | INCH |

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| COAL | BU-1542 coal.pdf |
| COAL | BU-1542 coal_0328201412141800.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS | BU-1542 gs.pdf |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Gamma/Caliper/Deviation

Did logs disclose vertical locations of a coal seam? R

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|

## 6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|---|---|
| CASING | BU-1542 casing.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By:

List of Attached Items:

| Description | FileName |
|---|---|
| LOG | NO LOGS.doc |

## 9. Comments

[4/28/2014, jsa]
Material inserted by DGO [3/24/2014, jhh]

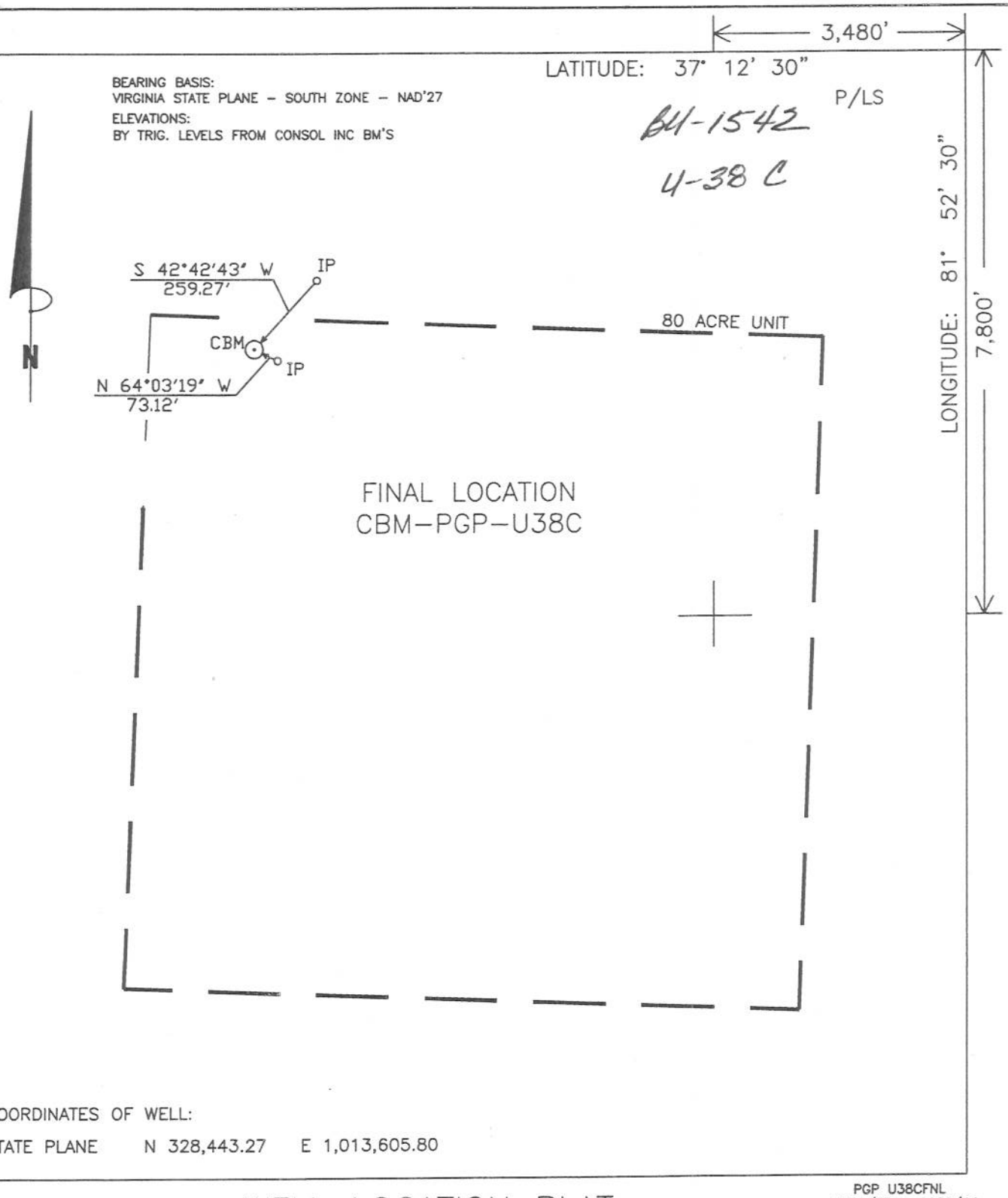
## 10. Signature

Permitee: CNX Gas Company LLC Date: 3/28/2014

Signed By: lESLIE aRRINGTON Title: **********

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 3/28/2014 | | |
| Status: | A | Date: | 4/28/2014 |
| Final PDF Date: | 6/2/2014 | | |




COORDINATES OF WELL:

STATE PLANE N 328,443.27 E 1,013,605.80

PGP U38CFNL
PGP3/53 – 9901/44

# WELL LOCATION PLAT

Company POCAHONTAS GAS PARTNERSHIP Well Name and Number CBM–PGP–U38C

Tract No. _____ Elevation 2129.10 Quadrangle KEEN MOUNTAIN

County BUCHANAN District GARDEN Scale: 1" = 400' Date 04-06-99

This Plat is a new plat _____; an updated plat _____; or a final location plat X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

DRP

D. R. PRICE

LICENSE No. 8540

4/7/99

(Affix Seal)

COMMONWEALTH OF VIRGINIA PROFESSIONAL ENGINEER

DRPrice

Licensed Professional Engineer or Licensed Land Surveyor

Form DGO–GO–7
Rev. 9/91

# Exhibit A

Well Name: 99-PGP-U-38-C
SURFACE ELEV: 2129.10 EASTING: 1013605.80 NORTHING: 328443.27

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA2 | 35.50 | 37.70 | 2093.60 | 2.20 | |
| | 37.70 | 40.40 | 2091.40 | 2.70 | |
| RA3 | 40.40 | 42.00 | 2088.70 | 1.60 | |
| | 42.00 | 119.20 | 2087.10 | 77.20 | |
| JB1 | 119.20 | 121.10 | 2009.90 | 1.90 | |
| | 121.10 | 160.60 | 2008.00 | 39.50 | |
| JB3 | 160.60 | 163.90 | 1968.50 | 3.30 | |
| | 163.90 | 197.90 | 1965.20 | 34.00 | |
| COAL | 197.90 | 199.70 | 1931.20 | 1.80 | |
| | 199.70 | 258.40 | 1929.40 | 58.70 | |
| TI | 258.40 | 260.00 | 1870.70 | 1.60 | |
| | 260.00 | 381.00 | 1869.10 | 121.00 | |
| US1 | 381.00 | 382.50 | 1748.10 | 1.50 | |
| | 382.50 | 484.60 | 1746.60 | 102.10 | |
| *US2 | 484.60 | 485.60 | 1644.50 | 1.00 | |
| | 485.60 | 659.80 | 1643.50 | 174.20 | |
| *SE1 | 659.80 | 661.50 | 1469.30 | 1.70 | |
| | 661.50 | 692.30 | 1467.60 | 30.80 | |
| *SE2 | 692.30 | 694.00 | 1436.80 | 1.70 | |
| | 694.00 | 737.60 | 1435.10 | 43.60 | |
| *LS1 | 737.60 | 739.10 | 1391.50 | 1.50 | |
| | 739.10 | 747.80 | 1390.00 | 8.70 | |
| *LS2 | 747.80 | 748.90 | 1381.30 | 1.10 | |
| | 748.90 | 789.60 | 1380.20 | 40.70 | |
| *UH1 | 789.60 | 791.00 | 1339.50 | 1.40 | |
| | 791.00 | 847.70 | 1338.10 | 56.70 | |
| *UH2 | 847.70 | 849.90 | 1281.40 | 2.20 | |
| | 849.90 | 901.20 | 1279.20 | 51.30 | |
| *MH1 | 901.20 | 903.90 | 1227.90 | 2.70 | |
| | 903.90 | 966.70 | 1225.20 | 62.80 | |
| *MH2 | 966.70 | 968.00 | 1162.40 | 1.30 | |
| | 968.00 | 1011.00 | 1161.10 | 43.00 | |
| *P11 | 1011.00 | 1014.10 | 1118.10 | 3.10 | |
| | 1014.10 | 1036.40 | 1115.00 | 22.30 | |
| *P10 | 1036.40 | 1038.20 | 1092.70 | 1.80 | |
| | 1038.20 | 1096.00 | 1090.90 | 57.80 | |
| *LH2 | 1096.00 | 1098.20 | 1033.10 | 2.20 | |
| | 1098.20 | 1167.00 | 1030.90 | 68.80 | |
| *P91 | 1167.00 | 1168.50 | 962.10 | 1.50 | |
| | 1168.50 | 1185.00 | 960.60 | 16.50 | |
| *P92 | 1185.00 | 1186.00 | 944.10 | 1.00 | |
| | 1186.00 | 1188.00 | 943.10 | 2.00 | |
| *P92 | 1188.00 | 1189.40 | 941.10 | 1.40 | |
| | 1189.40 | 1199.00 | 939.70 | 9.60 | |
| *COAL | 1199.00 | 1200.00 | 930.10 | 1.00 | |
| | 1200.00 | 1222.00 | 929.10 | 22.00 | |
| *P81 | 1222.00 | 1223.30 | 907.10 | 1.30 | |
| | 1223.30 | 1255.00 | 905.80 | 31.70 | |
| *P82 | 1255.00 | 1256.20 | 874.10 | 1.20 | |

| | | | | |
|---|---|---|---|---|
| | 1256.20 | 1436.00 | 872.90 | 179.80 |
| *P62 | 1436.00 | 1437.50 | 693.10 | 1.50 |
| | 1437.50 | 1469.00 | 691.60 | 31.50 |
| *P51 | 1469.00 | 1470.50 | 660.10 | 1.50 |
| | 1470.50 | 1563.00 | 658.60 | 92.50 |
| *P41 | 1563.00 | 1564.30 | 566.10 | 1.30 |
| | 1564.30 | 1647.00 | 564.80 | 82.70 |
| *P3 | 1647.00 | 1652.60 | 482.10 | 5.60 |
| | 1652.60 | 1695.40 | 476.50 | 42.80 |
| *P21 | 1695.40 | 1697.00 | 433.70 | 1.60 |
| | 1697.00 | 1732.80 | 432.10 | 35.80 |
| *P01 | 1732.80 | 1734.50 | 396.30 | 1.70 |
| | 1734.50 | 1799.40 | 394.60 | 64.90 |
| *SJ3 | 1799.40 | 1800.80 | 329.70 | 1.40 |
| | 1800.80 | 1810.00 | 328.30 | 9.20 |
| *SJ2 | 1810.00 | 1811.00 | 319.10 | 1.00 |
| | 1811.00 | 1821.00 | 318.10 | 10.00 |
| *SJ1 | 1821.00 | 1822.80 | 308.10 | 1.80 |
| | 1822.80 | 2020.70 | 306.30 | 197.90 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: C:\GAS\U38C.CMP
DATE: 04/16/99

revision
mee
11/14/98

3/69

PREDICT

| HOLE: | ESTIMATED EASTING: | ESTIMATED NORTHING: | ESTIMATED ELEVATION: |
|---|---|---|---|
| CBM-PGP-U38C | 1013605 | 328443 | 2122 |

| SEAM | DEPTH FROM (FEET) | DEPTH TO (FEET) | ELEVATION (TOSE) | THICKNESS (FEET) |
|---|---|---|---|---|
| TOPO | 0.00 | 0.00 | 2122.18 | 0.00 |
| RA3 | 5.99 | 7.75 | 2116.19 | 1.76 |
| JB1 | 117.61 | 119.87 | 2004.57 | 2.26 |
| JB3 | 167.34 | 167.84 | 1954.84 | 0.50 |
| TI | 264.82 | 265.33 | 1857.36 | 0.51 |
| US1 | 387.51 | 387.92 | 1734.67 | 0.41 |
| US2 | 494.46 | 494.69 | 1627.72 | 0.23 |
| *SE1 | 673.03 | 673.42 | 1449.15 | 0.39 |
| *SE2 | 707.87 | 709.36 | 1414.31 | 1.49 |
| *LS1 | 748.40 | 750.39 | 1373.78 | 1.99 |
| *LS2 | 763.72 | 764.26 | 1358.46 | 0.54 |
| *UH1 | 803.46 | 804.43 | 1318.72 | 0.97 |
| *UH2 | 860.92 | 862.27 | 1261.26 | 1.35 |
| *MH1 | 920.63 | 921.69 | 1201.55 | 1.06 |
| *MH2 | 994.58 | 995.91 | 1127.60 | 1.33 |
| *P11 | 1022.20 | 1025.11 | 1099.98 | 2.91 |
| *P10 | 1046.77 | 1047.70 | 1075.41 | 0.93 |
| *LH3 | 1110.85 | 1111.53 | 1011.33 | 0.68 |
| *P91 | 1181.88 | 1183.14 | 940.30 | 1.26 |
| *P92 | 1193.49 | 1194.08 | 928.69 | 0.59 |
| *P93 | 1197.55 | 1197.77 | 924.63 | 0.22 |
| *P81 | 1214.23 | 1215.64 | 907.95 | 1.41 |
| *P71 | 1261.18 | 1261.55 | 861.00 | 0.37 |
| *P62 | 1450.70 | 1450.99 | 671.48 | 0.29 |
| *P51 | 1478.83 | 1480.29 | 643.35 | 1.46 |
| *P42 | 1574.18 | 1574.37 | 548.00 | 0.19 |
| *P3 | 1652.40 | 1657.85 | 469.78 | 5.45 |

* Coal seam subject to coalbed methane production
** Mined Out
Schema : SCHEMA4
12/04/98



Gas and Oil Shows

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Pocahontas | 260.00' | 2017.5' | 1757.5' | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Cuttings or samples: _____ are __X__ are not available for examination by a member of the Virginia Division of Mineral Resources

Cuttings or samples: _____ have __X__ have not been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS

List logs ran on wellbore: Gamma, Caliper, Deviation

Did logs disclose vertical location of a coal seam? __X__ Yes _____ No

SURVEY RESULTS

| Depth Of Survey | Direction/Distance/ Degrees From True Vertical | Depth Of Survey | Direction/Distance Degrees From True Vertical |
|---|---|---|---|
| See Deviation Survey | | | |

Use additional sheets as necessary

## CASING AND TUBING PROGRAM

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0–20.30' | 15" | | | | | |
| Surface | 13 3/8" | 0–20.30' | 15" | | | | | |
| Water Protection | 4 ½" | 0-1984.52 | 6 ½" | 200 | X | | 04-08-99 | |
| Coal Protection | 4 ½" | 0-1984.52 | 6 ½" | 200 | X | | 04-08-99 | |
| Other Casing And Tubing Left In Well | | | | | | | | |
| Liners | | | | | | | | |

REMARKS: Shut down fishing jobs, depths and dates, caving, lost circulation, etc.: _____

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Thornton (Signature)

Form DGO-GO-14
Rev. 10/96

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1549 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3632 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 5/20/2008 |
| **Driller's Total Depth:** | 1653.90 | **Log's Total Depth:** | 1654.30 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 11/21/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 11/21/2008 | | |
| Status: | | Date: | 11/26/2008 |
| Final PDF Date: | 3/27/2009 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1590 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3632 |
| **Operations Name:** | CBM U39D W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 5/9/2008

Drilling Contractor: Noah Horn

Date drilling completed: 5/20/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1653.87

Log Total Depth (feet): 1654.31

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1016522.70

Permitted State Plane Y: 327602.24

Final Plat State Plane X: 1016527.72

Final Plat State Plane Y: 327595.85

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | U39D PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | U39D EXHIBIT A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | U39D Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: caliper gamma density temp deviation

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | U39D DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | U39D Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| Drill Data | U39D DRILL DATA.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 11/21/2008

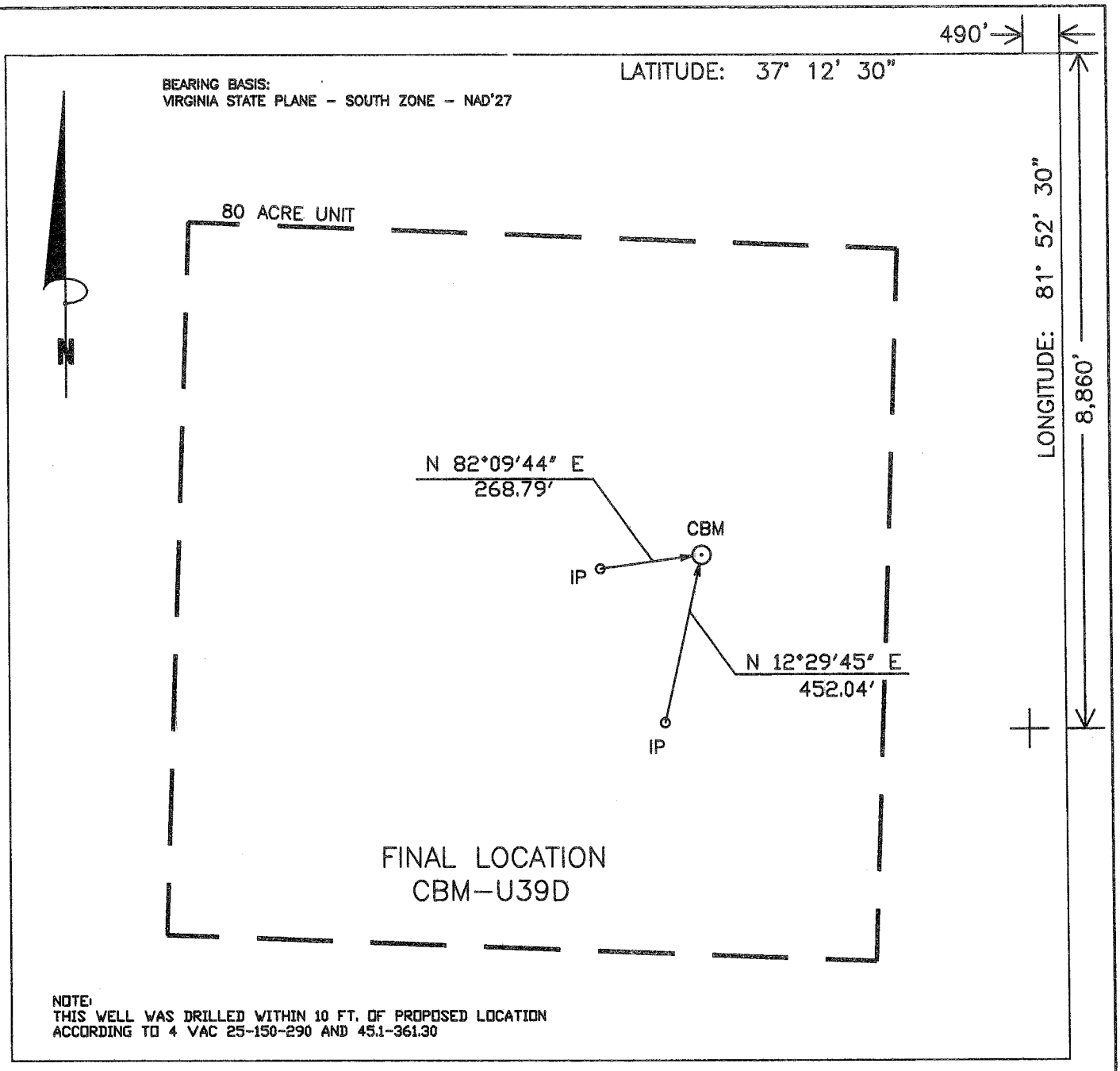
Signed By: Leslie Arrington Title: Director Environmental Permitting

## INTERNAL USE ONLY

Submit Date: 11/21/2008

Status: A Date: 11/26/2008

Final PDF Date: 12/18/2008




U39DFNL
2N30/190-667/34

# WELL LOCATION PLAT

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-U39D

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 327,595.85 E 1,016,527.72

ELEVATION: 2147.12' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 05-13-08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
5-13-08
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 10/96

U39D.CMP
Exhibit A

Well Name: 08 CBM U39D
SURFACE ELEV: 2147.12 EASTING: 1016527.72 NORTHING: 317595.85

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 91.10 | 91.70 | 2056.02 | 0.60 | |
| | 91.70 | 122.00 | 2055.42 | 30.30 | |
| JB3 | 122.00 | 124.50 | 2025.12 | 2.50 | |
| | 124.50 | 167.00 | 2022.62 | 42.50 | |
| T2 | 167.00 | 170.20 | 1980.12 | 3.20 | |
| | 170.20 | 234.00 | 1976.92 | 63.80 | |
| T1 | 234.00 | 235.30 | 1913.12 | 1.30 | |
| | 235.30 | 247.00 | 1911.82 | 11.70 | |
| TI | 247.00 | 249.30 | 1900.12 | 2.30 | |
| | 249.30 | 374.90 | 1897.82 | 125.60 | |
| *US1 | 374.90 | 375.50 | 1772.22 | 0.60 | |
| | 375.50 | 454.00 | 1771.62 | 78.50 | |
| *COAL | 454.00 | 454.60 | 1693.12 | 0.60 | |
| | 454.60 | 486.60 | 1692.52 | 32.00 | |
| *US2 | 486.60 | 487.20 | 1660.52 | 0.60 | |
| | 487.20 | 614.80 | 1659.92 | 127.60 | |
| *GC2 | 614.80 | 615.50 | 1532.32 | 0.70 | |
| | 615.50 | 673.20 | 1531.62 | 57.70 | |
| *SE1 | 673.20 | 674.30 | 1473.92 | 1.10 | |
| | 674.30 | 712.90 | 1472.82 | 38.60 | |
| *SE2 | 712.90 | 715.00 | 1434.22 | 2.10 | |
| | 715.00 | 758.00 | 1432.12 | 43.00 | |
| *LS1 | 758.00 | 758.80 | 1389.12 | 0.80 | |
| | 758.80 | 758.80 | 1388.32 | 0.00 | |
| *LS2 | 758.80 | 760.00 | 1388.32 | 1.20 | |
| | 760.00 | 775.70 | 1387.12 | 15.70 | |
| *COAL | 775.70 | 776.60 | 1371.42 | 0.90 | |
| | 776.60 | 806.90 | 1370.52 | 30.30 | |
| *UH1 | 806.90 | 807.00 | 1340.22 | 0.10 | |
| | 807.00 | 864.80 | 1340.12 | 57.80 | |
| *UH3 | 864.80 | 867.00 | 1282.32 | 2.20 | |
| | 867.00 | 921.80 | 1280.12 | 54.80 | |
| *MH1 | 921.80 | 922.90 | 1225.32 | 1.10 | |
| | 922.90 | 987.30 | 1224.22 | 64.40 | |
| *MH2 | 987.30 | 987.80 | 1159.82 | 0.50 | |
| | 987.80 | 1027.70 | 1159.32 | 39.90 | |
| *P11 | 1027.70 | 1030.00 | 1119.42 | 2.30 | |
| | 1030.00 | 1052.50 | 1117.12 | 22.50 | |
| *P10 | 1052.50 | 1053.80 | 1094.62 | 1.30 | |
| | 1053.80 | 1118.00 | 1093.32 | 64.20 | |
| *LH3 | 1118.00 | 1118.80 | 1029.12 | 0.80 | |
| | 1118.80 | 1188.00 | 1028.32 | 69.20 | |
| *P92 | 1188.00 | 1189.70 | 959.12 | 1.70 | |
| | 1189.70 | 1197.30 | 957.42 | 7.60 | |
| *COAL | 1197.30 | 1200.00 | 949.82 | 2.70 | |
| | 1200.00 | 1278.80 | 947.12 | 78.80 | |
| *P82 | 1278.80 | 1280.20 | 868.32 | 1.40 | |
| | 1280.20 | 1355.20 | 866.92 | 75.00 | |
| *P71 | 1355.20 | 1356.60 | 791.92 | 1.40 | |
| | 1356.60 | 1378.60 | 790.52 | 22.00 | |
| *P72 | 1378.60 | 1379.20 | 768.52 | 0.60 | |
| | 1379.20 | 1448.40 | 767.92 | 69.20 | |
| *P61 | 1448.40 | 1448.80 | 698.72 | 0.40 | |
| | 1448.80 | 1484.80 | 698.32 | 36.00 | |
| *P51 | 1484.80 | 1485.80 | 662.32 | 1.00 | |
| | 1485.80 | 1580.10 | 661.32 | 94.30 | |

| | | | | |
|---|---|---|---|---|
| *P41 | 1580.10 | 1581.00 | 567.02 | 0.90 |
| | 1581.00 | 1654.31 | 566.12 | 73.31 |

AMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U39D.CMP
DATE: 07/16/08

Well: **U39D**

## Oil & Gas Show

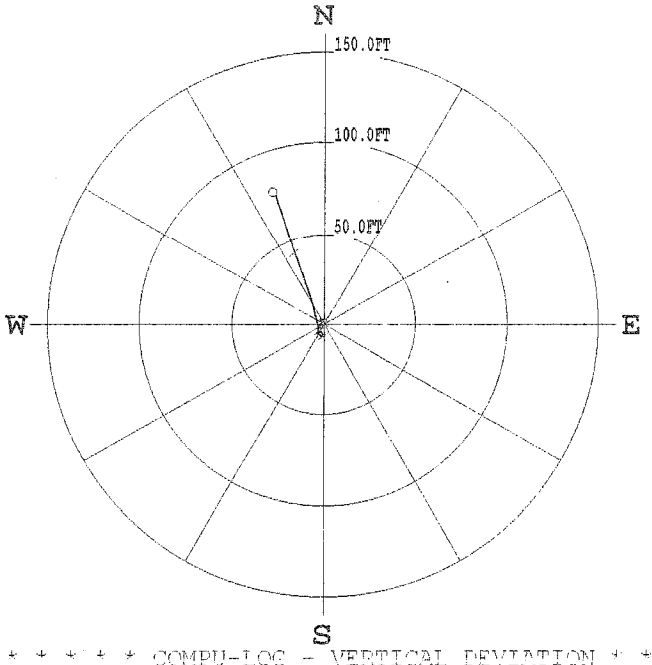
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 673.2 | 1280.2 | 607.0 | | | |
| Pocahontas | 1355.2 | 1485.8 | 130.6 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: Consol Energy
LOCATION:
HOLE ID: 08-CNX-U-39-D
DATE OF LOG: 05/20/08
PROBE: 9136CA 956

MAG DECL: -6.9

SCALE: 50 FT/IN
TRUE DEPTH: 1642.04 FT
AZIMUTH: 338.9
DISTANCE: 78.2 FT
+ = 300 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 08-CNX-U-39-D
DATE OF LOG : 05/20/08
PROBE : 9136CA , 956
DEPTH UNITS : FEET
LOG: 08-CNX-U-39-D_05-20-08_03-17_9136CA_.02_-0.02_1651.84_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | 0.90 | -0.00 | 0.9 | 359.8 | 1.5 | 14.5 |
| 60.0 | 59.98 | 1.15 | -0.02 | 1.2 | 359.2 | 1.4 | 336.5 |
| 70.0 | 69.98 | 1.39 | -0.08 | 1.4 | 356.7 | 1.5 | 328.5 |
| 80.0 | 79.98 | 1.63 | -0.20 | 1.6 | 352.9 | 1.4 | 330.2 |
| 90.0 | 89.97 | 1.83 | -0.35 | 1.9 | 349.1 | 1.4 | 329.7 |
| 100.0 | 99.97 | 2.06 | -0.46 | 2.1 | 347.3 | 1.5 | 339.8 |
| 110.0 | 109.97 | 2.29 | -0.55 | 2.4 | 346.5 | 1.4 | 326.8 |
| 120.0 | 119.96 | 2.44 | -0.75 | 2.6 | 342.9 | 1.5 | 285.9 |
| 130.0 | 129.96 | 2.49 | -1.00 | 2.7 | 338.1 | 1.7 | 277.5 |
| 140.0 | 139.96 | 2.50 | -1.26 | 2.8 | 333.3 | 1.5 | 271.2 |
| 150.0 | 149.95 | 2.43 | -1.51 | 2.9 | 328.2 | 1.5 | 240.1 |
| 160.0 | 159.95 | 2.33 | -1.75 | 2.9 | 323.1 | 1.5 | 241.9 |
| 170.0 | 169.95 | 2.18 | -1.96 | 2.9 | 318.0 | 1.5 | 224.0 |
| 180.0 | 179.94 | 1.96 | -2.10 | 2.9 | 312.9 | 1.5 | 211.0 |
| 190.0 | 189.94 | 1.72 | -2.20 | 2.8 | 308.0 | 1.5 | 215.1 |
| 200.0 | 199.94 | 1.47 | -2.27 | 2.7 | 302.8 | 1.5 | 186.0 |
| 210.0 | 209.93 | 1.21 | -2.32 | 2.6 | 297.6 | 1.5 | 179.4 |
| 220.0 | 219.93 | 1.06 | -2.18 | 2.4 | 295.9 | 1.5 | 118.2 |
| 230.0 | 229.93 | 1.02 | -2.11 | 2.3 | 295.7 | 1.5 | 157.5 |
| 240.0 | 239.92 | 1.08 | -2.08 | 2.3 | 297.4 | 1.5 | 15.4 |
| 250.0 | 249.92 | 1.32 | -1.99 | 2.4 | 303.6 | 1.5 | 26.1 |
| 260.0 | 259.92 | 1.55 | -1.88 | 2.4 | 309.5 | 1.5 | 29.8 |
| 270.0 | 269.91 | 1.70 | -1.69 | 2.4 | 315.2 | 1.5 | 68.9 |
| 280.0 | 279.91 | 1.73 | -1.45 | 2.3 | 320.0 | 1.4 | 88.9 |
| 290.0 | 289.91 | 1.69 | -1.22 | 2.1 | 324.2 | 1.4 | 119.9 |
| 300.0 | 299.90 | 1.50 | -1.04 | 1.8 | 325.4 | 1.6 | 135.9 |
| 310.0 | 309.90 | 1.27 | -0.90 | 1.6 | 324.6 | 1.6 | 160.0 |
| 320.0 | 319.89 | 0.98 | -0.84 | 1.3 | 319.5 | 1.7 | 169.8 |
| 330.0 | 329.89 | 0.72 | -0.93 | 1.2 | 307.7 | 1.7 | 234.6 |
| 340.0 | 339.89 | 0.62 | -1.21 | 1.4 | 297.2 | 1.7 | 240.7 |
| 350.0 | 349.88 | 0.49 | -1.15 | 1.2 | 293.0 | 1.8 | 210.0 |
| 360.0 | 359.88 | 0.21 | -1.28 | 1.3 | 279.2 | 1.7 | 196.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 220.0 | 219.93 | 1.06 | -2.18 | 2.4 | 295.9 | 1.5 | 118.2 |
| 230.0 | 229.93 | 1.02 | -2.11 | 2.3 | 295.7 | 1.5 | 157.5 |
| 240.0 | 239.92 | 1.08 | -2.08 | 2.3 | 297.4 | 1.5 | 15.4 |
| 250.0 | 249.92 | 1.32 | -1.99 | 2.4 | 303.6 | 1.5 | 26.1 |
| 260.0 | 259.92 | 1.55 | -1.88 | 2.4 | 309.5 | 1.5 | 29.8 |
| 270.0 | 269.91 | 1.70 | -1.69 | 2.4 | 315.2 | 1.5 | 68.9 |
| 280.0 | 279.91 | 1.73 | -1.45 | 2.3 | 320.0 | 1.4 | 88.9 |
| 290.0 | 289.91 | 1.69 | -1.22 | 2.1 | 324.2 | 1.4 | 119.9 |
| 300.0 | 299.90 | 1.50 | -1.04 | 1.8 | 325.4 | 1.6 | 135.9 |
| 310.0 | 309.90 | 1.27 | -0.90 | 1.6 | 324.6 | 1.6 | 160.0 |
| 320.0 | 319.89 | 0.98 | -0.84 | 1.3 | 319.5 | 1.7 | 169.8 |
| 330.0 | 329.89 | 0.72 | -0.93 | 1.2 | 307.7 | 1.7 | 234.6 |
| 340.0 | 339.89 | 0.62 | -1.21 | 1.4 | 297.2 | 1.7 | 240.7 |
| 350.0 | 349.88 | 0.49 | -1.15 | 1.2 | 293.0 | 1.8 | 210.0 |
| 360.0 | 359.88 | 0.21 | -1.28 | 1.3 | 279.2 | 1.7 | 196.1 |
| 370.0 | 369.87 | -0.06 | -1.34 | 1.3 | 267.2 | 1.7 | 190.1 |
| 380.0 | 379.87 | -0.37 | -1.41 | 1.5 | 255.3 | 1.9 | 196.6 |
| 390.0 | 389.86 | -0.66 | -1.51 | 1.7 | 246.5 | 1.8 | 205.5 |
| 400.0 | 399.86 | -0.86 | -1.72 | 1.9 | 243.4 | 1.5 | 257.0 |
| 410.0 | 409.85 | -0.86 | -1.99 | 2.2 | 246.5 | 1.5 | 267.8 |
| 420.0 | 419.85 | -0.97 | -2.23 | 2.4 | 246.4 | 1.7 | 221.4 |
| 430.0 | 429.85 | -1.16 | -2.46 | 2.7 | 244.7 | 1.7 | 244.3 |
| 440.0 | 439.84 | -1.31 | -2.70 | 3.0 | 244.1 | 1.7 | 230.1 |
| 450.0 | 449.84 | -1.54 | -2.88 | 3.3 | 241.8 | 1.7 | 204.4 |
| 460.0 | 459.83 | -1.83 | -3.00 | 3.5 | 238.6 | 1.8 | 206.4 |
| 470.0 | 469.83 | -2.12 | -3.11 | 3.8 | 235.7 | 1.7 | 182.5 |
| 480.0 | 479.82 | -2.45 | -3.17 | 4.0 | 232.3 | 2.1 | 189.5 |
| 490.0 | 489.82 | -2.77 | -3.16 | 4.2 | 228.7 | 1.7 | 175.6 |
| 500.0 | 499.81 | -3.04 | -3.05 | 4.3 | 225.1 | 1.7 | 151.6 |
| 510.0 | 509.81 | -3.28 | -2.90 | 4.4 | 221.5 | 1.5 | 137.8 |
| 520.0 | 519.81 | -3.46 | -2.71 | 4.4 | 218.1 | 1.5 | 129.8 |
| 530.0 | 529.80 | -3.56 | -2.49 | 4.3 | 215.0 | 1.3 | 104.9 |
| 540.0 | 539.80 | -3.57 | -2.26 | 4.2 | 212.3 | 1.3 | 73.2 |
| 550.0 | 549.80 | -3.47 | -2.06 | 4.0 | 210.7 | 1.2 | 51.3 |
| 560.0 | 559.80 | -3.30 | -1.94 | 3.8 | 210.4 | 1.2 | 43.9 |
| 570.0 | 569.79 | -3.13 | -1.81 | 3.6 | 209.9 | 1.1 | 22.1 |
| 580.0 | 579.79 | -2.94 | -1.73 | 3.4 | 210.5 | 1.3 | 30.4 |
| 590.0 | 589.79 | -2.73 | -1.71 | 3.2 | 212.1 | 1.3 | 343.3 |
| 600.0 | 599.79 | -2.54 | -1.85 | 3.1 | 216.1 | 1.5 | 299.5 |
| 610.0 | 609.78 | -2.42 | -2.07 | 3.2 | 220.5 | 1.4 | 296.8 |
| 620.0 | 619.78 | -2.24 | -2.21 | 3.1 | 224.5 | 1.3 | 346.3 |
| 630.0 | 629.78 | -2.03 | -2.31 | 3.1 | 228.6 | 1.4 | 310.8 |
| 640.0 | 639.77 | -2.00 | -2.54 | 3.2 | 231.9 | 1.5 | 267.6 |
| 650.0 | 649.77 | -1.97 | -2.80 | 3.4 | 234.9 | 1.5 | 255.8 |
| 660.0 | 659.77 | -2.08 | -3.04 | 3.7 | 235.6 | 1.6 | 237.6 |
| 670.0 | 669.76 | -2.25 | -3.26 | 4.0 | 235.3 | 1.7 | 219.7 |
| 680.0 | 679.76 | -2.52 | -3.38 | 4.2 | 233.3 | 1.7 | 193.6 |
| 690.0 | 689.75 | -2.80 | -3.35 | 4.4 | 230.1 | 1.6 | 145.0 |
| 700.0 | 699.75 | -2.97 | -3.13 | 4.3 | 226.5 | 1.6 | 117.1 |
| 710.0 | 709.75 | -3.13 | -2.91 | 4.3 | 222.9 | 1.6 | 115.3 |
| 720.0 | 719.74 | -3.05 | -2.73 | 4.1 | 221.9 | 1.2 | 11.7 |
| 730.0 | 729.74 | -2.91 | -2.84 | 4.1 | 224.3 | 1.3 | 288.0 |
| 740.0 | 739.74 | -2.92 | -3.07 | 4.2 | 226.4 | 1.4 | 256.6 |
| 750.0 | 749.73 | -3.11 | -3.24 | 4.5 | 226.1 | 1.5 | 205.7 |
| 760.0 | 759.73 | -3.36 | -3.32 | 4.7 | 224.7 | 1.6 | 172.7 |
| 770.0 | 769.73 | -3.63 | -3.23 | 4.9 | 221.7 | 1.7 | 157.4 |
| 780.0 | 779.72 | -3.84 | -3.03 | 4.9 | 218.3 | 2.0 | 136.4 |
| 790.0 | 789.72 | -4.01 | -2.79 | 4.9 | 214.8 | 1.7 | 129.8 |
| 800.0 | 799.71 | -4.09 | -2.53 | 4.8 | 211.7 | 1.2 | 59.2 |
| 810.0 | 809.71 | -3.93 | -2.39 | 4.6 | 211.3 | 1.2 | 44.7 |
| 820.0 | 819.71 | -3.80 | -2.23 | 4.4 | 210.4 | 1.4 | 75.3 |
| 830.0 | 829.71 | -3.76 | -1.98 | 4.3 | 207.8 | 1.5 | 87.2 |
| 840.0 | 839.70 | -3.63 | -1.84 | 4.1 | 206.9 | 1.0 | 351.3 |
| 850.0 | 849.70 | -3.44 | -1.83 | 3.9 | 207.9 | 1.2 | 357.6 |
| 860.0 | 859.70 | -3.34 | -1.96 | 3.9 | 210.5 | 1.2 | 275.5 |
| 870.0 | 869.70 | -3.30 | -2.17 | 4.0 | 213.3 | 1.2 | 272.2 |
| 880.0 | 879.70 | -3.30 | -2.38 | 4.1 | 215.8 | 1.3 | 248.2 |
| 890.0 | 889.69 | -3.41 | -2.58 | 4.3 | 217.0 | 1.5 | 215.9 |
| 900.0 | 899.69 | -3.63 | -2.72 | 4.5 | 216.8 | 1.5 | 207.6 |
| 910.0 | 909.69 | -3.91 | -2.78 | 4.8 | 215.4 | 1.5 | 204.2 |
| 920.0 | 919.68 | -4.14 | -2.91 | 5.1 | 215.1 | 1.5 | 221.6 |
| 930.0 | 929.68 | -4.36 | -3.06 | 5.3 | 215.1 | 1.6 | 204.6 |
| 940.0 | 939.67 | -4.61 | -3.16 | 5.6 | 214.4 | 1.6 | 195.1 |
| 950.0 | 949.67 | -4.87 | -3.25 | 5.9 | 213.7 | 1.5 | 204.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 870.0 | 869.70 | -3.30 | -2.17 | 4.0 | 213.3 | 1.2 | 272.2 |
| 880.0 | 879.70 | -3.30 | -2.38 | 4.1 | 215.8 | 1.3 | 248.2 |
| 890.0 | 889.69 | -3.41 | -2.58 | 4.3 | 217.0 | 1.5 | 215.9 |
| 900.0 | 899.69 | -3.63 | -2.72 | 4.5 | 216.8 | 1.5 | 207.6 |
| 910.0 | 909.69 | -3.91 | -2.78 | 4.8 | 215.4 | 1.5 | 204.2 |
| 920.0 | 919.68 | -4.14 | -2.91 | 5.1 | 215.1 | 1.5 | 221.6 |
| 930.0 | 929.68 | -4.36 | -3.06 | 5.3 | 215.1 | 1.6 | 204.6 |
| 940.0 | 939.67 | -4.61 | -3.16 | 5.6 | 214.4 | 1.6 | 195.1 |
| 950.0 | 949.67 | -4.87 | -3.25 | 5.9 | 213.7 | 1.5 | 204.5 |
| 960.0 | 959.67 | -5.14 | -3.31 | 6.1 | 212.8 | 1.7 | 170.7 |
| 970.0 | 969.66 | -5.43 | -3.25 | 6.3 | 210.9 | 1.7 | 165.3 |
| 980.0 | 979.66 | -5.67 | -3.06 | 6.4 | 208.4 | 1.6 | 126.4 |
| 990.0 | 989.65 | -5.87 | -2.83 | 6.5 | 205.7 | 1.9 | 148.9 |
| 1000.0 | 999.65 | -6.14 | -2.63 | 6.7 | 203.2 | 1.9 | 137.6 |
| 1010.0 | 1009.64 | -6.34 | -2.39 | 6.8 | 200.7 | 1.8 | 144.1 |
| 1020.0 | 1019.64 | -6.57 | -2.16 | 6.9 | 198.2 | 1.9 | 131.2 |
| 1030.0 | 1029.63 | -6.66 | -1.87 | 6.9 | 195.7 | 1.8 | 111.7 |
| 1040.0 | 1039.63 | -6.86 | -1.59 | 7.0 | 193.1 | 2.0 | 126.8 |
| 1050.0 | 1049.62 | -6.99 | -1.28 | 7.1 | 190.4 | 2.0 | 112.3 |
| 1060.0 | 1059.61 | -7.08 | -0.97 | 7.1 | 187.8 | 2.0 | 115.2 |
| 1070.0 | 1069.61 | -7.17 | -0.65 | 7.2 | 185.2 | 1.8 | 88.1 |
| 1080.0 | 1079.60 | -7.15 | -0.34 | 7.2 | 182.7 | 1.8 | 90.7 |
| 1090.0 | 1089.60 | -7.08 | -0.07 | 7.1 | 180.5 | 1.6 | 70.0 |
| 1100.0 | 1099.60 | -6.93 | 0.05 | 6.9 | 179.6 | 1.1 | 17.6 |
| 1110.0 | 1109.60 | -6.76 | 0.06 | 6.8 | 179.5 | 0.7 | 311.9 |
| 1120.0 | 1119.59 | -6.63 | -0.00 | 6.6 | 180.0 | 0.9 | 321.4 |
| 1130.0 | 1129.59 | -6.54 | -0.11 | 6.5 | 181.0 | 0.9 | 286.9 |
| 1140.0 | 1139.59 | -6.40 | -0.21 | 6.4 | 181.8 | 1.1 | 313.7 |
| 1150.0 | 1149.59 | -6.41 | -0.34 | 6.4 | 183.1 | 0.8 | 287.3 |
| 1160.0 | 1159.59 | -6.40 | -0.51 | 6.4 | 184.6 | 1.0 | 258.8 |
| 1170.0 | 1169.59 | -6.49 | -0.67 | 6.5 | 185.9 | 0.8 | 258.9 |
| 1180.0 | 1179.59 | -6.61 | -0.83 | 6.7 | 187.2 | 1.4 | 213.8 |
| 1190.0 | 1189.58 | -6.54 | -0.59 | 6.6 | 185.2 | 1.5 | 28.3 |
| 1200.0 | 1199.58 | -6.37 | -0.45 | 6.4 | 184.0 | 1.0 | 24.2 |
| 1210.0 | 1209.58 | -6.22 | -0.37 | 6.2 | 183.4 | 1.0 | 28.3 |
| 1220.0 | 1219.58 | -6.06 | -0.32 | 6.1 | 183.0 | 0.9 | 342.6 |
| 1230.0 | 1229.57 | -5.95 | -0.47 | 6.0 | 184.5 | 2.0 | 314.2 |
| 1240.0 | 1239.57 | -5.69 | -0.71 | 5.7 | 187.1 | 2.3 | 321.1 |
| 1250.0 | 1249.55 | -5.27 | -1.04 | 5.4 | 191.1 | 3.3 | 322.2 |
| 1260.0 | 1259.53 | -4.68 | -1.45 | 4.9 | 197.2 | 4.7 | 325.4 |
| 1270.0 | 1269.49 | -3.91 | -1.92 | 4.4 | 206.2 | 5.3 | 331.2 |
| 1280.0 | 1279.43 | -2.98 | -2.47 | 3.9 | 219.7 | 6.4 | 326.9 |
| 1290.0 | 1289.35 | -1.90 | -3.07 | 3.6 | 238.2 | 7.4 | 341.2 |
| 1300.0 | 1299.27 | -0.70 | -3.50 | 3.6 | 258.7 | 7.3 | 343.3 |
| 1310.0 | 1309.18 | 0.52 | -3.89 | 3.9 | 277.6 | 7.5 | 344.2 |
| 1320.0 | 1319.09 | 1.85 | -4.18 | 4.6 | 293.9 | 8.0 | 345.6 |
| 1330.0 | 1328.97 | 3.35 | -4.52 | 5.6 | 306.5 | 9.2 | 347.9 |
| 1340.0 | 1338.82 | 5.02 | -4.91 | 7.0 | 315.6 | 10.2 | 349.7 |
| 1350.0 | 1348.65 | 6.64 | -5.22 | 8.4 | 321.8 | 11.4 | 340.8 |
| 1360.0 | 1358.46 | 8.52 | -5.73 | 10.3 | 326.1 | 11.5 | 347.1 |
| 1370.0 | 1368.25 | 10.48 | -6.22 | 12.2 | 329.3 | 11.6 | 342.7 |
| 1380.0 | 1378.03 | 12.48 | -6.76 | 14.2 | 331.6 | 12.6 | 342.1 |
| 1390.0 | 1387.79 | 14.60 | -7.35 | 16.3 | 333.3 | 13.2 | 351.2 |
| 1400.0 | 1397.51 | 16.78 | -8.19 | 18.7 | 334.0 | 13.0 | 339.9 |
| 1410.0 | 1407.25 | 18.94 | -8.90 | 20.9 | 334.8 | 13.3 | 342.7 |
| 1420.0 | 1416.98 | 21.13 | -9.62 | 23.2 | 335.5 | 13.4 | 341.1 |
| 1430.0 | 1426.71 | 23.32 | -10.35 | 25.5 | 336.1 | 13.4 | 340.4 |
| 1440.0 | 1436.43 | 25.52 | -11.10 | 27.8 | 336.5 | 13.5 | 340.8 |
| 1450.0 | 1446.16 | 27.71 | -11.88 | 30.2 | 336.8 | 13.4 | 341.6 |
| 1460.0 | 1455.88 | 29.93 | -12.62 | 32.5 | 337.1 | 13.6 | 341.1 |
| 1470.0 | 1465.60 | 32.15 | -13.38 | 34.8 | 337.4 | 13.4 | 340.1 |
| 1480.0 | 1475.33 | 34.35 | -14.17 | 37.2 | 337.6 | 13.5 | 341.0 |
| 1490.0 | 1485.05 | 36.57 | -14.92 | 39.5 | 337.8 | 13.5 | 340.4 |
| 1500.0 | 1494.77 | 38.78 | -15.69 | 41.8 | 338.0 | 13.7 | 341.1 |
| 1510.0 | 1504.49 | 41.02 | -16.45 | 44.2 | 338.2 | 13.7 | 341.4 |
| 1520.0 | 1514.20 | 43.26 | -17.22 | 46.6 | 338.3 | 13.7 | 340.8 |
| 1530.0 | 1523.91 | 45.51 | -17.99 | 48.9 | 338.4 | 13.8 | 340.0 |
| 1540.0 | 1533.62 | 47.75 | -18.81 | 51.3 | 338.5 | 13.7 | 339.8 |
| 1550.0 | 1543.33 | 50.01 | -19.59 | 53.7 | 338.6 | 13.9 | 342.6 |
| 1560.0 | 1553.04 | 52.30 | -20.34 | 56.1 | 338.7 | 14.0 | 340.7 |
| 1570.0 | 1562.74 | 54.58 | -21.13 | 58.5 | 338.8 | 13.9 | 341.3 |
| 1580.0 | 1572.44 | 56.88 | -21.89 | 61.0 | 339.0 | 14.1 | 342.5 |
| 1590.0 | 1582.14 | 59.19 | -22.69 | 63.4 | 339.0 | 14.2 | 342.2 |
| 1600.0 | 1591.84 | 61.53 | -23.45 | 65.8 | 339.1 | 14.3 | 340.4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1480.0 | 1475.33 | 34.35 | -14.17 | 37.2 | 337.6 | 13.5 | 341.0 |
| 1490.0 | 1485.05 | 36.57 | -14.92 | 39.5 | 337.8 | 13.5 | 340.4 |
| 1500.0 | 1494.77 | 38.78 | -15.69 | 41.8 | 338.0 | 13.7 | 341.1 |
| 1510.0 | 1504.49 | 41.02 | -16.45 | 44.2 | 338.2 | 13.7 | 341.4 |
| 1520.0 | 1514.20 | 43.26 | -17.22 | 46.6 | 338.3 | 13.7 | 340.8 |
| 1530.0 | 1523.91 | 45.51 | -17.99 | 48.9 | 338.4 | 13.8 | 340.0 |
| 1540.0 | 1533.62 | 47.75 | -18.81 | 51.3 | 338.5 | 13.7 | 339.8 |
| 1550.0 | 1543.33 | 50.01 | -19.59 | 53.7 | 338.6 | 13.9 | 342.6 |
| 1560.0 | 1553.04 | 52.30 | -20.34 | 56.1 | 338.7 | 14.0 | 340.7 |
| 1570.0 | 1562.74 | 54.58 | -21.13 | 58.5 | 338.8 | 13.9 | 341.3 |
| 1580.0 | 1572.44 | 56.88 | -21.89 | 61.0 | 339.0 | 14.1 | 342.5 |
| 1590.0 | 1582.14 | 59.19 | -22.69 | 63.4 | 339.0 | 14.2 | 342.2 |
| 1600.0 | 1591.84 | 61.53 | -23.45 | 65.8 | 339.1 | 14.3 | 340.4 |
| 1610.0 | 1601.53 | 63.87 | -24.23 | 68.3 | 339.2 | 14.3 | 340.2 |
| 1620.0 | 1611.21 | 66.22 | -25.00 | 70.8 | 339.3 | 14.4 | 342.2 |
| 1630.0 | 1620.90 | 68.60 | -25.76 | 73.3 | 339.4 | 14.4 | 342.7 |
| 1640.0 | 1630.59 | 70.99 | -26.49 | 75.9 | 339.5 | 14.7 | 342.5 |
| 1650.0 | 1640.26 | 72.87 | -27.71 | 78.0 | 339.2 | 14.6 | 280.9 |
| 1651.8 | 1642.04 | 72.96 | -28.16 | 78.2 | 338.9 | 14.5 | 282.9 |

Well: **U39D**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 10 | 24" | | | X | 5/12/08 | |
| Surface | 16" | 249.9 | 20" | 331.35 | X | | 5/13/08 | Bskt@126.3 |
| Water Protection | 13 3/8" | 334.95 | 15 3/8" | 141 | X | | 5/14/08 | Bskt@167.55 |
| Coal Protection | 13 3/8" | 334.95 | 15 3/8" | 141 | X | | 5/14/08 | |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CONSOL

HOLE U39D

RIG #: 148

LOCATION:

DATE STARTED: 5/9/2008

DATE COMPLETED: 5/20/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 10 | 10 | OVERBURDEN |
| 10 | 37 | 27 | SAND/SHALE |
| 37 | 66.47 | 29.47 | SANDY SHALE/SAND |
| 66.47 | 96.72 | 30.25 | SAND |
| 96.72 | 125.62 | 28.9 | SAND/SANDY SHALE |
| 125.62 | 154.57 | 28.95 | SANDY SHALE/SAND |
| 154.57 | 184.77 | 30.2 | SAND/COAL/SANDY SHALE |
| 184.77 | 215.02 | 30.25 | SAND |
| 215.02 | 242.02 | 27 | SAND/SHALE |
| 242.02 | 246.72 | 4.7 | SANDY SHALE/SAND |
| 246.72 | 278.27 | 31.55 | SAND/SANDY SHALE |
| 278.27 | 309.97 | 31.7 | SAND/SHALE |
| 309.97 | 341.72 | 31.75 | SAND/SHALE/COAL |
| 341.72 | 356 | 14.28 | SAND/SHALE |
| 356 | 368.42 | 12.42 | SAND/SHALE |
| 368.42 | 400.17 | 31.75 | SAND/SHALE/COAL |
| 400.17 | 431.62 | 31.45 | SAND/SHALE |
| 431.62 | 463.31 | 31.69 | SAND/SHALE/COAL |
| 463.31 | 494.86 | 31.55 | SAND/SHALE/COAL |
| 494.86 | 526.64 | 31.78 | SAND/SHALE |
| 526.64 | 558.29 | 31.65 | SAND/SHALE/COAL |
| 558.29 | 589.88 | 31.59 | SAND/SHALE |
| 589.88 | 621.4 | 31.52 | SAND/SHALE/COAL |
| 621.4 | 653.19 | 31.79 | SAND/SHALE |
| 653.19 | 684.88 | 31.69 | SAND/SHALE/COAL |
| 684.88 | 716.63 | 31.75 | SAND/SHALE |
| 716.63 | 748.06 | 31.43 | SAND/SHALE/COAL |
| 748.06 | 779.73 | 31.67 | SAND/SHALE/COAL |
| 779.73 | 811.46 | 31.73 | SAND/SHALE/COAL |
| 811.46 | 843.19 | 31.73 | SAND/SHALE |
| 843.19 | 874.83 | 31.64 | SAND/SHALE/COAL |
| 874.83 | 906.47 | 31.64 | SAND/SHALE |
| 906.47 | 938.07 | 31.6 | SAND/SHALE/COAL |
| 938.07 | 969.77 | 31.7 | SAND/SHALE |

| | | | |
|---|---|---|---|
| 969.77 | 999.38 | 29.61 | SAND/SHALE |
| 999.38 | 1030.94 | 31.56 | SAND/SHALE/COAL |
| 1030.94 | 1062.17 | 31.23 | SAND/SHALE/COAL |
| 1062.17 | 1093.81 | 31.64 | SAND/SHALE |
| 1093.81 | 1125.5 | 31.69 | SAND/SHALE/COAL |
| 1125.5 | 1157 | 31.5 | SAND/SHALE |
| 1157 | 1188.45 | 31.45 | SANDY SHALE/SAND |
| 1188.45 | 1200.45 | 12 | SANDY SHALE |
| 1200.45 | 1224.03 | 23.58 | SAND/SHALE/COAL |
| 1224.03 | 1255.71 | 31.68 | SAND/SHALE |
| 1255.71 | 1287.36 | 31.65 | SAND/SHALE |
| 1287.36 | 1319.06 | 31.7 | SAND/SHALE |
| 1319.06 | 1350.76 | 31.7 | SAND/SHALE/COAL |
| 1350.76 | 1382.23 | 31.47 | SAND/SHALE/COAL |
| 1382.23 | 1397.23 | 15 | SANDY SHALE/SAND |
| 1397.23 | 1418.08 | 20.85 | SAND/SHALE/COAL |
| 1418.08 | 1449.97 | 31.89 | SAND/SHALE |
| 1449.97 | 1481.75 | 31.78 | SANDY SHALE/SAND |
| 1481.75 | 1513.42 | 31.67 | SAND/SANDY SHALE |
| 1513.42 | 1545.12 | 31.7 | SANDY SHALE/SAND |
| 1545.12 | 1576.76 | 31.64 | SAND |
| 1576.76 | 1608.06 | 31.3 | SAND |
| 1608.06 | 1639.87 | 31.81 | SAND |
| 1639.87 | 1653.87 | 14 | SAND |

1653.87' TOTAL DEPTH
10' OF 22" CASING
249.9' OF 16" CASING
336.95' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 451
**Company:** CNX Gas Company LLC
**File Number:** BU-3189
**Operations Name:** CBM U38E W/PL
**Operation Type:** Coalbed/Pipeline
**Completion Report Type:** Original

# COMPLETION REPORT (DGO-GO-15)

**Well Type:** Coalbed/Pipeline **Date Well Completed:** 1/11/2007
**Driller's Total Depth:** 1,880 **Log's Total Depth:** 1,879

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

☐ Stimulated ☐ Not Stimulated ☑ Gob

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 7/2/2007 3:05:29 PM *(Company)*

By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 7/2/2007

Status: Inspr Approved Date: 10/9/2007

Final PDF Date: 10/9/2007

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 489 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3189 |
| **Operations Name:** | CBM U38E W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 1/2/2007
Drilling Contractor: Noah Horn
Date drilling completed: 1/11/2007
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,880
Log Total Depth (feet): 1,879
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,013,339
Final Plat State Plane X: 1,013,339
Permitted State Plane Y: 327,433
Final Plat State Plane Y: 327,432
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | U38E Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | U38E Exhibit A.doc |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | U38E Gas Show.doc |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper Gamma Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑ Yes ☐ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | U38E Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | U38E Casing.doc |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

Mine Void @ 257' - 262'; Grouted 16" casing to surface on backside

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | U38E Drill Data.pdf |

## 9. Comments

Inspector's report says the driller ran 530' of casing. The drilling report says 580' . I think some one made a topgraphical error. Please check your records.

## 10. Signature

Permitee: CNX Gas Company LLC Date: 7/20/2007 *(Company)*

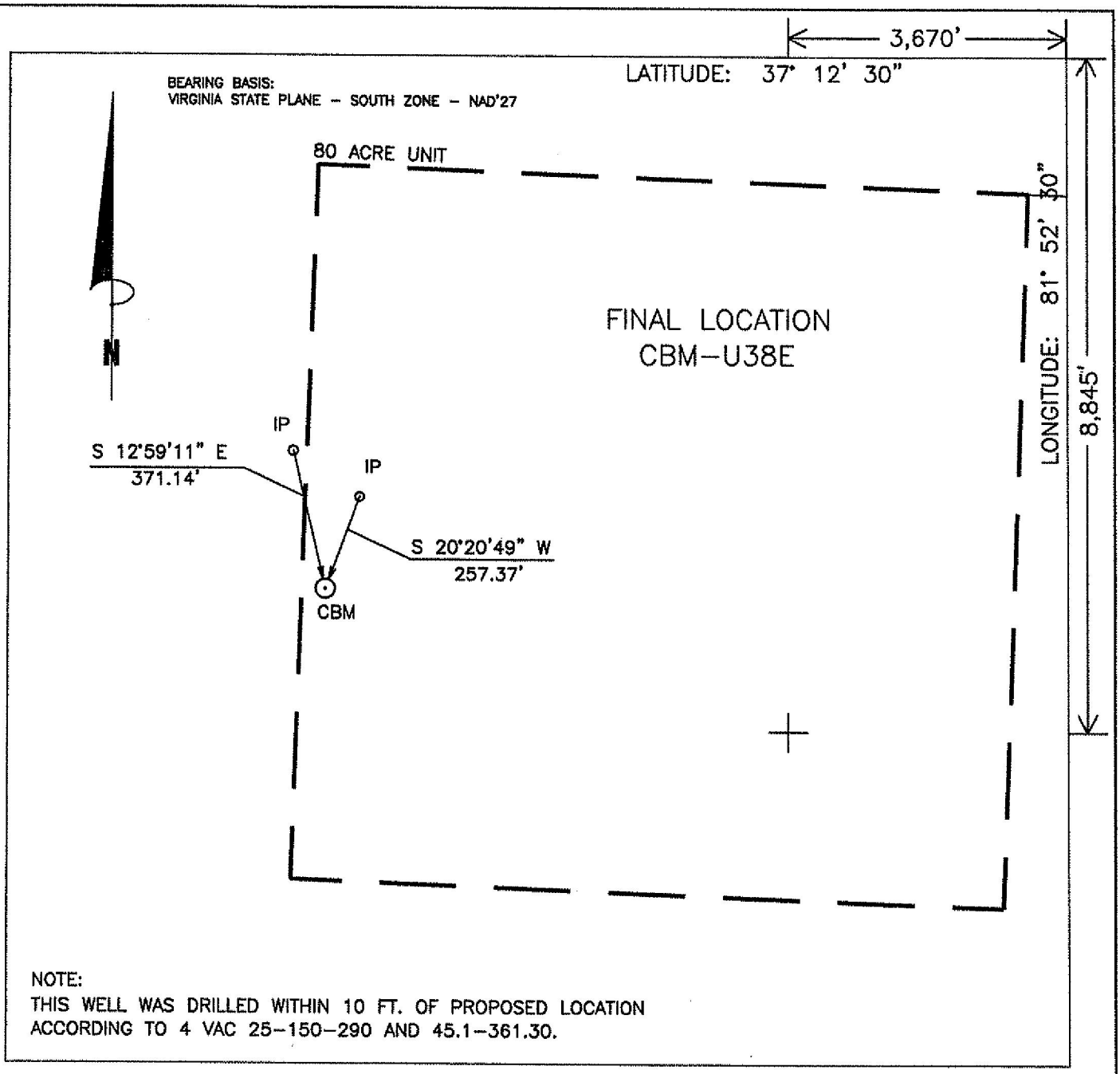
Signed By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 7/20/2007

Status: Inspr Approved Date: 7/24/2007

Final PDF Date: 7/24/2007




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

# WELL LOCATION PLAT

U38EFNL
2N24/66–558/45

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–U38E

TRACT NUMBER COAL MOUNTAIN MINING CO QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 327,431.68 E 1,013,338.99

ELEVATION: 2379.77' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 01–05–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION P[illegible] X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (diagonal).

D R Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No.
8540
1-5-07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

# Exhibit A

Well Name: 07 CBM U38E
SURFACE ELEV: 2379.77  EASTING: 1013338.99  NORTHING:  327431.68

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| AL1 | 103.40 | 104.30 | 2276.37 | 0.90 | |
| | 104.30 | 112.10 | 2275.47 | 7.80 | |
| AL2 | 112.10 | 113.50 | 2267.67 | 1.40 | |
| | 113.50 | 227.90 | 2266.27 | 114.40 | |
| RA1 | 227.90 | 230.30 | 2151.87 | 2.40 | |
| | 230.30 | 256.90 | 2149.47 | 26.60 | |
| RA2 | 256.90 | 262.50 | 2122.87 | 5.60 | MINED OUT |
| | 262.50 | 278.20 | 2117.27 | 15.70 | |
| RA3 | 278.20 | 281.00 | 2101.57 | 2.80 | |
| | 281.00 | 361.40 | 2098.77 | 80.40 | |
| JB1 | 361.40 | 363.50 | 2018.37 | 2.10 | |
| | 363.50 | 398.10 | 2016.27 | 34.60 | |
| JB3 | 398.10 | 402.20 | 1981.67 | 4.10 | |
| | 402.20 | 502.10 | 1977.57 | 99.90 | |
| TI | 502.10 | 503.30 | 1877.67 | 1.20 | |
| | 503.30 | 505.00 | 1876.47 | 1.70 | |
| TI | 505.00 | 505.90 | 1874.77 | 0.90 | |
| | 505.90 | 512.10 | 1873.87 | 6.20 | |
| *COAL | 512.10 | 512.90 | 1867.67 | 0.80 | |
| | 512.90 | 621.80 | 1866.87 | 108.90 | |
| *US1 | 621.80 | 622.20 | 1757.97 | 0.40 | |
| | 622.20 | 726.50 | 1757.57 | 104.30 | |
| *US2 | 726.50 | 727.10 | 1653.27 | 0.60 | |
| | 727.10 | 904.00 | 1652.67 | 176.90 | |
| *SE1 | 904.00 | 905.00 | 1475.77 | 1.00 | |
| | 905.00 | 940.40 | 1474.77 | 35.40 | |
| *SE2 | 940.40 | 942.00 | 1439.37 | 1.60 | |
| | 942.00 | 978.00 | 1437.77 | 36.00 | |
| *LS1 | 978.00 | 980.80 | 1401.77 | 2.80 | |
| | 980.80 | 992.90 | 1398.97 | 12.10 | |
| *LS2 | 992.90 | 993.90 | 1386.87 | 1.00 | |
| | 993.90 | 1033.30 | 1385.87 | 39.40 | |
| *UH1 | 1033.30 | 1035.00 | 1346.47 | 1.70 | |
| | 1035.00 | 1097.90 | 1344.77 | 62.90 | |
| *UH2 | 1097.90 | 1100.00 | 1281.87 | 2.10 | |
| | 1100.00 | 1150.50 | 1279.77 | 50.50 | |
| *MH1 | 1150.50 | 1152.40 | 1229.27 | 1.90 | |
| | 1152.40 | 1213.00 | 1227.37 | 60.60 | |
| *MH2 | 1213.00 | 1214.00 | 1166.77 | 1.00 | |
| | 1214.00 | 1255.90 | 1165.77 | 41.90 | |
| *P11 | 1255.90 | 1258.90 | 1123.87 | 3.00 | |
| | 1258.90 | 1279.90 | 1120.87 | 21.00 | |
| *P10 | 1279.90 | 1281.10 | 1099.87 | 1.20 | |
| | 1281.10 | 1341.00 | 1098.67 | 59.90 | |
| *LH2 | 1341.00 | 1342.00 | 1038.77 | 1.00 | |
| | 1342.00 | 1417.00 | 1037.77 | 75.00 | |
| *P91 | 1417.00 | 1419.00 | 962.77 | 2.00 | |

| | | | | |
|---|---|---|---|---|
| | 1419.00 | 1430.90 | 960.77 | 11.90 |
| *P92 | 1430.90 | 1431.80 | 948.87 | 0.90 |
| | 1431.80 | 1442.80 | 947.97 | 11.00 |
| *COAL | 1442.80 | 1444.00 | 936.97 | 1.20 |
| | 1444.00 | 1514.00 | 935.77 | 70.00 |
| *P82 | 1514.00 | 1515.20 | 865.77 | 1.20 |
| | 1515.20 | 1694.80 | 864.57 | 179.60 |
| *P62 | 1694.80 | 1695.30 | 684.97 | 0.50 |
| | 1695.30 | 1729.00 | 684.47 | 33.70 |
| *P51 | 1729.00 | 1731.00 | 650.77 | 2.00 |
| | 1731.00 | 1825.40 | 648.77 | 94.40 |
| *P41 | 1825.40 | 1827.00 | 554.37 | 1.60 |
| | 1827.00 | 1879.36 | 552.77 | 52.36 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\U38E.CMP
DATE: 02/07/07

# Oil & Gas Show

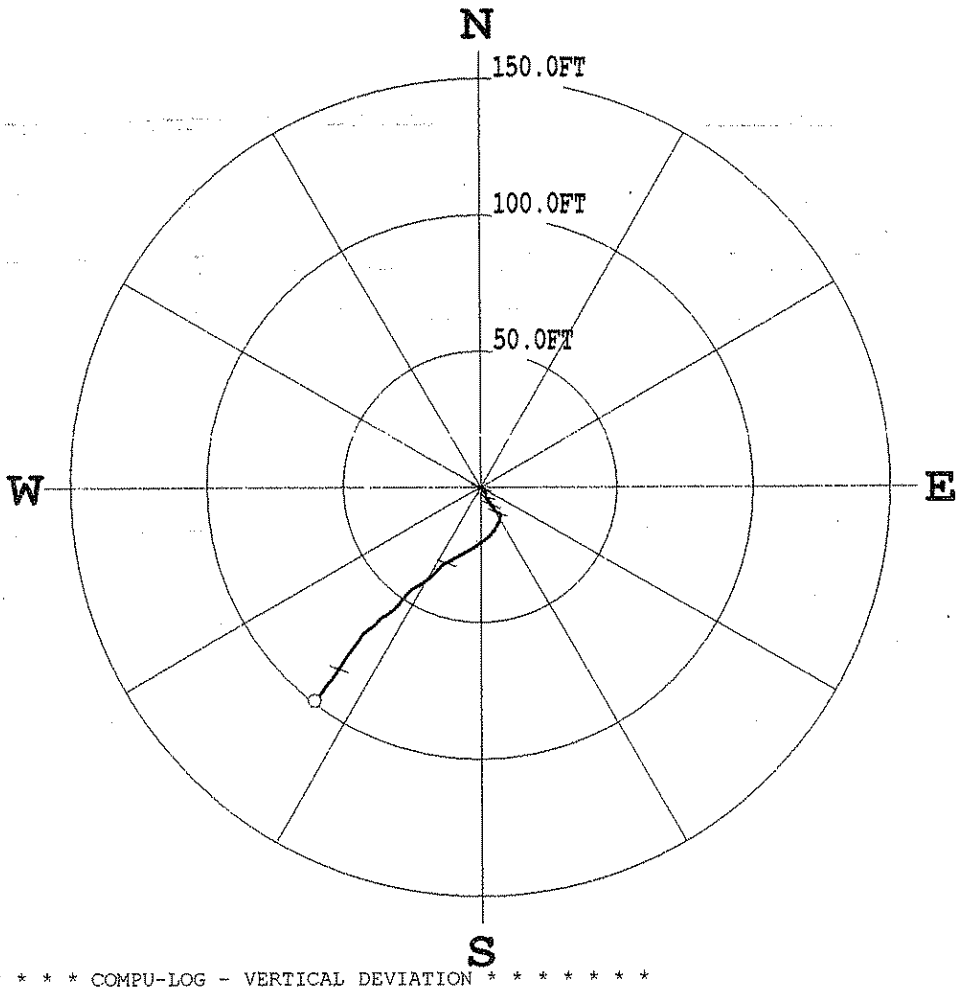
| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Lee/Norton | 904 | 1515 | | | | |
| Pocahontas | 1729 | 1827 | | | | |
| Total | | | | | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: CONSOL ENERGY
LOCATION:
HOLE ID: 07-CNX-U-38E
DATE OF LOG: 01/11/07
PROBE: 0026C 1044

MAG DECL: -7.1

SCALE: 50 FT/IN
TRUE DEPTH: 1867.33 FT
AZIMUTH: 217.8
DISTANCE: 99.0 FT
+ = 300 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * *

CLIENT : CONSOL ENERGY
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
HOLE ID. : 07-CNX-U-38E
DATE OF LOG : 01/11/07
PROBE : 0026C , 1044
DEPTH UNITS : FEET
LOG: 07-CNX-U-38E_01-11-07_14-29_0026C_.10_-0.30_1879.10_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 6.3 | 6.30 | 0.00 | 0.00 | 0.0 | 6.3 | 0.2 | 6.3 |
| 10.0 | 10.00 | 0.01 | -0.00 | 0.0 | 358.7 | 0.2 | 351.0 |
| 20.0 | 20.00 | 0.03 | 0.00 | 0.0 | 3.7 | 0.2 | 215.6 |
| 30.0 | 30.00 | 0.01 | -0.00 | 0.0 | 351.7 | 0.2 | 146.0 |
| 40.0 | 40.00 | -0.02 | 0.01 | 0.0 | 145.4 | 0.2 | 152.4 |
| 50.0 | 50.00 | -0.04 | 0.03 | 0.1 | 145.5 | 0.2 | 139.4 |
| 60.0 | 60.00 | -0.08 | 0.05 | 0.1 | 146.8 | 0.2 | 154.7 |
| 70.0 | 70.00 | -0.11 | 0.07 | 0.1 | 146.2 | 0.2 | 140.0 |
| 80.0 | 80.00 | -0.13 | 0.10 | 0.2 | 143.2 | 0.2 | 125.3 |
| 90.0 | 90.00 | -0.15 | 0.14 | 0.2 | 138.7 | 0.2 | 117.2 |
| 100.0 | 100.00 | -0.16 | 0.18 | 0.2 | 132.9 | 0.3 | 93.5 |
| 110.0 | 110.00 | -0.15 | 0.22 | 0.3 | 125.0 | 0.3 | 66.3 |
| 120.0 | 120.00 | -0.14 | 0.25 | 0.3 | 119.0 | 0.2 | 51.5 |
| 130.0 | 130.00 | -0.12 | 0.27 | 0.3 | 114.2 | 0.1 | 46.9 |
| 140.0 | 140.00 | -0.11 | 0.30 | 0.3 | 110.0 | 0.2 | 58.0 |
| 150.0 | 150.00 | -0.11 | 0.34 | 0.4 | 107.6 | 0.3 | 23.0 |
| 160.0 | 160.00 | -0.09 | 0.36 | 0.4 | 104.1 | 0.3 | 18.2 |
| 170.0 | 170.00 | -0.07 | 0.38 | 0.4 | 100.7 | 0.1 | 27.6 |
| 180.0 | 180.00 | -0.05 | 0.39 | 0.4 | 97.7 | 0.2 | 25.8 |
| 190.0 | 190.00 | -0.05 | 0.41 | 0.4 | 96.4 | 0.3 | 145.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 80.0 | 80.00 | -0.13 | 0.10 | 0.2 | 143.2 | 0.2 | 125.3 |
| 90.0 | 90.00 | -0.15 | 0.14 | 0.2 | 138.7 | 0.2 | 117.2 |
| 100.0 | 100.00 | -0.16 | 0.18 | 0.2 | 132.9 | 0.3 | 93.5 |
| 110.0 | 110.00 | -0.15 | 0.22 | 0.3 | 125.0 | 0.3 | 66.3 |
| 120.0 | 120.00 | -0.14 | 0.25 | 0.3 | 119.0 | 0.2 | 51.5 |
| 130.0 | 130.00 | -0.12 | 0.27 | 0.3 | 114.2 | 0.1 | 46.9 |
| 140.0 | 140.00 | -0.11 | 0.30 | 0.3 | 110.0 | 0.2 | 58.0 |
| 150.0 | 150.00 | -0.11 | 0.34 | 0.4 | 107.6 | 0.3 | 23.0 |
| 160.0 | 160.00 | -0.09 | 0.36 | 0.4 | 104.1 | 0.3 | 18.2 |
| 170.0 | 170.00 | -0.07 | 0.38 | 0.4 | 100.7 | 0.1 | 27.6 |
| 180.0 | 180.00 | -0.05 | 0.39 | 0.4 | 97.7 | 0.2 | 25.8 |
| 190.0 | 190.00 | -0.05 | 0.41 | 0.4 | 96.4 | 0.3 | 145.0 |
| 200.0 | 200.00 | -0.04 | 0.43 | 0.4 | 95.8 | 0.2 | 6.3 |
| 210.0 | 210.00 | -0.05 | 0.45 | 0.5 | 95.7 | 0.3 | 120.1 |
| 220.0 | 220.00 | -0.04 | 0.48 | 0.5 | 94.4 | 0.3 | 116.7 |
| 230.0 | 230.00 | -0.05 | 0.51 | 0.5 | 95.6 | 0.1 | 1.9 |
| 240.0 | 240.00 | -0.06 | 0.53 | 0.5 | 96.0 | 0.1 | 121.3 |
| 250.0 | 250.00 | -0.08 | 0.54 | 0.6 | 98.0 | 0.2 | 122.1 |
| 260.0 | 260.00 | -0.07 | 0.54 | 0.5 | 97.6 | 0.2 | 246.2 |
| 270.0 | 270.00 | -0.14 | 0.52 | 0.5 | 104.8 | 0.3 | 196.3 |
| 280.0 | 280.00 | -0.20 | 0.52 | 0.6 | 111.4 | 0.7 | 171.0 |
| 290.0 | 290.00 | -0.20 | 0.51 | 0.6 | 111.3 | 0.3 | 317.8 |
| 300.0 | 300.00 | -0.21 | 0.51 | 0.5 | 112.4 | 0.3 | 121.3 |
| 310.0 | 310.00 | -0.24 | 0.53 | 0.6 | 114.1 | 0.2 | 126.0 |
| 320.0 | 320.00 | -0.28 | 0.56 | 0.6 | 116.5 | 0.5 | 137.2 |
| 330.0 | 330.00 | -0.32 | 0.59 | 0.7 | 118.5 | 0.4 | 123.3 |
| 340.0 | 340.00 | -0.36 | 0.60 | 0.7 | 120.9 | 0.3 | 197.9 |
| 350.0 | 350.00 | -0.40 | 0.61 | 0.7 | 123.2 | 0.1 | 16.4 |
| 360.0 | 360.00 | -0.40 | 0.59 | 0.7 | 123.9 | 0.3 | 330.5 |
| 370.0 | 370.00 | -0.41 | 0.57 | 0.7 | 126.0 | 0.3 | 229.3 |
| 380.0 | 380.00 | -0.46 | 0.52 | 0.7 | 131.2 | 0.3 | 234.1 |
| 390.0 | 390.00 | -0.55 | 0.46 | 0.7 | 139.9 | 0.4 | 214.3 |
| 400.0 | 399.99 | -0.67 | 0.45 | 0.8 | 145.7 | 0.5 | 158.9 |
| 410.0 | 409.99 | -0.80 | 0.51 | 0.9 | 147.5 | 1.0 | 155.8 |
| 420.0 | 419.99 | -0.92 | 0.59 | 1.1 | 147.1 | 0.8 | 138.4 |
| 430.0 | 429.99 | -1.03 | 0.68 | 1.2 | 146.4 | 1.0 | 161.1 |
| 440.0 | 439.99 | -1.15 | 0.78 | 1.4 | 146.0 | 1.0 | 162.6 |
| 450.0 | 449.99 | -1.28 | 0.88 | 1.5 | 145.5 | 1.0 | 146.7 |
| 460.0 | 459.99 | -1.38 | 0.99 | 1.7 | 144.2 | 1.1 | 136.9 |
| 470.0 | 469.99 | -1.52 | 1.09 | 1.9 | 144.3 | 1.1 | 141.5 |
| 480.0 | 479.98 | -1.63 | 1.19 | 2.0 | 144.0 | 0.6 | 129.4 |
| 490.0 | 489.98 | -1.73 | 1.31 | 2.2 | 142.9 | 1.0 | 137.7 |
| 500.0 | 499.98 | -1.84 | 1.44 | 2.3 | 142.1 | 1.2 | 142.3 |
| 510.0 | 509.98 | -1.97 | 1.57 | 2.5 | 141.5 | 1.2 | 136.4 |
| 520.0 | 519.98 | -2.09 | 1.70 | 2.7 | 140.9 | 1.5 | 143.6 |
| 530.0 | 529.98 | -2.21 | 1.84 | 2.9 | 140.3 | 0.8 | 128.4 |
| 540.0 | 539.98 | -2.36 | 1.88 | 3.0 | 141.5 | 0.9 | 183.7 |
| 550.0 | 549.97 | -2.53 | 1.87 | 3.1 | 143.5 | 0.9 | 175.7 |
| 560.0 | 559.97 | -2.74 | 1.88 | 3.3 | 145.6 | 1.1 | 179.2 |
| 570.0 | 569.97 | -2.91 | 1.87 | 3.5 | 147.2 | 0.8 | 181.4 |
| 580.0 | 579.97 | -3.10 | 1.88 | 3.6 | 148.8 | 1.2 | 175.3 |
| 590.0 | 589.97 | -3.27 | 1.89 | 3.8 | 150.0 | 0.9 | 174.7 |
| 600.0 | 599.97 | -3.43 | 1.88 | 3.9 | 151.2 | 0.8 | 179.4 |
| 610.0 | 609.96 | -3.57 | 1.89 | 4.0 | 152.0 | 0.9 | 175.6 |
| 620.0 | 619.96 | -3.72 | 1.92 | 4.2 | 152.7 | 0.8 | 168.5 |
| 630.0 | 629.96 | -3.85 | 1.95 | 4.3 | 153.2 | 0.8 | 161.5 |
| 640.0 | 639.96 | -3.98 | 1.99 | 4.4 | 153.4 | 0.7 | 157.5 |
| 650.0 | 649.96 | -4.08 | 2.05 | 4.6 | 153.3 | 0.9 | 127.7 |
| 660.0 | 659.96 | -4.18 | 2.19 | 4.7 | 152.3 | 1.0 | 119.4 |
| 670.0 | 669.96 | -4.25 | 2.32 | 4.8 | 151.3 | 1.0 | 119.4 |
| 680.0 | 679.96 | -4.34 | 2.47 | 5.0 | 150.3 | 0.9 | 121.8 |
| 690.0 | 689.96 | -4.42 | 2.58 | 5.1 | 149.8 | 0.6 | 136.0 |
| 700.0 | 699.95 | -4.51 | 2.65 | 5.2 | 149.6 | 0.7 | 157.8 |
| 710.0 | 709.95 | -4.61 | 2.68 | 5.3 | 149.8 | 0.6 | 170.0 |
| 720.0 | 719.95 | -4.76 | 2.69 | 5.5 | 150.5 | 1.1 | 175.6 |
| 730.0 | 729.95 | -4.94 | 2.76 | 5.7 | 150.8 | 1.0 | 126.7 |
| 740.0 | 739.95 | -5.06 | 2.92 | 5.8 | 150.0 | 1.2 | 124.8 |
| 750.0 | 749.95 | -5.16 | 3.07 | 6.0 | 149.2 | 1.1 | 122.7 |
| 760.0 | 759.95 | -5.26 | 3.21 | 6.2 | 148.6 | 0.7 | 138.7 |
| 770.0 | 769.95 | -5.36 | 3.27 | 6.3 | 148.6 | 0.7 | 157.6 |
| 780.0 | 779.94 | -5.46 | 3.30 | 6.4 | 148.9 | 0.6 | 168.1 |
| 790.0 | 789.94 | -5.57 | 3.32 | 6.5 | 149.2 | 0.6 | 173.8 |
| 800.0 | 799.94 | -5.66 | 3.33 | 6.6 | 149.6 | 0.6 | 183.1 |
| 810.0 | 809.94 | -5.77 | 3.34 | 6.7 | 150.0 | 0.6 | 176.9 |
| 820.0 | 819.94 | -5.87 | 3.34 | 6.8 | 150.3 | 0.6 | 169.3 |
| 830.0 | 829.94 | -5.97 | 3.36 | 6.8 | 150.6 | 0.6 | 165.6 |
| 840.0 | 839.94 | -6.05 | 3.38 | 6.9 | 150.8 | 0.4 | 170.0 |
| 850.0 | 849.94 | -6.12 | 3.40 | 7.0 | 150.9 | 0.5 | 163.5 |
| 860.0 | 859.94 | -6.19 | 3.44 | 7.1 | 150.9 | 0.4 | 156.3 |
| 870.0 | 869.94 | -6.24 | 3.48 | 7.1 | 150.9 | 0.4 | 140.6 |
| 880.0 | 879.94 | -6.29 | 3.52 | 7.2 | 150.8 | 0.4 | 144.6 |
| 890.0 | 889.94 | -6.34 | 3.56 | 7.3 | 150.7 | 0.4 | 134.6 |
| 900.0 | 899.94 | -6.40 | 3.62 | 7.4 | 150.5 | 0.5 | 126.0 |
| 910.0 | 909.94 | -6.45 | 3.71 | 7.4 | 150.1 | 0.6 | 123.5 |
| 920.0 | 919.94 | -6.49 | 3.79 | 7.5 | 149.7 | 0.5 | 115.5 |
| 930.0 | 929.94 | -6.52 | 3.88 | 7.6 | 149.3 | 0.6 | 111.0 |
| 940.0 | 939.94 | -6.55 | 3.97 | 7.7 | 148.8 | 0.6 | 106.8 |
| 950.0 | 949.94 | -6.59 | 4.08 | 7.7 | 148.2 | 0.6 | 108.1 |
| 960.0 | 959.94 | -6.62 | 4.16 | 7.8 | 147.8 | 0.5 | 110.7 |
| 970.0 | 969.94 | -6.67 | 4.27 | 7.9 | 147.4 | 0.7 | 121.2 |
| 980.0 | 979.94 | -6.76 | 4.37 | 8.0 | 147.1 | 0.6 | 150.7 |
| 990.0 | 989.93 | -6.84 | 4.43 | 8.2 | 147.1 | 0.8 | 146.4 |
| 1000.0 | 999.93 | -6.95 | 4.48 | 8.3 | 147.2 | 0.8 | 144.8 |
| 1010.0 | 1009.93 | -7.06 | 4.54 | 8.4 | 147.3 | 0.8 | 156.0 |
| 1020.0 | 1019.93 | -7.18 | 4.57 | 8.5 | 147.5 | 0.6 | 163.6 |
| 1030.0 | 1029.93 | -7.27 | 4.60 | 8.6 | 147.7 | 0.7 | 161.5 |

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|---|---|---|---|---|---|---|---|
| 550.0 | 549.97 | -2.53 | 1.87 | 3.1 | 143.5 | 0.9 | 175.7 |
| 560.0 | 559.97 | -2.74 | 1.88 | 3.3 | 145.6 | 1.1 | 179.2 |
| 570.0 | 569.97 | -2.91 | 1.87 | 3.5 | 147.2 | 0.8 | 181.4 |
| 580.0 | 579.97 | -3.10 | 1.88 | 3.6 | 148.8 | 1.2 | 175.3 |
| 590.0 | 589.97 | -3.27 | 1.89 | 3.8 | 150.0 | 0.9 | 174.7 |
| 600.0 | 599.97 | -3.43 | 1.88 | 3.9 | 151.2 | 0.8 | 179.4 |
| 610.0 | 609.96 | -3.57 | 1.89 | 4.0 | 152.0 | 0.9 | 175.6 |
| 620.0 | 619.96 | -3.72 | 1.92 | 4.2 | 152.7 | 0.8 | 168.5 |
| 630.0 | 629.96 | -3.85 | 1.95 | 4.3 | 153.2 | 0.8 | 161.5 |
| 640.0 | 639.96 | -3.98 | 1.99 | 4.4 | 153.4 | 0.7 | 157.5 |
| 650.0 | 649.96 | -4.08 | 2.05 | 4.6 | 153.3 | 0.9 | 127.7 |
| 660.0 | 659.96 | -4.18 | 2.19 | 4.7 | 152.3 | 1.0 | 119.4 |
| 670.0 | 669.96 | -4.25 | 2.32 | 4.8 | 151.3 | 1.0 | 119.4 |
| 680.0 | 679.96 | -4.34 | 2.47 | 5.0 | 150.3 | 0.9 | 121.8 |
| 690.0 | 689.96 | -4.42 | 2.58 | 5.1 | 149.8 | 0.6 | 136.0 |
| 700.0 | 699.95 | -4.51 | 2.65 | 5.2 | 149.6 | 0.7 | 157.8 |
| 710.0 | 709.95 | -4.61 | 2.68 | 5.3 | 149.8 | 0.6 | 170.0 |
| 720.0 | 719.95 | -4.76 | 2.69 | 5.5 | 150.5 | 1.1 | 175.6 |
| 730.0 | 729.95 | -4.94 | 2.76 | 5.7 | 150.8 | 1.0 | 126.7 |
| 740.0 | 739.95 | -5.06 | 2.92 | 5.8 | 150.0 | 1.2 | 124.8 |
| 750.0 | 749.95 | -5.16 | 3.07 | 6.0 | 149.2 | 1.1 | 122.7 |
| 760.0 | 759.95 | -5.26 | 3.21 | 6.2 | 148.6 | 0.7 | 138.7 |
| 770.0 | 769.95 | -5.36 | 3.27 | 6.3 | 148.6 | 0.7 | 157.6 |
| 780.0 | 779.94 | -5.46 | 3.30 | 6.4 | 148.9 | 0.6 | 168.1 |
| 790.0 | 789.94 | -5.57 | 3.32 | 6.5 | 149.2 | 0.6 | 173.8 |
| 800.0 | 799.94 | -5.66 | 3.33 | 6.6 | 149.6 | 0.6 | 183.1 |
| 810.0 | 809.94 | -5.77 | 3.34 | 6.7 | 150.0 | 0.6 | 176.9 |
| 820.0 | 819.94 | -5.87 | 3.34 | 6.8 | 150.3 | 0.6 | 169.3 |
| 830.0 | 829.94 | -5.97 | 3.36 | 6.8 | 150.6 | 0.6 | 165.6 |
| 840.0 | 839.94 | -6.05 | 3.38 | 6.9 | 150.8 | 0.4 | 170.0 |
| 850.0 | 849.94 | -6.12 | 3.40 | 7.0 | 150.9 | 0.5 | 163.5 |
| 860.0 | 859.94 | -6.19 | 3.44 | 7.1 | 150.9 | 0.4 | 156.3 |
| 870.0 | 869.94 | -6.24 | 3.48 | 7.1 | 150.9 | 0.4 | 140.6 |
| 880.0 | 879.94 | -6.29 | 3.52 | 7.2 | 150.8 | 0.4 | 144.6 |
| 890.0 | 889.94 | -6.34 | 3.56 | 7.3 | 150.7 | 0.4 | 134.6 |
| 900.0 | 899.94 | -6.40 | 3.62 | 7.4 | 150.5 | 0.5 | 126.0 |
| 910.0 | 909.94 | -6.45 | 3.71 | 7.4 | 150.1 | 0.6 | 123.5 |
| 920.0 | 919.94 | -6.49 | 3.79 | 7.5 | 149.7 | 0.5 | 115.5 |
| 930.0 | 929.94 | -6.52 | 3.88 | 7.6 | 149.3 | 0.6 | 111.0 |
| 940.0 | 939.94 | -6.55 | 3.97 | 7.7 | 148.8 | 0.6 | 106.8 |
| 950.0 | 949.94 | -6.59 | 4.08 | 7.7 | 148.2 | 0.6 | 108.1 |
| 960.0 | 959.94 | -6.62 | 4.16 | 7.8 | 147.8 | 0.5 | 110.7 |
| 970.0 | 969.94 | -6.67 | 4.27 | 7.9 | 147.4 | 0.7 | 121.2 |
| 980.0 | 979.94 | -6.76 | 4.37 | 8.0 | 147.1 | 0.6 | 150.7 |
| 990.0 | 989.93 | -6.84 | 4.43 | 8.2 | 147.1 | 0.8 | 146.4 |
| 1000.0 | 999.93 | -6.95 | 4.48 | 8.3 | 147.2 | 0.8 | 144.8 |
| 1010.0 | 1009.93 | -7.06 | 4.54 | 8.4 | 147.3 | 0.8 | 156.0 |
| 1020.0 | 1019.93 | -7.18 | 4.57 | 8.5 | 147.5 | 0.6 | 163.6 |
| 1030.0 | 1029.93 | -7.27 | 4.60 | 8.6 | 147.7 | 0.7 | 161.5 |
| 1040.0 | 1039.93 | -7.40 | 4.65 | 8.7 | 147.9 | 0.8 | 157.5 |
| 1050.0 | 1049.93 | -7.54 | 4.69 | 8.9 | 148.1 | 1.0 | 160.2 |
| 1060.0 | 1059.93 | -7.67 | 4.74 | 9.0 | 148.3 | 0.7 | 158.6 |
| 1070.0 | 1069.93 | -7.80 | 4.79 | 9.2 | 148.5 | 0.7 | 161.9 |
| 1080.0 | 1079.93 | -7.94 | 4.84 | 9.3 | 148.6 | 0.9 | 164.1 |
| 1090.0 | 1089.93 | -8.08 | 4.89 | 9.4 | 148.8 | 1.0 | 163.7 |
| 1100.0 | 1099.92 | -8.22 | 4.94 | 9.6 | 149.0 | 0.7 | 161.0 |
| 1110.0 | 1109.92 | -8.37 | 4.99 | 9.7 | 149.2 | 1.0 | 169.8 |
| 1120.0 | 1119.92 | -8.56 | 5.06 | 9.9 | 149.4 | 1.2 | 146.8 |
| 1130.0 | 1129.92 | -8.71 | 5.21 | 10.1 | 149.1 | 1.2 | 123.8 |
| 1140.0 | 1139.92 | -8.79 | 5.39 | 10.3 | 148.5 | 1.2 | 107.4 |
| 1150.0 | 1149.92 | -8.84 | 5.54 | 10.4 | 147.9 | 0.4 | 127.9 |
| 1160.0 | 1159.91 | -8.97 | 5.61 | 10.6 | 148.0 | 0.8 | 158.2 |
| 1170.0 | 1169.91 | -9.11 | 5.65 | 10.7 | 148.2 | 0.9 | 168.6 |
| 1180.0 | 1179.91 | -9.23 | 5.72 | 10.9 | 148.2 | 1.0 | 108.9 |
| 1190.0 | 1189.91 | -9.29 | 5.87 | 11.0 | 147.7 | 0.9 | 110.0 |
| 1200.0 | 1199.91 | -9.34 | 6.02 | 11.1 | 147.2 | 0.9 | 107.4 |
| 1210.0 | 1209.91 | -9.38 | 6.17 | 11.2 | 146.7 | 0.8 | 103.8 |
| 1220.0 | 1219.91 | -9.42 | 6.31 | 11.3 | 146.2 | 0.8 | 104.0 |
| 1230.0 | 1229.91 | -9.45 | 6.45 | 11.4 | 145.7 | 0.9 | 102.5 |
| 1240.0 | 1239.91 | -9.49 | 6.60 | 11.6 | 145.2 | 0.8 | 104.6 |
| 1250.0 | 1249.90 | -9.53 | 6.75 | 11.7 | 144.7 | 1.1 | 103.4 |
| 1260.0 | 1259.90 | -9.56 | 6.87 | 11.8 | 144.3 | 0.7 | 116.0 |
| 1270.0 | 1269.90 | -9.71 | 6.98 | 12.0 | 144.3 | 1.5 | 169.7 |
| 1280.0 | 1279.90 | -9.98 | 7.09 | 12.2 | 144.6 | 1.9 | 166.4 |
| 1290.0 | 1289.89 | -10.28 | 7.17 | 12.5 | 145.1 | 2.0 | 173.3 |
| 1300.0 | 1299.88 | -10.69 | 7.17 | 12.9 | 146.1 | 2.7 | 182.0 |
| 1310.0 | 1309.87 | -11.25 | 7.09 | 13.3 | 147.8 | 3.7 | 193.6 |
| 1320.0 | 1319.84 | -11.98 | 6.92 | 13.8 | 150.0 | 4.5 | 199.2 |
| 1330.0 | 1329.80 | -12.84 | 6.64 | 14.5 | 152.6 | 5.2 | 199.7 |
| 1340.0 | 1339.75 | -13.74 | 6.21 | 15.1 | 155.7 | 6.2 | 205.2 |
| 1350.0 | 1349.68 | -14.72 | 5.66 | 15.8 | 159.0 | 6.9 | 209.5 |
| 1360.0 | 1359.60 | -15.78 | 5.00 | 16.6 | 162.4 | 6.8 | 210.6 |
| 1370.0 | 1369.52 | -16.79 | 4.20 | 17.3 | 166.0 | 8.4 | 225.6 |
| 1380.0 | 1379.42 | -17.85 | 3.26 | 18.1 | 169.7 | 8.7 | 223.6 |
| 1390.0 | 1389.29 | -18.97 | 2.19 | 19.1 | 173.4 | 8.7 | 201.1 |
| 1400.0 | 1399.19 | -19.81 | 1.08 | 19.8 | 176.9 | 8.3 | 236.7 |
| 1410.0 | 1409.09 | -20.62 | -0.11 | 20.6 | 180.3 | 7.9 | 239.3 |
| 1420.0 | 1418.97 | -21.41 | -1.36 | 21.5 | 183.6 | 8.7 | 240.6 |
| 1430.0 | 1428.86 | -22.34 | -2.52 | 22.5 | 186.4 | 8.7 | 209.3 |
| 1440.0 | 1438.74 | -23.14 | -3.80 | 23.5 | 189.3 | 8.7 | 236.1 |
| 1450.0 | 1448.63 | -23.83 | -5.16 | 24.4 | 192.2 | 8.9 | 240.7 |
| 1460.0 | 1458.50 | -24.54 | -6.55 | 25.4 | 195.0 | 9.0 | 243.6 |
| 1470.0 | 1468.38 | -25.25 | -7.96 | 26.5 | 197.5 | 9.2 | 241.5 |
| 1480.0 | 1478.25 | -26.02 | -9.36 | 27.7 | 199.8 | 9.3 | 238.0 |
| 1490.0 | 1488.12 | -26.82 | -10.76 | 28.9 | 201.9 | 9.4 | 243.5 |
| 1500.0 | 1497.98 | -27.59 | -12.20 | 30.2 | 203.9 | 9.5 | 243.1 |

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|---|---|---|---|---|---|---|---|
| 970.0 | 969.94 | -6.67 | 4.27 | 7.9 | 147.4 | 0.7 | 121.2 |
| 980.0 | 979.94 | -6.76 | 4.37 | 8.0 | 147.1 | 0.6 | 150.7 |
| 990.0 | 989.93 | -6.84 | 4.43 | 8.2 | 147.1 | 0.8 | 146.4 |
| 1000.0 | 999.93 | -6.95 | 4.48 | 8.3 | 147.2 | 0.8 | 144.8 |
| 1010.0 | 1009.93 | -7.06 | 4.54 | 8.4 | 147.3 | 0.8 | 156.0 |
| 1020.0 | 1019.93 | -7.18 | 4.57 | 8.5 | 147.5 | 0.6 | 163.6 |
| 1030.0 | 1029.93 | -7.27 | 4.60 | 8.6 | 147.7 | 0.7 | 161.5 |
| 1040.0 | 1039.93 | -7.40 | 4.65 | 8.7 | 147.9 | 0.8 | 157.5 |
| 1050.0 | 1049.93 | -7.54 | 4.69 | 8.9 | 148.1 | 1.0 | 160.2 |
| 1060.0 | 1059.93 | -7.67 | 4.74 | 9.0 | 148.3 | 0.7 | 158.6 |
| 1070.0 | 1069.93 | -7.80 | 4.79 | 9.2 | 148.5 | 0.7 | 161.9 |
| 1080.0 | 1079.93 | -7.94 | 4.84 | 9.3 | 148.6 | 0.9 | 164.1 |
| 1090.0 | 1089.93 | -8.08 | 4.89 | 9.4 | 148.8 | 1.0 | 163.7 |
| 1100.0 | 1099.92 | -8.22 | 4.94 | 9.6 | 149.0 | 0.7 | 161.0 |
| 1110.0 | 1109.92 | -8.37 | 4.99 | 9.7 | 149.2 | 1.0 | 169.8 |
| 1120.0 | 1119.92 | -8.56 | 5.06 | 9.9 | 149.4 | 1.2 | 146.8 |
| 1130.0 | 1129.92 | -8.71 | 5.21 | 10.1 | 149.1 | 1.2 | 123.8 |
| 1140.0 | 1139.92 | -8.79 | 5.39 | 10.3 | 148.5 | 1.2 | 107.4 |
| 1150.0 | 1149.92 | -8.84 | 5.54 | 10.4 | 147.9 | 0.4 | 127.9 |
| 1160.0 | 1159.91 | -8.97 | 5.61 | 10.6 | 148.0 | 0.8 | 158.2 |
| 1170.0 | 1169.91 | -9.11 | 5.65 | 10.7 | 148.2 | 0.9 | 168.6 |
| 1180.0 | 1179.91 | -9.23 | 5.72 | 10.9 | 148.2 | 1.0 | 108.9 |
| 1190.0 | 1189.91 | -9.29 | 5.87 | 11.0 | 147.7 | 0.9 | 110.0 |
| 1200.0 | 1199.91 | -9.34 | 6.02 | 11.1 | 147.2 | 0.9 | 107.4 |
| 1210.0 | 1209.91 | -9.38 | 6.17 | 11.2 | 146.7 | 0.8 | 103.8 |
| 1220.0 | 1219.91 | -9.42 | 6.31 | 11.3 | 146.2 | 0.8 | 104.0 |
| 1230.0 | 1229.91 | -9.45 | 6.45 | 11.4 | 145.7 | 0.9 | 102.5 |
| 1240.0 | 1239.91 | -9.49 | 6.60 | 11.6 | 145.2 | 0.8 | 104.6 |
| 1250.0 | 1249.90 | -9.53 | 6.75 | 11.7 | 144.7 | 1.1 | 103.4 |
| 1260.0 | 1259.90 | -9.56 | 6.87 | 11.8 | 144.3 | 0.7 | 116.0 |
| 1270.0 | 1269.90 | -9.71 | 6.98 | 12.0 | 144.3 | 1.5 | 169.7 |
| 1280.0 | 1279.90 | -9.98 | 7.09 | 12.2 | 144.6 | 1.9 | 166.4 |
| 1290.0 | 1289.89 | -10.28 | 7.17 | 12.5 | 145.1 | 2.0 | 173.3 |
| 1300.0 | 1299.88 | -10.69 | 7.17 | 12.9 | 146.1 | 2.7 | 182.0 |
| 1310.0 | 1309.87 | -11.25 | 7.09 | 13.3 | 147.8 | 3.7 | 193.6 |
| 1320.0 | 1319.84 | -11.98 | 6.92 | 13.8 | 150.0 | 4.5 | 199.2 |
| 1330.0 | 1329.80 | -12.84 | 6.64 | 14.5 | 152.6 | 5.2 | 199.7 |
| 1340.0 | 1339.75 | -13.74 | 6.21 | 15.1 | 155.7 | 6.2 | 205.2 |
| 1350.0 | 1349.68 | -14.72 | 5.66 | 15.8 | 159.0 | 6.9 | 209.5 |
| 1360.0 | 1359.60 | -15.78 | 5.00 | 16.6 | 162.4 | 6.8 | 210.6 |
| 1370.0 | 1369.52 | -16.79 | 4.20 | 17.3 | 166.0 | 8.4 | 225.6 |
| 1380.0 | 1379.42 | -17.85 | 3.26 | 18.1 | 169.7 | 8.7 | 223.6 |
| 1390.0 | 1389.29 | -18.97 | 2.19 | 19.1 | 173.4 | 8.7 | 201.1 |
| 1400.0 | 1399.19 | -19.81 | 1.08 | 19.8 | 176.9 | 8.3 | 236.7 |
| 1410.0 | 1409.09 | -20.62 | -0.11 | 20.6 | 180.3 | 7.9 | 239.3 |
| 1420.0 | 1418.97 | -21.41 | -1.36 | 21.5 | 183.6 | 8.7 | 240.6 |
| 1430.0 | 1428.86 | -22.34 | -2.52 | 22.5 | 186.4 | 8.7 | 209.3 |
| 1440.0 | 1438.74 | -23.14 | -3.80 | 23.5 | 189.3 | 8.7 | 236.1 |
| 1450.0 | 1448.63 | -23.83 | -5.16 | 24.4 | 192.2 | 8.9 | 240.7 |
| 1460.0 | 1458.50 | -24.54 | -6.55 | 25.4 | 195.0 | 9.0 | 243.6 |
| 1470.0 | 1468.38 | -25.25 | -7.96 | 26.5 | 197.5 | 9.2 | 241.5 |
| 1480.0 | 1478.25 | -26.02 | -9.36 | 27.7 | 199.8 | 9.3 | 238.0 |
| 1490.0 | 1488.12 | -26.82 | -10.76 | 28.9 | 201.9 | 9.4 | 243.5 |
| 1500.0 | 1497.98 | -27.59 | -12.20 | 30.2 | 203.9 | 9.5 | 243.1 |
| 1510.0 | 1507.84 | -28.40 | -13.65 | 31.5 | 205.7 | 9.6 | 235.9 |
| 1520.0 | 1517.71 | -29.60 | -14.73 | 33.1 | 206.5 | 9.0 | 209.2 |
| 1530.0 | 1527.58 | -30.72 | -15.86 | 34.6 | 207.3 | 9.6 | 227.7 |
| 1540.0 | 1537.45 | -31.86 | -17.01 | 36.1 | 208.1 | 9.4 | 230.6 |
| 1550.0 | 1547.31 | -33.00 | -18.20 | 37.7 | 208.9 | 9.5 | 226.7 |
| 1560.0 | 1557.17 | -34.08 | -19.46 | 39.2 | 209.7 | 9.7 | 231.8 |
| 1570.0 | 1567.03 | -35.09 | -20.82 | 40.8 | 210.7 | 9.9 | 234.9 |
| 1580.0 | 1576.88 | -36.01 | -22.28 | 42.3 | 211.7 | 10.1 | 232.6 |
| 1590.0 | 1586.71 | -36.81 | -23.87 | 43.9 | 213.0 | 10.6 | 241.0 |
| 1600.0 | 1596.55 | -37.76 | -25.42 | 45.5 | 213.9 | 10.7 | 243.3 |
| 1610.0 | 1606.38 | -39.08 | -26.66 | 47.3 | 214.3 | 10.6 | 219.4 |
| 1620.0 | 1616.21 | -40.49 | -27.82 | 49.1 | 214.5 | 10.5 | 224.9 |
| 1630.0 | 1626.04 | -41.90 | -28.99 | 51.0 | 214.7 | 10.5 | 218.0 |
| 1640.0 | 1635.88 | -43.36 | -30.01 | 52.7 | 214.7 | 10.1 | 218.6 |
| 1650.0 | 1645.72 | -44.57 | -31.32 | 54.5 | 215.1 | 10.3 | 227.2 |
| 1660.0 | 1655.56 | -45.77 | -32.63 | 56.2 | 215.5 | 10.3 | 229.7 |
| 1670.0 | 1665.39 | -46.86 | -34.08 | 57.9 | 216.0 | 10.7 | 232.1 |
| 1680.0 | 1675.21 | -47.80 | -35.69 | 59.7 | 216.7 | 10.9 | 235.9 |
| 1690.0 | 1685.03 | -49.04 | -37.11 | 61.5 | 217.1 | 11.0 | 223.6 |
| 1700.0 | 1694.85 | -50.48 | -38.37 | 63.4 | 217.2 | 11.1 | 221.7 |
| 1710.0 | 1704.65 | -51.73 | -39.86 | 65.3 | 217.6 | 11.4 | 232.5 |
| 1720.0 | 1714.45 | -52.88 | -41.48 | 67.2 | 218.1 | 11.5 | 232.9 |
| 1730.0 | 1724.25 | -54.19 | -42.98 | 69.2 | 218.4 | 11.5 | 220.7 |
| 1740.0 | 1734.06 | -55.82 | -44.06 | 71.1 | 218.3 | 11.2 | 198.8 |
| 1750.0 | 1743.87 | -57.38 | -45.16 | 73.0 | 218.2 | 11.3 | 212.1 |
| 1760.0 | 1753.68 | -58.91 | -46.36 | 75.0 | 218.2 | 11.3 | 220.8 |
| 1770.0 | 1763.48 | -60.49 | -47.54 | 76.9 | 218.2 | 11.4 | 208.4 |
| 1780.0 | 1773.28 | -62.12 | -48.65 | 78.9 | 218.1 | 11.4 | 208.5 |
| 1790.0 | 1783.08 | -63.76 | -49.78 | 80.9 | 218.0 | 11.8 | 213.1 |
| 1800.0 | 1792.87 | -65.44 | -50.91 | 82.9 | 217.9 | 11.8 | 212.5 |
| 1810.0 | 1802.66 | -67.14 | -52.03 | 84.9 | 217.8 | 12.0 | 213.6 |
| 1820.0 | 1812.45 | -68.85 | -53.11 | 87.0 | 217.6 | 12.1 | 212.3 |
| 1830.0 | 1822.23 | -70.55 | -54.29 | 89.0 | 217.6 | 12.0 | 216.3 |
| 1840.0 | 1832.01 | -72.11 | -55.70 | 91.1 | 217.7 | 12.3 | 219.3 |
| 1850.0 | 1841.78 | -73.80 | -57.01 | 93.3 | 217.7 | 12.4 | 217.1 |
| 1860.0 | 1851.54 | -75.58 | -58.25 | 95.4 | 217.6 | 12.6 | 213.8 |
| 1870.0 | 1861.29 | -77.12 | -59.80 | 97.6 | 217.8 | 13.1 | 224.0 |
| 1876.2 | 1867.33 | -78.21 | -60.69 | 99.0 | 217.8 | 13.2 | 205.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 760.0 | 1753.68 | -58.91 | -46.36 | 75.0 | 218.2 | 11.3 | 220.8 |
| 770.0 | 1763.48 | -60.49 | -47.54 | 76.9 | 218.2 | 11.4 | 208.4 |
| 780.0 | 1773.28 | -62.12 | -48.65 | 78.9 | 218.1 | 11.4 | 208.5 |
| 790.0 | 1783.08 | -63.76 | -49.78 | 80.9 | 218.0 | 11.8 | 213.1 |
| 800.0 | 1792.87 | -65.44 | -50.91 | 82.9 | 217.9 | 11.8 | 212.5 |
| 810.0 | 1802.66 | -67.14 | -52.03 | 84.9 | 217.8 | 12.0 | 213.6 |
| 820.0 | 1812.45 | -68.85 | -53.11 | 87.0 | 217.6 | 12.1 | 212.3 |
| 830.0 | 1822.23 | -70.55 | -54.29 | 89.0 | 217.6 | 12.0 | 216.3 |
| 840.0 | 1832.01 | -72.11 | -55.70 | 91.1 | 217.7 | 12.3 | 219.3 |
| 850.0 | 1841.78 | -73.80 | -57.01 | 93.3 | 217.7 | 12.4 | 217.1 |
| 860.0 | 1851.54 | -75.58 | -58.25 | 95.4 | 217.6 | 12.6 | 213.8 |
| 870.0 | 1861.29 | -77.12 | -59.80 | 97.6 | 217.8 | 13.1 | 224.0 |
| 876.2 | 1867.33 | -78.21 | -60.69 | 99.0 | 217.8 | 13.2 | 205.5 |

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | Cemented To Surface No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22” | 20.4 | 24” | | | X | 1/2/07 | |
| Surface | 16” | 300’ | 19 3/8” | 472 | | X | 1/7/07 | Basket @ 172’ |
| Water Protection | 13 3/8” | 530.65’ | 15 3/8” | 236 | X | | 1/8/07 | Basket @ 170’ |
| Coal Protection | 13 3/8” | 530.65’ | 15 3/8” | 236 | X | | 1/8/07 | Basket @ 170’ |
| Other Casing And Tubing Left In Well | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** CNX **HOLE #:** U-38E

**LOCATION:** **DRILL RIG #:** 19

**DATE STARTED:** 01-02-07 **DATED COMPLETED:** 01-11-07

**ELECTRIC LOGGED:** YES **GROUTED:** YES

| DEPTH | THICKNESS | | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 20.40 | 20.40 | OVERBURDEN |
| 20.40 | 34 | 13.60 | |
| 34 | 64.30 | 30.30 | SAND |
| 64.30 | 93.70 | 29.40 | SAND/SANDY SHALE |
| 93.70 | 122.65 | 28.95 | SANDY SHALE/SAND |
| 122.65 | 152.10 | 29.45 | SAND |
| 152.10 | 210 | 57.90 | SAND/SANDY SHALE |
| 210 | 240.15 | 30.15 | SANDY SHALE/SAND |
| 240.15 | 260 | 19.85 | SAND/SANDY SHALE |
| 260 | 263 | 3 | BROKE UP |
| 263 | 270.30 | 7.30 | SANDY SHALE |
| 270.30 | 290 | 19.70 | SANDY SHALE/SAND |
| 290 | 300 | 10 | SANDY SHALE |
| 300 | 332.25 | 32.25 | SANDY SHALE/SAND |
| 332.25 | 363.95 | 31.70 | SAND/SANDY SHALE |
| 363.95 | 394.80 | 30.85 | COAL/SAND |
| 394.80 | 426.30 | 31.50 | SAND/SANDY SHALE/SAND |
| 426.30 | 457.30 | 31.00 | SAND/SANDY SHALE |
| 457.30 | 486.90 | 29.60 | SANDY SHALE/COAL/SANDY SHALE |
| 486.90 | 518.45 | 31.55 | SANDY SHALE/COAL/SAND |
| 518.45 | 550.35 | 31.90 | SAND/SANDY SHALE/SAND |
| 550.35 | 580.90 | 30.55 | SAND |
| 580.90 | 598.05 | 17.15 | SANDY SHALE |
| 598.05 | 630.05 | 32.00 | SANDY SHALE/SAND |
| 630.05 | 660.40 | 30.35 | SAND |
| 660.40 | 723.15 | 62.75 | SAND/SANDY SHALE/SAND |
| 723.15 | 753.70 | 30.55 | SAND/SANDY SHALE |
| 753.70 | 784.86 | 31.16 | SAND/SANDY SHALE/SAND |
| 784.86 | 816.22 | 31.36 | SAND/SANDY SHALE |
| 816.22 | 848.22 | 32.00 | SANDY SHALE |
| 848.22 | 880.37 | 32.15 | SANDY SHALE/COAL/SAND |
| 880.37 | 912.27 | 31.90 | SANDY SHALE/SAND |
| 912.27 | 943.97 | 31.70 | SAND |
| 943.97 | 974.97 | 31.00 | SAND/SANDY SHALE |
| 974.97 | 1005.62 | 30.65 | SANDY SHALE/COAL/SAND |

| | | | |
|---|---|---|---|
| 1005.62 | 1036.87 | 31.25 | SAND/SANDY SHALE |
| 1036.87 | 1068.25 | 31.38 | SAND |
| 1068.25 | 1100.05 | 31.80 | SAND/COAL/SAND |
| 1100.05 | 1131.75 | 31.70 | SAND |
| 1131.75 | 1163.40 | 31.65 | SAND/SANDY SHALE/SAND |
| 1163.40 | 1194.60 | 31.20 | SAND/SANDY SHALE |
| 1194.60 | 1224.10 | 29.50 | SANDY SHALE/SAND |
| 1224.10 | 1254.30 | 30.20 | SAND/SANDY SHALE/SAND |
| 1254.30 | 1260.05 | 5.75 | SANDY SHALE |
| 1260.05 | 1290.25 | 30.20 | SANDY SHALE/SAND |
| 1290.25 | 1321.15 | 30.90 | SAND/SANDY SHALE/SAND |
| 1321.15 | 1352.00 | 30.85 | SAND |
| 1352.00 | 1383.80 | 31.80 | SAND/SANDY SHALE/SAND |
| 1383.80 | 1413.40 | 29.60 | SAND |
| 1413.40 | 1426.05 | 12.65 | SAND/SANDY SHALE |
| 1426.05 | 1457.40 | 31.35 | SANDY SHALE/SAND |
| 1457.40 | 1489.35 | 31.95 | SAND/SANDY SHALE |
| 1489.35 | 1520.55 | 31.20 | SANDY SHALE/SAND |
| 1520.55 | 1551.85 | 31.30 | SAND/SANDY SHALE |
| 1551.85 | 1583.45 | 31.60 | SANDY SHALE/SAND |
| 1583.45 | 1613.35 | 29.90 | SAND |
| 1613.35 | 1642.85 | 29.50 | SAND/SANDY SHALE |
| 1642.85 | 1674.85 | 32.00 | SANDY SHALE/COAL/SANDY SHALE |
| 1674.85 | 1706.05 | 31.20 | SANDY SHALE |
| 1706.05 | 1737.60 | 31.55 | SANDY SHALE/COAL/SAND |
| 1737.60 | 1769.35 | 31.75 | SAND/SANDY SHALE/SAND |
| 1769.35 | 1800.35 | 31.00 | SAND |
| 1800.35 | 1831.30 | 30.95 | SAND/SANDY SHALE/COAL SANDY SHALE |
| 1831.30 | 1862.90 | 31.60 | SANDY SHALE/SAND |
| 1862.90 | 1880 | 17.10 | SAND/SANDY SHALE |

1880.00 FT. TOTAL DEPTH
20.40 FT. OF 22" CASING
300.60 FT. OF 16" CASING
550.65 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 413
**Company:** CNX Gas Company LLC
**File Number:** BU-3222
**Operations Name:** CBM U38G W/PL
**Operation Type:** Coalbed/Pipeline
**Completion Report Type:** Original

# COMPLETION REPORT (DGO-GO-15)

**Well Type:** Coalbed/Pipeline **Date Well Completed:** 12/19/2006
**Driller's Total Depth:** 1,637 **Log's Total Depth:** 1,621

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

☐ Stimulated ☐ Not Stimulated ☑ Gob

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 6/19/2007 11:45:50 AM *(Company)*

By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 6/19/2007

Status: Inspr Approved Date: 7/23/2007

Final PDF Date: 7/23/2007

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 451 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3222 |
| **Operations Name:** | CBM U38G W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 12/6/2006
Drilling Contractor: Noah Horn
Date drilling completed: 12/19/2006
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,637
Log Total Depth (feet): 1,621
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,013,593
Final Plat State Plane X: 1,013,585
Permitted State Plane Y: 328,429
Final Plat State Plane Y: 328,431
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | U38G Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | U38G Exhibit A.doc |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | U38G Gas Show.doc |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper Gamma Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑ Yes ☐ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | U38G Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | U38G Casing.doc |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | U38G Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/19/2007 *(Company)*

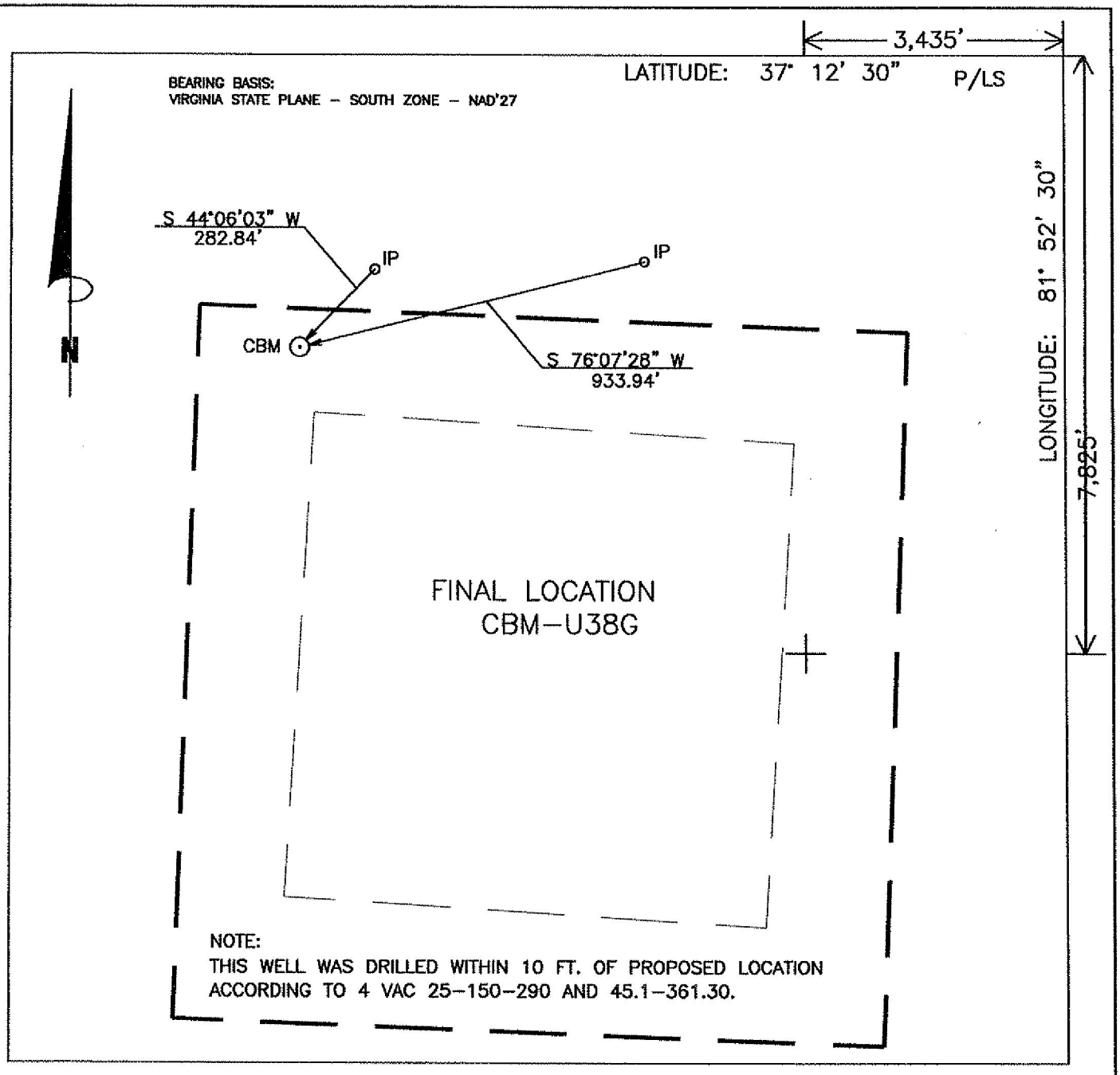
Signed By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 6/19/2007

Status: Inspr Approved Date: 7/23/2007

Final PDF Date: 7/23/2007




# WELL LOCATION PLAT

U38GFNL
2N24/12–556/38

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–U38G

TRACT NUMBER CMMC QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE:N 328,430.66 E 1,013,584.83

ELEVATION: 2129.79' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 12–18–06

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X DRP

┼ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

D.R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No. 8540
12/18/06
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

# Exhibit A

Well Name: 06 CBM U38G
SURFACE ELEV: 2129.79  EASTING: 1013584.83  NORTHING:  328430.66

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA3 | 36.10 | 38.10 | 2093.69 | 2.00 | |
| | 38.10 | 120.20 | 2091.69 | 82.10 | |
| JB1 | 120.20 | 122.00 | 2009.59 | 1.80 | |
| | 122.00 | 162.80 | 2007.79 | 40.80 | |
| JB3 | 162.80 | 165.10 | 1966.99 | 2.30 | |
| | 165.10 | 259.00 | 1964.69 | 93.90 | |
| TI | 259.00 | 260.10 | 1870.79 | 1.10 | |
| | 260.10 | 260.50 | 1869.69 | 0.40 | |
| TI | 260.50 | 261.30 | 1869.29 | 0.80 | |
| | 261.30 | 376.50 | 1868.49 | 115.20 | |
| US1 | 376.50 | 377.00 | 1753.29 | 0.50 | |
| | 377.00 | 484.20 | 1752.79 | 107.20 | |
| US2 | 484.20 | 485.00 | 1645.59 | 0.80 | |
| | 485.00 | 667.50 | 1644.79 | 182.50 | |
| *SE1 | 667.50 | 668.70 | 1462.29 | 1.20 | |
| | 668.70 | 692.80 | 1461.09 | 24.10 | |
| *SE2 | 692.80 | 695.00 | 1436.99 | 2.20 | |
| | 695.00 | 739.10 | 1434.79 | 44.10 | |
| *LS1 | 739.10 | 741.80 | 1390.69 | 2.70 | |
| | 741.80 | 748.80 | 1387.99 | 7.00 | |
| *LS2 | 748.80 | 749.50 | 1380.99 | 0.70 | |
| | 749.50 | 790.00 | 1380.29 | 40.50 | |
| *UH1 | 790.00 | 791.00 | 1339.79 | 1.00 | |
| | 791.00 | 850.00 | 1338.79 | 59.00 | |
| *UH2 | 850.00 | 851.90 | 1279.79 | 1.90 | |
| | 851.90 | 909.00 | 1277.89 | 57.10 | |
| *MH1 | 909.00 | 910.00 | 1220.79 | 1.00 | |
| | 910.00 | 971.00 | 1219.79 | 61.00 | |
| *MH2 | 971.00 | 972.20 | 1158.79 | 1.20 | |
| | 972.20 | 1016.90 | 1157.59 | 44.70 | |
| *P11 | 1016.90 | 1019.20 | 1112.89 | 2.30 | |
| | 1019.20 | 1040.80 | 1110.59 | 21.60 | |
| *P10 | 1040.80 | 1041.80 | 1088.99 | 1.00 | |
| | 1041.80 | 1100.90 | 1087.99 | 59.10 | |
| *LH2 | 1100.90 | 1102.00 | 1028.89 | 1.10 | |
| | 1102.00 | 1168.90 | 1027.79 | 66.90 | |
| *P91 | 1168.90 | 1170.90 | 960.89 | 2.00 | |
| | 1170.90 | 1197.50 | 958.89 | 26.60 | |
| *P92 | 1197.50 | 1199.60 | 932.29 | 2.10 | |
| | 1199.60 | 1235.80 | 930.19 | 36.20 | |
| *COAL | 1235.80 | 1236.40 | 893.99 | 0.60 | |
| | 1236.40 | 1440.10 | 893.39 | 203.70 | |
| *P61 | 1440.10 | 1443.00 | 689.69 | 2.90 | |
| | 1443.00 | 1454.00 | 686.79 | 11.00 | |
| *P62 | 1454.00 | 1454.80 | 675.79 | 0.80 | |
| | 1454.80 | 1488.80 | 674.99 | 34.00 | |
| *P51 | 1488.80 | 1490.00 | 640.99 | 1.20 | |

| | | | | |
|---|---|---|---|---|
| | 1490.00 | 1583.60 | 639.79 | 93.60 |
| *P41 | 1583.60 | 1584.90 | 546.19 | 1.30 |
| | 1584.90 | 1620.74 | 544.89 | 35.84 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\U38G.CMP
DATE: 02/07/07

# Oil & Gas Show

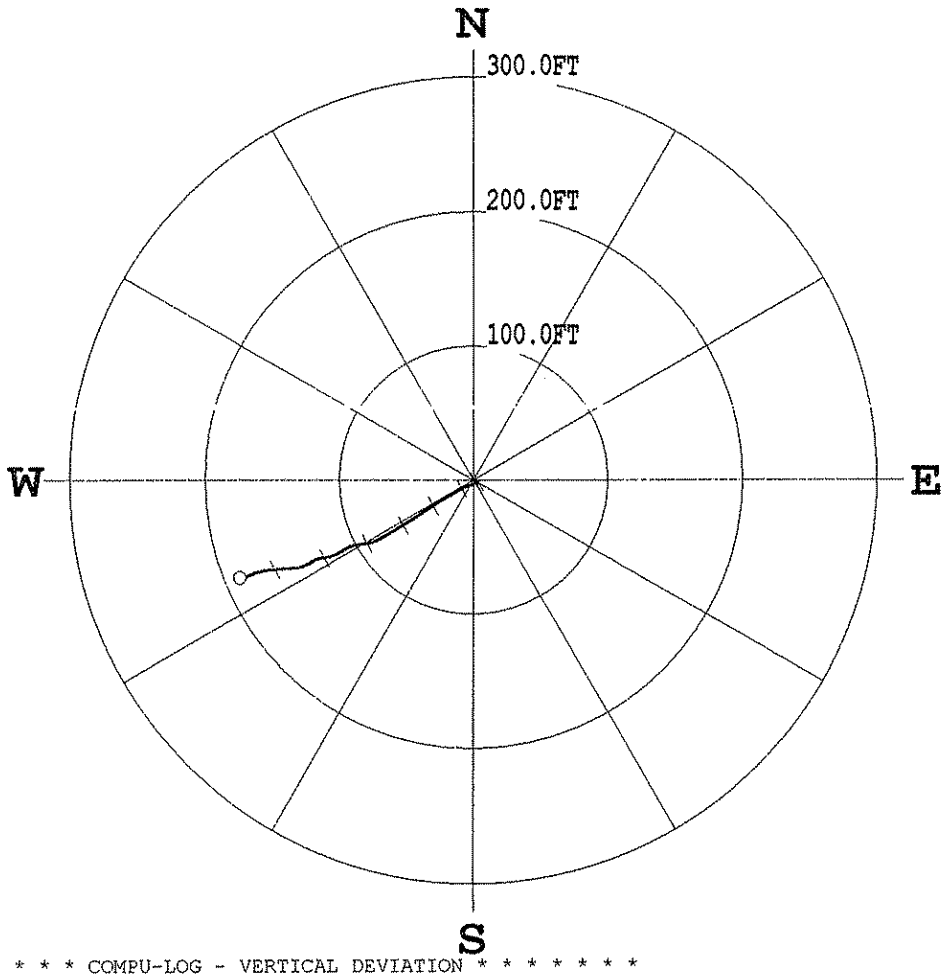
| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|---|
| Lee/Norton | 667 | 1199 | 532 | | | |
| Pocahontas | 1440 | 1582 | 145 | | | |
| Total | | | | | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: CONSOL ENERGY
LOCATION:
HOLE ID: 06-CNX-U-38G
DATE OF LOG: 12/19/06
PROBE: 0026C - 1044

MAG DECL: -7.1

SCALE: 100 FT/IN
TRUE DEPTH: 1596.99
AZIMUTH: 247.3
DISTANCE: 188.3 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * *

CLIENT : CONSOL ENERGY
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
HOLE ID. : 06-CNX-U-38G
DATE OF LOG : 12/19/06
PROBE : 0026C , 1044
DEPTH UNITS : FEET
LOG: 06-CNX-U-38G_12-19-06_14-42_0026C_.10_0.00_1620.50_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 6.6 | 6.60 | 0.00 | -0.00 | 0.0 | 357.1 | 0.1 | 357.1 |
| 10.0 | 10.00 | 0.01 | 0.00 | 0.0 | 11.3 | 0.1 | 4.5 |
| 20.0 | 20.00 | 0.02 | 0.01 | 0.0 | 39.1 | 0.1 | 61.4 |
| [illegible].0 | 30.00 | 0.03 | 0.02 | 0.0 | 36.9 | 0.1 | 309.8 |
| .0 | 40.00 | 0.05 | 0.03 | 0.1 | 28.8 | 0.1 | 12.1 |
| 50.0 | 50.00 | 0.07 | 0.03 | 0.1 | 25.0 | 0.1 | 5.7 |
| 60.0 | 60.00 | 0.08 | 0.03 | 0.1 | 20.3 | 0.1 | 349.3 |
| 70.0 | 70.00 | 0.10 | 0.02 | 0.1 | 12.8 | 0.1 | 309.7 |
| 80.0 | 80.00 | 0.11 | 0.01 | 0.1 | 4.1 | 0.1 | 303.0 |
| 90.0 | 90.00 | 0.12 | -0.01 | 0.1 | 356.0 | 0.1 | 299.6 |
| 100.0 | 100.00 | 0.12 | -0.02 | 0.1 | 348.5 | 0.1 | 285.1 |
| 110.0 | 110.00 | 0.12 | -0.04 | 0.1 | 340.7 | 0.1 | 258.3 |
| 120.0 | 120.00 | 0.12 | -0.06 | 0.1 | 332.7 | 0.1 | 246.3 |
| 130.0 | 130.00 | 0.11 | -0.08 | 0.1 | 325.1 | 0.1 | 236.8 |
| 140.0 | 140.00 | 0.10 | -0.09 | 0.1 | 317.2 | 0.1 | 225.9 |
| 150.0 | 150.00 | 0.08 | -0.11 | 0.1 | 308.5 | 0.1 | 224.5 |
| 160.0 | 160.00 | 0.07 | -0.13 | 0.1 | 298.5 | 0.3 | 190.8 |
| 170.0 | 170.00 | 0.04 | -0.13 | 0.1 | 286.7 | 0.1 | 195.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 90.0 | 90.00 | 0.12 | -0.01 | 0.1 | 356.0 | 0.1 | 299.6 |
| 100.0 | 100.00 | 0.12 | -0.02 | 0.1 | 348.5 | 0.1 | 285.1 |
| 110.0 | 110.00 | 0.12 | -0.04 | 0.1 | 340.7 | 0.1 | 258.3 |
| 120.0 | 120.00 | 0.12 | -0.06 | 0.1 | 332.7 | 0.1 | 246.3 |
| 130.0 | 130.00 | 0.11 | -0.08 | 0.1 | 325.1 | 0.1 | 236.8 |
| 140.0 | 140.00 | 0.10 | -0.09 | 0.1 | 317.2 | 0.1 | 225.9 |
| 150.0 | 150.00 | 0.08 | -0.11 | 0.1 | 308.5 | 0.1 | 224.5 |
| 160.0 | 160.00 | 0.07 | -0.13 | 0.1 | 298.5 | 0.3 | 190.8 |
| 170.0 | 170.00 | 0.04 | -0.13 | 0.1 | 286.7 | 0.1 | 195.5 |
| 180.0 | 180.00 | 0.01 | -0.12 | 0.1 | 272.5 | 0.3 | 149.6 |
| 190.0 | 190.00 | -0.03 | -0.09 | 0.1 | 251.2 | 0.4 | 144.4 |
| 200.0 | 200.00 | -0.07 | -0.05 | 0.1 | 218.2 | 0.2 | 126.6 |
| 210.0 | 210.00 | -0.09 | -0.01 | 0.1 | 185.5 | 0.4 | 115.7 |
| 220.0 | 220.00 | -0.11 | 0.05 | 0.1 | 155.9 | 0.4 | 105.4 |
| 230.0 | 230.00 | -0.12 | 0.10 | 0.2 | 139.6 | 0.4 | 118.2 |
| 240.0 | 240.00 | -0.13 | 0.16 | 0.2 | 128.9 | 0.3 | 87.1 |
| 250.0 | 250.00 | -0.13 | 0.23 | 0.3 | 120.6 | 0.3 | 68.1 |
| 260.0 | 260.00 | -0.13 | 0.27 | 0.3 | 115.5 | 0.2 | 42.6 |
| 270.0 | 270.00 | -0.14 | 0.31 | 0.3 | 115.1 | 0.1 | 164.6 |
| 280.0 | 280.00 | -0.18 | 0.33 | 0.4 | 118.5 | 0.3 | 196.7 |
| 290.0 | 290.00 | -0.22 | 0.35 | 0.4 | 122.7 | 0.3 | 154.3 |
| 300.0 | 300.00 | -0.28 | 0.38 | 0.5 | 126.1 | 0.8 | 132.0 |
| 310.0 | 310.00 | -0.34 | 0.42 | 0.5 | 129.2 | 0.7 | 171.7 |
| 320.0 | 320.00 | -0.42 | 0.47 | 0.6 | 131.5 | 0.7 | 132.3 |
| 330.0 | 330.00 | -0.50 | 0.53 | 0.7 | 133.1 | 0.4 | 141.1 |
| 340.0 | 340.00 | -0.58 | 0.60 | 0.8 | 133.9 | 0.6 | 140.0 |
| 350.0 | 349.99 | -0.66 | 0.67 | 0.9 | 134.4 | 0.4 | 154.0 |
| 360.0 | 359.99 | -0.75 | 0.76 | 1.1 | 134.3 | 0.6 | 134.4 |
| 370.0 | 369.99 | -0.83 | 0.86 | 1.2 | 134.1 | 0.4 | 139.0 |
| 380.0 | 379.99 | -0.92 | 0.96 | 1.3 | 133.6 | 0.5 | 138.4 |
| 390.0 | 389.99 | -1.01 | 1.06 | 1.5 | 133.6 | 0.6 | 136.9 |
| 400.0 | 399.99 | -1.10 | 1.15 | 1.6 | 133.8 | 0.7 | 132.0 |
| 410.0 | 409.99 | -1.19 | 1.26 | 1.7 | 133.3 | 1.0 | 88.7 |
| 420.0 | 419.99 | -1.19 | 1.36 | 1.8 | 131.3 | 0.6 | 100.8 |
| 430.0 | 429.99 | -1.22 | 1.45 | 1.9 | 130.0 | 0.5 | 98.7 |
| 440.0 | 439.99 | -1.28 | 1.53 | 2.0 | 129.9 | 0.7 | 120.6 |
| 450.0 | 449.99 | -1.37 | 1.64 | 2.1 | 129.9 | 0.8 | 127.2 |
| 460.0 | 459.99 | -1.45 | 1.75 | 2.3 | 129.7 | 0.8 | 131.5 |
| 470.0 | 469.98 | -1.55 | 1.87 | 2.4 | 129.7 | 1.0 | 129.6 |
| 480.0 | 479.98 | -1.65 | 2.00 | 2.6 | 129.5 | 0.9 | 132.0 |
| 490.0 | 489.98 | -1.75 | 2.14 | 2.8 | 129.3 | 1.1 | 123.8 |
| 500.0 | 499.98 | -1.84 | 2.31 | 2.9 | 128.5 | 1.1 | 109.5 |
| 510.0 | 509.98 | -1.86 | 2.50 | 3.1 | 126.7 | 0.9 | 91.9 |
| 520.0 | 519.98 | -1.86 | 2.67 | 3.3 | 124.9 | 1.0 | 91.6 |
| 530.0 | 529.97 | -1.86 | 2.83 | 3.4 | 123.3 | 0.9 | 89.0 |
| 540.0 | 539.97 | -1.87 | 2.99 | 3.5 | 122.0 | 0.9 | 90.1 |
| 550.0 | 549.97 | -1.87 | 3.13 | 3.6 | 120.8 | 0.9 | 94.0 |
| 560.0 | 559.97 | -1.87 | 3.29 | 3.8 | 119.7 | 0.8 | 92.9 |
| 570.0 | 569.97 | -1.89 | 3.43 | 3.9 | 118.8 | 0.8 | 97.3 |
| 580.0 | 579.97 | -1.89 | 3.57 | 4.0 | 117.9 | 0.9 | 94.6 |
| 590.0 | 589.97 | -1.89 | 3.72 | 4.2 | 116.9 | 0.6 | 87.9 |
| 600.0 | 599.97 | -1.89 | 3.80 | 4.2 | 116.5 | 0.2 | 84.2 |
| 610.0 | 609.97 | -1.88 | 3.82 | 4.3 | 116.2 | 0.1 | 64.4 |
| 620.0 | 619.97 | -1.88 | 3.84 | 4.3 | 116.1 | 0.2 | 153.3 |
| 630.0 | 629.97 | -1.94 | 3.83 | 4.3 | 116.9 | 0.9 | 222.3 |
| 640.0 | 639.96 | -2.07 | 3.66 | 4.2 | 119.5 | 1.9 | 240.8 |
| 650.0 | 649.96 | -2.25 | 3.28 | 4.0 | 124.4 | 3.2 | 244.3 |
| 660.0 | 659.94 | -2.47 | 2.70 | 3.7 | 132.4 | 4.3 | 250.9 |
| 670.0 | 669.90 | -2.72 | 1.93 | 3.3 | 144.7 | 5.3 | 262.9 |
| 680.0 | 679.85 | -3.04 | 0.95 | 3.2 | 162.7 | 6.5 | 255.1 |
| 690.0 | 689.78 | -3.38 | -0.19 | 3.4 | 183.2 | 7.5 | 250.3 |
| 700.0 | 699.69 | -3.74 | -1.45 | 4.0 | 201.1 | 7.9 | 248.0 |
| 710.0 | 709.59 | -4.14 | -2.83 | 5.0 | 214.4 | 8.6 | 252.6 |
| 720.0 | 719.47 | -4.61 | -4.27 | 6.3 | 222.8 | 8.9 | 250.1 |
| 730.0 | 729.34 | -5.15 | -5.75 | 7.7 | 228.2 | 9.1 | 244.6 |
| 740.0 | 739.22 | -5.88 | -7.15 | 9.3 | 230.6 | 8.9 | 228.2 |
| 750.0 | 749.09 | -6.36 | -8.60 | 10.7 | 233.5 | 8.6 | 251.4 |
| 760.0 | 758.97 | -7.14 | -9.97 | 12.3 | 234.4 | 8.9 | 245.0 |
| 770.0 | 768.85 | -8.00 | -11.25 | 13.8 | 234.6 | 8.9 | 235.9 |
| 780.0 | 778.73 | -8.84 | -12.55 | 15.3 | 234.8 | 8.9 | 235.2 |
| 790.0 | 788.61 | -9.70 | -13.84 | 16.9 | 235.0 | 9.0 | 235.2 |
| 800.0 | 798.48 | -10.48 | -15.21 | 18.5 | 235.4 | 9.2 | 241.4 |
| 810.0 | 808.35 | -11.23 | -16.62 | 20.1 | 235.9 | 9.2 | 243.6 |
| 820.0 | 818.22 | -12.02 | -18.02 | 21.7 | 236.3 | 9.5 | 240.7 |
| 830.0 | 828.09 | -12.87 | -19.40 | 23.3 | 236.4 | 9.4 | 242.2 |
| 840.0 | 837.96 | -13.70 | -20.80 | 24.9 | 236.6 | 9.4 | 233.9 |
| 850.0 | 847.82 | -14.57 | -22.19 | 26.5 | 236.7 | 9.5 | 236.8 |
| 860.0 | 857.68 | -15.32 | -23.70 | 28.2 | 237.1 | 9.8 | 244.5 |
| 870.0 | 867.53 | -16.11 | -25.21 | 29.9 | 237.4 | 9.8 | 240.5 |
| 880.0 | 877.38 | -17.00 | -26.66 | 31.6 | 237.5 | 9.8 | 237.9 |
| 890.0 | 887.24 | -17.94 | -28.08 | 33.3 | 237.4 | 9.8 | 234.7 |
| 900.0 | 897.09 | -18.85 | -29.51 | 35.0 | 237.4 | 9.8 | 237.2 |
| .0 | 906.95 | -19.80 | -30.92 | 36.7 | 237.4 | 9.7 | 235.8 |
| .0 | 916.80 | -20.67 | -32.37 | 38.4 | 237.4 | 9.7 | 237.1 |
| 930.0 | 926.66 | -21.61 | -33.78 | 40.1 | 237.4 | 9.8 | 236.1 |
| 940.0 | 936.52 | -22.50 | -35.21 | 41.8 | 237.4 | 9.8 | 239.5 |
| 950.0 | 946.37 | -23.43 | -36.62 | 43.5 | 237.4 | 9.7 | 235.6 |
| 960.0 | 956.23 | -24.39 | -38.02 | 45.2 | 237.3 | 9.8 | 236.2 |
| 970.0 | 966.08 | -25.36 | -39.43 | 46.9 | 237.2 | 10.0 | 237.2 |
| 980.0 | 975.93 | -26.29 | -40.89 | 48.6 | 237.3 | 10.1 | 236.6 |
| 990.0 | 985.77 | -27.27 | -42.34 | 50.4 | 237.2 | 10.0 | 238.1 |
| 1000.0 | 995.62 | -28.23 | -43.80 | 52.1 | 237.2 | 10.1 | 237.0 |
| 1010.0 | 1005.46 | -29.22 | -45.26 | 53.9 | 237.2 | 10.2 | 235.0 |
| 1020.0 | 1015.30 | -30.20 | -46.74 | 55.6 | 237.1 | 10.3 | 239.3 |
| 1030.0 | 1025.14 | -31.10 | -48.31 | 57.5 | 237.2 | 10.5 | 241.7 |
| 1040.0 | 1034.97 | -32.02 | -49.88 | 59.3 | 237.3 | 10.5 | 240.7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 980.0 | 975.93 | -26.29 | -40.89 | 48.6 | 237.3 | 10.1 | 236.6 |
| 990.0 | 985.77 | -27.27 | -42.34 | 50.4 | 237.2 | 10.0 | 238.1 |
| 1000.0 | 995.62 | -28.23 | -43.80 | 52.1 | 237.2 | 10.1 | 237.0 |
| 1010.0 | 1005.46 | -29.22 | -45.26 | 53.9 | 237.2 | 10.2 | 235.0 |
| 1020.0 | 1015.30 | -30.20 | -46.74 | 55.6 | 237.1 | 10.3 | 239.3 |
| 1030.0 | 1025.14 | -31.10 | -48.31 | 57.5 | 237.2 | 10.5 | 241.7 |
| 1040.0 | 1034.97 | -32.02 | -49.88 | 59.3 | 237.3 | 10.5 | 240.7 |
| 1050.0 | 1044.80 | -32.94 | -51.47 | 61.1 | 237.4 | 10.8 | 239.1 |
| 1060.0 | 1054.63 | -33.87 | -53.08 | 63.0 | 237.5 | 10.7 | 238.1 |
| 1070.0 | 1064.45 | -34.88 | -54.66 | 64.8 | 237.5 | 10.8 | 237.4 |
| 1080.0 | 1074.27 | -35.88 | -56.25 | 66.7 | 237.5 | 10.9 | 241.9 |
| 1090.0 | 1084.09 | -36.91 | -57.85 | 68.6 | 237.5 | 10.9 | 238.1 |
| 1100.0 | 1093.91 | -37.90 | -59.47 | 70.5 | 237.5 | 11.1 | 238.5 |
| 1110.0 | 1103.72 | -38.86 | -61.15 | 72.5 | 237.6 | 11.2 | 238.7 |
| 1120.0 | 1113.52 | -39.83 | -62.85 | 74.4 | 237.6 | 11.3 | 239.6 |
| 1130.0 | 1123.33 | -40.81 | -64.56 | 76.4 | 237.7 | 11.3 | 237.9 |
| 1140.0 | 1133.13 | -41.79 | -66.29 | 78.4 | 237.8 | 11.5 | 241.7 |
| 1150.0 | 1142.92 | -42.71 | -68.07 | 80.4 | 237.9 | 11.5 | 243.0 |
| 1160.0 | 1152.72 | -43.59 | -69.86 | 82.3 | 238.0 | 11.5 | 243.4 |
| 1170.0 | 1162.52 | -44.47 | -71.67 | 84.3 | 238.2 | 11.3 | 245.6 |
| 1180.0 | 1172.31 | -45.29 | -73.50 | 86.3 | 238.4 | 11.7 | 246.4 |
| 1190.0 | 1182.10 | -46.06 | -75.38 | 88.3 | 238.6 | 12.0 | 250.5 |
| 1200.0 | 1191.88 | -46.43 | -77.46 | 90.3 | 239.1 | 12.4 | 261.6 |
| 1210.0 | 1201.64 | -46.84 | -79.57 | 92.3 | 239.5 | 12.4 | 258.3 |
| 1220.0 | 1211.41 | -47.21 | -81.70 | 94.4 | 240.0 | 12.5 | 259.4 |
| 1230.0 | 1221.17 | -47.56 | -83.84 | 96.4 | 240.4 | 12.6 | 260.8 |
| 1240.0 | 1230.93 | -47.93 | -85.98 | 98.4 | 240.9 | 12.7 | 261.2 |
| 1250.0 | 1240.69 | -48.36 | -88.13 | 100.5 | 241.2 | 12.7 | 256.7 |
| 1260.0 | 1250.44 | -48.82 | -90.27 | 102.6 | 241.6 | 12.7 | 255.9 |
| 1270.0 | 1260.20 | -49.47 | -92.37 | 104.8 | 241.8 | 12.8 | 244.2 |
| 1280.0 | 1269.96 | -50.41 | -94.33 | 107.0 | 241.9 | 12.5 | 242.6 |
| 1290.0 | 1279.72 | -51.49 | -96.20 | 109.1 | 241.8 | 12.6 | 240.2 |
| 1300.0 | 1289.48 | -52.57 | -98.09 | 111.3 | 241.8 | 12.6 | 240.2 |
| 1310.0 | 1299.24 | -53.67 | -99.98 | 113.5 | 241.8 | 12.7 | 240.1 |
| 1320.0 | 1308.99 | -54.73 | -101.93 | 115.7 | 241.8 | 12.9 | 241.8 |
| 1330.0 | 1318.73 | -55.72 | -103.94 | 117.9 | 241.8 | 13.1 | 244.3 |
| 1340.0 | 1328.47 | -56.67 | -106.00 | 120.2 | 241.9 | 13.4 | 250.5 |
| 1350.0 | 1338.20 | -57.18 | -108.26 | 122.4 | 242.2 | 13.8 | 262.9 |
| 1360.0 | 1347.91 | -57.52 | -110.60 | 124.7 | 242.5 | 13.7 | 263.5 |
| 1370.0 | 1357.63 | -57.86 | -112.96 | 126.9 | 242.9 | 13.9 | 263.3 |
| 1380.0 | 1367.33 | -58.30 | -115.31 | 129.2 | 243.2 | 13.8 | 249.8 |
| 1390.0 | 1377.04 | -59.07 | -117.56 | 131.6 | 243.3 | 13.8 | 246.4 |
| 1400.0 | 1386.76 | -60.17 | -119.65 | 133.9 | 243.3 | 13.8 | 246.2 |
| 1410.0 | 1396.47 | -61.25 | -121.77 | 136.3 | 243.3 | 13.8 | 243.7 |
| 1420.0 | 1406.18 | -62.34 | -123.91 | 138.7 | 243.3 | 14.0 | 243.8 |
| 1430.0 | 1415.88 | -63.34 | -126.11 | 141.1 | 243.3 | 14.0 | 244.9 |
| 1440.0 | 1425.58 | -64.20 | -128.39 | 143.5 | 243.4 | 14.3 | 252.0 |
| 1450.0 | 1435.27 | -64.66 | -130.82 | 145.9 | 243.7 | 14.3 | 263.0 |
| 1460.0 | 1444.94 | -64.85 | -133.35 | 148.3 | 244.1 | 14.7 | 263.8 |
| 1470.0 | 1454.61 | -65.07 | -135.90 | 150.7 | 244.4 | 14.9 | 265.7 |
| 1480.0 | 1464.27 | -65.28 | -138.46 | 153.1 | 244.8 | 15.0 | 265.3 |
| 1490.0 | 1473.93 | -65.49 | -141.04 | 155.5 | 245.1 | 14.9 | 265.0 |
| 1500.0 | 1483.59 | -65.76 | -143.60 | 157.9 | 245.4 | 14.6 | 261.2 |
| 1510.0 | 1493.25 | -66.03 | -146.19 | 160.4 | 245.7 | 15.1 | 262.7 |
| 1520.0 | 1502.90 | -66.28 | -148.80 | 162.9 | 246.0 | 15.2 | 266.2 |
| 1530.0 | 1512.54 | -66.48 | -151.43 | 165.4 | 246.3 | 15.4 | 269.6 |
| 1540.0 | 1522.19 | -66.80 | -154.05 | 167.9 | 246.6 | 15.5 | 268.3 |
| 1550.0 | 1531.83 | -67.28 | -156.66 | 170.5 | 246.8 | 15.4 | 258.2 |
| 1560.0 | 1541.48 | -67.90 | -159.20 | 173.1 | 246.9 | 15.5 | 257.3 |
| 1570.0 | 1551.12 | -68.56 | -161.77 | 175.7 | 247.0 | 15.4 | 252.7 |
| 1580.0 | 1560.77 | -69.53 | -164.20 | 178.3 | 247.1 | 15.2 | 241.9 |
| 1590.0 | 1570.41 | -70.55 | -166.65 | 181.0 | 247.1 | 15.4 | 247.8 |
| 1600.0 | 1580.05 | -71.46 | -169.15 | 183.6 | 247.1 | 15.4 | 249.7 |
| 1610.0 | 1589.68 | -72.09 | -171.74 | 186.3 | 247.2 | 15.9 | 268.9 |
| 1620.0 | 1599.39 | -72.51 | -173.76 | 188.3 | 247.3 | 0.0 | 0.0 |
| 1617.6 | 1596.99 | -72.51 | -173.76 | 188.3 | 247.3 | 15.7 | 249.5 |

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement Used In Cu/Ft | Cemented To Surface Yes | Cemented To Surface No | Date Cemented | Packers Or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22” | 27.6’ | 24” | | | X | 12/7/06 | |
| Surface | 13 3/8” | 432.8’ | 15 3/8” | 195 | X | | 12/12/06 | Basket @ 173’ |
| Water Protection | | | | | | | | |
| Coal Protection | | | | | | | | |
| Other Casing And Tubing Left In Well | | | | | | | | |
| Liners | | | | | | | | |

## DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC

**COMPANY:** CNX **HOLE #:** U-38G

**LOCATION:** **DRILL RIG #:** 19

**DATE STARTED:** 12-06-06 **DATED COMPLETED:** 12-19-06

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | | THICKNESS | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 27.60 | 27.60 | |
| 27.60 | 34 | 6.40 | SAND/SANDY SHALE |
| 34 | 63 | 29 | SANDY SHALE/COAL/SANDY SHALE |
| 63 | 92.40 | 29.40 | SANDY SHALE/SAND/SANDY SHALE |
| 92.40 | 121.35 | 28.95 | SANDY SHALE/SAND/COAL |
| 121.35 | 150.25 | 28.90 | COAL/SAND |
| 150.25 | 179.70 | 29.45 | SAND/SANDY SHALE /COAL /SAND |
| 179.70 | 210 | 30.30 | SAND/SANDY SHALE/SAND |
| 210 | 240.15 | 30.15 | SAND |
| 240.15 | 270.30 | 30.15 | SAND/SANDY SHALE/SAND |
| 270.30 | 300.45 | 30.15 | SAND |
| 300.45 | 330.60 | 30.15 | SAND/SANDY SHALE |
| 330.60 | 360.75 | 30.15 | SANDY SHALE/SAND |
| 360.75 | 390.90 | 30.15 | SAND/SANDY SHALE/SAND |
| 390.90 | 422.60 | 31.70 | SAND |
| 422.60 | 453.45 | 30.85 | SANDY SHALE/SAND/SANDY SHALE |
| 453.45 | 457.75 | 4.30 | SANDY SHALE |
| 457.75 | 490.35 | 32.60 | SANDY SHALE/SAND |
| 490.35 | 522.00 | 31.65 | SAND/SANDY SHALE |
| 522.00 | 553.80 | 31.80 | SANDY SHALE |
| 553.80 | 584.35 | 30.55 | SANDY SHALE |
| 584.35 | 600.35 | 16.00 | SANDY SHALE/SAND |
| 600.35 | 623.65 | 23.30 | SAND/SANDY SHALE/SANDY SHALE |
| 623.65 | 655.55 | 31.90 | SANDY SHALE/SAND |
| 655.55 | 687.40 | 31.85 | SAND/SANDY SHALE/SAND |
| 687.40 | 719.55 | 32.15 | SAND/SANDY SHALE |
| 719.55 | 748.95 | 29.40 | SANDY SHALE/COAL/SANDY SHALE |
| 748.95 | 765.95 | 17 | SANDY SHALE/SAND/SANDY SHALE |
| 765.95 | 797.25 | 31.30 | SANDY SHALE/SAND/SANDY SHALE |
| 797.25 | 829.05 | 31.80 | SANDY SHALE/SAND |
| 829.05 | 859.55 | 30.50 | SAND/SANDY SHALE/SAND |
| 859.55 | 891.20 | 31.65 | SANDY SHALE/SAND |
| 891.20 | 921.65 | 30.45 | SAND/SANDY SHALE |
| 921.65 | 952.25 | 30.60 | SANDY SHALE/COAL/SAND |
| 952.25 | 983.30 | 31.05 | SAND/SANDY SHALE |
| 983.30 | 1012.80 | 29.50 | SAND |
| 1012.80 | 1044.50 | 31.70 | SAND/SANDY SHALE/SAND |
| 1044.50 | 1076.25 | 31.75 | SAND/COAL/SANDY SHALE/ SAND |
| 1076.25 | 1107.95 | 31.70 | SAND |
| 1107.95 | 1139.45 | 31.50 | SAND/SANDY SHALE/SAND |
| 1139.45 | 1170.45 | 31 | SAND |
| 1170.45 | 1202.20 | 31.75 | SAND/SANDY SHALE/COAL |

| | | | |
|---|---|---|---|
| 1202.20 | 1232.55 | 30.35 | SANDY SHALE/SAND |
| 1232.55 | 1263.70 | 31.15 | SAND/SANDY SHALE/SAND |
| 1263.70 | 1295.70 | 32.00 | SAND |
| 1295.70 | 1327.05 | 31.35 | SAND |
| 1327.05 | 1359.00 | 31.95 | SAND/SANDY SHALE/SAND |
| 1359.00 | 1390.30 | 31.30 | SAND |
| 1390.30 | 1421.65 | 31.35 | SAND/SANDY SHALE |
| 1421.65 | 1452.20 | 30.55 | SANDY SHALE/COAL/SAND |
| 1452.20 | 1481.75 | 29.55 | SAND/SANDY SHALE |
| 1481.75 | 1513.35 | 31.60 | SANDY SHALE/SAND/SANDY SHALE |
| 1513.35 | 1545.20 | 31.85 | SAND |
| 1545.20 | 1576.20 | 31.00 | SAND/SANDY SHALE/SAND |
| 1576.20 | 1605.80 | 29.60 | SAND/COAL/SANDY SHALE |
| 1605.80 | 1636.65 | 30.85 | SANDY SHALE/SAND |

1636.65 FT. TOTAL DEPTH
27.60 FT. OF 22" CASING
432.80 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 963 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3378 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 4/17/2007 |
| **Driller's Total Depth:** | 1634.00 | **Log's Total Depth:** | 1641.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 1/12/2008 | *(Company)* |
| By: | Leslie K Arrington | Title: | Manager | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 1/12/2008 | | |
| Status: | | Date: | 1/14/2008 |
| Final PDF Date: | 2/28/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 849 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3378 |
| **Operations Name:** | CBM U38H W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 4/5/2007
Drilling Contractor: Noah Horn
Date drilling completed: 4/17/2007
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,634
Log Total Depth (feet): 1,641
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,014,421
Final Plat State Plane X: 1,014,415
Permitted State Plane Y: 326,851
Final Plat State Plane Y: 326,852
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | U38H Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|
| 35 | 1-2 | GPM |

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | U38H ExhibitA.pdf |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Show Gas | U38H Gas Show.xls |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper,Gamma,Density,Temp,Deviation

Did logs disclose vertical locations of a coal seam? ☐ Yes ☑ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | U38H Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | U38H Casing.xls |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | U38H Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 11/27/2007 *(Company)*

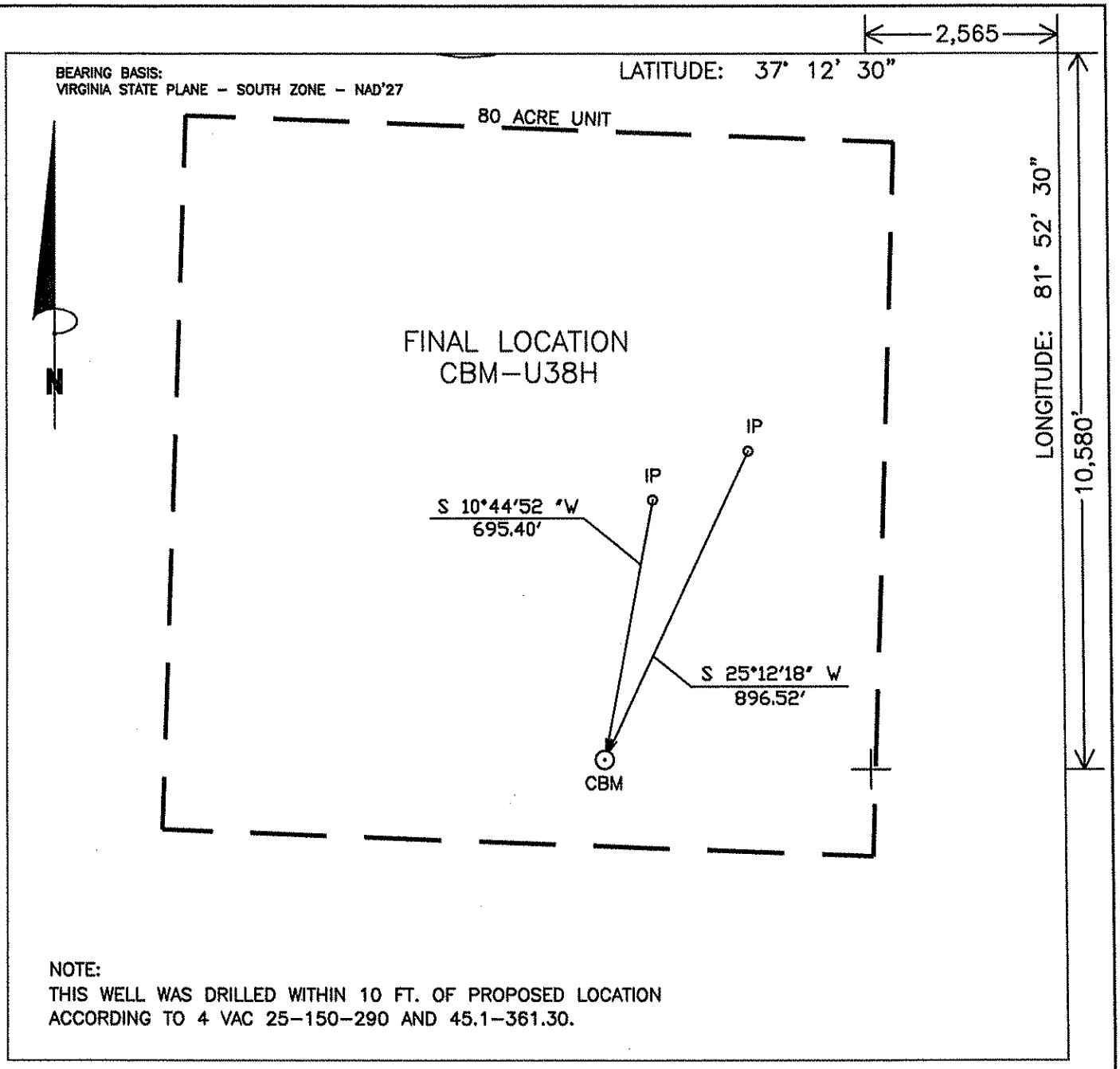
Signed By: Leslie K. Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 11/27/2007

Status: Inspr Approved Date: 11/30/2007

Final PDF Date: 11/30/2007




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

U38HFNL
2N25/59–271/57

# WELL LOCATION PLAT

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–U38H

TRACT NUMBER COAL MOUNTAIN MINING CO. LLC QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 326,852.00 E 1,014,415.09

ELEVATION: 2111.24' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 04–13–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

D. R. PRICE

LICENSE No. 8540

4/13/07

COMMONWEALTH OF VIRGINIA PROFESSIONAL ENGINEER

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM U38H
SURFACE ELEV: 2111.24 EASTING: 1014415.09 NORTHING: 326852.00

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| JB1 | 89.00 | 91.70 | 2022.24 | 2.70 | |
| | 91.70 | 130.60 | 2019.54 | 38.90 | |
| JB3 | 130.60 | 134.00 | 1980.64 | 3.40 | |
| | 134.00 | 218.50 | 1977.24 | 84.50 | |
| TI | 218.50 | 219.80 | 1892.74 | 1.30 | |
| | 219.80 | 338.80 | 1891.44 | 119.00 | |
| US1 | 338.80 | 339.70 | 1772.44 | 0.90 | |
| | 339.70 | 451.10 | 1771.54 | 111.40 | |
| *US2 | 451.10 | 452.00 | 1660.14 | 0.90 | |
| | 452.00 | 631.30 | 1659.24 | 179.30 | |
| *SE1 | 631.30 | 632.90 | 1479.94 | 1.60 | |
| | 632.90 | 669.00 | 1478.34 | 36.10 | |
| *SE2 | 669.00 | 671.60 | 1442.24 | 2.60 | |
| | 671.60 | 709.10 | 1439.64 | 37.50 | |
| *LS1 | 709.10 | 711.90 | 1402.14 | 2.80 | |
| | 711.90 | 722.60 | 1399.34 | 10.70 | |
| *LS2 | 722.60 | 723.70 | 1388.64 | 1.10 | |
| | 723.70 | 766.00 | 1387.54 | 42.30 | |
| *UH1 | 766.00 | 767.90 | 1345.24 | 1.90 | |
| | 767.90 | 825.20 | 1343.34 | 57.30 | |
| *UH2 | 825.20 | 826.80 | 1286.04 | 1.60 | |
| | 826.80 | 890.90 | 1284.44 | 64.10 | |
| *MH1 | 890.90 | 893.20 | 1220.34 | 2.30 | |
| | 893.20 | 961.20 | 1218.04 | 68.00 | |
| *MH2 | 961.20 | 963.00 | 1150.04 | 1.80 | |
| | 963.00 | 997.00 | 1148.24 | 34.00 | |
| *P11 | 997.00 | 1000.10 | 1114.24 | 3.10 | |
| | 1000.10 | 1020.30 | 1111.14 | 20.20 | |
| *P10 | 1020.30 | 1021.90 | 1090.94 | 1.60 | |
| | 1021.90 | 1085.70 | 1089.34 | 63.80 | |
| *LH2 | 1085.70 | 1087.00 | 1025.54 | 1.30 | |
| | 1087.00 | 1160.10 | 1024.24 | 73.10 | |
| *P91 | 1160.10 | 1161.60 | 951.14 | 1.50 | |
| | 1161.60 | 1174.70 | 949.64 | 13.10 | |
| *COAL | 1174.70 | 1175.80 | 936.54 | 1.10 | |
| | 1175.80 | 1197.20 | 935.44 | 21.40 | |
| *P82 | 1197.20 | 1199.00 | 914.04 | 1.80 | |
| | 1199.00 | 1279.00 | 912.24 | 80.00 | |
| *COAL | 1279.00 | 1280.00 | 832.24 | 1.00 | |
| | 1280.00 | 1400.60 | 831.24 | 120.60 | |
| *P61 | 1400.60 | 1401.40 | 710.64 | 0.80 | |
| | 1401.40 | 1455.00 | 709.84 | 53.60 | |
| *P51 | 1455.00 | 1456.30 | 656.24 | 1.30 | |
| | 1456.30 | 1548.80 | 654.94 | 92.50 | |
| *P42 | 1548.80 | 1550.10 | 562.44 | 1.30 | |
| | 1550.10 | 1640.83 | 561.14 | 90.73 | |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U38H.CMP
DATE: 06/06/07

Well: U38H

## Oil & Gas Show

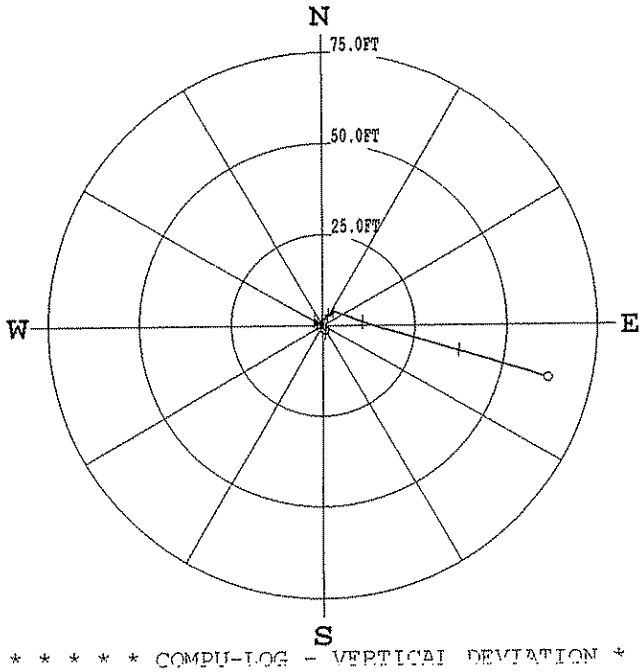
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 631 | 1199 | 568 | | | |
| Pocahontas | 1279 | 1550 | 271 | | | |
| Total IPF | | | | Not Taken | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: Consol Energy
LOCATION: Laurel
HOLE ID: 07-CNX-U-38-H
DATE OF LOG: 04/16/07
PROBE: 0019C 732

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1631.09 FT
AZIMUTH: 103.5
DISTANCE: 63.0 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE : M.Sammons
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 07-CNX-U-38-H
DATE OF LOG : 04/16/07
PROBE : 0019C , 732
DEPTH UNITS : FEET
LOG: 07-CNX-U-38-H_04-16-07_18-02_0019C_.02_-9.17_1637.13_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | -0.73 | -0.33 | 0.8 | 204.4 | 1.5 | 252.0 |
| 60.0 | 59.99 | -0.91 | -0.50 | 1.0 | 209.0 | 1.5 | 172.8 |
| 70.0 | 69.99 | -1.15 | -0.42 | 1.2 | 200.0 | 1.5 | 180.2 |
| 80.0 | 79.98 | -1.40 | -0.48 | 1.5 | 198.8 | 1.5 | 182.1 |
| 90.0 | 89.98 | -1.66 | -0.48 | 1.7 | 196.0 | 1.5 | 157.5 |
| 100.0 | 99.98 | -1.89 | -0.36 | 1.9 | 190.7 | 1.5 | 133.9 |
| 110.0 | 109.97 | -2.05 | -0.16 | 2.1 | 184.4 | 1.5 | 120.8 |
| 120.0 | 119.97 | -2.20 | 0.05 | 2.2 | 178.7 | 1.5 | 142.0 |
| 130.0 | 129.97 | -2.37 | 0.25 | 2.4 | 174.0 | 1.5 | 116.4 |
| 140.0 | 139.96 | -2.47 | 0.49 | 2.5 | 168.8 | 1.6 | 103.0 |
| 150.0 | 149.96 | -2.51 | 0.74 | 2.6 | 163.5 | 1.3 | 100.2 |
| 160.0 | 159.96 | -2.52 | 1.00 | 2.7 | 158.4 | 1.5 | 82.1 |
| 170.0 | 169.95 | -2.44 | 1.24 | 2.7 | 153.1 | 1.4 | 80.4 |
| 180.0 | 179.95 | -2.52 | 1.48 | 2.9 | 149.6 | 1.6 | 84.1 |
| 190.0 | 189.95 | -2.33 | 1.62 | 2.8 | 145.3 | 1.6 | 3.7 |
| 200.0 | 199.94 | -2.07 | 1.57 | 2.6 | 142.8 | 1.6 | 2.6 |
| 210.0 | 209.94 | -1.81 | 1.59 | 2.4 | 138.7 | 1.5 | 10.8 |
| 220.0 | 219.94 | -1.55 | 1.63 | 2.2 | 133.6 | 1.4 | 9.1 |
| 230.0 | 229.93 | -1.30 | 1.69 | 2.1 | 127.6 | 1.5 | 9.7 |
| 240.0 | 239.93 | -1.04 | 1.69 | 2.0 | 121.7 | 1.5 | 348.6 |
| 250.0 | 249.92 | -0.78 | 1.64 | 1.8 | 115.4 | 1.6 | 335.8 |
| 260.0 | 259.92 | -0.54 | 1.48 | 1.6 | 110.2 | 1.6 | 310.5 |
| 270.0 | 269.92 | -0.41 | 1.21 | 1.3 | 108.7 | 2.1 | 279.4 |
| 280.0 | 279.91 | -0.56 | 0.98 | 1.1 | 119.5 | 1.7 | 203.0 |
| 290.0 | 289.91 | -0.84 | 0.89 | 1.2 | 133.2 | 1.6 | 186.2 |
| 300.0 | 299.90 | -1.12 | 0.82 | 1.4 | 143.6 | 1.7 | 210.0 |
| 310.0 | 309.90 | -1.33 | 0.58 | 1.5 | 156.4 | 1.9 | 228.6 |
| 320.0 | 319.89 | -1.59 | 0.47 | 1.7 | 163.5 | 1.4 | 167.9 |
| 330.0 | 329.89 | -1.63 | 0.62 | 1.7 | 159.2 | 1.2 | 38.9 |
| 340.0 | 339.89 | -1.40 | 0.65 | 1.5 | 155.0 | 1.5 | 346.7 |
| 350.0 | 349.88 | -1.16 | 0.50 | 1.3 | 156.7 | 1.7 | 316.5 |
| 360.0 | 359.88 | -1.00 | 0.24 | 1.0 | 166.6 | 1.8 | 293.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 360.0 | 359.88 | -1.00 | 0.24 | 1.0 | 166.6 | 1.6 | 293.3 |
| 370.0 | 369.88 | -0.87 | 0.07 | 0.9 | 175.2 | 1.4 | 2.8 |
| 380.0 | 379.87 | -0.60 | 0.07 | 0.6 | 173.3 | 1.5 | 8.3 |
| 390.0 | 389.87 | -0.34 | 0.11 | 0.4 | 162.5 | 1.6 | 7.3 |
| 400.0 | 399.86 | -0.07 | 0.05 | 0.1 | 147.0 | 1.7 | 337.5 |
| 410.0 | 409.86 | 0.19 | -0.09 | 0.2 | 334.0 | 1.7 | 323.4 |
| 420.0 | 419.86 | 0.41 | -0.31 | 0.5 | 322.9 | 1.8 | 307.0 |
| 430.0 | 429.85 | 0.47 | -0.60 | 0.8 | 307.8 | 2.0 | 254.4 |
| 440.0 | 439.84 | 0.37 | -0.94 | 1.0 | 291.6 | 2.1 | 251.6 |
| 450.0 | 449.84 | 0.23 | -1.24 | 1.3 | 280.4 | 1.9 | 233.5 |
| 460.0 | 459.83 | 0.03 | -1.47 | 1.5 | 271.0 | 1.8 | 228.9 |
| 470.0 | 469.83 | -0.22 | -1.65 | 1.7 | 262.6 | 1.7 | 197.2 |
| 480.0 | 479.83 | -0.48 | -1.68 | 1.7 | 254.1 | 1.4 | 170.8 |
| 490.0 | 489.82 | -0.69 | -1.59 | 1.7 | 246.7 | 1.2 | 144.9 |
| 500.0 | 499.82 | -0.81 | -1.43 | 1.6 | 240.4 | 1.2 | 118.0 |
| 510.0 | 509.82 | -0.91 | -1.25 | 1.5 | 234.0 | 1.2 | 103.9 |
| 520.0 | 519.82 | -0.91 | -1.04 | 1.4 | 228.9 | 1.3 | 78.6 |
| 530.0 | 529.81 | -0.83 | -0.82 | 1.2 | 224.7 | 1.4 | 62.3 |
| 540.0 | 539.81 | -0.65 | -0.64 | 0.9 | 224.8 | 1.6 | 30.5 |
| 550.0 | 549.81 | -0.38 | -0.51 | 0.6 | 233.3 | 1.9 | 10.8 |
| 560.0 | 559.80 | -0.07 | -0.51 | 0.5 | 262.2 | 1.8 | 343.5 |
| 570.0 | 569.80 | 0.21 | -0.68 | 0.7 | 286.7 | 2.0 | 305.9 |
| 580.0 | 579.79 | 0.37 | -0.98 | 1.0 | 290.9 | 1.9 | 289.1 |
| 590.0 | 589.78 | 0.53 | -1.30 | 1.4 | 292.0 | 2.1 | 288.2 |
| 600.0 | 599.78 | 0.64 | -1.65 | 1.8 | 291.4 | 2.0 | 278.7 |
| 610.0 | 609.77 | 0.63 | -1.97 | 2.1 | 287.7 | 1.6 | 242.6 |
| 620.0 | 619.77 | 0.48 | -2.16 | 2.2 | 282.5 | 1.1 | 206.2 |
| 630.0 | 629.77 | 0.29 | -2.19 | 2.2 | 277.6 | 1.1 | 182.6 |
| 640.0 | 639.77 | 0.15 | -2.15 | 2.2 | 274.1 | 0.9 | 150.5 |
| 650.0 | 649.76 | 0.03 | -2.06 | 2.1 | 270.9 | 1.0 | 112.5 |
| 660.0 | 659.76 | 0.03 | -1.89 | 1.9 | 270.9 | 1.2 | 95.1 |
| 670.0 | 669.76 | 0.06 | -1.65 | 1.7 | 272.3 | 1.4 | 69.5 |
| 680.0 | 679.75 | 0.27 | -1.42 | 1.4 | 280.9 | 1.8 | 48.5 |
| 690.0 | 689.75 | 0.56 | -1.29 | 1.4 | 293.3 | 1.8 | 8.0 |
| 700.0 | 699.74 | 0.85 | -1.38 | 1.6 | 301.7 | 1.8 | 330.1 |
| 710.0 | 709.74 | 1.13 | -1.55 | 1.9 | 306.2 | 1.9 | 317.1 |
| 720.0 | 719.73 | 1.33 | -1.78 | 2.2 | 306.7 | 1.8 | 313.2 |
| 730.0 | 729.73 | 1.43 | -2.03 | 2.5 | 305.1 | 1.5 | 288.7 |
| 740.0 | 739.73 | 1.39 | -2.25 | 2.6 | 301.7 | 1.3 | 257.6 |
| 750.0 | 749.73 | 1.27 | -2.39 | 2.7 | 298.0 | 1.1 | 202.5 |
| 760.0 | 759.72 | 1.09 | -2.36 | 2.6 | 294.8 | 1.2 | 153.1 |
| 770.0 | 769.72 | 0.93 | -2.19 | 2.4 | 292.9 | 1.6 | 121.3 |
| 780.0 | 779.72 | 0.79 | -1.94 | 2.1 | 292.1 | 1.6 | 118.7 |
| 790.0 | 789.71 | 0.66 | -1.67 | 1.8 | 291.7 | 1.9 | 102.5 |
| 800.0 | 799.71 | 0.66 | -1.29 | 1.4 | 297.0 | 2.4 | 89.7 |
| 810.0 | 809.70 | 0.75 | -0.91 | 1.2 | 309.4 | 2.2 | 58.8 |
| 820.0 | 819.69 | 0.95 | -0.58 | 1.1 | 328.7 | 2.4 | 53.8 |
| 830.0 | 829.68 | 1.24 | -0.34 | 1.3 | 344.9 | 2.0 | 22.3 |
| 840.0 | 839.68 | 1.56 | -0.21 | 1.6 | 352.5 | 2.1 | 26.8 |
| 850.0 | 849.67 | 1.91 | -0.08 | 1.9 | 357.7 | 2.1 | 15.1 |
| 860.0 | 859.66 | 2.18 | -0.12 | 2.2 | 356.9 | 1.1 | 304.6 |
| 870.0 | 869.66 | 2.22 | -0.25 | 2.2 | 353.6 | 0.5 | 234.8 |
| 880.0 | 879.66 | 2.15 | -0.32 | 2.2 | 351.6 | 0.6 | 206.0 |
| 890.0 | 889.66 | 2.02 | -0.31 | 2.0 | 351.3 | 0.9 | 177.3 |
| 900.0 | 899.66 | 1.83 | -0.28 | 1.9 | 351.3 | 1.2 | 175.2 |
| 910.0 | 909.66 | 1.63 | -0.17 | 1.6 | 354.0 | 1.6 | 130.4 |
| 920.0 | 919.65 | 1.53 | 0.13 | 1.5 | 4.9 | 2.3 | 82.7 |
| 930.0 | 929.64 | 1.70 | 0.48 | 1.8 | 15.8 | 2.3 | 43.4 |
| 940.0 | 939.64 | 2.01 | 0.72 | 2.1 | 19.7 | 2.2 | 30.5 |
| 950.0 | 949.63 | 2.34 | 0.92 | 2.5 | 21.5 | 2.2 | 28.9 |
| 960.0 | 959.62 | 2.68 | 1.03 | 2.9 | 20.9 | 1.9 | 352.1 |
| 970.0 | 969.62 | 2.81 | 0.84 | 2.9 | 16.7 | 1.0 | 262.1 |
| 980.0 | 979.62 | 2.74 | 0.83 | 2.9 | 16.9 | 1.2 | 139.3 |
| 990.0 | 989.61 | 2.56 | 0.93 | 2.7 | 19.9 | 1.4 | 138.3 |
| 1000.0 | 999.61 | 2.38 | 1.07 | 2.6 | 24.2 | 1.5 | 139.2 |
| 1010.0 | 1009.61 | 2.40 | 1.38 | 2.8 | 29.9 | 2.0 | 48.3 |
| 1020.0 | 1019.60 | 2.70 | 1.64 | 3.2 | 31.3 | 2.2 | 19.6 |
| 1030.0 | 1029.59 | 3.00 | 1.58 | 3.4 | 27.7 | 1.6 | 324.9 |
| 1040.0 | 1039.59 | 3.03 | 1.40 | 3.3 | 24.9 | 0.9 | 205.1 |
| 1050.0 | 1049.59 | 2.86 | 1.41 | 3.2 | 26.2 | 1.4 | 141.1 |
| 1060.0 | 1059.59 | 2.70 | 1.60 | 3.1 | 30.6 | 1.5 | 120.0 |
| 1070.0 | 1069.58 | 2.66 | 1.91 | 3.3 | 35.6 | 2.0 | 73.1 |
| 1080.0 | 1079.57 | 2.95 | 2.11 | 3.6 | 35.6 | 2.0 | 12.8 |
| 1090.0 | 1089.57 | 3.19 | 2.01 | 3.8 | 32.3 | 1.3 | 282.3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1110.0 | 1109.57 | 2.95 | 1.88 | 3.5 | 32.4 | 1.2 | 149.3 |
| 1120.0 | 1119.56 | 2.78 | 2.00 | 3.4 | 35.8 | 1.3 | 136.7 |
| 1130.0 | 1129.56 | 2.69 | 2.26 | 3.5 | 40.0 | 2.1 | 70.6 |
| 1140.0 | 1139.55 | 3.00 | 2.45 | 3.9 | 39.3 | 2.2 | 18.0 |
| 1150.0 | 1149.54 | 3.38 | 2.48 | 4.2 | 36.3 | 2.3 | 5.8 |
| 1160.0 | 1159.54 | 3.75 | 2.45 | 4.5 | 33.2 | 1.5 | 318.0 |
| 1170.0 | 1169.54 | 3.64 | 2.40 | 4.4 | 33.4 | 1.1 | 164.1 |
| 1180.0 | 1179.53 | 3.50 | 2.58 | 4.3 | 36.4 | 1.8 | 102.0 |
| 1190.0 | 1189.53 | 3.62 | 2.86 | 4.6 | 38.3 | 1.9 | 24.9 |
| 1200.0 | 1199.52 | 3.94 | 2.91 | 4.9 | 36.4 | 1.9 | 351.3 |
| 1210.0 | 1209.52 | 4.16 | 2.73 | 5.0 | 33.3 | 1.5 | 308.1 |
| 1220.0 | 1219.51 | 4.13 | 2.56 | 4.9 | 31.8 | 1.2 | 212.6 |
| 1230.0 | 1229.51 | 3.91 | 2.60 | 4.7 | 33.6 | 1.5 | 144.2 |
| 1240.0 | 1239.51 | 3.78 | 2.83 | 4.7 | 36.8 | 1.6 | 81.2 |
| 1250.0 | 1249.50 | 4.00 | 2.93 | 5.0 | 36.2 | 1.6 | 344.5 |
| 1260.0 | 1259.50 | 4.11 | 2.73 | 4.9 | 33.6 | 1.0 | 236.0 |
| 1270.0 | 1269.50 | 3.94 | 2.86 | 4.9 | 36.0 | 2.2 | 107.5 |
| 1280.0 | 1279.49 | 3.79 | 3.27 | 5.0 | 40.8 | 3.1 | 107.7 |
| 1290.0 | 1289.47 | 3.59 | 3.86 | 5.3 | 47.1 | 4.1 | 108.4 |
| 1300.0 | 1299.44 | 3.31 | 4.60 | 5.7 | 54.3 | 5.1 | 114.1 |
| 1310.0 | 1309.39 | 2.97 | 5.51 | 6.3 | 61.7 | 6.2 | 105.4 |
| 1320.0 | 1319.32 | 2.52 | 6.59 | 7.1 | 69.1 | 7.1 | 111.0 |
| 1330.0 | 1329.23 | 2.03 | 7.78 | 8.0 | 75.3 | 7.7 | 109.0 |
| 1340.0 | 1339.13 | 1.50 | 9.11 | 9.2 | 80.6 | 8.3 | 108.0 |
| 1350.0 | 1349.01 | 0.94 | 10.54 | 10.6 | 84.9 | 8.8 | 113.1 |
| 1360.0 | 1358.87 | 0.39 | 12.09 | 12.1 | 88.1 | 9.8 | 110.2 |
| 1370.0 | 1368.73 | -0.15 | 13.69 | 13.7 | 90.6 | 9.7 | 108.5 |
| 1380.0 | 1378.59 | -0.66 | 15.21 | 15.2 | 92.5 | 10.6 | 109.4 |
| 1390.0 | 1388.42 | -1.24 | 16.94 | 17.0 | 94.2 | 10.3 | 106.9 |
| 1400.0 | 1398.26 | -1.76 | 18.64 | 18.7 | 95.4 | 10.3 | 108.2 |
| 1410.0 | 1408.10 | -2.28 | 20.37 | 20.5 | 96.4 | 10.3 | 106.1 |
| 1420.0 | 1417.94 | -2.74 | 22.01 | 22.2 | 97.1 | 8.0 | 98.8 |
| 1430.0 | 1427.78 | -3.29 | 23.71 | 23.9 | 97.9 | 10.6 | 107.0 |
| 1440.0 | 1437.61 | -3.80 | 25.46 | 25.7 | 98.5 | 10.6 | 100.0 |
| 1450.0 | 1447.44 | -4.33 | 27.23 | 27.6 | 99.0 | 10.6 | 107.9 |
| 1460.0 | 1457.29 | -4.80 | 28.83 | 29.2 | 99.5 | 10.6 | 101.8 |
| 1470.0 | 1467.10 | -5.39 | 30.65 | 31.1 | 100.0 | 10.9 | 111.0 |
| 1480.0 | 1476.92 | -5.96 | 32.48 | 33.0 | 100.4 | 10.9 | 107.1 |
| 1490.0 | 1486.73 | -6.50 | 34.31 | 34.9 | 100.7 | 11.0 | 106.3 |
| 1500.0 | 1496.55 | -7.02 | 36.12 | 36.8 | 101.0 | 10.5 | 103.2 |
| 1510.0 | 1506.40 | -7.46 | 37.77 | 38.5 | 101.2 | 9.7 | 106.8 |
| 1520.0 | 1516.25 | -7.96 | 39.42 | 40.2 | 101.4 | 10.5 | 106.3 |
| 1530.0 | 1526.05 | -8.58 | 41.32 | 42.2 | 101.7 | 11.3 | 104.6 |
| 1540.0 | 1535.85 | -9.12 | 43.21 | 44.2 | 101.9 | 10.8 | 102.3 |
| 1550.0 | 1545.70 | -9.56 | 44.88 | 45.9 | 102.0 | 9.6 | 105.9 |
| 1560.0 | 1555.51 | -10.14 | 46.69 | 47.8 | 102.3 | 12.5 | 103.6 |
| 1570.0 | 1565.29 | -10.81 | 48.68 | 49.9 | 102.5 | 11.8 | 107.2 |
| 1580.0 | 1575.08 | -11.41 | 50.62 | 51.9 | 102.7 | 11.4 | 103.5 |
| 1590.0 | 1584.91 | -11.86 | 52.34 | 53.7 | 102.8 | 10.6 | 106.4 |
| 1600.0 | 1594.74 | -12.40 | 54.14 | 55.5 | 102.9 | 11.3 | 107.5 |
| 1610.0 | 1604.54 | -12.98 | 56.01 | 57.5 | 103.0 | 11.1 | 107.7 |
| 1620.0 | 1614.32 | -13.63 | 58.00 | 59.6 | 103.2 | 12.8 | 115.7 |
| 1630.0 | 1624.09 | -14.29 | 60.00 | 61.7 | 103.4 | 10.6 | 99.1 |
| 1637.1 | 1631.11 | -14.69 | 61.26 | 63.0 | 103.4 | 0.0 | 0.0 |

Well: U38H

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 13' | 24" | 5.9 | | X | 4/5/2007 | |
| Surface | 22" | 13' | 24" | 5.9 | | X | 4/5/2007 | |
| Water Protection | 13 3/8" | 340.55' | 15 3/8" | 1.44 | X | | 4/9/2007 | Bskt @ 86' |
| Coal Protection | 13 3/8" | 340.55' | 15 3/8" | 1.44 | X | | 4/9/2007 | Bskt @ 86' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** CNX **HOLE #: U-38H**

**LOCATION:** OSBORNE MTN **DRILL RIG #: 87**

**DATE STARTED: 04-05-07** **DATED COMPLETED: 04-17-07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | | THICKNESS | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 13 | 13 | |
| 13 | 35 | 22 | SANDY SHALE/COAL & SHALE/SAND STONE |
| 35 | 93 | 58 | SAND STONE |
| 93 | 155 | 62 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 155 | 187 | 32 | SAND STONE |
| 187 | 218 | 31 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 218 | 250 | 32 | SAND STONE/SANDY SHALE STR/POSS COAL |
| 250 | 281 | 31 | SAND STONE/SANDY SHALE STR |
| 281 | 313 | 32 | SAND STONE/SANDY SHALE/SAND STONE |
| 313 | 345 | 32 | SAND STONE STR/SANDY SHALE/SAND STONE |
| 345 | 370 | 25 | SAND STONE |
| 370 | 398 | 28 | SAND STONE |
| 398 | 429 | 31 | SAND STONE/SANDY SHALE/SAND STONE |
| 429 | 461 | 32 | SAND STONE |
| 461 | 493 | 32 | SAND STONE/SANDY SHALE/SAND STONE |
| 493 | 524 | 31 | SAND STONE/SANDY SHALE |
| 524 | 556 | 32 | SANDY SHALE |
| 556 | 587 | 31 | SAND STONE/SANDY SHALE STR |
| 587 | 619 | 32 | SANDY SHALE/COAL/SAND STONE |
| 619 | 651 | 32 | SAND STONE |
| 651 | 682 | 31 | SAND STONE/COAL & SANDY SHALE STR |
| 682 | 714 | 32 | SAND STONE/SANDY SHALE/COAL |
| 714 | 745 | 31 | SAND STONE/SANDY SHALE |
| 745 | 777 | 32 | SANDY SHALE/COAL/SANDY SHALE/SAND STONE STR |
| 777 | 809 | 32 | SAND STONE/SANDY SHALE STR |
| 809 | 840 | 31 | SAND STONE |
| 840 | 871 | 31 | SAND STONE |
| 871 | 903 | 32 | SAND STONE/SANDY SHALE |
| 903 | 934 | 31 | SANDY SHALE |
| 934 | 966 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 966 | 997 | 31 | SANDY SHALE |
| 997 | 1029 | 32 | SAND STONE |
| 1029 | 1061 | 32 | SAND STONE/SANDY SHALE/SAND STONE |
| 1061 | 1092 | 31 | SAND STONE/SANDY SHALE/COAL |
| 1092 | 1124 | 32 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1124 | 1156 | 32 | SAND STONE/SANDY SHALE/SAND STONE |
| 1156 | 1188 | 32 | SAND STONE |

| | | | |
|---|---|---|---|
| 1188 | 1219 | 31 | SAND STONE/SANDY SHALE/COAL/SANDY SHALE |
| 1219 | 1251 | 32 | SANDY SHALE |
| 1251 | 1285 | 34 | SANDY SHALE/COAL/SAND STONE |
| 1285 | 1316 | 31 | SAND STONE/SANDY SHALE |
| 1316 | 1379 | 63 | SANDY SHALE |
| 1379 | 1388 | 9 | SANDY SHALE |
| 1388 | 1420 | 32 | SANDY SHALE/SAND STONE STR |
| 1420 | 1452 | 32 | SANDY SHALE STR/SAND STONE |
| 1452 | 1484 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 1484 | 1515 | 31 | SANDY SHALE/COAL/SAND STONE |
| 1515 | 1547 | 32 | SAND STONE/SANDY SHALE STR |
| 1547 | 1578 | 31 | SAND STONE/SANDY SHALE/POSS COAL |
| 1578 | 1610 | 32 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1610 | 1634 | 24 | SANDY SHALE/SAND STONE STR/SANDY SHALE |

1634.00 FT. TOTAL DEPTH
13.00 FT. OF 22" CASING
340.55 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 965 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3404 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 4/5/2007 |
| **Driller's Total Depth:** | 1579.00 | **Log's Total Depth:** | 1583.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 1/12/2008 | *(Company)* |
| By: | Leslie K Arrington | Title: | Manager | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 1/12/2008 | | |
| Status: | | Date: | 1/14/2008 |
| Final PDF Date: | 2/28/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 850 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3404 |
| **Operations Name:** | CBM U38I W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 3/30/2007
Date drilling completed: 4/5/2007
Driller's Total Depth (feet): 1,579
Log Total Depth (feet): 1,583
Drilling Contractor: Noah Horn
Rig Type: ☑ Rotary ☐ Cable Tool
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,014,217
Permitted State Plane Y: 327,356
Final Plat State Plane X: 1,014,218
Final Plat State Plane Y: 327,355
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | U38I Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | U38I ExhibitA.pdf |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Show Gas | U38I Gas Show.xls |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper,Gamma,Density,Temp,Deviation

Did logs disclose vertical locations of a coal seam? ☐ Yes ☑ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | U38I Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | U38I Casing.xls |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

13 3/8" Casing cemented on the backside to surface

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | U38I Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 11/27/2007 *(Company)*

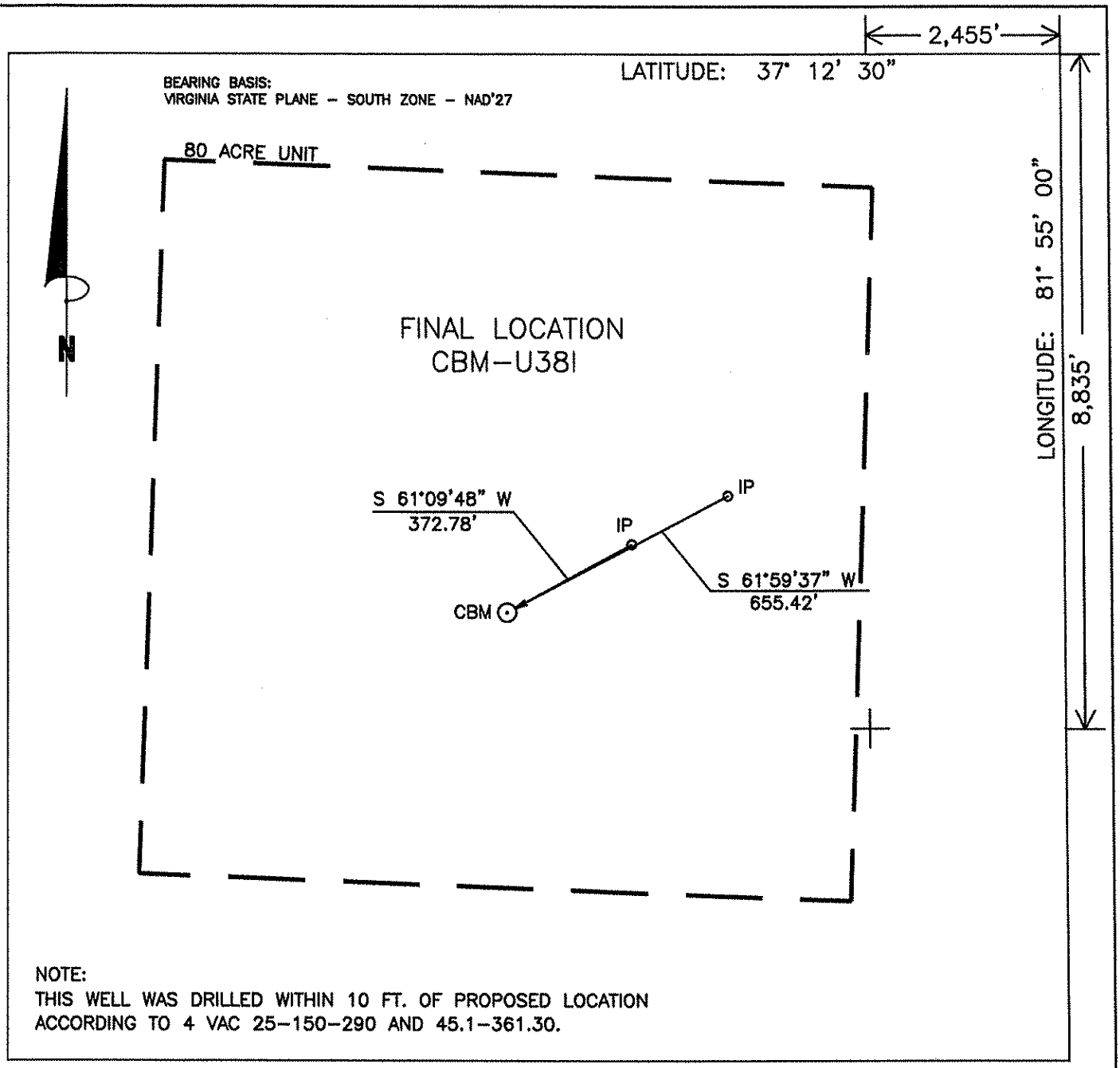
Signed By: Leslie K. Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 11/27/2007

Status: Inspr Approved Date: 11/30/2007

Final PDF Date: 11/30/2007




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

# WELL LOCATION PLAT

U38IFNL
2N25/55–536/78

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–U38I

TRACT NUMBER COAL MOUNTIAN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 327,355.40 E 1,014,218.22

ELEVATION: 2080.49' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 04–06–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 : 24,000, latitude and longitude lines being represented by border lines as shown (optional).

D R Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No. 8540
4/6/07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM U38I
SURFACE ELEV: 2080.49 EASTING: 1014218.22 NORTHING: 327355.40

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| JB1 | 61.90 | 65.00 | 2018.59 | 3.10 | |
| | 65.00 | 104.90 | 2015.49 | 39.90 | |
| JB3 | 104.90 | 105.50 | 1975.59 | 0.60 | |
| | 105.50 | 205.50 | 1974.99 | 100.00 | |
| TI | 205.50 | 206.00 | 1874.99 | 0.50 | |
| | 206.00 | 214.20 | 1874.49 | 8.20 | |
| COAL | 214.20 | 215.00 | 1866.29 | 0.80 | |
| | 215.00 | 304.80 | 1865.49 | 89.80 | |
| COAL | 304.80 | 305.90 | 1775.69 | 1.10 | |
| | 305.90 | 321.50 | 1774.59 | 15.60 | |
| US1 | 321.50 | 322.10 | 1758.99 | 0.60 | |
| | 322.10 | 430.00 | 1758.39 | 107.90 | |
| *US2 | 430.00 | 431.10 | 1650.49 | 1.10 | |
| | 431.10 | 609.50 | 1649.39 | 178.40 | |
| *SE1 | 609.50 | 610.00 | 1470.99 | 0.50 | |
| | 610.00 | 645.90 | 1470.49 | 35.90 | |
| *SE2 | 645.90 | 647.80 | 1434.59 | 1.90 | |
| | 647.80 | 686.40 | 1432.69 | 38.60 | |
| *LS1 | 686.40 | 688.90 | 1394.09 | 2.50 | |
| | 688.90 | 701.30 | 1391.59 | 12.40 | |
| *LS2 | 701.30 | 702.00 | 1379.19 | 0.70 | |
| | 702.00 | 747.80 | 1378.49 | 45.80 | |
| *UH1 | 747.80 | 749.60 | 1332.69 | 1.80 | |
| | 749.60 | 801.80 | 1330.89 | 52.20 | |
| *UH2 | 801.80 | 804.80 | 1278.69 | 3.00 | |
| | 804.80 | 859.10 | 1275.69 | 54.30 | |
| *MH1 | 859.10 | 860.00 | 1221.39 | 0.90 | |
| | 860.00 | 923.80 | 1220.49 | 63.80 | |
| *MH2 | 923.80 | 924.50 | 1156.69 | 0.70 | |
| | 924.50 | 967.20 | 1155.99 | 42.70 | |
| *P11 | 967.20 | 970.00 | 1113.29 | 2.80 | |
| | 970.00 | 992.90 | 1110.49 | 22.90 | |
| *P10 | 992.90 | 994.00 | 1087.59 | 1.10 | |
| | 994.00 | 1007.80 | 1086.49 | 13.80 | |
| *COAL | 1007.80 | 1008.00 | 1072.69 | 0.20 | |
| | 1008.00 | 1059.00 | 1072.49 | 51.00 | |
| *LH2 | 1059.00 | 1060.00 | 1021.49 | 1.00 | |
| | 1060.00 | 1133.50 | 1020.49 | 73.50 | |
| *P91 | 1133.50 | 1135.20 | 946.99 | 1.70 | |
| | 1135.20 | 1146.60 | 945.29 | 11.40 | |
| *P92 | 1146.60 | 1147.50 | 933.89 | 0.90 | |
| | 1147.50 | 1148.80 | 932.99 | 1.30 | |
| *P93 | 1148.80 | 1149.70 | 931.69 | 0.90 | |
| | 1149.70 | 1172.00 | 930.79 | 22.30 | |
| *P82 | 1172.00 | 1172.10 | 908.49 | 0.10 | |
| | 1172.10 | 1172.80 | 908.39 | 0.70 | |
| *P82 | 1172.80 | 1173.80 | 907.69 | 1.00 | |

| | | | | |
|---|---|---|---|---|
| | 1173.80 | 1204.20 | 906.69 | 30.40 |
| *COAL | 1204.20 | 1205.80 | 876.29 | 1.60 |
| | 1205.80 | 1213.80 | 874.69 | 8.00 |
| *P71 | 1213.80 | 1215.00 | 866.69 | 1.20 |
| | 1215.00 | 1301.00 | 865.49 | 86.00 |
| *COAL | 1301.00 | 1301.80 | 779.49 | 0.80 |
| | 1301.80 | 1376.70 | 778.69 | 74.90 |
| *P61 | 1376.70 | 1377.30 | 703.79 | 0.60 |
| | 1377.30 | 1415.90 | 703.19 | 38.60 |
| *P62 | 1415.90 | 1416.40 | 664.59 | 0.50 |
| | 1416.40 | 1424.90 | 664.09 | 8.50 |
| *P51 | 1424.90 | 1426.60 | 655.59 | 1.70 |
| | 1426.60 | 1518.80 | 653.89 | 92.20 |
| *P42 | 1518.80 | 1519.90 | 561.69 | 1.10 |
| | 1519.90 | 1583.44 | 560.59 | 63.54 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U38I.CMP
DATE: 06/06/07

Well: U38I

## Oil & Gas Show

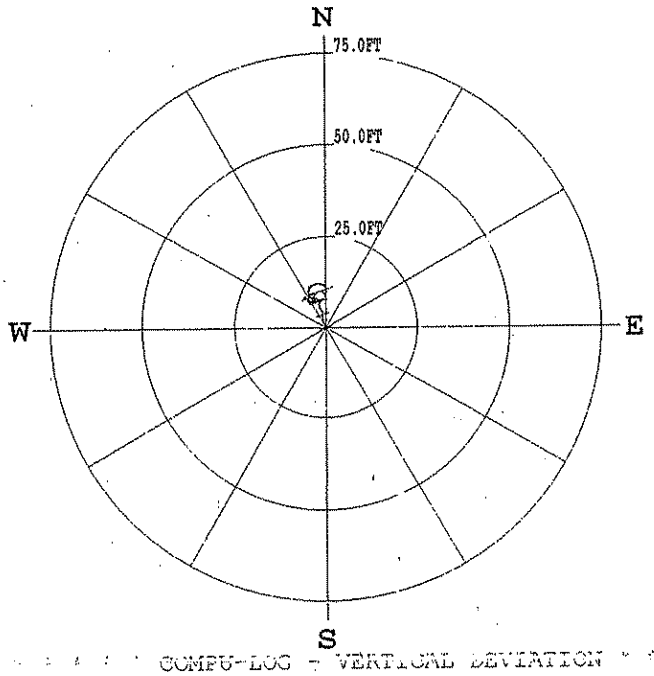
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 430 | 1173 | 743 | | | |
| Pocahontas | 1204 | 1519 | 315 | | | |
| Total IPF | | | | Not Taken | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: CNX Gas
LOCATION: Laurel
HOLE ID: 07-CNX-U-38-I
DATE OF LOG: 04/05/07
PROBE: 0019C 732

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1580.69 FT
AZIMUTH: 349.3
DISTANCE: 8.8 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




## COMPU-LOG - VERTICAL DEVIATION

CLIENT : CNX Gas
FIELD OFFICE : M.Sammons
DATA FROM :
MAG. DECL. : -6.900
LOG: 07-CNX-U-38-I_04-05-07_11-12_0019C_.02_-9.17_1581.21_DEVI.log

HOLE ID. : 07-CNX-U-38-I
DATE OF LOG : 04/05/07
PROBE : 0019C , 732
DEPTH UNITS : FEET

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | 0.90 | -0.47 | 1.0 | 332.3 | 1.5 | 306.7 |
| 60.0 | 59.99 | 1.10 | -0.64 | 1.3 | 329.9 | 1.5 | 338.9 |
| 70.0 | 69.99 | 1.36 | -0.65 | 1.5 | 334.3 | 1.5 | 3.1 |
| 80.0 | 79.98 | 1.62 | -0.68 | 1.8 | 337.3 | 1.6 | 348.2 |
| 90.0 | 89.98 | 1.88 | -0.77 | 2.0 | 337.8 | 1.6 | 336.9 |
| 100.0 | 99.97 | 2.14 | -0.86 | 2.3 | 338.1 | 1.6 | 343.7 |
| 110.0 | 109.97 | 2.41 | -0.92 | 2.6 | 339.0 | 1.6 | 350.3 |
| 120.0 | 119.97 | 2.69 | -0.97 | 2.9 | 340.2 | 1.7 | 349.1 |
| 130.0 | 129.96 | 2.98 | -0.99 | 3.1 | 341.7 | 1.6 | 357.5 |
| 140.0 | 139.96 | 3.27 | -0.96 | 3.4 | 343.6 | 1.7 | 9.5 |
| 150.0 | 149.95 | 3.56 | -0.92 | 3.7 | 345.6 | 1.7 | 12.9 |
| 160.0 | 159.95 | 3.85 | -0.84 | 3.9 | 347.6 | 1.7 | 5.5 |
| 170.0 | 169.95 | 4.12 | -0.94 | 4.2 | 347.1 | 1.7 | 322.6 |
| 180.0 | 179.94 | 4.34 | -1.14 | 4.5 | 345.2 | 1.6 | 330.6 |
| 190.0 | 189.94 | 4.61 | -1.24 | 4.8 | 344.9 | 1.6 | 337.2 |
| 200.0 | 199.93 | 4.84 | -1.42 | 5.0 | 343.7 | 1.7 | 321.3 |
| 210.0 | 209.93 | 5.09 | -1.58 | 5.3 | 342.8 | 1.7 | 328.5 |
| 220.0 | 219.92 | 5.35 | -1.68 | 5.6 | 342.6 | 1.6 | 351.1 |
| 230.0 | 229.92 | 5.64 | -1.69 | 5.9 | 343.3 | 1.6 | 1.2 |
| 240.0 | 239.92 | 5.92 | -1.73 | 6.2 | 343.7 | 1.6 | 342.0 |
| 250.0 | 249.91 | 6.19 | -1.82 | 6.4 | 343.6 | 1.8 | 337.5 |
| 260.0 | 259.91 | 6.47 | -1.81 | 6.7 | 344.4 | 1.6 | 14.0 |
| 270.0 | 269.90 | 6.71 | -1.67 | 6.9 | 346.0 | 1.6 | 35.9 |
| 280.0 | 279.90 | 6.93 | -1.51 | 7.1 | 347.7 | 1.6 | 42.7 |
| 290.0 | 289.89 | 7.14 | -1.34 | 7.2 | 349.4 | 1.5 | 31.9 |
| 300.0 | 299.89 | 7.40 | -1.23 | 7.5 | 350.6 | 1.7 | 15.8 |
| 310.0 | 309.89 | 7.69 | -1.17 | 7.8 | 351.3 | 1.7 | 21.1 |
| 320.0 | 319.88 | 7.90 | -0.99 | 8.0 | 352.9 | 1.4 | 34.2 |
| 330.0 | 329.88 | 8.10 | -0.83 | 8.1 | 354.1 | 1.5 | 37.8 |
| 340.0 | 339.88 | 8.31 | -0.68 | 8.3 | 355.3 | 1.5 | 43.7 |
| 350.0 | 349.87 | 8.47 | -0.47 | 8.5 | 356.8 | 1.4 | 61.0 |
| 360.0 | 359.87 | 8.62 | -0.34 | 8.6 | 357.7 | 1.3 | 12.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 380.0 | 379.87 | 9.06 | -0.26 | 9.1 | 358.4 | 1.3 | 23.0 |
| 390.0 | 389.86 | 9.25 | -0.15 | 9.2 | 359.1 | 1.3 | 31.2 |
| 400.0 | 399.86 | 9.43 | -0.03 | 9.4 | 359.8 | 1.2 | 29.9 |
| 410.0 | 409.86 | 9.64 | 0.06 | 9.6 | 0.4 | 1.3 | 15.5 |
| 420.0 | 419.86 | 9.85 | 0.09 | 9.8 | 0.5 | 1.3 | 351.5 |
| 430.0 | 429.85 | 10.08 | 0.04 | 10.1 | 0.2 | 1.3 | 353.7 |
| 440.0 | 439.85 | 10.30 | 0.06 | 10.3 | 0.3 | 1.3 | 7.4 |
| 450.0 | 449.85 | 10.52 | 0.07 | 10.5 | 0.4 | 1.3 | 2.8 |
| 460.0 | 459.85 | 10.74 | 0.04 | 10.7 | 0.2 | 1.4 | 340.6 |
| 470.0 | 469.84 | 10.96 | -0.08 | 11.0 | 359.6 | 1.3 | 331.6 |
| 480.0 | 479.84 | 11.17 | -0.21 | 11.2 | 358.9 | 1.4 | 327.8 |
| 490.0 | 489.84 | 11.36 | -0.36 | 11.4 | 358.2 | 1.5 | 318.1 |
| 500.0 | 499.83 | 11.52 | -0.56 | 11.5 | 357.2 | 1.5 | 297.8 |
| 510.0 | 509.83 | 11.61 | -0.80 | 11.6 | 356.0 | 1.5 | 291.5 |
| 520.0 | 519.83 | 11.70 | -1.05 | 11.7 | 354.9 | 1.5 | 280.1 |
| 530.0 | 529.82 | 11.71 | -1.31 | 11.8 | 353.6 | 1.4 | 276.3 |
| 540.0 | 539.82 | 11.77 | -1.56 | 11.9 | 352.5 | 1.5 | 282.7 |
| 550.0 | 549.82 | 11.84 | -1.81 | 12.0 | 351.3 | 1.4 | 278.4 |
| 560.0 | 559.81 | 11.88 | -2.07 | 12.1 | 350.1 | 1.5 | 271.3 |
| 570.0 | 569.81 | 11.85 | -2.34 | 12.1 | 348.8 | 1.6 | 254.6 |
| 580.0 | 579.81 | 11.78 | -2.59 | 12.1 | 347.6 | 1.4 | 251.8 |
| 590.0 | 589.80 | 11.69 | -2.83 | 12.0 | 346.4 | 1.5 | 246.7 |
| 600.0 | 599.80 | 11.61 | -3.07 | 12.0 | 345.2 | 1.4 | 254.3 |
| 610.0 | 609.80 | 11.49 | -3.28 | 12.0 | 344.0 | 1.5 | 236.6 |
| 620.0 | 619.79 | 11.34 | -3.49 | 11.9 | 342.9 | 1.4 | 244.1 |
| 630.0 | 629.79 | 11.25 | -3.72 | 11.9 | 341.7 | 1.4 | 254.8 |
| 640.0 | 639.79 | 11.16 | -3.95 | 11.8 | 340.5 | 1.4 | 248.3 |
| 650.0 | 649.78 | 11.03 | -4.15 | 11.8 | 339.4 | 1.4 | 222.5 |
| 660.0 | 659.78 | 10.83 | -4.30 | 11.7 | 338.3 | 1.4 | 209.3 |
| 670.0 | 669.78 | 10.61 | -4.40 | 11.5 | 337.5 | 1.4 | 191.5 |
| 680.0 | 679.78 | 10.37 | -4.47 | 11.3 | 336.7 | 1.4 | 204.6 |
| 690.0 | 689.77 | 10.15 | -4.57 | 11.1 | 335.8 | 1.4 | 211.0 |
| 700.0 | 699.77 | 9.93 | -4.67 | 11.0 | 334.8 | 1.4 | 195.8 |
| 710.0 | 709.77 | 9.68 | -4.69 | 10.8 | 334.2 | 1.4 | 182.8 |
| 720.0 | 719.76 | 9.44 | -4.70 | 10.5 | 333.5 | 1.4 | 181.8 |
| 730.0 | 729.76 | 9.20 | -4.68 | 10.3 | 333.0 | 1.4 | 164.0 |
| 740.0 | 739.76 | 8.97 | -4.61 | 10.1 | 332.8 | 1.4 | 159.8 |
| 750.0 | 749.75 | 8.74 | -4.53 | 9.8 | 332.6 | 1.4 | 157.2 |
| 760.0 | 759.75 | 8.51 | -4.44 | 9.6 | 332.5 | 1.4 | 167.0 |
| 770.0 | 769.75 | 8.29 | -4.36 | 9.4 | 332.3 | 1.4 | 152.3 |
| 780.0 | 779.75 | 8.08 | -4.23 | 9.1 | 332.4 | 1.4 | 143.7 |
| 790.0 | 789.74 | 7.89 | -4.09 | 8.9 | 332.6 | 1.4 | 134.8 |
| 800.0 | 799.74 | 7.73 | -3.91 | 8.7 | 333.2 | 1.4 | 134.4 |
| 810.0 | 809.74 | 7.60 | -3.71 | 8.5 | 334.0 | 1.4 | 119.6 |
| 820.0 | 819.73 | 7.49 | -3.50 | 8.3 | 334.9 | 1.3 | 114.9 |
| 830.0 | 829.73 | 7.40 | -3.27 | 8.1 | 336.2 | 1.4 | 109.7 |
| 840.0 | 839.73 | 7.36 | -3.04 | 8.0 | 337.6 | 1.4 | 104.1 |
| 850.0 | 849.73 | 7.35 | -2.80 | 7.9 | 339.1 | 1.4 | 81.6 |
| 860.0 | 859.72 | 7.40 | -2.57 | 7.8 | 340.9 | 1.4 | 70.0 |
| 870.0 | 869.72 | 7.56 | -2.39 | 7.9 | 342.5 | 1.5 | 33.4 |
| 880.0 | 879.72 | 7.79 | -2.30 | 8.1 | 343.6 | 1.4 | 23.4 |
| 890.0 | 889.71 | 7.99 | -2.17 | 8.3 | 344.8 | 1.4 | 34.0 |
| 900.0 | 899.71 | 8.21 | -2.07 | 8.5 | 345.8 | 1.4 | 14.5 |
| 910.0 | 909.71 | 8.45 | -2.04 | 8.7 | 346.4 | 1.4 | 3.0 |
| 920.0 | 919.70 | 8.69 | -2.09 | 8.9 | 346.5 | 1.5 | 341.5 |
| 930.0 | 929.70 | 8.92 | -2.21 | 9.2 | 346.1 | 1.4 | 325.2 |
| 940.0 | 939.70 | 9.10 | -2.41 | 9.4 | 345.2 | 1.5 | 296.5 |
| 950.0 | 949.69 | 9.22 | -2.64 | 9.6 | 344.0 | 1.5 | 290.2 |
| 960.0 | 959.69 | 9.28 | -2.90 | 9.7 | 342.6 | 1.6 | 276.6 |
| 970.0 | 969.69 | 9.26 | -3.17 | 9.8 | 341.1 | 1.5 | 242.2 |
| 980.0 | 979.68 | 9.18 | -3.42 | 9.8 | 339.6 | 1.5 | 257.8 |
| 990.0 | 989.68 | 9.11 | -3.67 | 9.8 | 338.1 | 1.5 | 250.0 |
| 1000.0 | 999.68 | 8.97 | -3.89 | 9.8 | 336.6 | 1.6 | 244.9 |
| 1010.0 | 1009.67 | 8.87 | -4.13 | 9.8 | 335.0 | 1.5 | 244.0 |
| 1020.0 | 1019.67 | 8.72 | -4.34 | 9.7 | 333.5 | 1.5 | 232.1 |
| 1030.0 | 1029.67 | 8.52 | -4.50 | 9.6 | 332.1 | 1.5 | 218.4 |
| 1040.0 | 1039.66 | 8.31 | -4.63 | 9.5 | 330.9 | 1.4 | 208.6 |
| 1050.0 | 1049.66 | 8.08 | -4.71 | 9.4 | 329.8 | 1.4 | 201.7 |
| 1060.0 | 1059.66 | 7.86 | -4.80 | 9.2 | 328.6 | 1.4 | 205.5 |
| 1070.0 | 1069.65 | 7.63 | -4.83 | 9.0 | 327.7 | 1.3 | 179.1 |
| 1080.0 | 1079.65 | 7.40 | -4.77 | 8.8 | 327.2 | 1.4 | 164.8 |
| 1090.0 | 1089.65 | 7.23 | -4.61 | 8.6 | 327.4 | 1.3 | 124.9 |
| 1100.0 | 1099.65 | 7.10 | -4.43 | 8.4 | 328.0 | 1.3 | 125.9 |
| 1110.0 | 1109.64 | 7.01 | -4.22 | 8.2 | 329.0 | 1.3 | 87.9 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1110.0 | 1109.64 | 7.01 | -4.22 | 8.2 | 329.0 | 1.3 | 87.3 |
| 1120.0 | 1119.64 | 6.98 | -4.00 | 8.0 | 330.2 | 1.3 | 91.7 |
| 1130.0 | 1129.64 | 7.04 | -3.78 | 8.0 | 331.8 | 1.4 | 58.7 |
| 1140.0 | 1139.64 | 7.20 | -3.60 | 8.1 | 333.4 | 1.4 | 40.2 |
| 1150.0 | 1149.63 | 7.43 | -3.52 | 8.2 | 334.6 | 1.5 | 4.2 |
| 1160.0 | 1159.63 | 7.68 | -3.55 | 8.5 | 335.2 | 1.5 | 342.0 |
| 1170.0 | 1169.63 | 7.91 | -3.66 | 8.7 | 335.2 | 1.5 | 322.4 |
| 1180.0 | 1179.62 | 8.08 | -3.85 | 8.9 | 334.5 | 1.5 | 293.8 |
| 1190.0 | 1189.62 | 8.17 | -4.09 | 9.1 | 333.4 | 1.5 | 279.5 |
| 1200.0 | 1199.62 | 8.18 | -4.35 | 9.3 | 332.0 | 1.5 | 251.6 |
| 1210.0 | 1209.61 | 8.07 | -4.58 | 9.3 | 330.5 | 1.4 | 236.4 |
| 1220.0 | 1219.61 | 7.88 | -4.72 | 9.2 | 329.1 | 1.4 | 205.7 |
| 1230.0 | 1229.61 | 7.67 | -4.84 | 9.1 | 327.7 | 1.4 | 209.0 |
| 1240.0 | 1239.60 | 7.44 | -4.90 | 8.9 | 326.6 | 1.4 | 176.7 |
| 1250.0 | 1249.60 | 7.21 | -4.82 | 8.7 | 326.2 | 1.3 | 146.9 |
| 1260.0 | 1259.60 | 7.02 | -4.69 | 8.4 | 326.3 | 1.4 | 143.2 |
| 1270.0 | 1269.60 | 6.86 | -4.53 | 8.2 | 326.6 | 1.3 | 121.3 |
| 1280.0 | 1279.59 | 6.72 | -4.34 | 8.0 | 327.2 | 1.4 | 115.1 |
| 1290.0 | 1289.59 | 6.63 | -4.12 | 7.8 | 328.2 | 1.4 | 107.3 |
| 1300.0 | 1299.59 | 6.57 | -3.89 | 7.6 | 329.4 | 1.4 | 92.8 |
| 1310.0 | 1309.58 | 6.56 | -3.65 | 7.5 | 330.9 | 1.4 | 96.7 |
| 1320.0 | 1319.58 | 6.56 | -3.41 | 7.4 | 332.6 | 1.4 | 83.1 |
| 1330.0 | 1329.58 | 6.62 | -3.17 | 7.3 | 334.4 | 1.4 | 68.8 |
| 1340.0 | 1339.57 | 6.74 | -2.96 | 7.4 | 336.3 | 1.4 | 50.5 |
| 1350.0 | 1349.57 | 6.95 | -2.81 | 7.5 | 338.0 | 1.5 | 18.5 |
| 1360.0 | 1359.57 | 7.21 | -2.74 | 7.7 | 339.1 | 1.5 | 3.5 |
| 1370.0 | 1369.56 | 7.46 | -2.78 | 8.0 | 339.6 | 1.5 | 350.8 |
| 1380.0 | 1379.56 | 7.71 | -2.86 | 8.2 | 339.6 | 1.5 | 330.8 |
| 1390.0 | 1389.56 | 7.92 | -3.02 | 8.5 | 339.1 | 1.4 | 306.6 |
| 1400.0 | 1399.55 | 7.97 | -3.25 | 8.6 | 337.8 | 1.4 | 267.3 |
| 1410.0 | 1409.55 | 7.91 | -3.47 | 8.6 | 336.3 | 1.3 | 247.6 |
| 1420.0 | 1419.55 | 7.76 | -3.62 | 8.6 | 335.0 | 1.2 | 212.7 |
| 1430.0 | 1429.55 | 7.58 | -3.73 | 8.5 | 333.8 | 1.3 | 202.8 |
| 1440.0 | 1439.55 | 7.38 | -3.77 | 8.3 | 333.0 | 1.1 | 160.6 |
| 1450.0 | 1449.54 | 7.19 | -3.68 | 8.1 | 332.9 | 1.2 | 145.4 |
| 1460.0 | 1459.54 | 7.03 | -3.52 | 7.9 | 333.4 | 1.3 | 133.5 |
| 1470.0 | 1469.54 | 6.91 | -3.32 | 7.7 | 334.3 | 1.4 | 123.1 |
| 1480.0 | 1479.53 | 6.82 | -3.10 | 7.5 | 335.6 | 1.4 | 113.3 |
| 1490.0 | 1489.53 | 6.78 | -2.84 | 7.4 | 337.3 | 1.6 | 88.6 |
| 1500.0 | 1499.53 | 6.83 | -2.58 | 7.3 | 339.3 | 1.6 | 60.2 |
| 1510.0 | 1509.52 | 7.05 | -2.38 | 7.4 | 341.3 | 1.6 | 36.5 |
| 1520.0 | 1519.52 | 7.30 | -2.24 | 7.6 | 343.0 | 1.7 | 27.0 |
| 1530.0 | 1529.51 | 7.57 | -2.12 | 7.9 | 344.3 | 1.7 | 17.6 |
| 1540.0 | 1539.51 | 7.85 | -2.02 | 8.1 | 345.6 | 1.7 | 24.1 |
| 1550.0 | 1549.51 | 8.13 | -1.92 | 8.3 | 346.7 | 1.7 | 21.2 |
| 1560.0 | 1559.50 | 8.41 | -1.85 | 8.6 | 347.6 | 1.5 | 350.7 |
| 1570.0 | 1569.50 | 8.66 | -1.88 | 8.9 | 347.8 | 1.0 | 187.1 |
| 1580.0 | 1579.49 | 8.61 | -1.66 | 8.8 | 349.1 | 1.8 | 69.2 |
| 1581.2 | 1580.69 | 8.62 | -1.63 | 8.8 | 349.3 | 1.9 | 66.2 |

Well: U38I

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 10.4' | 24" | 4.72 | | X | 4/2/2007 | |
| Surface | 22" | 10.4' | 24" | 4.72 | | X | 4/2/2007 | |
| Water Protection | 13 3/8" | 339.35' | 15 3/8" | 211.5 | X | | 4/3/2007 | Bskt @ 85' |
| Coal Protection | 13 3/8" | 339.35' | 15 3/8" | 211.5 | X | | 4/3/2007 | Bskt @ 85' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** CNX **HOLE #: U-38I**

**LOCATION:** OSBORNE MTN **DRILL RIG #: 87**

**DATE STARTED: 03-30-07** **DATED COMPLETED: 04-05-07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | THICKNESS | | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 10 | 10 | |
| 10 | 35 | 25 | SAND STONE/SANDY SHALE |
| 35 | 64 | 29 | SANDY SHALE/SAND STONE |
| 64 | 93 | 29 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 93 | 124 | 31 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 124 | 155 | 31 | SAND STONE |
| 155 | 187 | 32 | SAND STONE |
| 187 | 219 | 32 | SAND STONE/SANDY SHALE |
| 219 | 250 | 31 | SANDY SHALE/SAND STONE |
| 250 | 282 | 32 | SAND STONE/SANDY SHALE/SAND STONE |
| 282 | 313 | 31 | SAND STONE/SANDY SHALE |
| 313 | 343 | 30 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 343 | 370 | 27 | SANDY SHALE |
| 370 | 408 | 38 | SANDY SHALE |
| 408 | 440 | 32 | SAND STONE/SANDY SHALE |
| 440 | 472 | 32 | SANDY SHALE |
| 472 | 503 | 31 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 503 | 535 | 32 | SANDY SHALE/SAND STONE |
| 535 | 567 | 32 | SAND STONE/COAL/SANDY SHALE |
| 567 | 598 | 31 | SANDY SHALE/SAND STONE |
| 598 | 630 | 32 | SAND STONE/COAL/SANDY SHALE |
| 630 | 661 | 31 | SANDY SHALE/COAL/SANDY SHALE |
| 661 | 725 | 64 | SANDY SHALE |
| 725 | 756 | 31 | SAND STONE/COAL/SAND STONE |
| 756 | 788 | 32 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 788 | 820 | 32 | SANDY SHALE/COAL/SAND STONE |
| 820 | 851 | 31 | SAND STONE/COAL/SANDY SHALE |
| 851 | 883 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 883 | 915 | 32 | SANDY SHALE |
| 915 | 946 | 31 | SANDY SHALE/SAND STONE |
| 946 | 978 | 32 | SAND STONE/COAL/SANDY SHALE |
| 978 | 1010 | 32 | SANDY SHALE/COAL/SAND STONE |
| 1010 | 1041 | 31 | SAND STONE/COAL/SANDY SHALE |
| 1041 | 1073 | 32 | SAND STONE/SANDY SHALE/POSS COAL |
| 1073 | 1105 | 32 | SANDY SHALE/COAL/SAND STONE/SANDY SHALE |
| 1105 | 1137 | 32 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1137 | 1168 | 31 | SANDY SHALE/COAL/SANDY SHALE/COAL |
| 1168 | 1200 | 32 | COAL/SANDY SHALE/SAND STONE STR |
| 1200 | 1232 | 32 | COAL/SANDY SHALE/SAND STONE |

| | | | |
|---|---|---|---|
| 1232 | 1263 | 31 | SAND STONE/SANDY SHALE STR |
| 1263 | 1295 | 32 | SAND STONE/SANDY SHALE/SAND STONE |
| 1295 | 1358 | 63 | SANDY SHALE |
| 1358 | 1389 | 31 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 1389 | 1421 | 32 | SANDY SHALE/SAND STONE |
| 1421 | 1453 | 32 | SAND STONE/SANDY SHALE/SAND STONE |
| 1453 | 1484 | 31 | SAND STONE/SANDY SHALE/COAL/SANDY SHALE/SAND STONE |
| 1484 | 1516 | 32 | SAND STONE/SANDY SHALE |
| 1516 | 1579 | 63 | SANDY SHALE |

1579.00 FT. TOTAL DEPTH
10.40 FT. OF 22" CASING
339.35 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 966 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3402 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 3/28/2007 |
| **Driller's Total Depth:** | 1650.00 | **Log's Total Depth:** | 1646.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 1/12/2008 | *(Company)* |
| By: | Leslie K Arrington | Title: | Manager | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 1/12/2008 | | |
| Status: | | Date: | 1/14/2008 |
| Final PDF Date: | 2/28/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 867 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3402 |
| **Operations Name:** | CBM U38J W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 3/21/2007
Drilling Contractor: Noah Horn
Date drilling completed: 3/28/2007
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,650
Log Total Depth (feet): 1,646
Coal Seam At Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,014,578
Final Plat State Plane X: 1,014,573
Permitted State Plane Y: 327,995
Final Plat State Plane Y: 327,990
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | U38J Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | U38J ExhibitA.pdf |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Show Gas | U38J Gas Show.xls |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper,Gamma,Density,Temp,Deviation

Did logs disclose vertical locations of a coal seam? ☐ Yes ☑ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | U38J Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | U38J Casing.xls |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

**8. Drillers Log**

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | U38J Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 11/27/2007 *(Company)*

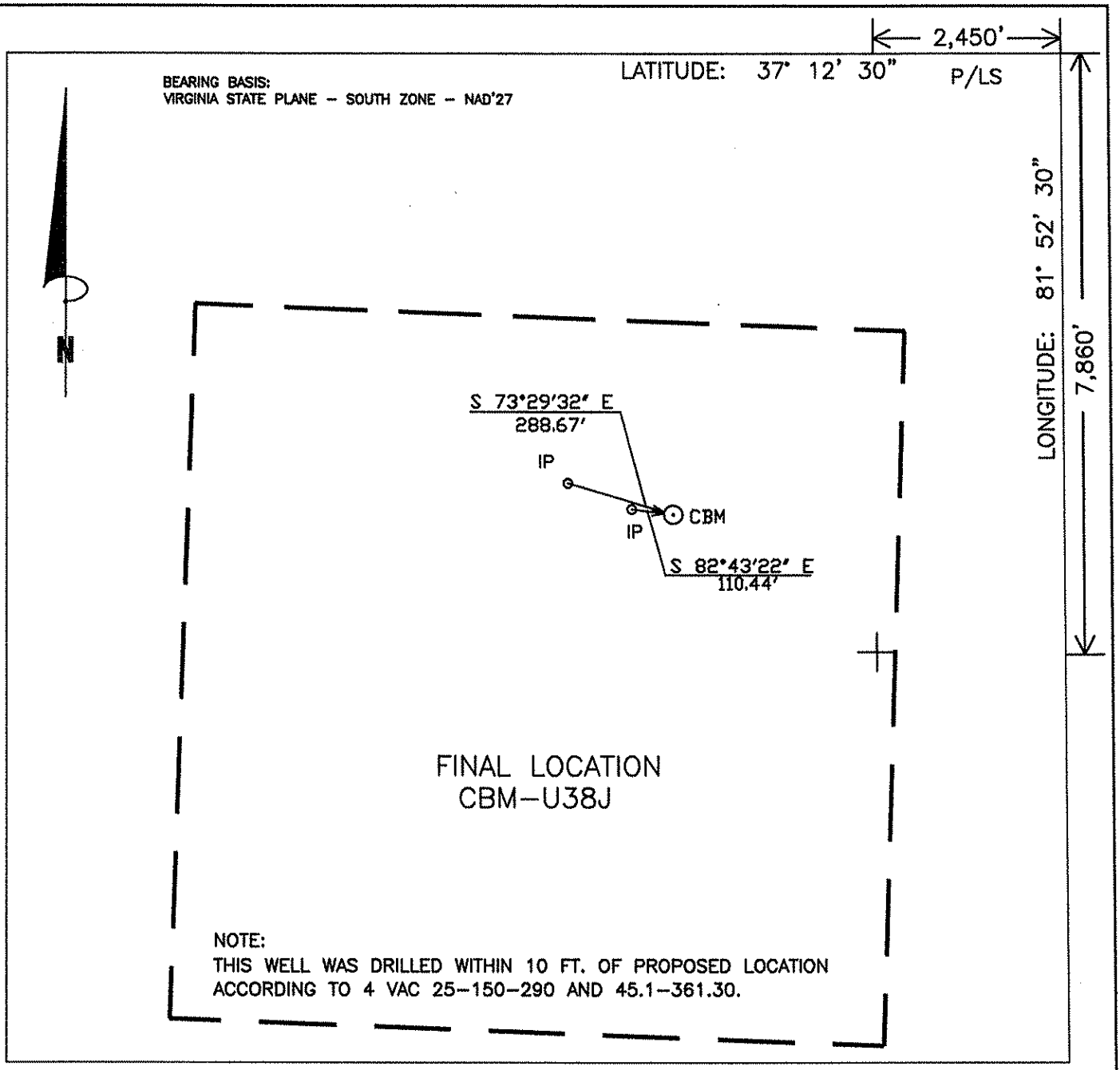
Signed By: Leslie K. Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 11/27/2007

Status: Inspr Approved Date: 11/30/2007

Final PDF Date: 11/30/2007




# WELL LOCATION PLAT

U38JFNL
2N25/49–536/74

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–U38J

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 327,990.42 E 1,014,573.06

ELEVATION: 2133.98' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 3–23–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

D R Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No.
8540
3/23/07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM U38J
SURFACE ELEV: 2133.98 EASTING: 1014573.06 NORTHING: 327990.42

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| JB1 | 114.00 | 116.90 | 2019.98 | 2.90 | |
| | 116.90 | 152.20 | 2017.08 | 35.30 | |
| JB3 | 152.20 | 153.80 | 1981.78 | 1.60 | |
| | 153.80 | 254.40 | 1980.18 | 100.60 | |
| TI | 254.40 | 259.20 | 1879.58 | 4.80 | |
| | 259.20 | 375.00 | 1874.78 | 115.80 | |
| *US1 | 375.00 | 376.80 | 1758.98 | 1.80 | |
| | 376.80 | 482.30 | 1757.18 | 105.50 | |
| *US2 | 482.30 | 485.30 | 1651.68 | 3.00 | |
| | 485.30 | 664.30 | 1648.68 | 179.00 | |
| *SE1 | 664.30 | 665.80 | 1469.68 | 1.50 | |
| | 665.80 | 698.90 | 1468.18 | 33.10 | |
| *SE2 | 698.90 | 701.40 | 1435.08 | 2.50 | |
| | 701.40 | 742.20 | 1432.58 | 40.80 | |
| *LS1 | 742.20 | 746.00 | 1391.78 | 3.80 | |
| | 746.00 | 756.80 | 1387.98 | 10.80 | |
| *LS2 | 756.80 | 757.60 | 1377.18 | 0.80 | |
| | 757.60 | 801.50 | 1376.38 | 43.90 | |
| *UH1 | 801.50 | 803.20 | 1332.48 | 1.70 | |
| | 803.20 | 853.80 | 1330.78 | 50.60 | |
| *UH2 | 853.80 | 856.20 | 1280.18 | 2.40 | |
| | 856.20 | 912.80 | 1277.78 | 56.60 | |
| *MH1 | 912.80 | 915.10 | 1221.18 | 2.30 | |
| | 915.10 | 977.50 | 1218.88 | 62.40 | |
| *MH2 | 977.50 | 978.90 | 1156.48 | 1.40 | |
| | 978.90 | 1023.20 | 1155.08 | 44.30 | |
| *P11 | 1023.20 | 1026.40 | 1110.78 | 3.20 | |
| | 1026.40 | 1048.00 | 1107.58 | 21.60 | |
| *P10 | 1048.00 | 1049.70 | 1085.98 | 1.70 | |
| | 1049.70 | 1113.00 | 1084.28 | 63.30 | |
| *LH2 | 1113.00 | 1115.10 | 1020.98 | 2.10 | |
| | 1115.10 | 1186.60 | 1018.88 | 71.50 | |
| *P91 | 1186.60 | 1188.10 | 947.38 | 1.50 | |
| | 1188.10 | 1227.60 | 945.88 | 39.50 | |
| *P82 | 1227.60 | 1229.10 | 906.38 | 1.50 | |
| | 1229.10 | 1234.00 | 904.88 | 4.90 | |
| *COAL | 1234.00 | 1235.40 | 899.98 | 1.40 | |
| | 1235.40 | 1265.00 | 898.58 | 29.60 | |
| *P71 | 1265.00 | 1265.90 | 868.98 | 0.90 | |
| | 1265.90 | 1437.30 | 868.08 | 171.40 | |
| *P61 | 1437.30 | 1438.10 | 696.68 | 0.80 | |
| | 1438.10 | 1470.20 | 695.88 | 32.10 | |
| *P62 | 1470.20 | 1471.00 | 663.78 | 0.80 | |
| | 1471.00 | 1488.70 | 662.98 | 17.70 | |
| *P51 | 1488.70 | 1489.70 | 645.28 | 1.00 | |
| | 1489.70 | 1587.10 | 644.28 | 97.40 | |
| *P42 | 1587.10 | 1587.70 | 546.88 | 0.60 | |

| | | | |
|---|---|---|---|
| 1587.70 | 1646.17 | 546.28 | 58.47 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U38J.CMP
DATE: 06/06/07

Well: U38J

## Oil & Gas Show

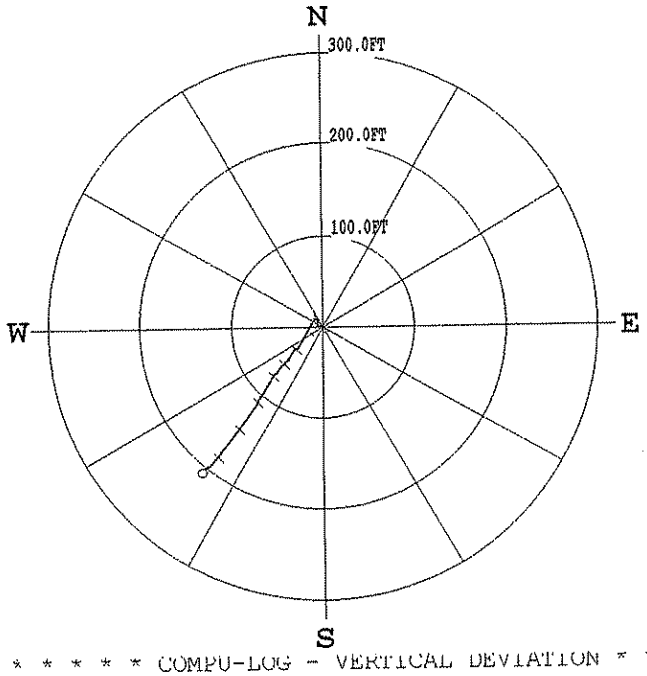
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 375 | 1229 | 854 | | | |
| Pocahontas | 1234 | 1489 | 255 | | | |
| Total IPF | | | | Not Taken | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: CNX GAS
LOCATION: Laurel
HOLE ID: 07-CNX-U-38-J
DATE OF LOG: 03/28/07
PROBE: 9136CA 956

MAG DECL: -6.9

SCALE: 100 FT/IN
TRUE DEPTH: 1618.13 FT
AZIMUTH: 219.8
DISTANCE: 207.0 FT
+ = 150 FT INCR
O = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX GAS
FIELD OFFICE : M.Sammons
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 07-CNX-U-38-J
DATE OF LOG : 03/28/07
PROBE : 9136CA , 956
DEPTH UNITS : FEET
LOG: 07-CNX-U-38-J_03-28-07_15-59_9136CA_.02_-9.17_1643.14_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | -0.11 | -0.97 | 1.0 | 263.6 | 1.7 | 268.6 |
| 60.0 | 59.99 | -0.11 | -1.26 | 1.3 | 264.9 | 1.8 | 269.2 |
| 70.0 | 69.99 | -0.23 | -1.48 | 1.5 | 261.3 | 1.2 | 200.3 |
| 80.0 | 79.98 | -0.39 | -1.62 | 1.7 | 256.5 | 1.5 | 242.4 |
| 90.0 | 89.98 | -0.47 | -1.88 | 1.9 | 255.9 | 1.7 | 266.6 |
| 100.0 | 99.97 | -0.45 | -2.20 | 2.2 | 258.4 | 2.0 | 280.4 |
| 110.0 | 109.97 | -0.37 | -2.55 | 2.6 | 261.6 | 1.9 | 280.0 |
| 120.0 | 119.96 | -0.31 | -2.89 | 2.9 | 263.8 | 2.0 | 275.1 |
| 130.0 | 129.96 | -0.32 | -3.21 | 3.2 | 264.3 | 1.8 | 265.4 |
| 140.0 | 139.95 | -0.38 | -3.50 | 3.5 | 263.8 | 1.6 | 252.2 |
| 150.0 | 149.95 | -0.41 | -3.81 | 3.8 | 263.9 | 2.0 | 273.2 |
| 160.0 | 159.94 | -0.24 | -4.17 | 4.2 | 266.6 | 2.5 | 306.6 |
| 170.0 | 169.93 | 0.01 | -4.50 | 4.5 | 270.1 | 2.4 | 309.7 |
| 180.0 | 179.92 | 0.25 | -4.84 | 4.8 | 272.9 | 2.4 | 301.4 |
| 190.0 | 189.91 | 0.54 | -5.16 | 5.2 | 276.0 | 2.5 | 325.6 |
| 200.0 | 199.90 | 0.89 | -5.41 | 5.5 | 279.3 | 2.4 | 321.8 |
| 210.0 | 209.89 | 1.23 | -5.67 | 5.8 | 282.3 | 2.6 | 325.9 |
| 220.0 | 219.88 | 1.64 | -5.83 | 6.1 | 285.7 | 2.2 | 341.7 |
| 230.0 | 229.88 | 2.03 | -5.90 | 6.2 | 289.0 | 2.3 | 357.1 |
| 240.0 | 239.87 | 2.43 | -5.95 | 6.4 | 292.2 | 2.3 | 345.8 |
| 250.0 | 249.86 | 2.83 | -6.06 | 6.7 | 295.1 | 2.4 | 354.2 |
| 260.0 | 259.85 | 3.24 | -6.05 | 6.9 | 298.1 | 2.0 | 11.6 |
| 270.0 | 269.85 | 3.59 | -5.98 | 7.0 | 301.0 | 2.2 | 5.2 |
| 280.0 | 279.84 | 3.97 | -5.95 | 7.2 | 303.7 | 2.1 | 3.8 |
| 290.0 | 289.83 | 4.35 | -5.92 | 7.3 | 306.3 | 2.4 | 4.4 |
| 300.0 | 299.82 | 4.72 | -5.88 | 7.5 | 308.8 | 2.3 | 1.9 |
| 310.0 | 309.82 | 5.12 | -5.86 | 7.8 | 311.2 | 2.1 | 10.7 |
| 320.0 | 319.81 | 5.40 | -5.74 | 7.9 | 313.3 | 2.0 | 17.2 |
| 330.0 | 329.80 | 5.73 | -5.66 | 8.1 | 315.4 | 2.0 | 15.5 |
| 340.0 | 339.80 | 6.03 | -5.55 | 8.2 | 317.4 | 1.6 | 32.1 |
| 350.0 | 349.80 | 6.24 | -5.44 | 8.3 | 318.9 | 0.9 | 39.2 |
| 360.0 | 359.80 | 6.33 | -5.34 | 8.3 | 319.9 | 2.0 | 49.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 350.0 | 349.80 | 6.24 | -5.44 | 8.3 | 320.3 | 2.0 | 49.5 |
| 360.0 | 359.80 | 6.33 | -5.34 | 8.3 | 319.9 | 2.0 | 49.5 |
| 370.0 | 369.79 | 6.57 | -5.10 | 8.3 | 322.2 | 2.1 | 44.3 |
| 380.0 | 379.78 | 6.82 | -4.84 | 8.4 | 324.6 | 1.7 | 46.2 |
| 390.0 | 389.78 | 7.02 | -4.60 | 8.4 | 326.8 | 1.8 | 52.1 |
| 400.0 | 399.77 | 7.18 | -4.33 | 8.4 | 328.9 | 1.9 | 55.0 |
| 410.0 | 409.77 | 7.33 | -4.07 | 8.4 | 331.0 | 1.9 | 64.6 |
| 420.0 | 419.76 | 7.46 | -3.81 | 8.4 | 332.9 | 1.8 | 171.2 |
| 430.0 | 429.76 | 7.44 | -4.14 | 8.5 | 330.9 | 3.2 | 312.1 |
| 440.0 | 439.74 | 7.78 | -4.67 | 9.1 | 329.0 | 3.7 | 314.0 |
| 450.0 | 449.72 | 7.99 | -5.25 | 9.6 | 326.7 | 3.2 | 289.6 |
| 460.0 | 459.70 | 8.15 | -5.78 | 10.0 | 324.7 | 3.4 | 288.6 |
| 470.0 | 469.68 | 8.27 | -6.38 | 10.4 | 322.4 | 3.7 | 268.5 |
| 480.0 | 479.66 | 8.23 | -7.04 | 10.8 | 319.5 | 4.0 | 283.8 |
| 490.0 | 489.63 | 7.97 | -7.70 | 11.1 | 316.0 | 5.0 | 248.0 |
| 500.0 | 499.60 | 7.55 | -8.39 | 11.3 | 312.0 | 4.8 | 232.1 |
| 510.0 | 509.56 | 6.96 | -9.10 | 11.5 | 307.4 | 5.9 | 225.2 |
| 520.0 | 519.50 | 6.19 | -9.83 | 11.6 | 302.2 | 6.3 | 222.3 |
| 530.0 | 529.43 | 5.26 | -10.57 | 11.8 | 296.5 | 6.8 | 217.8 |
| 540.0 | 539.35 | 4.18 | -11.27 | 12.0 | 290.4 | 7.7 | 206.9 |
| 550.0 | 549.24 | 2.99 | -12.08 | 12.4 | 283.9 | 8.7 | 216.8 |
| 560.0 | 559.11 | 1.65 | -12.94 | 13.0 | 277.3 | 9.6 | 208.1 |
| 570.0 | 568.98 | 0.18 | -13.66 | 13.7 | 270.8 | 9.4 | 209.8 |
| 580.0 | 578.84 | -1.20 | -14.55 | 14.6 | 265.3 | 9.6 | 214.4 |
| 590.0 | 588.70 | -2.63 | -15.43 | 15.7 | 260.3 | 9.7 | 206.6 |
| 600.0 | 598.56 | -4.10 | -16.26 | 16.8 | 255.8 | 9.8 | 204.8 |
| 610.0 | 608.41 | -5.55 | -17.15 | 18.0 | 252.1 | 9.7 | 213.9 |
| 620.0 | 618.26 | -7.01 | -18.04 | 19.4 | 248.8 | 10.0 | 214.2 |
| 630.0 | 628.11 | -8.45 | -18.99 | 20.8 | 246.0 | 9.9 | 218.5 |
| 640.0 | 637.96 | -9.97 | -19.77 | 22.1 | 243.2 | 9.7 | 206.1 |
| 650.0 | 647.82 | -11.42 | -20.67 | 23.6 | 241.1 | 10.0 | 209.3 |
| 660.0 | 657.66 | -12.96 | -21.49 | 25.1 | 238.9 | 10.1 | 209.1 |
| 670.0 | 667.51 | -14.41 | -22.39 | 26.6 | 237.2 | 10.1 | 203.4 |
| 680.0 | 677.36 | -15.94 | -23.25 | 28.2 | 235.6 | 10.3 | 205.7 |
| 690.0 | 687.20 | -17.49 | -24.12 | 29.8 | 234.0 | 10.3 | 207.2 |
| 700.0 | 697.03 | -19.00 | -25.07 | 31.5 | 232.8 | 10.3 | 206.5 |
| 710.0 | 706.88 | -20.55 | -25.94 | 33.1 | 231.6 | 10.3 | 211.2 |
| 720.0 | 716.71 | -22.13 | -26.85 | 34.8 | 230.5 | 10.4 | 211.3 |
| 730.0 | 726.54 | -23.71 | -27.74 | 36.5 | 229.5 | 10.5 | 208.3 |
| 740.0 | 736.37 | -24.75 | -28.70 | 37.9 | 229.2 | 10.6 | 327.5 |
| 750.0 | 746.23 | -23.86 | -29.48 | 37.9 | 231.0 | 6.7 | 229.1 |
| 760.0 | 756.17 | -23.53 | -30.32 | 38.4 | 232.2 | 6.7 | 185.2 |
| 770.0 | 766.10 | -23.54 | -30.93 | 38.9 | 232.7 | 6.8 | 311.3 |
| 780.0 | 775.95 | -24.77 | -31.82 | 40.3 | 232.1 | 10.9 | 208.4 |
| 790.0 | 785.77 | -26.43 | -32.70 | 42.0 | 231.1 | 10.8 | 207.9 |
| 800.0 | 795.59 | -28.06 | -33.61 | 43.8 | 230.1 | 10.8 | 208.6 |
| 810.0 | 805.02 | -29.13 | -34.55 | 45.2 | 229.9 | 11.0 | 204.0 |
| 820.0 | 814.84 | -30.71 | -35.37 | 46.8 | 229.0 | 11.0 | 204.7 |
| 830.0 | 824.65 | -32.32 | -36.13 | 48.5 | 228.2 | 11.1 | 207.8 |
| 840.0 | 834.46 | -34.06 | -36.94 | 50.2 | 227.3 | 11.1 | 208.1 |
| 850.0 | 844.27 | -35.69 | -37.82 | 52.0 | 226.7 | 11.2 | 331.6 |
| 860.0 | 854.10 | -34.55 | -38.58 | 51.8 | 228.2 | 7.7 | 225.3 |
| 870.0 | 864.01 | -35.74 | -39.09 | 53.0 | 227.6 | 7.5 | 191.6 |
| 880.0 | 873.90 | -36.87 | -40.01 | 54.4 | 227.3 | 8.7 | 224.8 |
| 890.0 | 883.79 | -37.75 | -41.22 | 55.9 | 227.5 | 8.6 | 241.3 |
| 900.0 | 893.69 | -38.74 | -42.16 | 57.3 | 227.4 | 8.1 | 231.3 |
| 910.0 | 903.59 | -39.67 | -43.19 | 58.6 | 227.4 | 7.7 | 221.9 |
| 920.0 | 913.36 | -40.58 | -44.23 | 60.0 | 227.5 | 7.7 | 226.3 |
| 930.0 | 923.27 | -41.48 | -45.25 | 61.4 | 227.5 | 7.6 | 223.3 |
| 940.0 | 933.18 | -42.39 | -46.06 | 62.6 | 227.4 | 7.4 | 215.6 |
| 950.0 | 943.10 | -43.41 | -46.78 | 63.8 | 227.1 | 7.4 | 216.4 |
| 960.0 | 953.01 | -44.45 | -47.56 | 65.1 | 226.9 | 7.5 | 217.8 |
| 970.0 | 962.93 | -45.47 | -48.34 | 66.4 | 226.8 | 7.5 | 218.2 |
| 980.0 | 972.84 | -46.46 | -49.03 | 67.6 | 226.5 | 7.7 | 217.3 |
| 990.0 | 982.75 | -47.41 | -49.76 | 68.7 | 226.4 | 7.7 | 216.4 |
| 1000.0 | 992.66 | -48.49 | -50.53 | 70.0 | 226.2 | 7.6 | 216.3 |
| 1010.0 | 1002.57 | -49.56 | -51.33 | 71.4 | 226.0 | 7.8 | 218.4 |
| 1020.0 | 1012.48 | -50.30 | -52.30 | 72.6 | 226.1 | 7.8 | 304.3 |
| 1030.0 | 1022.40 | -50.36 | -53.22 | 73.3 | 226.6 | 7.8 | 187.2 |
| 1040.0 | 1032.30 | -51.75 | -53.28 | 74.3 | 225.8 | 8.1 | 183.9 |
| 1050.0 | 1042.20 | -51.37 | -54.18 | 74.7 | 226.5 | 10.0 | 245.9 |
| 1060.0 | 1051.98 | -53.15 | -55.20 | 76.6 | 226.1 | 12.1 | 208.1 |
| 1070.0 | 1061.76 | -55.00 | -56.21 | 78.6 | 225.6 | 12.3 | 212.7 |
| 1080.0 | 1071.52 | -56.87 | -57.26 | 80.7 | 225.2 | 12.4 | 208.4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1090.0 | 1081.29 | -58.75 | -58.31 | 82.8 | 224.6 | 12.5 | 209.6 |
| 1100.0 | 1091.05 | -60.63 | -59.37 | 84.9 | 224.4 | 12.5 | 211.5 |
| 1110.0 | 1100.81 | -62.47 | -60.52 | 87.0 | 224.1 | 12.4 | 210.6 |
| 1120.0 | 1110.57 | -64.35 | -61.58 | 89.1 | 223.7 | 12.7 | 212.8 |
| 1130.0 | 1120.32 | -66.25 | -62.73 | 91.2 | 223.4 | 12.8 | 205.9 |
| 1140.0 | 1130.07 | -68.10 | -63.92 | 93.4 | 223.2 | 13.6 | 205.6 |
| 1150.0 | 1139.82 | -70.05 | -64.98 | 95.6 | 222.8 | 12.9 | 212.7 |
| 1160.0 | 1149.56 | -71.94 | -66.19 | 97.8 | 222.6 | 13.0 | 211.4 |
| 1170.0 | 1159.31 | -73.78 | -67.32 | 99.9 | 222.4 | 12.6 | 213.6 |
| 1180.0 | 1169.06 | -75.66 | -68.50 | 102.1 | 222.2 | 12.9 | 211.2 |
| 1190.0 | 1178.63 | -76.99 | -69.76 | 103.9 | 222.2 | 12.8 | 207.5 |
| 1200.0 | 1188.38 | -78.84 | -70.93 | 106.1 | 222.0 | 12.9 | 213.6 |
| 1210.0 | 1198.13 | -80.72 | -72.11 | 108.2 | 221.8 | 12.8 | 216.0 |
| 1220.0 | 1207.51 | -83.13 | -72.80 | 110.5 | 221.2 | 12.8 | 211.9 |
| 1230.0 | 1217.26 | -84.94 | -74.06 | 112.7 | 221.1 | 12.9 | 213.4 |
| 1240.0 | 1227.00 | -86.82 | -75.28 | 114.9 | 220.9 | 13.1 | 214.9 |
| 1250.0 | 1236.74 | -88.72 | -76.51 | 117.2 | 220.8 | 13.0 | 212.8 |
| 1260.0 | 1246.48 | -90.59 | -77.78 | 119.4 | 220.7 | 13.1 | 215.9 |
| 1270.0 | 1256.22 | -92.49 | -79.01 | 121.6 | 220.5 | 13.1 | 216.4 |
| 1280.0 | 1265.96 | -94.39 | -80.30 | 123.9 | 220.4 | 13.3 | 214.9 |
| 1290.0 | 1275.69 | -96.29 | -81.60 | 126.2 | 220.3 | 13.4 | 214.4 |
| 1300.0 | 1285.41 | -98.21 | -82.91 | 128.5 | 220.2 | 13.5 | 214.0 |
| 1310.0 | 1295.13 | -100.13 | -84.25 | 130.9 | 220.1 | 13.6 | 213.3 |
| 1320.0 | 1304.85 | -102.04 | -85.63 | 133.2 | 220.0 | 13.9 | 215.5 |
| 1330.0 | 1314.57 | -104.01 | -86.97 | 135.6 | 219.9 | 13.8 | 213.3 |
| 1340.0 | 1324.28 | -105.94 | -88.37 | 138.0 | 219.8 | 13.8 | 216.7 |
| 1350.0 | 1333.98 | -107.89 | -89.79 | 140.4 | 219.8 | 14.1 | 214.4 |
| 1360.0 | 1343.68 | -109.88 | -91.17 | 142.8 | 219.7 | 14.1 | 215.0 |
| 1370.0 | 1353.38 | -111.84 | -92.61 | 145.2 | 219.6 | 14.1 | 215.7 |
| 1380.0 | 1363.08 | -113.80 | -94.08 | 147.7 | 219.6 | 14.1 | 217.5 |
| 1390.0 | 1372.77 | -115.75 | -95.58 | 150.1 | 219.5 | 14.4 | 219.5 |
| 1400.0 | 1382.46 | -117.75 | -97.00 | 152.6 | 219.5 | 14.1 | 218.4 |
| 1410.0 | 1392.16 | -119.70 | -98.47 | 155.0 | 219.4 | 14.1 | 214.4 |
| 1420.0 | 1401.86 | -121.65 | -99.94 | 157.4 | 219.4 | 14.2 | 217.5 |
| 1430.0 | 1411.55 | -123.59 | -101.44 | 159.9 | 219.4 | 14.2 | 219.4 |
| 1440.0 | 1421.24 | -125.54 | -102.94 | 162.4 | 219.4 | 14.3 | 214.2 |
| 1450.0 | 1430.93 | -127.51 | -104.45 | 164.8 | 219.3 | 14.5 | 217.6 |
| 1460.0 | 1440.62 | -129.49 | -105.98 | 167.3 | 219.3 | 14.4 | 218.2 |
| 1470.0 | 1450.30 | -131.44 | -107.53 | 169.8 | 219.3 | 14.5 | 216.7 |
| 1480.0 | 1459.98 | -133.44 | -109.05 | 172.3 | 219.3 | 14.6 | 219.1 |
| 1490.0 | 1469.66 | -135.33 | -110.71 | 174.8 | 219.3 | 14.5 | 217.7 |
| 1500.0 | 1479.33 | -137.28 | -112.31 | 177.4 | 219.3 | 14.8 | 214.1 |
| 1510.0 | 1489.00 | -139.33 | -113.81 | 179.9 | 219.2 | 14.8 | 218.9 |
| 1520.0 | 1498.67 | -141.32 | -115.42 | 182.5 | 219.2 | 14.8 | 218.7 |
| 1530.0 | 1508.33 | -143.29 | -117.07 | 185.0 | 219.2 | 14.8 | 221.7 |
| 1540.0 | 1517.99 | -145.27 | -118.72 | 187.6 | 219.3 | 15.1 | 215.9 |
| 1550.0 | 1527.65 | -147.31 | -120.34 | 190.2 | 219.2 | 15.1 | 219.0 |
| 1560.0 | 1537.30 | -149.32 | -122.00 | 192.8 | 219.3 | 15.2 | 216.7 |
| 1570.0 | 1546.95 | -151.33 | -123.67 | 195.4 | 219.3 | 15.3 | 222.6 |
| 1580.0 | 1556.60 | -153.29 | -125.45 | 198.1 | 219.3 | 15.4 | 216.2 |
| 1590.0 | 1566.24 | -151.78 | -126.11 | 197.3 | 219.7 | 11.3 | 256.9 |
| 1600.0 | 1576.05 | -153.22 | -127.36 | 199.2 | 219.7 | 11.2 | 225.0 |
| 1610.0 | 1585.67 | -154.32 | -128.95 | 201.1 | 219.9 | 11.4 | 227.9 |
| 1620.0 | 1595.47 | -155.73 | -130.17 | 203.0 | 219.9 | 11.8 | 216.4 |
| 1630.0 | 1605.27 | -157.23 | -131.36 | 204.9 | 219.9 | 11.5 | 219.1 |
| 1640.0 | 1615.07 | -158.74 | -132.53 | 206.8 | 219.9 | 11.7 | 221.0 |
| 1643.1 | 1618.15 | -159.06 | -132.51 | 207.0 | 219.8 | 0.0 | 0.0 |

Well: U38J

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 16' | 24" | 5.9 | | X | 3/21/2007 | |
| Surface | 22" | 16' | 24" | 5.9 | | X | 3/21/2007 | |
| Water Protection | 13 3/8" | 342.55' | 15 3/8" | 156 | X | | 3/23/2007 | Bskt @ 85' |
| Coal Protection | 13 3/8" | 342.55' | 15 3/8" | 156 | X | | 3/23/2007 | Bskt @ 85' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** CNX **HOLE #: U-38J**

**LOCATION:** OSBORNE MTN **DRILL RIG #: 87**

**DATE STARTED: 03-21-07** **DATED COMPLETED: 03-28-07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | | THICKNESS | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 16 | 16 | |
| 16 | 35 | 19 | SANDY SHALE |
| 35 | 50 | 15 | SANDY SHALE/COAL/SANDY SHALE |
| 50 | 64 | 14 | SANDY SHALE/SAND STONE |
| 64 | 93 | 29 | SAND STONE/SANDY SHALE |
| 93 | 122 | 29 | SAND STONE/SANDY SHALE/COAL |
| 122 | 155 | 33 | SANDY SHALE/SAND STONE |
| 155 | 187 | 32 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 187 | 250 | 63 | SAND STONE |
| 250 | 281 | 31 | SAND STONE/SANDY SHALE /COAL /SANDY SHALE/SAND STONE |
| 281 | 345 | 64 | SAND STONE |
| 345 | 376 | 31 | |
| 376 | 398 | 22 | SANDY SHALE/SAND STONE |
| 398 | 430 | 32 | SAND STONE/SANDY SHALE |
| 430 | 462 | 32 | |
| 462 | 495 | 33 | SAND STONE/SANDY SHALE/COAL/SAND STONE |
| 495 | 558 | 63 | SAND STONE/SANDY SHALE/SAND STONE |
| 558 | 564 | 6 | |
| 564 | 595 | 31 | SANDY SHALE |
| 595 | 659 | 64 | SANDY SHALE |
| 659 | 690 | 31 | SANDY SHALE/SAND STONE |
| 690 | 722 | 32 | SAND STONE/SANDY SHALE/SAND STONE |
| 722 | 754 | 32 | SAND STONE/COAL/SANDY SHALE |
| 754 | 785 | 31 | SANDY SHALE |
| 785 | 817 | 32 | SANDY SHALE/SAND STONE /SANDY SHALE/COAL/SANDY SHALE |
| 817 | 848 | 31 | SANDY SHALE/COAL/SAND STONE |
| 848 | 880 | 32 | SAND STONE/SANDY SHALE/COAL |
| 880 | 912 | 32 | SAND STONE/SANDY SHALE |
| 912 | 943 | 31 | SANDY SHALE/COAL/SAND STONE STR/SANDY SHALE |
| 943 | 975 | 32 | SANDY SHALE |
| 975 | 1007 | 32 | SANDY SHALE/SAND STONE |
| 1007 | 1038 | 31 | SANDY SHALE/COAL/SAND STONE |
| 1038 | 1070 | 32 | SAND STONE/COAL/SANDY SHALE |
| 1070 | 1102 | 32 | SANDY SHALE |
| 1102 | 1133 | 31 | SAND STONE/COAL/SAND STONE |
| 1133 | 1197 | 64 | SHALE/COAL |
| 1197 | 1229 | 32 | SANDY SHALE/COAL |

| | | | |
|---|---|---|---|
| 1229 | 1261 | 32 | SAND STONE/COAL/SAND STONE |
| 1261 | 1356 | 95 | SAND STONE |
| 1356 | 1387 | 31 | SAND STONE |
| 1387 | 1419 | 32 | SAND STONE/COAL/SANDY SHALE |
| 1419 | 1440 | 21 | SANDY SHALE |
| 1440 | 1504 | 64 | SANDY SHALE/SAND STONE |
| 1504 | 1535 | 31 | SAND STONE/SANDY SHALE/SAND STONE |
| 1535 | 1567 | 32 | SAND STONE |
| 1567 | 1598 | 31 | SAND STONE/SANDY SHALE/COAL/SANDY SHALE |
| 1598 | 1630 | 32 | SAND STONE |
| 1630 | 1650 | 20 | SAND STONE/SANDY SHALE/SAND STONE |

1650.00 FT. TOTAL DEPTH
16.00 FT. OF 22" CASING
342.55 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

**Tracking Number:** 762
**Company:** CNX Gas Company LLC
**File Number:** BU-3403
**Operations Name:** CBM U38K W/PL
**Operation Type:** Coalbed/Pipeline
**Completion Report Type:** Original

# COMPLETION REPORT (DGO-GO-15)

**Well Type:** Coalbed/Pipeline **Date Well Completed:** 6/11/2007
**Driller's Total Depth:** 1,521 **Log's Total Depth:** 1,522

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

☐ Stimulated ☐ Not Stimulated ☑ Gob

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 11/3/2007 11:37:13 AM *(Company)*

By: Leslie K Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 11/3/2007

Status: Inspr Approved Date: 11/7/2007

Final PDF Date: 11/13/2007

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 703 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3403 |
| **Operations Name:** | CBM U38K W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 6/5/2007
Drilling Contractor: Noah Horn
Date drilling completed: 6/11/2007
Rig Type: ☑ Rotary ☐ Cable Tool
Driller's Total Depth (feet): 1,521
Log Total Depth (feet): 1,522
Coal Seam At Total Depth PARDEE

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X 1,014,565
Final Plat State Plane X: 1,014,565
Permitted State Plane Y: 328,374
Final Plat State Plane Y: 328,366
☐ Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | U38K Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|
| 120 | 35-50 | GPM |

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | U38K Exhibit A.pdf |

*Gas and Oil Shows*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | U38K Gas Show.xls |

**4. Electric Logs** *(As required by 4VAC25-150-280.A.)*

List all logs run: Caliper, Gamma,Density,Temp,Devieation

Did logs disclose vertical locations of a coal seam? ☐ Yes ☑ No

**5. Survey Results** *(As required by 4VAC25-150-280.B.2)*

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | U38K Deviation.pdf |

**6. Casing and Tubing Program**

List of Attached Items:

| Description | FileName |
|---|---|
| Casting | U38K Casing.xls |

**7. Remarks**

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

13 3/8' casting cemented on the backside to surface

**8. Drillers Log**

Compiled By: Norah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | U38K Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 10/10/2007 *(Company)*

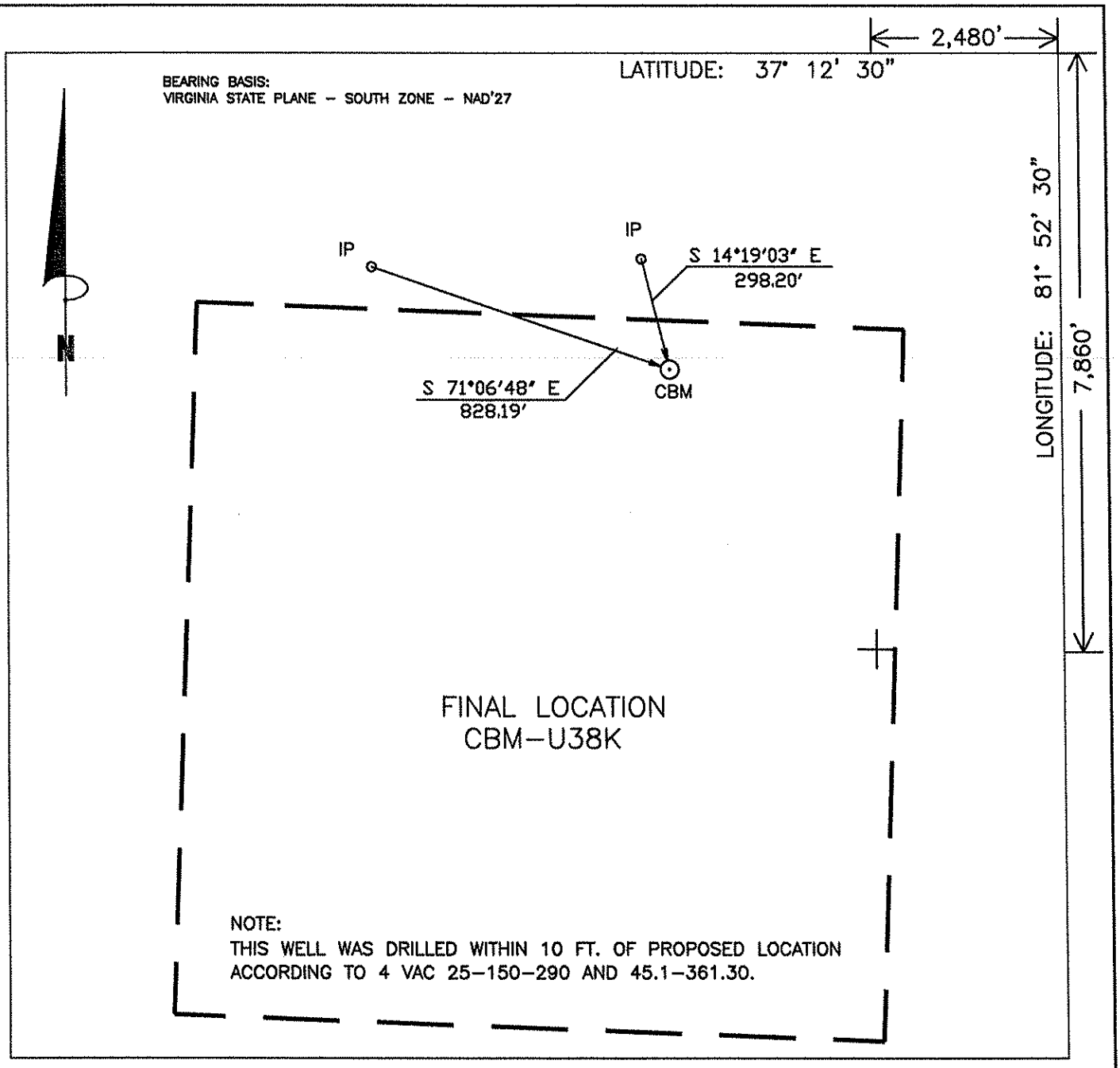
Signed By: Leslie K. Arington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 10/10/2007

Status: Inspr Approved Date: 10/11/2007

Final PDF Date: 10/11/2007




# WELL LOCATION PLAT

U38KFNL
2N25/118–594/19

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–U38K

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 328,365.69 E 1,014,565.26

ELEVATION: 1983.63' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 06–07–07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

D R Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
D. R. PRICE
LICENSE No.
8540
6/7/07
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM U38K
SURFACE ELEV: 1983.63 EASTING: 1014565.26 NORTHING: 328365.69

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 85.90 | 86.20 | 1897.73 | 0.30 | |
| | 86.20 | 104.30 | 1897.43 | 18.10 | |
| TI | 104.30 | 105.50 | 1879.33 | 1.20 | |
| | 105.50 | 106.10 | 1878.13 | 0.60 | |
| TI | 106.10 | 106.50 | 1877.53 | 0.40 | |
| | 106.50 | 145.10 | 1877.13 | 38.60 | |
| COAL | 145.10 | 146.10 | 1838.53 | 1.00 | |
| | 146.10 | 224.50 | 1837.53 | 78.40 | |
| US1 | 224.50 | 225.00 | 1759.13 | 0.50 | |
| | 225.00 | 298.30 | 1758.63 | 73.30 | |
| COAL | 298.30 | 299.70 | 1685.33 | 1.40 | |
| | 299.70 | 335.50 | 1683.93 | 35.80 | |
| US2 | 335.50 | 337.40 | 1648.13 | 1.90 | |
| | 337.40 | 516.90 | 1646.23 | 179.50 | |
| *SE1 | 516.90 | 517.90 | 1466.73 | 1.00 | |
| | 517.90 | 552.80 | 1465.73 | 34.90 | |
| *SE2 | 552.80 | 555.10 | 1430.83 | 2.30 | |
| | 555.10 | 599.00 | 1428.53 | 43.90 | |
| *LS1 | 599.00 | 601.50 | 1384.63 | 2.50 | |
| | 601.50 | 607.30 | 1382.13 | 5.80 | |
| *LS2 | 607.30 | 607.80 | 1376.33 | 0.50 | |
| | 607.80 | 648.80 | 1375.83 | 41.00 | |
| *UH1 | 648.80 | 650.00 | 1334.83 | 1.20 | |
| | 650.00 | 704.40 | 1333.63 | 54.40 | |
| *UH2 | 704.40 | 706.70 | 1279.23 | 2.30 | |
| | 706.70 | 760.60 | 1276.93 | 53.90 | |
| *MH1 | 760.60 | 763.90 | 1223.03 | 3.30 | |
| | 763.90 | 839.10 | 1219.73 | 75.20 | |
| *MH2 | 839.10 | 841.70 | 1144.53 | 2.60 | |
| | 841.70 | 861.80 | 1141.93 | 20.10 | |
| *P11 | 861.80 | 864.20 | 1121.83 | 2.40 | |
| | 864.20 | 884.20 | 1119.43 | 20.00 | |
| *P10 | 884.20 | 885.00 | 1099.43 | 0.80 | |
| | 885.00 | 886.70 | 1098.63 | 1.70 | |
| *COAL | 886.70 | 890.00 | 1096.93 | 3.30 | |
| | 890.00 | 945.90 | 1093.63 | 55.90 | |
| *LH2 | 945.90 | 946.30 | 1037.73 | 0.40 | |
| | 946.30 | 1019.00 | 1037.33 | 72.70 | |
| *P91 | 1019.00 | 1020.60 | 964.63 | 1.60 | |
| | 1020.60 | 1029.40 | 963.03 | 8.80 | |
| *COAL | 1029.40 | 1030.10 | 954.23 | 0.70 | |
| | 1030.10 | 1043.10 | 953.53 | 13.00 | |
| *P92 | 1043.10 | 1044.10 | 940.53 | 1.00 | |
| | 1044.10 | 1067.20 | 939.53 | 23.10 | |
| *P81 | 1067.20 | 1067.30 | 916.43 | 0.10 | |
| | 1067.30 | 1110.40 | 916.33 | 43.10 | |
| *P71 | 1110.40 | 1110.90 | 873.23 | 0.50 | |

| | | | | |
|---|---|---|---|---|
| | 1110.90 | 1184.10 | 872.73 | 73.20 |
| *COAL | 1184.10 | 1184.20 | 799.53 | 0.10 |
| | 1184.20 | 1276.80 | 799.43 | 92.60 |
| *P61 | 1276.80 | 1277.20 | 706.83 | 0.40 |
| | 1277.20 | 1294.00 | 706.43 | 16.80 |
| *P62 | 1294.00 | 1294.50 | 689.63 | 0.50 |
| | 1294.50 | 1327.20 | 689.13 | 32.70 |
| *P51 | 1327.20 | 1328.20 | 656.43 | 1.00 |
| | 1328.20 | 1421.90 | 655.43 | 93.70 |
| *P42 | 1421.90 | 1422.70 | 561.73 | 0.80 |
| | 1422.70 | 1503.00 | 560.93 | 80.30 |
| *P3 | 1503.00 | 1509.10 | 480.63 | 6.10 |
| | 1509.10 | 1522.33 | 474.53 | 13.23 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U38K.CMP
DATE: 07/10/07

Well: U38K

## Oil & Gas Show

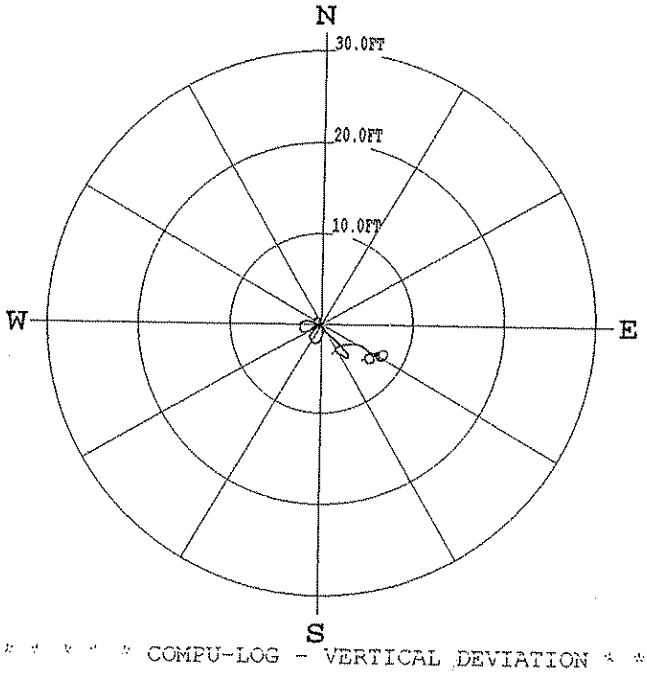
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 517 | 1067 | 550 | | | |
| Pocahontas | 1110 | 1509 | 399 | | | |
| Total IPF | | | | Not Taken | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: CNX Gas
LOCATION: Laurel
HOLE ID: 07-CNX-U-38-K
DATE OF LOG: 06/12/07
PROBE: 0019C 732

MAG DECL: -6.9

SCALE: 10 FT/IN
TRUE DEPTH: 1517.66 FT
AZIMUTH: 116.6
DISTANCE: 7.6 FT
+ = 300 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX Gas
FIELD OFFICE : M.Sammons
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 07-CNX-U-38-K
DATE OF LOG : 06/12/07
PROBE : 0019C , 732
DEPTH UNITS : FEET
LOG: 07-CNX-U-38-K_06-12-07_08-02_0019C_.02_0.00_1518.15_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.98 | -0.36 | 0.15 | 0.4 | 157.0 | 1.7 | 130.5 |
| 60.0 | 59.98 | -0.63 | 0.25 | 0.7 | 158.5 | 1.7 | 185.2 |
| 70.0 | 69.97 | -0.91 | 0.18 | 0.9 | 168.7 | 1.6 | 193.7 |
| 80.0 | 79.97 | -1.19 | 0.10 | 1.2 | 175.1 | 1.7 | 184.4 |
| 90.0 | 89.96 | -1.47 | 0.03 | 1.5 | 178.9 | 1.7 | 201.0 |
| 100.0 | 99.96 | -1.73 | -0.09 | 1.7 | 182.8 | 1.7 | 225.9 |
| 110.0 | 109.96 | -1.99 | -0.21 | 2.0 | 185.9 | 1.7 | 201.9 |
| 120.0 | 119.95 | -2.20 | -0.41 | 2.2 | 190.6 | 1.7 | 242.6 |
| 130.0 | 129.95 | -2.25 | -0.69 | 2.4 | 197.1 | 1.7 | 285.3 |
| 140.0 | 139.94 | -2.12 | -0.95 | 2.3 | 204.1 | 1.7 | 307.9 |
| 150.0 | 149.94 | -1.89 | -1.11 | 2.2 | 210.5 | 1.6 | 342.8 |
| 160.0 | 159.93 | -1.64 | -1.24 | 2.1 | 217.1 | 1.6 | 324.2 |
| 170.0 | 169.93 | -1.37 | -1.27 | 1.9 | 222.9 | 1.6 | 17.6 |
| 180.0 | 179.93 | -1.13 | -1.13 | 1.6 | 225.2 | 1.6 | 35.2 |
| 190.0 | 189.92 | -0.90 | -0.97 | 1.3 | 227.1 | 1.6 | 38.0 |
| 200.0 | 199.92 | -0.65 | -0.83 | 1.1 | 231.9 | 1.7 | 40.9 |
| 210.0 | 209.91 | -0.46 | -0.62 | 0.8 | 233.7 | 1.6 | 23.6 |
| 220.0 | 219.91 | -0.19 | -0.70 | 0.7 | 254.8 | 1.6 | 334.9 |
| 230.0 | 229.91 | 0.05 | -0.84 | 0.8 | 273.6 | 1.6 | 335.8 |
| 240.0 | 239.90 | 0.32 | -0.86 | 0.9 | 290.4 | 1.6 | 26.1 |
| 250.0 | 249.90 | 0.55 | -0.71 | 0.9 | 307.7 | 1.6 | 45.5 |
| 260.0 | 259.89 | 0.64 | -0.44 | 0.8 | 325.7 | 1.7 | 96.3 |
| 270.0 | 269.89 | 0.62 | -0.14 | 0.6 | 347.8 | 1.8 | 100.2 |
| 280.0 | 279.88 | 0.39 | 0.00 | 0.4 | 0.6 | 1.8 | 189.9 |
| 290.0 | 289.88 | 0.08 | -0.04 | 0.1 | 333.9 | 1.8 | 196.3 |
| 300.0 | 299.87 | -0.12 | -0.25 | 0.3 | 243.7 | 1.7 | 244.8 |
| 310.0 | 309.87 | -0.14 | -0.52 | 0.5 | 255.3 | 1.5 | 301.7 |
| 320.0 | 319.87 | 0.03 | -0.72 | 0.7 | 272.6 | 1.5 | 311.4 |
| 330.0 | 329.86 | 0.26 | -0.83 | 0.9 | 287.4 | 1.6 | 22.6 |
| 340.0 | 339.86 | 0.48 | -0.70 | 0.8 | 304.8 | 1.6 | 38.7 |
| 350.0 | 349.85 | 0.60 | -0.44 | 0.7 | 324.0 | 1.8 | 89.3 |
| 360.0 | 359.85 | 0.56 | -0.17 | 0.6 | 343.1 | 1.8 | 183.3 |
| 370.0 | 369.84 | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 300.0 | 299.87 | -0.12 | -0.20 | 0.3 | 245.7 | 1.7 | 243.9 |
| 310.0 | 309.87 | -0.14 | -0.52 | 0.5 | 255.3 | 1.5 | 301.7 |
| 320.0 | 319.87 | 0.03 | -0.72 | 0.7 | 272.6 | 1.5 | 311.4 |
| 330.0 | 329.86 | 0.26 | -0.83 | 0.9 | 287.4 | 1.6 | 22.6 |
| 340.0 | 339.86 | 0.48 | -0.70 | 0.8 | 304.8 | 1.6 | 38.7 |
| 350.0 | 349.85 | 0.60 | -0.44 | 0.7 | 324.0 | 1.8 | 89.3 |
| 360.0 | 359.85 | 0.56 | -0.17 | 0.6 | 343.1 | 1.8 | 183.3 |
| 370.0 | 369.84 | 0.24 | -0.18 | 0.3 | 322.8 | 1.9 | 195.1 |
| 380.0 | 379.84 | -0.05 | -0.31 | 0.3 | 261.8 | 1.8 | 205.8 |
| 390.0 | 389.84 | -0.26 | -0.52 | 0.6 | 243.6 | 1.7 | 232.3 |
| 400.0 | 399.83 | -0.35 | -0.76 | 0.8 | 245.3 | 1.4 | 326.9 |
| 410.0 | 409.83 | -0.52 | -0.96 | 1.1 | 241.5 | 1.5 | 230.3 |
| 420.0 | 419.82 | -0.68 | -1.16 | 1.3 | 239.4 | 1.4 | 239.7 |
| 430.0 | 429.82 | -0.81 | -1.37 | 1.6 | 239.6 | 1.4 | 251.1 |
| 440.0 | 439.82 | -0.87 | -1.60 | 1.8 | 241.3 | 1.3 | 248.2 |
| 450.0 | 449.82 | -0.94 | -1.80 | 2.0 | 242.5 | 1.2 | 259.2 |
| 460.0 | 459.81 | -0.94 | -2.02 | 2.2 | 245.1 | 1.3 | 266.1 |
| 470.0 | 469.81 | -0.86 | -2.19 | 2.4 | 248.6 | 1.1 | 320.2 |
| 480.0 | 479.81 | -0.68 | -2.28 | 2.4 | 253.3 | 1.0 | 325.6 |
| 490.0 | 489.81 | -0.56 | -2.39 | 2.5 | 256.7 | 1.1 | 1.5 |
| 500.0 | 499.81 | -0.39 | -2.39 | 2.4 | 260.7 | 1.0 | 17.4 |
| 510.0 | 509.80 | -0.22 | -2.36 | 2.4 | 264.7 | 1.0 | 23.4 |
| 520.0 | 519.80 | -0.07 | -2.32 | 2.3 | 268.1 | 1.0 | 359.6 |
| 530.0 | 529.80 | 0.05 | -2.29 | 2.3 | 271.3 | 1.0 | 38.1 |
| 540.0 | 539.80 | 0.15 | -2.13 | 2.1 | 274.0 | 1.0 | 72.1 |
| 550.0 | 549.80 | 0.22 | -1.94 | 2.0 | 276.4 | 1.2 | 80.1 |
| 560.0 | 559.80 | 0.26 | -1.74 | 1.8 | 278.6 | 1.2 | 79.9 |
| 570.0 | 569.79 | 0.29 | -1.52 | 1.5 | 280.7 | 1.4 | 93.7 |
| 580.0 | 579.79 | 0.26 | -1.27 | 1.3 | 281.5 | 1.5 | 98.6 |
| 590.0 | 589.79 | 0.18 | -1.00 | 1.0 | 279.9 | 1.7 | 112.4 |
| 600.0 | 599.78 | 0.04 | -0.72 | 0.7 | 273.4 | 1.8 | 105.0 |
| 610.0 | 609.78 | -0.09 | -0.44 | 0.4 | 258.4 | 1.8 | 103.1 |
| 620.0 | 619.77 | -0.30 | -0.18 | 0.3 | 211.2 | 2.0 | 148.3 |
| 630.0 | 629.77 | -0.51 | 0.09 | 0.5 | 170.1 | 2.1 | 141.5 |
| 640.0 | 639.76 | -0.77 | 0.32 | 0.8 | 157.0 | 1.9 | 131.7 |
| 650.0 | 649.75 | -1.02 | 0.56 | 1.2 | 151.2 | 2.0 | 124.1 |
| 660.0 | 659.75 | -1.24 | 0.81 | 1.5 | 146.7 | 2.1 | 127.2 |
| 670.0 | 669.74 | -1.47 | 1.07 | 1.8 | 143.8 | 2.0 | 127.7 |
| 680.0 | 679.74 | -1.69 | 1.32 | 2.1 | 141.9 | 1.9 | 123.9 |
| 690.0 | 689.73 | -1.92 | 1.56 | 2.5 | 140.9 | 1.9 | 127.7 |
| 700.0 | 699.72 | -2.15 | 1.81 | 2.8 | 139.9 | 1.9 | 126.9 |
| 710.0 | 709.72 | -2.37 | 2.04 | 3.1 | 139.3 | 1.8 | 150.2 |
| 720.0 | 719.71 | -2.60 | 2.25 | 3.4 | 139.2 | 1.6 | 148.6 |
| 730.0 | 729.71 | -2.84 | 2.44 | 3.7 | 139.4 | 1.7 | 146.9 |
| 740.0 | 739.70 | -3.07 | 2.61 | 4.0 | 139.6 | 1.7 | 129.2 |
| 750.0 | 749.70 | -3.30 | 2.81 | 4.3 | 139.6 | 1.7 | 149.6 |
| 760.0 | 759.70 | -3.56 | 2.95 | 4.6 | 140.4 | 1.6 | 154.9 |
| 770.0 | 769.69 | -3.75 | 2.95 | 4.8 | 141.9 | 1.0 | 187.9 |
| 780.0 | 779.69 | -3.83 | 2.85 | 4.8 | 143.3 | 0.6 | 265.0 |
| 790.0 | 789.69 | -3.83 | 2.74 | 4.7 | 144.3 | 0.7 | 263.4 |
| 800.0 | 799.69 | -3.78 | 2.62 | 4.6 | 145.3 | 0.8 | 267.2 |
| 810.0 | 809.69 | -3.74 | 2.50 | 4.5 | 146.2 | 0.8 | 301.7 |
| 820.0 | 819.69 | -3.64 | 2.38 | 4.4 | 146.8 | 1.0 | 310.3 |
| 830.0 | 829.69 | -3.56 | 2.25 | 4.2 | 147.7 | 0.9 | 312.2 |
| 840.0 | 839.69 | -3.46 | 2.11 | 4.1 | 148.6 | 1.1 | 325.1 |
| 850.0 | 849.68 | -3.43 | 1.96 | 3.9 | 150.3 | 0.9 | 288.5 |
| 860.0 | 859.68 | -3.31 | 1.84 | 3.8 | 150.9 | 1.0 | 314.0 |
| 870.0 | 869.68 | -3.23 | 1.74 | 3.7 | 151.7 | 0.8 | 277.6 |
| 880.0 | 879.68 | -3.15 | 1.63 | 3.6 | 152.6 | 0.6 | 290.5 |
| 890.0 | 889.68 | -3.08 | 1.55 | 3.4 | 153.3 | 0.8 | 322.6 |
| 900.0 | 899.68 | -2.94 | 1.53 | 3.3 | 152.5 | 0.8 | 3.7 |
| 910.0 | 909.68 | -2.80 | 1.59 | 3.2 | 150.4 | 1.1 | 51.4 |
| 920.0 | 919.68 | -2.66 | 1.71 | 3.2 | 147.1 | 1.3 | 62.5 |
| 930.0 | 929.67 | -2.58 | 1.94 | 3.2 | 143.0 | 1.1 | 43.8 |
| 940.0 | 939.67 | -2.49 | 2.17 | 3.3 | 139.0 | 1.6 | 86.2 |
| 950.0 | 949.67 | -2.41 | 2.38 | 3.4 | 135.3 | 1.2 | 57.8 |
| 960.0 | 959.66 | -2.38 | 2.64 | 3.6 | 132.1 | 1.4 | 68.5 |
| 970.0 | 969.66 | -2.36 | 2.88 | 3.7 | 129.3 | 1.6 | 97.2 |
| 980.0 | 979.66 | -2.31 | 3.13 | 3.9 | 126.4 | 1.6 | 89.7 |
| 990.0 | 989.65 | -2.33 | 3.38 | 4.1 | 124.5 | 1.4 | 76.6 |
| 1000.0 | 999.65 | -2.32 | 3.63 | 4.3 | 122.6 | 1.3 | 79.8 |
| 1010.0 | 1009.65 | -2.35 | 3.89 | 4.5 | 121.1 | 1.3 | 72.3 |
| 1020.0 | 1019.64 | -2.41 | 4.15 | 4.8 | 120.2 | 1.5 | 100.5 |
| 1030.0 | 1029.64 | -2.48 | 4.40 | 5.0 | 119.4 | 1.6 | 107.5 |
| 1040.0 | 1039.63 | -2.65 | 4.63 | 5.3 | 119.8 | 1.7 | 151.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 960.0 | 959.66 | -2.38 | 2.64 | 3.6 | 132.1 | 1.4 | 68.5 |
| 970.0 | 969.66 | -2.36 | 2.88 | 3.7 | 129.3 | 1.6 | 97.2 |
| 980.0 | 979.66 | -2.31 | 3.13 | 3.9 | 126.4 | 1.6 | 89.7 |
| 990.0 | 989.65 | -2.33 | 3.38 | 4.1 | 124.5 | 1.4 | 76.6 |
| 1000.0 | 999.65 | -2.32 | 3.63 | 4.3 | 122.6 | 1.3 | 79.8 |
| 1010.0 | 1009.65 | -2.35 | 3.89 | 4.5 | 121.1 | 1.3 | 72.3 |
| 1020.0 | 1019.64 | -2.41 | 4.15 | 4.8 | 120.2 | 1.5 | 100.5 |
| 1030.0 | 1029.64 | -2.48 | 4.40 | 5.0 | 119.4 | 1.6 | 107.5 |
| 1040.0 | 1039.63 | -2.65 | 4.63 | 5.3 | 119.8 | 1.7 | 151.5 |
| 1050.0 | 1049.63 | -2.82 | 4.84 | 5.6 | 120.2 | 1.5 | 126.9 |
| 1060.0 | 1059.63 | -3.00 | 5.06 | 5.9 | 120.7 | 1.6 | 124.2 |
| 1070.0 | 1069.62 | -3.21 | 5.24 | 6.2 | 121.5 | 1.7 | 151.5 |
| 1080.0 | 1079.62 | -3.43 | 5.42 | 6.4 | 122.3 | 1.5 | 131.3 |
| 1090.0 | 1089.61 | -3.62 | 5.60 | 6.7 | 122.9 | 1.4 | 150.4 |
| 1100.0 | 1099.61 | -3.86 | 5.68 | 6.9 | 124.2 | 1.5 | 156.5 |
| 1110.0 | 1109.61 | -4.10 | 5.72 | 7.0 | 125.6 | 1.3 | 181.3 |
| 1120.0 | 1119.61 | -4.29 | 5.63 | 7.1 | 127.3 | 1.2 | 226.6 |
| 1130.0 | 1129.60 | -4.34 | 5.45 | 7.0 | 128.6 | 1.0 | 250.8 |
| 1140.0 | 1139.60 | -4.39 | 5.28 | 6.9 | 129.8 | 1.0 | 277.8 |
| 1150.0 | 1149.60 | -4.38 | 5.13 | 6.7 | 130.5 | 1.0 | 275.0 |
| 1160.0 | 1159.60 | -4.31 | 4.99 | 6.6 | 130.8 | 0.9 | 311.0 |
| 1170.0 | 1169.60 | -4.16 | 4.89 | 6.4 | 130.4 | 1.1 | 333.3 |
| 1180.0 | 1179.60 | -4.01 | 4.82 | 6.3 | 129.8 | 1.0 | 14.1 |
| 1190.0 | 1189.59 | -3.83 | 4.80 | 6.1 | 128.6 | 1.0 | 323.8 |
| 1200.0 | 1199.59 | -3.66 | 4.82 | 6.1 | 127.2 | 1.2 | 28.6 |
| 1210.0 | 1209.59 | -3.50 | 4.98 | 6.1 | 125.1 | 1.4 | 40.6 |
| 1220.0 | 1219.59 | -3.37 | 5.19 | 6.2 | 123.0 | 1.3 | 52.9 |
| 1230.0 | 1229.58 | -3.31 | 5.44 | 6.4 | 121.4 | 1.7 | 95.1 |
| 1240.0 | 1239.58 | -3.32 | 5.71 | 6.6 | 120.1 | 1.5 | 98.2 |
| 1250.0 | 1249.58 | -3.31 | 5.94 | 6.8 | 119.1 | 1.3 | 96.4 |
| 1260.0 | 1259.57 | -3.37 | 6.16 | 7.0 | 118.7 | 1.3 | 120.4 |
| 1270.0 | 1269.57 | -3.51 | 6.33 | 7.2 | 119.0 | 1.2 | 133.1 |
| 1280.0 | 1279.57 | -3.68 | 6.44 | 7.4 | 119.7 | 1.1 | 178.1 |
| 1290.0 | 1289.57 | -3.85 | 6.35 | 7.4 | 121.2 | 1.0 | 230.4 |
| 1300.0 | 1299.57 | -3.85 | 6.17 | 7.3 | 122.0 | 1.1 | 280.1 |
| 1310.0 | 1309.56 | -3.75 | 6.01 | 7.1 | 122.0 | 1.1 | 300.3 |
| 1320.0 | 1319.56 | -3.62 | 5.90 | 6.9 | 121.5 | 1.0 | 333.0 |
| 1330.0 | 1329.56 | -3.44 | 5.87 | 6.8 | 120.4 | 1.2 | 12.9 |
| 1340.0 | 1339.56 | -3.27 | 5.99 | 6.8 | 118.6 | 1.4 | 78.1 |
| 1350.0 | 1349.56 | -3.18 | 6.19 | 7.0 | 117.2 | 1.3 | 78.0 |
| 1360.0 | 1359.55 | -3.19 | 6.45 | 7.2 | 116.3 | 1.5 | 107.8 |
| 1370.0 | 1369.55 | -3.23 | 6.68 | 7.4 | 115.8 | 1.4 | 105.5 |
| 1380.0 | 1379.55 | -3.35 | 6.87 | 7.6 | 116.0 | 1.4 | 118.0 |
| 1390.0 | 1389.54 | -3.51 | 7.01 | 7.8 | 116.6 | 1.1 | 159.4 |
| 1400.0 | 1399.54 | -3.69 | 7.07 | 8.0 | 117.6 | 1.1 | 176.7 |
| 1410.0 | 1409.54 | -3.89 | 7.02 | 8.0 | 119.0 | 1.2 | 214.5 |
| 1420.0 | 1419.54 | -4.02 | 6.85 | 7.9 | 120.4 | 1.2 | 234.2 |
| 1430.0 | 1429.54 | -4.10 | 6.67 | 7.8 | 121.5 | 1.1 | 260.2 |
| 1440.0 | 1439.53 | -4.11 | 6.47 | 7.7 | 122.4 | 1.1 | 255.6 |
| 1450.0 | 1449.53 | -4.07 | 6.27 | 7.5 | 123.0 | 1.2 | 308.5 |
| 1460.0 | 1459.53 | -3.94 | 6.11 | 7.3 | 122.8 | 1.2 | 333.5 |
| 1470.0 | 1469.53 | -3.74 | 6.04 | 7.1 | 121.8 | 1.2 | 346.7 |
| 1480.0 | 1479.53 | -3.54 | 6.11 | 7.1 | 120.1 | 1.2 | 43.5 |
| 1490.0 | 1489.52 | -3.46 | 6.32 | 7.2 | 118.7 | 1.3 | 107.8 |
| 1500.0 | 1499.52 | -3.58 | 6.51 | 7.4 | 118.8 | 1.3 | 130.7 |
| 1510.0 | 1509.52 | -3.55 | 6.70 | 7.6 | 117.9 | 1.2 | 34.2 |
| 1518.2 | 1517.68 | -3.41 | 6.80 | 7.6 | 116.6 | 0.0 | 0.0 |

Well: U38K

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs Kind/Size/Set |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 36.55' | 24" | | | X | 5/7/2007 | |
| Surface | 13 3/8" | 381.35' | 15 3/8" | 189 | X | | 5/7/2007 | Bskt @ 85' |
| Water Protection | 13 3/8" | 381.35' | 15 3/8" | 189 | X | | 5/7/2007 | Bskt @ 85' |
| Coal Protection | 13 3/8" | 381.35' | 15 3/8" | 189 | X | | 5/7/2007 | Bskt @ 85' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** CNX **HOLE #: U-38K**

**LOCATION:** OSBORNE MTN **DRILL RIG #: 87**

**DATE STARTED: 06-05-07** **DATED COMPLETED: 06-11-07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | THICKNESS | | STRATA REMARKS |
|---|---|---|---|
| **FROM** | **TO** | **FT** | **DESCRIPTION,VOIDS ETC** |
| 0 | 37 | 37 | |
| 37 | 64 | 27 | SAND STONE |
| 64 | 93 | 29 | SAND STONE/SANDY SHALE/COAL/SANDY SHALE |
| 93 | 122 | 29 | SANDY SHALE |
| 122 | 155 | 33 | SANDY SHALE/SAND STONE |
| 155 | 186 | 31 | SAND STONE/SANDY SHALE/COAL/SANDY SHALE |
| 186 | 218 | 32 | SANDY SHALE |
| 218 | 249 | 31 | SANDY SHALE/SAND STONE |
| 249 | 271 | 22 | SAND STONE/SANDY SHALE |
| 271 | 334 | 63 | SANDY SHALE |
| 334 | 366 | 32 | SANDY SHALE/SAND STONE |
| 366 | 398 | 32 | SAND STONE/SANDY SHALE/SAND STONE/SANDY SHALE |
| 398 | 418 | 20 | SAND STONE/SANDY SHALE |
| 414 | 510 | 96 | SANDY SHALE |
| 510 | 541 | 31 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 541 | 573 | 32 | SANDY SHALE/COAL/SAND STONE/SANDY SHALE |
| 573 | 605 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 605 | 636 | 31 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 636 | 668 | 32 | SANDY SHALE |
| 668 | 700 | 32 | SANDY SHALE/SAND STONE |
| 700 | 731 | 31 | SAND STONE |
| 731 | 763 | 32 | SAND STONE/SANDY SHALE |
| 763 | 795 | 32 | SANDY SHALE |
| 795 | 858 | 63 | SANDY SHALE |
| 858 | 890 | 32 | SANDY SHALE/SAND STONE/SANDY SHALE |
| 890 | 922 | 32 | SANDY SHALE |
| 922 | 954 | 32 | SANDY SHALE/SAND STONE/SAND STONE |
| 954 | 1017 | 63 | SANDY SHALE |
| 1017 | 1048 | 31 | |
| 1048 | 1080 | 32 | SAND STONE/SANDY SHALE |
| 1080 | 1111 | 31 | SANDY SHALE/COAL/SAND STONE/COAL/SANDY SHALE |
| 1111 | 1143 | 32 | SANDY SHALE/COAL/SAND STONE |
| 1143 | 1238 | 95 | SAND STONE/SANDY SHALE STR |
| 1238 | 1269 | 31 | SANDY SHALE |
| 1269 | 1301 | 32 | SANDY SHALE/COAL/SAND STONE STR/SANDY SHALE/COAL |
| 1301 | 1332 | 31 | SAND STONE/SANDY SHALE/COAL |

| | | | |
|---|---|---|---|
| 1332 | 1364 | 32 | SANDY SHALE/COAL/SAND STONE |
| 1364 | 1396 | 32 | SAND STONE/COAL/SANDY SHALE/SAND STONE |
| 1396 | 1427 | 31 | SAND STONE/SANDY SHALE |
| 1427 | 1457 | 30 | SANDY SHALE |
| 1457 | 1521 | 64 | SANDY SHALE/COAL/SANDY SHALE |

1521.00 FT. TOTAL DEPTH
36.55 FT. OF 22" CASING
381.35 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9650

| | |
|---|---|
| **Tracking Number:** | 3886 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1176 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coal Bed | **Date Well Completed:** | 8/25/1997 |
| **Driller's Total Depth:** | 1747.80 | **Log's Total Depth:** | 0.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: £ Stimulated £ GOB £ Not Stimulated £ Service Well

| Description | FileName |
|---|---|
| U39 | BU-1176 STIM.pdf |

## 3. Final Production

| Description | FileName |
|---|---|
| U39 | BU-1176 STIM.pdf |

## 4. Comments

*Notes:*

[7/2/2013, jsa]
Information inserted by DGO [6/25/2013, jhh]

**5. Signature**

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/28/2013 | *(Company)* |
| By: | Leslie Arrington | Title: | ********** | *(Signature)* |

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/28/2013 | | |
| Status: | Approved | Date: | 7/2/2013 |
| Final PDF Date: | 7/2/2013 | | |

BU1176

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-U-39
Permit #: 3410

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

Virginia Department of Mines Minerals and Energy

DEPT. of MINES, MINERALS and ENERGY
DIVISION of GAS and OIL

OCT 1997
RECEIVED
DIVISION OF
GAS & OIL

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 8/25/97 Total Depth of Well: 1747.8'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 650 MSCF N2, 550 bbl water
530 sx 20/40 and 216 sx 12/20
Perforated: 1654 TO 1665 No. of Perforations: OH Perforation Size: NA
Formation Broke Down at: 1731 PSIG Average Injection Rate 30 BPM
ISIP 1850 PSIG 1 MIN SIP 1522 PSIG Average Injection Pressure: 2066 PSIG
Date stimulated: 8/25.

**Zone 2:** P4, P5, P7 Formation Stimulated With: 351 MSCF N2, 346 bbl water
572 sx 20/40
Perforated: 1261 TO 1573 No. of Perforations: 40 Perforation Size: .70" EHD
Formation Broke Down at: 2113 PSIG Average Injection Rate 30 BPM
ISIP 3800 PSIG 5 MIN SIP NA PSIG Average Injection Pressure: 2560 PSIG
Date stimulated: 8/25.

**Zone 3:** P8, P9, P10, P11, LH3 Formation Stimulated With: 457 MSCF N2
444 sx 20/40 and 136 sx 12/20
Perforated: 1028 TO 1227 No. of Perforations: 52 Perforation Size: .70" EHD
Formation Broke Down at: NVB PSIG Average Injection Rate 30 BPM
ISIP - PSIG - MIN SIP - PSIG Average Injection Pressure: 1831 PSIG
Date stimulated: 8/25. (SCREENOUT)

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | NA | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

ENTERED

Form DGO-GO-15
Rev 9/91

BU1176

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-U-39
Permit #: 3410

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
540/676-5423

Virginia Department of Mines Minerals and Energy

DEPT. of MINES, MINERALS and ENERGY
DIVISION of GAS and OIL

OCT 1997
RECEIVED
DIVISION OF
GAS & OIL

## COMPLETION REPORT

WELL TYPE: Oil __ Gas __ Coalbed Methane x or Injection __ well.

Date Well Completed: 8/25/97 Total Depth of Well: 1747.8'

Attach the Drilling Report, if not previously submitted. In addition submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD*

**Zone 1:** P3 Formation Stimulated With: 650 MSCF N2, 550 bbl water
530 sx 20/40 and 216 sx 12/20
Perforated: 1654 TO 1665 No. of Perforations: OH Perforation Size: NA
Formation Broke Down at: 1731 PSIG Average Injection Rate 30 BPM
ISIP 1850 PSIG 1 MIN SIP 1522 PSIG Average Injection Pressure: 2066 PSIG
Date stimulated: 8/25.

**Zone 2:** P4, P5, P7 Formation Stimulated With: 351 MSCF N2, 346 bbl water
572 sx 20/40
Perforated: 1261 TO 1573 No. of Perforations: 40 Perforation Size: .70" EHD
Formation Broke Down at: 2113 PSIG Average Injection Rate 30 BPM
ISIP 3800 PSIG 5 MIN SIP NA PSIG Average Injection Pressure: 2560 PSIG
Date stimulated: 8/25.

**Zone 3:** P8, P9, P10, P11, LH3 Formation Stimulated With: 457 MSCF N2
444 sx 20/40 and 136 sx 12/20
Perforated: 1028 TO 1227 No. of Perforations: 52 Perforation Size: .70" EHD
Formation Broke Down at: NVB PSIG Average Injection Rate 30 BPM
ISIP - PSIG - MIN SIP - PSIG Average Injection Pressure: 1831 PSIG
Date stimulated: 8/25. (SCREENOUT)

FINAL PRODUCTION: __ Natural __ After Stimulation

| | BOD | MCFD | HOURS TESTED | ROCK PRESSURE | HOURS TESTED |
|---|---|---|---|---|---|
| Zone (1) | NA | | | | |
| Zone (2) | | | | | |
| Zone (3) | | | | | |

Final Production if Gas Zones are Comingled _____ MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

* Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)

ENTERED

Form DGO-GO-15
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

| | |
|---|---|
| **Tracking Number:** | 3887 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-1176 |
| **Operations Name:** | PGP U39 |
| **Operation Type:** | Coal Bed |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 7/17/1997

Drilling Contractor: Noah Horn

Date drilling completed: 7/22/1997

Rig Type: R Rotary £ Cable

Driller's Total Depth (feet): 1747.80

Log Total Depth (feet): 0.00

Coal Seam At Total Depth: POCAHONTAS #3

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10498581.5500

Permitted State Plane Y: 3608721.2800

Final Plat State Plane X: 10498581.6470

Final Plat State Plane Y: 3608721.1700

Plat Previously Submitted Or... £

List of Attached Items:

| Description | FileName |
|---|---|
| U39 | BU-1176 PLAT.pdf |

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| U39 | BU-1176 COAL.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| U39 | BU-1176 GS.pdf |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: deviation/Gamma/Calipier

Did logs disclose vertical locations of a coal seam? R

**5. Survery Results (As required by 4VAC25-150-280.B.2)**

List of Attached Items:

| Description | FileName |
|---|---|
| U39 | BU-1176 CASING.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|---|---|
| U39 | BU-1176 CASING.pdf |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By:

List of Attached Items:

| Description | FileName |
|---|---|
| U29 | BU-1176 LOG.pdf |

## 9. Comments

[7/2/2013, jsa]
Information inserted by DGO [6/25/2013, jhh]

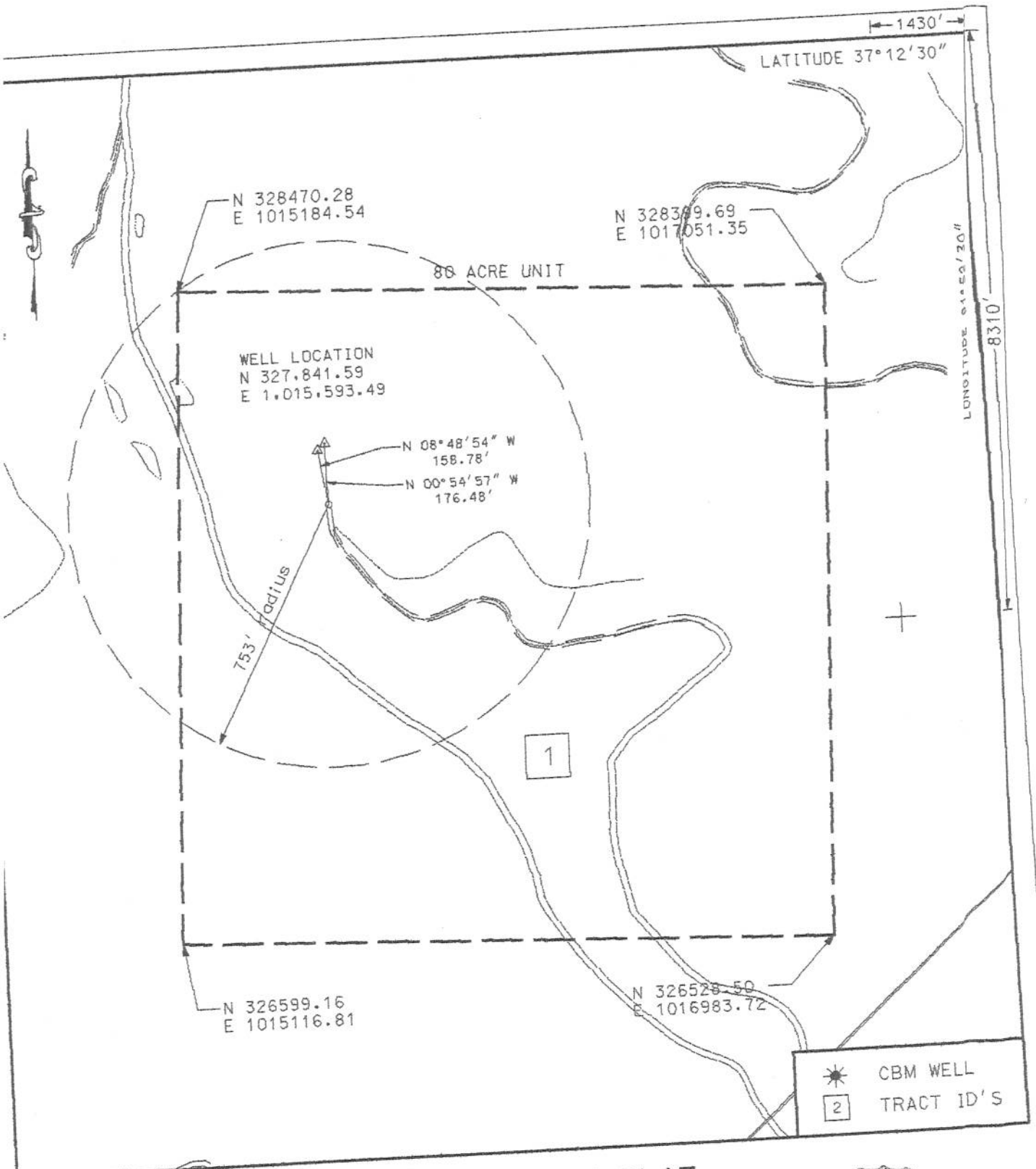
## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/28/2013

Signed By: Leslie Arrington Title: **********

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/28/2013 | | |
| Status: | A | Date: | 7/2/2013 |
| Final PDF Date: | 11/8/2013 | | |




# WELL LOCATION PLAT

Company Pocahontas Gas Partnership Well Name and Number CBM-P&P-U39

Tract No. Coal Mountain Elevation 2142.03' Quadrangle Keen Mountain

County Buchanan District Garden Scale: 1" = 400' Date 1/23/97

This plat is a new plat ____ ; an updated plat ____ ; or a final plat X

+ Denotes the location of a well on United States Topographic Maps, scale No. to 24,000, latitude and longitude lines being represented by border lines as shown.

CLAUDE D. MORGAN 10958 PROFESSIONAL ENGINEER

Claude D. Morgan

Form DGO-GO-7 Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

Rev. 9/91

Exhibit A

Well Name: 97-PGP-U39
Elevation: 2142.03

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA2 | 40.50 | 41.90 | 2101.53 | 1.40 | |
| | 41.90 | 43.30 | 2100.13 | 1.40 | |
| RA3 | 43.30 | 45.70 | 2098.73 | 2.40 | |
| | 45.70 | 122.90 | 2096.33 | 77.20 | |
| JB1 | 122.90 | 124.80 | 2019.13 | 1.90 | |
| | 124.80 | 167.00 | 2017.23 | 42.20 | |
| JB3 | 167.00 | 169.50 | 1975.03 | 2.50 | |
| | 169.50 | 255.80 | 1972.53 | 86.30 | |
| TI | 255.80 | 257.30 | 1886.23 | 1.50 | |
| | 257.30 | 486.00 | 1884.73 | 228.70 | |
| US2 | 486.00 | 487.00 | 1656.03 | 1.00 | |
| | 487.00 | 675.30 | 1655.03 | 188.30 | |
| SE1 | 675.30 | 675.80 | 1466.73 | 0.50 | |
| | 675.80 | 710.30 | 1466.23 | 34.50 | |
| SE2 | 710.30 | 711.90 | 1431.73 | 1.60 | |
| | 711.90 | 753.90 | 1430.13 | 42.00 | |
| LS1 | 753.90 | 756.00 | 1388.13 | 2.10 | |
| | 756.00 | 772.70 | 1386.03 | 16.70 | |
| LS2 | 772.70 | 773.30 | 1369.33 | 0.60 | |
| | 773.30 | 800.00 | 1368.73 | 26.70 | |
| UH1 | 800.00 | 800.80 | 1342.03 | 0.80 | |
| | 800.80 | 859.00 | 1341.23 | 58.20 | |
| UH3 | 859.00 | 860.30 | 1283.03 | 1.30 | |
| | 860.30 | 926.00 | 1281.73 | 65.70 | |
| MH1 | 926.00 | 927.40 | 1216.03 | 1.40 | |
| | 927.40 | 1027.70 | 1214.63 | 100.30 | |
| P11 | 1027.70 | 1031.20 | 1114.33 | 3.50 | |
| | 1031.20 | 1042.80 | 1110.83 | 11.60 | |
| 113 | 1042.80 | 1043.10 | 1099.23 | 0.30 | |
| | 1043.10 | 1047.90 | 1098.93 | 4.80 | |
| P10 | 1047.90 | 1049.30 | 1094.13 | 1.40 | |
| | 1049.30 | 1108.90 | 1092.73 | 59.60 | |
| LH3 | 1108.90 | 1109.20 | 1033.13 | 0.30 | |
| | 1109.20 | 1192.10 | 1032.83 | 82.90 | |
| P91 | 1192.10 | 1194.00 | 949.93 | 1.90 | |
| | 1194.00 | 1201.80 | 948.03 | 7.80 | |
| P92 | 1201.80 | 1202.90 | 940.23 | 1.10 | |
| | 1202.90 | 1225.80 | 939.13 | 22.90 | |
| P81 | 1225.80 | 1226.80 | 916.23 | 1.00 | |
| | 1226.80 | 1261.40 | 915.23 | 34.60 | |
| P71 | 1261.40 | 1262.80 | 880.63 | 1.40 | |
| | 1262.80 | 1276.00 | 879.23 | 13.20 | |
| P72 | 1276.00 | 1277.10 | 866.03 | 1.10 | |
| | 1277.10 | 1371.20 | 864.93 | 94.10 | |
| COAL | 1371.20 | 1372.00 | 770.83 | 0.80 | |
| | 1372.00 | 1430.90 | 770.03 | 58.90 | |
| P61 | 1430.90 | 1431.10 | 711.13 | 0.20 | |
| | 1431.10 | 1449.70 | 710.93 | 18.60 | |
| P62 | 1449.70 | 1450.00 | 692.33 | 0.30 | |

| | | | | |
|---|---|---|---|---|
| | 1450.00 | 1484.30 | 692.03 | 34.30 |
| P51 | 1484.30 | 1486.50 | 657.73 | 2.20 |
| | 1486.50 | 1571.80 | 655.53 | 85.30 |
| P42 | 1571.80 | 1572.40 | 570.23 | 0.60 |
| | 1572.40 | 1654.40 | 569.63 | 82.00 |
| P3 | 1654.40 | 1664.80 | 487.63 | 10.40 |
| | 1664.80 | 1752.00 | 477.23 | 87.20 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP-U39
Permit #: 3410

Department of Mines, Minerals, and Energy
Division of Gas and Oil
Virginia Gas and Oil Inspector
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

## DRILLING REPORT

Pursuant to VR-480-05-22.1, s 1.36, the undersigned Permittee submits this report on Well CBM- PGP-U39 in the Garden District of the Buchanan City/County, Virginia on this 6th day, October month, 1997.

LOCATION

City/County: Buchanan District: Garden
Surface Elevation: 2142.03' Elevation of Kelly Bushing: _____ Quadrangle: Keen Mountain
----- Ft. S. of Latitude ------ and ----- Ft. W. of Longitude -----

or, State Plane Coordinates: Zone 5 N 327,841.59 E 1,015,593.49

Attach a final location plat as required by VR 480-05-22.1, s 1.36.

RECEIVED OCT 1997 DIVISION OF GAS & OIL

DRILLING DATA

Date Drilling Commenced: July 17, 1997 Drilling Contractor: Noah Horn
Date Drilling Completed: July 22, 1997 Rig Type: x Rotary __ Cable Tool
Total Depth of Well: 1747.80'

GEOLOGICAL DATA

Fresh Water at: N/R Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM

Salt Water at: ____ Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM
____ Feet ____ GPM ____ Feet ____ GPM

| COAL SEAMS: | | | | MINING IN AREA | | |
|---|---|---|---|---|---|---|
| NAME | TOP | BOTTOM | THICKNESS | YES | NO | MINED OUT |
| See DGO-GO-14, Exhibit A | | | | | | |

| GAS AND OIL SHOWS: | | | | | | |
|---|---|---|---|---|---|---|
| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
| Pocahontas | 405.80' | 1747.80' | 1342.00' | | | |

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP-U39
Permit #: 3410

Cuttings or samples are __ are not x available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have __ have not x been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes x No _____

SURVEY RESULTS*:

* See Deviation Survey

CASING AND TUBING

| | SIZE | TOP | BOTTOM | CEMENT USED LENGTH | DATE IN CU/FT | PACKERS OR BRIDGE PLUGS CEMENTED | KIND | SIZE | SET AT |
|---|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0 | 17.60' | 17.60' | | | | | |
| Surface | 13 3/8" | 0 | 17.60' | 17.60' | | | | | |
| Water Protection | 8 5/8" | 0 | 405.80' | 405.80' | 7/18/97 | 115 Std | Cement to Surface | | |
| Coal Protection | 8 5/8" | 0 | 405.80' | 405.80' | | | | | |
| Other Casing and Tubing Left In Well | 5 1/2" | 0 | 1645.40' | 1645.40' | 8/11/97 | 120 Std<br>120 H.L. | Cement to Surface | | |

Liners

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.
Basket at 61.90'

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM- PGP-U39
Permit #: 3410

Cuttings or samples are __ are not x available for examination by a member of the Virginia Division of Mineral Resources
Cuttings or samples have __ have not x been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS:

List logs ran on wellbore: Deviation, Gamma, Calipier

Did log disclose vertical location of a coal seam? Yes x No _____

SURVEY RESULTS*:

* See Deviation Survey

CASING AND TUBING

| | SIZE | TOP | BOTTOM | CEMENT USED LENGTH | DATE IN CU/FT | PACKERS OR BRIDGE PLUGS CEMENTED | KIND | SIZE | SET AT |
|---|---|---|---|---|---|---|---|---|---|
| Conductor | 13 3/8" | 0 | 17.60' | 17.60' | | | | | |
| Surface | 13 3/8" | 0 | 17.60' | 17.60' | | | | | |
| Water Protection | 8 5/8" | 0 | 405.80' | 405.80' | 7/18/97 | 115 Std | Cement to Surface | | |
| Coal Protection | 8 5/8" | 0 | 405.80' | 405.80' | | | | | |
| Other Casing and Tubing Left In Well | 5 1/2" | 0 | 1645.40' | 1645.40' | 8/11/97 | 120 Std<br>120 H.L. | Cement to Surface | | |

Liners

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.
Basket at 61.90'

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: CBM-PGP-U39
Permit #: 3410

# DRILLER'S LOG

Compiled by - Noah Horn

| Geologic Age | Formation | General Lithology | Color | Depth Top | Depth Bottom | Thickness | Remarks |
|---|---|---|---|---|---|---|---|
| | | OVERBURDEN | | 0 | 17 | | |
| | | SAND | | 17 | 40 | | |
| | | SANDY SHALE | | 40 | 70 | | |
| | | SHALE | | 70 | 120 | | |
| | | COAL | | 120 | 121 | | |
| | | SAND | | 121 | 160 | | |
| Pennsylvanian | Pocahontas | SANDY SHALE | | 160 | 175 | | |
| | | COAL | | 175 | 176 | | |
| | | SAND | | 176 | 260 | | |
| | | SHALE | | 260 | 274 | | |
| | | COAL | | 274 | 275 | | |
| | | SAND | | 275 | 310 | | |
| | | SANDY SHALE | | 310 | 340 | | |
| | | SAND | | 340 | 370 | | |
| | | SANDY SHALE | | 370 | 415 | | |
| | | SAND | | 415 | 510 | | |
| | | SANDY SHALE | | 510 | 540 | | |
| | | SHALE | | 540 | 570 | | |
| | | SANDY SHALE | | 570 | 600 | | |
| | | SHALE W/ SAND | | 600 | 630 | | |
| | | SAND W/ SHALE | | 630 | 660 | | |
| | | SANDY SHALE | | 660 | 690 | | |
| | | SHALE | | 690 | 720 | | |
| | | COAL | | 720 | 721 | | |
| | | SHALE | | 721 | 805 | | |
| | | COAL | | 805 | 806 | | |
| | | SAND | | 806 | 840 | | |
| | | SHALE | | 840 | 870 | | |
| | | COAL | | 870 | 871 | | |
| | | SHALE | | 871 | 930 | | |
| | | COAL | | 930 | 931 | | |
| | | SHALE | | 931 | 990 | | |
| | | SAND W/ SHALE | | 990 | 1032 | | |
| | | COAL | | 1032 | 1035 | | |
| | | SHALE | | 1035 | 1050 | | |
| | | SAND W/ SHALE | | 1050 | 1057 | | |
| | | COAL | | 1057 | 1058 | | |
| | | SHALE | | 1058 | 1080 | | |
| | | SAND | | 1080 | 1110 | | |
| | | SANDY SHALE | | 1110 | 1170 | | |
| | | SAND | | 1170 | 1200 | | |
| | | COAL | | 1200 | 1202 | | |
| | | SAND W/ SHALE | | 1202 | 1229 | | |
| | | COAL | | 1229 | 1230 | | |
| | | SANDY SHALE | | 1230 | 1260 | | |
| | | SAND | | 1260 | 1380 | | |
| | | SHALE | | 1380 | 1440 | | |
| | | SAND | | 1440 | 1500 | | |
| | | SANDY SHALE | | 1500 | 1530 | | |
| | | SAND | | 1530 | 1620 | | |
| | | SANDY SHALE | | 1620 | 1650 | | |
| | | SHALE | | 1650 | 1661 | | |
| | | COAL | | 1661 | 1668 | | |
| | | SANDY SHALE | | 1668 | 1680 | | |
| | | SAND | | 1680 | 1770 | | |

Permittee: Pocahontas Gas Partnership (Company)

By: Leslie K. Arrington (Signature)



Form DGO-GO-14
Rev 9/91

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1549 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3632 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 5/20/2008 |
| **Driller's Total Depth:** | 1653.90 | **Log's Total Depth:** | 1654.30 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 11/21/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 11/21/2008 | | |
| Status: | | Date: | 11/26/2008 |
| Final PDF Date: | 3/27/2009 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1590 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3632 |
| **Operations Name:** | CBM U39D W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 5/9/2008

Drilling Contractor: Noah Horn

Date drilling completed: 5/20/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1653.87

Log Total Depth (feet): 1654.31

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1016522.70

Permitted State Plane Y: 327602.24

Final Plat State Plane X: 1016527.72

Final Plat State Plane Y: 327595.85

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | U39D PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | U39D EXHIBIT A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| Gas Show | U39D Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: caliper gamma density temp deviation

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | U39D DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | U39D Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| Drill Data | U39D DRILL DATA.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 11/21/2008

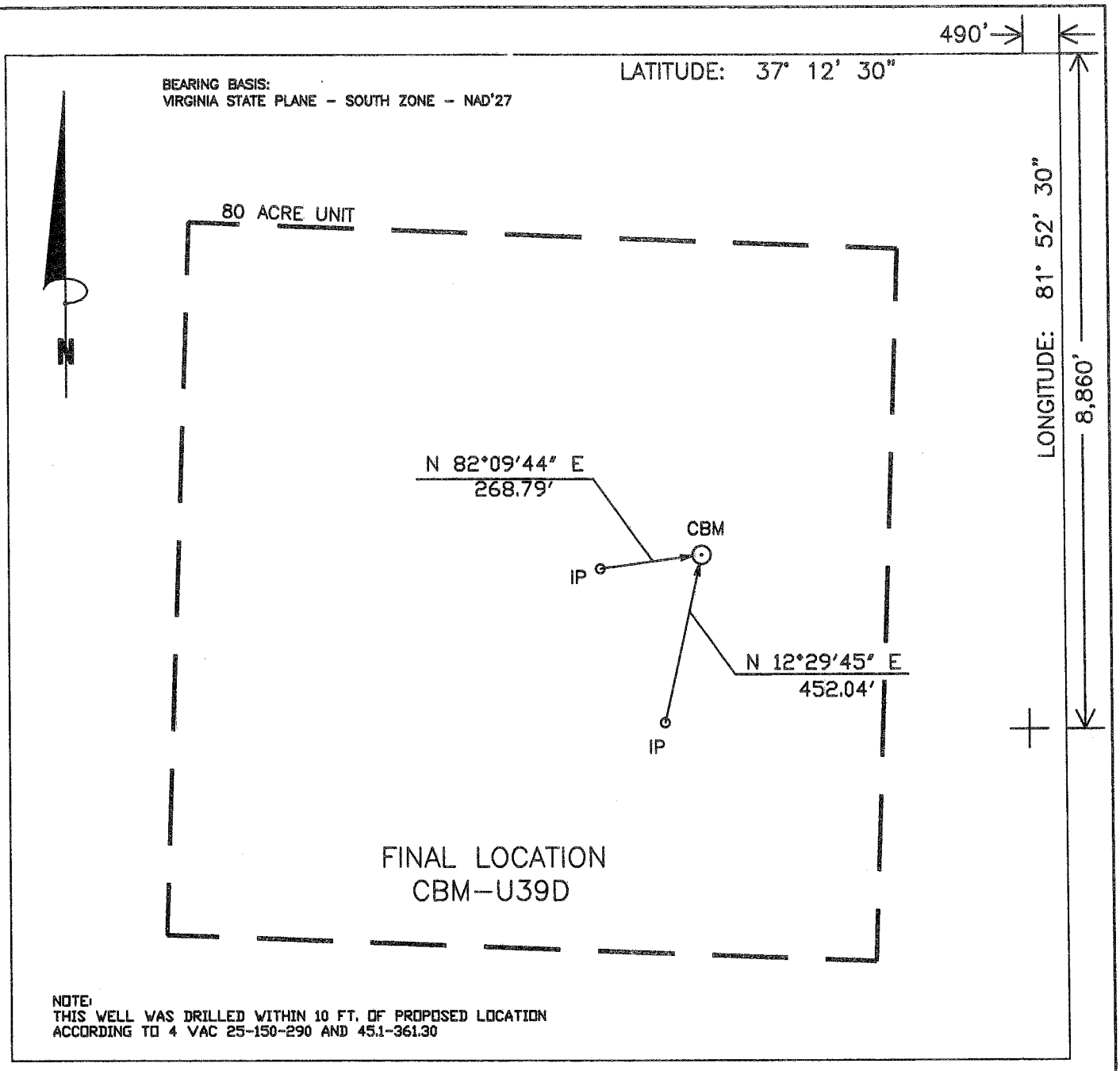
Signed By: Leslie Arrington Title: Director Environmental Permitting

## INTERNAL USE ONLY

Submit Date: 11/21/2008

Status: A Date: 11/26/2008

Final PDF Date: 12/18/2008




U39DFNL
2N30/190-667/34

# WELL LOCATION PLAT

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-U39D

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 327,595.85 E 1,016,527.72

ELEVATION: 2147.12' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 05-13-08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
5-13-08
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 10/96

U39D.CMP
Exhibit A

Well Name: 08 CBM U39D
SURFACE ELEV: 2147.12 EASTING: 1016527.72 NORTHING: 317595.85

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 91.10 | 91.70 | 2056.02 | 0.60 | |
| | 91.70 | 122.00 | 2055.42 | 30.30 | |
| JB3 | 122.00 | 124.50 | 2025.12 | 2.50 | |
| | 124.50 | 167.00 | 2022.62 | 42.50 | |
| T2 | 167.00 | 170.20 | 1980.12 | 3.20 | |
| | 170.20 | 234.00 | 1976.92 | 63.80 | |
| T1 | 234.00 | 235.30 | 1913.12 | 1.30 | |
| | 235.30 | 247.00 | 1911.82 | 11.70 | |
| TI | 247.00 | 249.30 | 1900.12 | 2.30 | |
| | 249.30 | 374.90 | 1897.82 | 125.60 | |
| *US1 | 374.90 | 375.50 | 1772.22 | 0.60 | |
| | 375.50 | 454.00 | 1771.62 | 78.50 | |
| *COAL | 454.00 | 454.60 | 1693.12 | 0.60 | |
| | 454.60 | 486.60 | 1692.52 | 32.00 | |
| *US2 | 486.60 | 487.20 | 1660.52 | 0.60 | |
| | 487.20 | 614.80 | 1659.92 | 127.60 | |
| *GC2 | 614.80 | 615.50 | 1532.32 | 0.70 | |
| | 615.50 | 673.20 | 1531.62 | 57.70 | |
| *SE1 | 673.20 | 674.30 | 1473.92 | 1.10 | |
| | 674.30 | 712.90 | 1472.82 | 38.60 | |
| *SE2 | 712.90 | 715.00 | 1434.22 | 2.10 | |
| | 715.00 | 758.00 | 1432.12 | 43.00 | |
| *LS1 | 758.00 | 758.80 | 1389.12 | 0.80 | |
| | 758.80 | 758.80 | 1388.32 | 0.00 | |
| *LS2 | 758.80 | 760.00 | 1388.32 | 1.20 | |
| | 760.00 | 775.70 | 1387.12 | 15.70 | |
| *COAL | 775.70 | 776.60 | 1371.42 | 0.90 | |
| | 776.60 | 806.90 | 1370.52 | 30.30 | |
| *UH1 | 806.90 | 807.00 | 1340.22 | 0.10 | |
| | 807.00 | 864.80 | 1340.12 | 57.80 | |
| *UH3 | 864.80 | 867.00 | 1282.32 | 2.20 | |
| | 867.00 | 921.80 | 1280.12 | 54.80 | |
| *MH1 | 921.80 | 922.90 | 1225.32 | 1.10 | |
| | 922.90 | 987.30 | 1224.22 | 64.40 | |
| *MH2 | 987.30 | 987.80 | 1159.82 | 0.50 | |
| | 987.80 | 1027.70 | 1159.32 | 39.90 | |
| *P11 | 1027.70 | 1030.00 | 1119.42 | 2.30 | |
| | 1030.00 | 1052.50 | 1117.12 | 22.50 | |
| *P10 | 1052.50 | 1053.80 | 1094.62 | 1.30 | |
| | 1053.80 | 1118.00 | 1093.32 | 64.20 | |
| *LH3 | 1118.00 | 1118.80 | 1029.12 | 0.80 | |
| | 1118.80 | 1188.00 | 1028.32 | 69.20 | |
| *P92 | 1188.00 | 1189.70 | 959.12 | 1.70 | |
| | 1189.70 | 1197.30 | 957.42 | 7.60 | |
| *COAL | 1197.30 | 1200.00 | 949.82 | 2.70 | |
| | 1200.00 | 1278.80 | 947.12 | 78.80 | |
| *P82 | 1278.80 | 1280.20 | 868.32 | 1.40 | |
| | 1280.20 | 1355.20 | 866.92 | 75.00 | |
| *P71 | 1355.20 | 1356.60 | 791.92 | 1.40 | |
| | 1356.60 | 1378.60 | 790.52 | 22.00 | |
| *P72 | 1378.60 | 1379.20 | 768.52 | 0.60 | |
| | 1379.20 | 1448.40 | 767.92 | 69.20 | |
| *P61 | 1448.40 | 1448.80 | 698.72 | 0.40 | |
| | 1448.80 | 1484.80 | 698.32 | 36.00 | |
| *P51 | 1484.80 | 1485.80 | 662.32 | 1.00 | |
| | 1485.80 | 1580.10 | 661.32 | 94.30 | |

| | | | | |
|---|---|---|---|---|
| *P41 | 1580.10 | 1581.00 | 567.02 | 0.90 |
| | 1581.00 | 1654.31 | 566.12 | 73.31 |

AMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U39D.CMP
DATE: 07/16/08

Well: **U39D**

## Oil & Gas Show

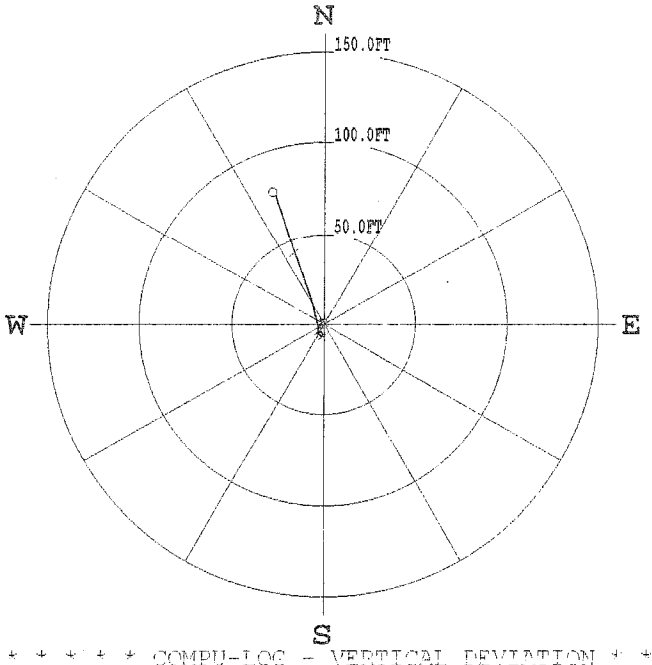
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 673.2 | 1280.2 | 607.0 | | | |
| Pocahontas | 1355.2 | 1485.8 | 130.6 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: Consol Energy
LOCATION:
HOLE ID: 08-CNX-U-39-D
DATE OF LOG: 05/20/08
PROBE: 9136CA 956

MAG DECL: -6.9

SCALE: 50 FT/IN
TRUE DEPTH: 1642.04 FT
AZIMUTH: 338.9
DISTANCE: 78.2 FT
+ = 300 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 08-CNX-U-39-D
DATE OF LOG : 05/20/08
PROBE : 9136CA , 956
DEPTH UNITS : FEET
LOG: 08-CNX-U-39-D_05-20-08_03-17_9136CA_.02_-0.02_1651.84_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | 0.90 | -0.00 | 0.9 | 359.8 | 1.5 | 14.5 |
| 60.0 | 59.98 | 1.15 | -0.02 | 1.2 | 359.2 | 1.4 | 336.5 |
| 70.0 | 69.98 | 1.39 | -0.08 | 1.4 | 356.7 | 1.5 | 328.5 |
| 80.0 | 79.98 | 1.63 | -0.20 | 1.6 | 352.9 | 1.4 | 330.2 |
| 90.0 | 89.97 | 1.83 | -0.35 | 1.9 | 349.1 | 1.4 | 329.7 |
| 100.0 | 99.97 | 2.06 | -0.46 | 2.1 | 347.3 | 1.5 | 339.8 |
| 110.0 | 109.97 | 2.29 | -0.55 | 2.4 | 346.5 | 1.4 | 326.8 |
| 120.0 | 119.96 | 2.44 | -0.75 | 2.6 | 342.9 | 1.5 | 285.9 |
| 130.0 | 129.96 | 2.49 | -1.00 | 2.7 | 338.1 | 1.7 | 277.5 |
| 140.0 | 139.96 | 2.50 | -1.26 | 2.8 | 333.3 | 1.5 | 271.2 |
| 150.0 | 149.95 | 2.43 | -1.51 | 2.9 | 328.2 | 1.5 | 240.1 |
| 160.0 | 159.95 | 2.33 | -1.75 | 2.9 | 323.1 | 1.5 | 241.9 |
| 170.0 | 169.95 | 2.18 | -1.96 | 2.9 | 318.0 | 1.5 | 224.0 |
| 180.0 | 179.94 | 1.96 | -2.10 | 2.9 | 312.9 | 1.5 | 211.0 |
| 190.0 | 189.94 | 1.72 | -2.20 | 2.8 | 308.0 | 1.5 | 215.1 |
| 200.0 | 199.94 | 1.47 | -2.27 | 2.7 | 302.8 | 1.5 | 186.0 |
| 210.0 | 209.93 | 1.21 | -2.32 | 2.6 | 297.6 | 1.5 | 179.4 |
| 220.0 | 219.93 | 1.06 | -2.18 | 2.4 | 295.9 | 1.5 | 118.2 |
| 230.0 | 229.93 | 1.02 | -2.11 | 2.3 | 295.7 | 1.5 | 157.5 |
| 240.0 | 239.92 | 1.08 | -2.08 | 2.3 | 297.4 | 1.5 | 15.4 |
| 250.0 | 249.92 | 1.32 | -1.99 | 2.4 | 303.6 | 1.5 | 26.1 |
| 260.0 | 259.92 | 1.55 | -1.88 | 2.4 | 309.5 | 1.5 | 29.8 |
| 270.0 | 269.91 | 1.70 | -1.69 | 2.4 | 315.2 | 1.5 | 68.9 |
| 280.0 | 279.91 | 1.73 | -1.45 | 2.3 | 320.0 | 1.4 | 88.9 |
| 290.0 | 289.91 | 1.69 | -1.22 | 2.1 | 324.2 | 1.4 | 119.9 |
| 300.0 | 299.90 | 1.50 | -1.04 | 1.8 | 325.4 | 1.6 | 135.9 |
| 310.0 | 309.90 | 1.27 | -0.90 | 1.6 | 324.6 | 1.6 | 160.0 |
| 320.0 | 319.89 | 0.98 | -0.84 | 1.3 | 319.5 | 1.7 | 169.8 |
| 330.0 | 329.89 | 0.72 | -0.93 | 1.2 | 307.7 | 1.7 | 234.6 |
| 340.0 | 339.89 | 0.62 | -1.21 | 1.4 | 297.2 | 1.7 | 240.7 |
| 350.0 | 349.88 | 0.49 | -1.15 | 1.2 | 293.0 | 1.8 | 210.0 |
| 360.0 | 359.88 | 0.21 | -1.28 | 1.3 | 279.2 | 1.7 | 196.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 220.0 | 219.93 | 1.06 | -2.18 | 2.4 | 295.9 | 1.5 | 118.2 |
| 230.0 | 229.93 | 1.02 | -2.11 | 2.3 | 295.7 | 1.5 | 157.5 |
| 240.0 | 239.92 | 1.08 | -2.08 | 2.3 | 297.4 | 1.5 | 15.4 |
| 250.0 | 249.92 | 1.32 | -1.99 | 2.4 | 303.6 | 1.5 | 26.1 |
| 260.0 | 259.92 | 1.55 | -1.88 | 2.4 | 309.5 | 1.5 | 29.8 |
| 270.0 | 269.91 | 1.70 | -1.69 | 2.4 | 315.2 | 1.5 | 68.9 |
| 280.0 | 279.91 | 1.73 | -1.45 | 2.3 | 320.0 | 1.4 | 88.9 |
| 290.0 | 289.91 | 1.69 | -1.22 | 2.1 | 324.2 | 1.4 | 119.9 |
| 300.0 | 299.90 | 1.50 | -1.04 | 1.8 | 325.4 | 1.6 | 135.9 |
| 310.0 | 309.90 | 1.27 | -0.90 | 1.6 | 324.6 | 1.6 | 160.0 |
| 320.0 | 319.89 | 0.98 | -0.84 | 1.3 | 319.5 | 1.7 | 169.8 |
| 330.0 | 329.89 | 0.72 | -0.93 | 1.2 | 307.7 | 1.7 | 234.6 |
| 340.0 | 339.89 | 0.62 | -1.21 | 1.4 | 297.2 | 1.7 | 240.7 |
| 350.0 | 349.88 | 0.49 | -1.15 | 1.2 | 293.0 | 1.8 | 210.0 |
| 360.0 | 359.88 | 0.21 | -1.28 | 1.3 | 279.2 | 1.7 | 196.1 |
| 370.0 | 369.87 | -0.06 | -1.34 | 1.3 | 267.2 | 1.7 | 190.1 |
| 380.0 | 379.87 | -0.37 | -1.41 | 1.5 | 255.3 | 1.9 | 196.6 |
| 390.0 | 389.86 | -0.66 | -1.51 | 1.7 | 246.5 | 1.8 | 205.5 |
| 400.0 | 399.86 | -0.86 | -1.72 | 1.9 | 243.4 | 1.5 | 257.0 |
| 410.0 | 409.85 | -0.86 | -1.99 | 2.2 | 246.5 | 1.5 | 267.8 |
| 420.0 | 419.85 | -0.97 | -2.23 | 2.4 | 246.4 | 1.7 | 221.4 |
| 430.0 | 429.85 | -1.16 | -2.46 | 2.7 | 244.7 | 1.7 | 244.3 |
| 440.0 | 439.84 | -1.31 | -2.70 | 3.0 | 244.1 | 1.7 | 230.1 |
| 450.0 | 449.84 | -1.54 | -2.88 | 3.3 | 241.8 | 1.7 | 204.4 |
| 460.0 | 459.83 | -1.83 | -3.00 | 3.5 | 238.6 | 1.8 | 206.4 |
| 470.0 | 469.83 | -2.12 | -3.11 | 3.8 | 235.7 | 1.7 | 182.5 |
| 480.0 | 479.82 | -2.45 | -3.17 | 4.0 | 232.3 | 2.1 | 189.5 |
| 490.0 | 489.82 | -2.77 | -3.16 | 4.2 | 228.7 | 1.7 | 175.6 |
| 500.0 | 499.81 | -3.04 | -3.05 | 4.3 | 225.1 | 1.7 | 151.6 |
| 510.0 | 509.81 | -3.28 | -2.90 | 4.4 | 221.5 | 1.5 | 137.8 |
| 520.0 | 519.81 | -3.46 | -2.71 | 4.4 | 218.1 | 1.5 | 129.8 |
| 530.0 | 529.80 | -3.56 | -2.49 | 4.3 | 215.0 | 1.3 | 104.9 |
| 540.0 | 539.80 | -3.57 | -2.26 | 4.2 | 212.3 | 1.3 | 73.2 |
| 550.0 | 549.80 | -3.47 | -2.06 | 4.0 | 210.7 | 1.2 | 51.3 |
| 560.0 | 559.80 | -3.30 | -1.94 | 3.8 | 210.4 | 1.2 | 43.9 |
| 570.0 | 569.79 | -3.13 | -1.81 | 3.6 | 209.9 | 1.1 | 22.1 |
| 580.0 | 579.79 | -2.94 | -1.73 | 3.4 | 210.5 | 1.3 | 30.4 |
| 590.0 | 589.79 | -2.73 | -1.71 | 3.2 | 212.1 | 1.3 | 343.3 |
| 600.0 | 599.79 | -2.54 | -1.85 | 3.1 | 216.1 | 1.5 | 299.5 |
| 610.0 | 609.78 | -2.42 | -2.07 | 3.2 | 220.5 | 1.4 | 296.8 |
| 620.0 | 619.78 | -2.24 | -2.21 | 3.1 | 224.5 | 1.3 | 346.3 |
| 630.0 | 629.78 | -2.03 | -2.31 | 3.1 | 228.6 | 1.4 | 310.8 |
| 640.0 | 639.77 | -2.00 | -2.54 | 3.2 | 231.9 | 1.5 | 267.6 |
| 650.0 | 649.77 | -1.97 | -2.80 | 3.4 | 234.9 | 1.5 | 255.8 |
| 660.0 | 659.77 | -2.08 | -3.04 | 3.7 | 235.6 | 1.6 | 237.6 |
| 670.0 | 669.76 | -2.25 | -3.26 | 4.0 | 235.3 | 1.7 | 219.7 |
| 680.0 | 679.76 | -2.52 | -3.38 | 4.2 | 233.3 | 1.7 | 193.6 |
| 690.0 | 689.75 | -2.80 | -3.35 | 4.4 | 230.1 | 1.6 | 145.0 |
| 700.0 | 699.75 | -2.97 | -3.13 | 4.3 | 226.5 | 1.6 | 117.1 |
| 710.0 | 709.75 | -3.13 | -2.91 | 4.3 | 222.9 | 1.6 | 115.3 |
| 720.0 | 719.74 | -3.05 | -2.73 | 4.1 | 221.9 | 1.2 | 11.7 |
| 730.0 | 729.74 | -2.91 | -2.84 | 4.1 | 224.3 | 1.3 | 288.0 |
| 740.0 | 739.74 | -2.92 | -3.07 | 4.2 | 226.4 | 1.4 | 256.6 |
| 750.0 | 749.73 | -3.11 | -3.24 | 4.5 | 226.1 | 1.5 | 205.7 |
| 760.0 | 759.73 | -3.36 | -3.32 | 4.7 | 224.7 | 1.6 | 172.7 |
| 770.0 | 769.73 | -3.63 | -3.23 | 4.9 | 221.7 | 1.7 | 157.4 |
| 780.0 | 779.72 | -3.84 | -3.03 | 4.9 | 218.3 | 2.0 | 136.4 |
| 790.0 | 789.72 | -4.01 | -2.79 | 4.9 | 214.8 | 1.7 | 129.8 |
| 800.0 | 799.71 | -4.09 | -2.53 | 4.8 | 211.7 | 1.2 | 59.2 |
| 810.0 | 809.71 | -3.93 | -2.39 | 4.6 | 211.3 | 1.2 | 44.7 |
| 820.0 | 819.71 | -3.80 | -2.23 | 4.4 | 210.4 | 1.4 | 75.3 |
| 830.0 | 829.71 | -3.76 | -1.98 | 4.3 | 207.8 | 1.5 | 87.2 |
| 840.0 | 839.70 | -3.63 | -1.84 | 4.1 | 206.9 | 1.0 | 351.3 |
| 850.0 | 849.70 | -3.44 | -1.83 | 3.9 | 207.9 | 1.2 | 357.6 |
| 860.0 | 859.70 | -3.34 | -1.96 | 3.9 | 210.5 | 1.2 | 275.5 |
| 870.0 | 869.70 | -3.30 | -2.17 | 4.0 | 213.3 | 1.2 | 272.2 |
| 880.0 | 879.70 | -3.30 | -2.38 | 4.1 | 215.8 | 1.3 | 248.2 |
| 890.0 | 889.69 | -3.41 | -2.58 | 4.3 | 217.0 | 1.5 | 215.9 |
| 900.0 | 899.69 | -3.63 | -2.72 | 4.5 | 216.8 | 1.5 | 207.6 |
| 910.0 | 909.69 | -3.91 | -2.78 | 4.8 | 215.4 | 1.5 | 204.2 |
| 920.0 | 919.68 | -4.14 | -2.91 | 5.1 | 215.1 | 1.5 | 221.6 |
| 930.0 | 929.68 | -4.36 | -3.06 | 5.3 | 215.1 | 1.6 | 204.6 |
| 940.0 | 939.67 | -4.61 | -3.16 | 5.6 | 214.4 | 1.6 | 195.1 |
| 950.0 | 949.67 | -4.87 | -3.25 | 5.9 | 213.7 | 1.5 | 204.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 870.0 | 869.70 | -3.30 | -2.17 | 4.0 | 213.3 | 1.2 | 272.2 |
| 880.0 | 879.70 | -3.30 | -2.38 | 4.1 | 215.8 | 1.3 | 248.2 |
| 890.0 | 889.69 | -3.41 | -2.58 | 4.3 | 217.0 | 1.5 | 215.9 |
| 900.0 | 899.69 | -3.63 | -2.72 | 4.5 | 216.8 | 1.5 | 207.6 |
| 910.0 | 909.69 | -3.91 | -2.78 | 4.8 | 215.4 | 1.5 | 204.2 |
| 920.0 | 919.68 | -4.14 | -2.91 | 5.1 | 215.1 | 1.5 | 221.6 |
| 930.0 | 929.68 | -4.36 | -3.06 | 5.3 | 215.1 | 1.6 | 204.6 |
| 940.0 | 939.67 | -4.61 | -3.16 | 5.6 | 214.4 | 1.6 | 195.1 |
| 950.0 | 949.67 | -4.87 | -3.25 | 5.9 | 213.7 | 1.5 | 204.5 |
| 960.0 | 959.67 | -5.14 | -3.31 | 6.1 | 212.8 | 1.7 | 170.7 |
| 970.0 | 969.66 | -5.43 | -3.25 | 6.3 | 210.9 | 1.7 | 165.3 |
| 980.0 | 979.66 | -5.67 | -3.06 | 6.4 | 208.4 | 1.6 | 126.4 |
| 990.0 | 989.65 | -5.87 | -2.83 | 6.5 | 205.7 | 1.9 | 148.9 |
| 1000.0 | 999.65 | -6.14 | -2.63 | 6.7 | 203.2 | 1.9 | 137.6 |
| 1010.0 | 1009.64 | -6.34 | -2.39 | 6.8 | 200.7 | 1.8 | 144.1 |
| 1020.0 | 1019.64 | -6.57 | -2.16 | 6.9 | 198.2 | 1.9 | 131.2 |
| 1030.0 | 1029.63 | -6.66 | -1.87 | 6.9 | 195.7 | 1.8 | 111.7 |
| 1040.0 | 1039.63 | -6.86 | -1.59 | 7.0 | 193.1 | 2.0 | 126.8 |
| 1050.0 | 1049.62 | -6.99 | -1.28 | 7.1 | 190.4 | 2.0 | 112.3 |
| 1060.0 | 1059.61 | -7.08 | -0.97 | 7.1 | 187.8 | 2.0 | 115.2 |
| 1070.0 | 1069.61 | -7.17 | -0.65 | 7.2 | 185.2 | 1.8 | 88.1 |
| 1080.0 | 1079.60 | -7.15 | -0.34 | 7.2 | 182.7 | 1.8 | 90.7 |
| 1090.0 | 1089.60 | -7.08 | -0.07 | 7.1 | 180.5 | 1.6 | 70.0 |
| 1100.0 | 1099.60 | -6.93 | 0.05 | 6.9 | 179.6 | 1.1 | 17.6 |
| 1110.0 | 1109.60 | -6.76 | 0.06 | 6.8 | 179.5 | 0.7 | 311.9 |
| 1120.0 | 1119.59 | -6.63 | -0.00 | 6.6 | 180.0 | 0.9 | 321.4 |
| 1130.0 | 1129.59 | -6.54 | -0.11 | 6.5 | 181.0 | 0.9 | 286.9 |
| 1140.0 | 1139.59 | -6.40 | -0.21 | 6.4 | 181.8 | 1.1 | 313.7 |
| 1150.0 | 1149.59 | -6.41 | -0.34 | 6.4 | 183.1 | 0.8 | 287.3 |
| 1160.0 | 1159.59 | -6.40 | -0.51 | 6.4 | 184.6 | 1.0 | 258.8 |
| 1170.0 | 1169.59 | -6.49 | -0.67 | 6.5 | 185.9 | 0.8 | 258.9 |
| 1180.0 | 1179.59 | -6.61 | -0.83 | 6.7 | 187.2 | 1.4 | 213.8 |
| 1190.0 | 1189.58 | -6.54 | -0.59 | 6.6 | 185.2 | 1.5 | 28.3 |
| 1200.0 | 1199.58 | -6.37 | -0.45 | 6.4 | 184.0 | 1.0 | 24.2 |
| 1210.0 | 1209.58 | -6.22 | -0.37 | 6.2 | 183.4 | 1.0 | 28.3 |
| 1220.0 | 1219.58 | -6.06 | -0.32 | 6.1 | 183.0 | 0.9 | 342.6 |
| 1230.0 | 1229.57 | -5.95 | -0.47 | 6.0 | 184.5 | 2.0 | 314.2 |
| 1240.0 | 1239.57 | -5.69 | -0.71 | 5.7 | 187.1 | 2.3 | 321.1 |
| 1250.0 | 1249.55 | -5.27 | -1.04 | 5.4 | 191.1 | 3.3 | 322.2 |
| 1260.0 | 1259.53 | -4.68 | -1.45 | 4.9 | 197.2 | 4.7 | 325.4 |
| 1270.0 | 1269.49 | -3.91 | -1.92 | 4.4 | 206.2 | 5.3 | 331.2 |
| 1280.0 | 1279.43 | -2.98 | -2.47 | 3.9 | 219.7 | 6.4 | 326.9 |
| 1290.0 | 1289.35 | -1.90 | -3.07 | 3.6 | 238.2 | 7.4 | 341.2 |
| 1300.0 | 1299.27 | -0.70 | -3.50 | 3.6 | 258.7 | 7.3 | 343.3 |
| 1310.0 | 1309.18 | 0.52 | -3.89 | 3.9 | 277.6 | 7.5 | 344.2 |
| 1320.0 | 1319.09 | 1.85 | -4.18 | 4.6 | 293.9 | 8.0 | 345.6 |
| 1330.0 | 1328.97 | 3.35 | -4.52 | 5.6 | 306.5 | 9.2 | 347.9 |
| 1340.0 | 1338.82 | 5.02 | -4.91 | 7.0 | 315.6 | 10.2 | 349.7 |
| 1350.0 | 1348.65 | 6.64 | -5.22 | 8.4 | 321.8 | 11.4 | 340.8 |
| 1360.0 | 1358.46 | 8.52 | -5.73 | 10.3 | 326.1 | 11.5 | 347.1 |
| 1370.0 | 1368.25 | 10.48 | -6.22 | 12.2 | 329.3 | 11.6 | 342.7 |
| 1380.0 | 1378.03 | 12.48 | -6.76 | 14.2 | 331.6 | 12.6 | 342.1 |
| 1390.0 | 1387.79 | 14.60 | -7.35 | 16.3 | 333.3 | 13.2 | 351.2 |
| 1400.0 | 1397.51 | 16.78 | -8.19 | 18.7 | 334.0 | 13.0 | 339.9 |
| 1410.0 | 1407.25 | 18.94 | -8.90 | 20.9 | 334.8 | 13.3 | 342.7 |
| 1420.0 | 1416.98 | 21.13 | -9.62 | 23.2 | 335.5 | 13.4 | 341.1 |
| 1430.0 | 1426.71 | 23.32 | -10.35 | 25.5 | 336.1 | 13.4 | 340.4 |
| 1440.0 | 1436.43 | 25.52 | -11.10 | 27.8 | 336.5 | 13.5 | 340.8 |
| 1450.0 | 1446.16 | 27.71 | -11.88 | 30.2 | 336.8 | 13.4 | 341.6 |
| 1460.0 | 1455.88 | 29.93 | -12.62 | 32.5 | 337.1 | 13.6 | 341.1 |
| 1470.0 | 1465.60 | 32.15 | -13.38 | 34.8 | 337.4 | 13.4 | 340.1 |
| 1480.0 | 1475.33 | 34.35 | -14.17 | 37.2 | 337.6 | 13.5 | 341.0 |
| 1490.0 | 1485.05 | 36.57 | -14.92 | 39.5 | 337.8 | 13.5 | 340.4 |
| 1500.0 | 1494.77 | 38.78 | -15.69 | 41.8 | 338.0 | 13.7 | 341.1 |
| 1510.0 | 1504.49 | 41.02 | -16.45 | 44.2 | 338.2 | 13.7 | 341.4 |
| 1520.0 | 1514.20 | 43.26 | -17.22 | 46.6 | 338.3 | 13.7 | 340.8 |
| 1530.0 | 1523.91 | 45.51 | -17.99 | 48.9 | 338.4 | 13.8 | 340.0 |
| 1540.0 | 1533.62 | 47.75 | -18.81 | 51.3 | 338.5 | 13.7 | 339.8 |
| 1550.0 | 1543.33 | 50.01 | -19.59 | 53.7 | 338.6 | 13.9 | 342.6 |
| 1560.0 | 1553.04 | 52.30 | -20.34 | 56.1 | 338.7 | 14.0 | 340.7 |
| 1570.0 | 1562.74 | 54.58 | -21.13 | 58.5 | 338.8 | 13.9 | 341.3 |
| 1580.0 | 1572.44 | 56.88 | -21.89 | 61.0 | 339.0 | 14.1 | 342.5 |
| 1590.0 | 1582.14 | 59.19 | -22.69 | 63.4 | 339.0 | 14.2 | 342.2 |
| 1600.0 | 1591.84 | 61.53 | -23.45 | 65.8 | 339.1 | 14.3 | 340.4 |

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|---|---|---|---|---|---|---|---|
| 1480.0 | 1475.33 | 34.35 | -14.17 | 37.2 | 337.6 | 13.5 | 341.0 |
| 1490.0 | 1485.05 | 36.57 | -14.92 | 39.5 | 337.8 | 13.5 | 340.4 |
| 1500.0 | 1494.77 | 38.78 | -15.69 | 41.8 | 338.0 | 13.7 | 341.1 |
| 1510.0 | 1504.49 | 41.02 | -16.45 | 44.2 | 338.2 | 13.7 | 341.4 |
| 1520.0 | 1514.20 | 43.26 | -17.22 | 46.6 | 338.3 | 13.7 | 340.8 |
| 1530.0 | 1523.91 | 45.51 | -17.99 | 48.9 | 338.4 | 13.8 | 340.0 |
| 1540.0 | 1533.62 | 47.75 | -18.81 | 51.3 | 338.5 | 13.7 | 339.8 |
| 1550.0 | 1543.33 | 50.01 | -19.59 | 53.7 | 338.6 | 13.9 | 342.6 |
| 1560.0 | 1553.04 | 52.30 | -20.34 | 56.1 | 338.7 | 14.0 | 340.7 |
| 1570.0 | 1562.74 | 54.58 | -21.13 | 58.5 | 338.8 | 13.9 | 341.3 |
| 1580.0 | 1572.44 | 56.88 | -21.89 | 61.0 | 339.0 | 14.1 | 342.5 |
| 1590.0 | 1582.14 | 59.19 | -22.69 | 63.4 | 339.0 | 14.2 | 342.2 |
| 1600.0 | 1591.84 | 61.53 | -23.45 | 65.8 | 339.1 | 14.3 | 340.4 |
| 1610.0 | 1601.53 | 63.87 | -24.23 | 68.3 | 339.2 | 14.3 | 340.2 |
| 1620.0 | 1611.21 | 66.22 | -25.00 | 70.8 | 339.3 | 14.4 | 342.2 |
| 1630.0 | 1620.90 | 68.60 | -25.76 | 73.3 | 339.4 | 14.4 | 342.7 |
| 1640.0 | 1630.59 | 70.99 | -26.49 | 75.9 | 339.5 | 14.7 | 342.5 |
| 1650.0 | 1640.26 | 72.87 | -27.71 | 78.0 | 339.2 | 14.6 | 280.9 |
| 1651.8 | 1642.04 | 72.96 | -28.16 | 78.2 | 338.9 | 14.5 | 282.9 |

Well: **U39D**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 10 | 24" | | | X | 5/12/08 | |
| Surface | 16" | 249.9 | 20" | 331.35 | X | | 5/13/08 | Bskt@126.3 |
| Water Protection | 13 3/8" | 334.95 | 15 3/8" | 141 | X | | 5/14/08 | Bskt@167.55 |
| Coal Protection | 13 3/8" | 334.95 | 15 3/8" | 141 | X | | 5/14/08 | |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CONSOL

HOLE U39D

RIG #: 148

LOCATION:

DATE STARTED: 5/9/2008

DATE COMPLETED: 5/20/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 10 | 10 | OVERBURDEN |
| 10 | 37 | 27 | SAND/SHALE |
| 37 | 66.47 | 29.47 | SANDY SHALE/SAND |
| 66.47 | 96.72 | 30.25 | SAND |
| 96.72 | 125.62 | 28.9 | SAND/SANDY SHALE |
| 125.62 | 154.57 | 28.95 | SANDY SHALE/SAND |
| 154.57 | 184.77 | 30.2 | SAND/COAL/SANDY SHALE |
| 184.77 | 215.02 | 30.25 | SAND |
| 215.02 | 242.02 | 27 | SAND/SHALE |
| 242.02 | 246.72 | 4.7 | SANDY SHALE/SAND |
| 246.72 | 278.27 | 31.55 | SAND/SANDY SHALE |
| 278.27 | 309.97 | 31.7 | SAND/SHALE |
| 309.97 | 341.72 | 31.75 | SAND/SHALE/COAL |
| 341.72 | 356 | 14.28 | SAND/SHALE |
| 356 | 368.42 | 12.42 | SAND/SHALE |
| 368.42 | 400.17 | 31.75 | SAND/SHALE/COAL |
| 400.17 | 431.62 | 31.45 | SAND/SHALE |
| 431.62 | 463.31 | 31.69 | SAND/SHALE/COAL |
| 463.31 | 494.86 | 31.55 | SAND/SHALE/COAL |
| 494.86 | 526.64 | 31.78 | SAND/SHALE |
| 526.64 | 558.29 | 31.65 | SAND/SHALE/COAL |
| 558.29 | 589.88 | 31.59 | SAND/SHALE |
| 589.88 | 621.4 | 31.52 | SAND/SHALE/COAL |
| 621.4 | 653.19 | 31.79 | SAND/SHALE |
| 653.19 | 684.88 | 31.69 | SAND/SHALE/COAL |
| 684.88 | 716.63 | 31.75 | SAND/SHALE |
| 716.63 | 748.06 | 31.43 | SAND/SHALE/COAL |
| 748.06 | 779.73 | 31.67 | SAND/SHALE/COAL |
| 779.73 | 811.46 | 31.73 | SAND/SHALE/COAL |
| 811.46 | 843.19 | 31.73 | SAND/SHALE |
| 843.19 | 874.83 | 31.64 | SAND/SHALE/COAL |
| 874.83 | 906.47 | 31.64 | SAND/SHALE |
| 906.47 | 938.07 | 31.6 | SAND/SHALE/COAL |
| 938.07 | 969.77 | 31.7 | SAND/SHALE |

| | | | |
|---|---|---|---|
| 969.77 | 999.38 | 29.61 | SAND/SHALE |
| 999.38 | 1030.94 | 31.56 | SAND/SHALE/COAL |
| 1030.94 | 1062.17 | 31.23 | SAND/SHALE/COAL |
| 1062.17 | 1093.81 | 31.64 | SAND/SHALE |
| 1093.81 | 1125.5 | 31.69 | SAND/SHALE/COAL |
| 1125.5 | 1157 | 31.5 | SAND/SHALE |
| 1157 | 1188.45 | 31.45 | SANDY SHALE/SAND |
| 1188.45 | 1200.45 | 12 | SANDY SHALE |
| 1200.45 | 1224.03 | 23.58 | SAND/SHALE/COAL |
| 1224.03 | 1255.71 | 31.68 | SAND/SHALE |
| 1255.71 | 1287.36 | 31.65 | SAND/SHALE |
| 1287.36 | 1319.06 | 31.7 | SAND/SHALE |
| 1319.06 | 1350.76 | 31.7 | SAND/SHALE/COAL |
| 1350.76 | 1382.23 | 31.47 | SAND/SHALE/COAL |
| 1382.23 | 1397.23 | 15 | SANDY SHALE/SAND |
| 1397.23 | 1418.08 | 20.85 | SAND/SHALE/COAL |
| 1418.08 | 1449.97 | 31.89 | SAND/SHALE |
| 1449.97 | 1481.75 | 31.78 | SANDY SHALE/SAND |
| 1481.75 | 1513.42 | 31.67 | SAND/SANDY SHALE |
| 1513.42 | 1545.12 | 31.7 | SANDY SHALE/SAND |
| 1545.12 | 1576.76 | 31.64 | SAND |
| 1576.76 | 1608.06 | 31.3 | SAND |
| 1608.06 | 1639.87 | 31.81 | SAND |
| 1639.87 | 1653.87 | 14 | SAND |

1653.87' TOTAL DEPTH
10' OF 22" CASING
249.9' OF 16" CASING
336.95' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1766 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3634 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 6/5/2008 |
| **Driller's Total Depth:** | 1958.00 | **Log's Total Depth:** | 1966.20 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 4/30/2009 *(Company)*

By: Jerry Boothe Title: Manager *(Signature)*

## INTERNAL USE ONLY

Submit Date: 4/30/2009

Status: Date: 5/19/2009

Final PDF Date: 5/20/2009

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1816 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3634 |
| **Operations Name:** | CBM U39E W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 5/27/2008

Drilling Contractor: NOAH HORN

Date drilling completed: 6/5/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1958.00

Log Total Depth (feet): 1966.18

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10499854.2100

Permitted State Plane Y: 3609031.1800

Final Plat State Plane X: 10499860.0620

Final Plat State Plane Y: 3609035.3040

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| PLAT | U39E PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| EXHIBIT A | U39E EXH A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS SHOW | U39E Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: CALIPER GAMMA DENSITY TEMP DEVIATON

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| DEVIATION | U39E DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| CASING | U39E Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

Void at 444 ft; 16" casing cemented on backside to surface.

## 8. Drillers Log

Compiled By: NOAH HORN

List of Attached Items:

| Description | |
|---|---|
| DRILL DATA | U39E DRILL DATA.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 4/22/2009

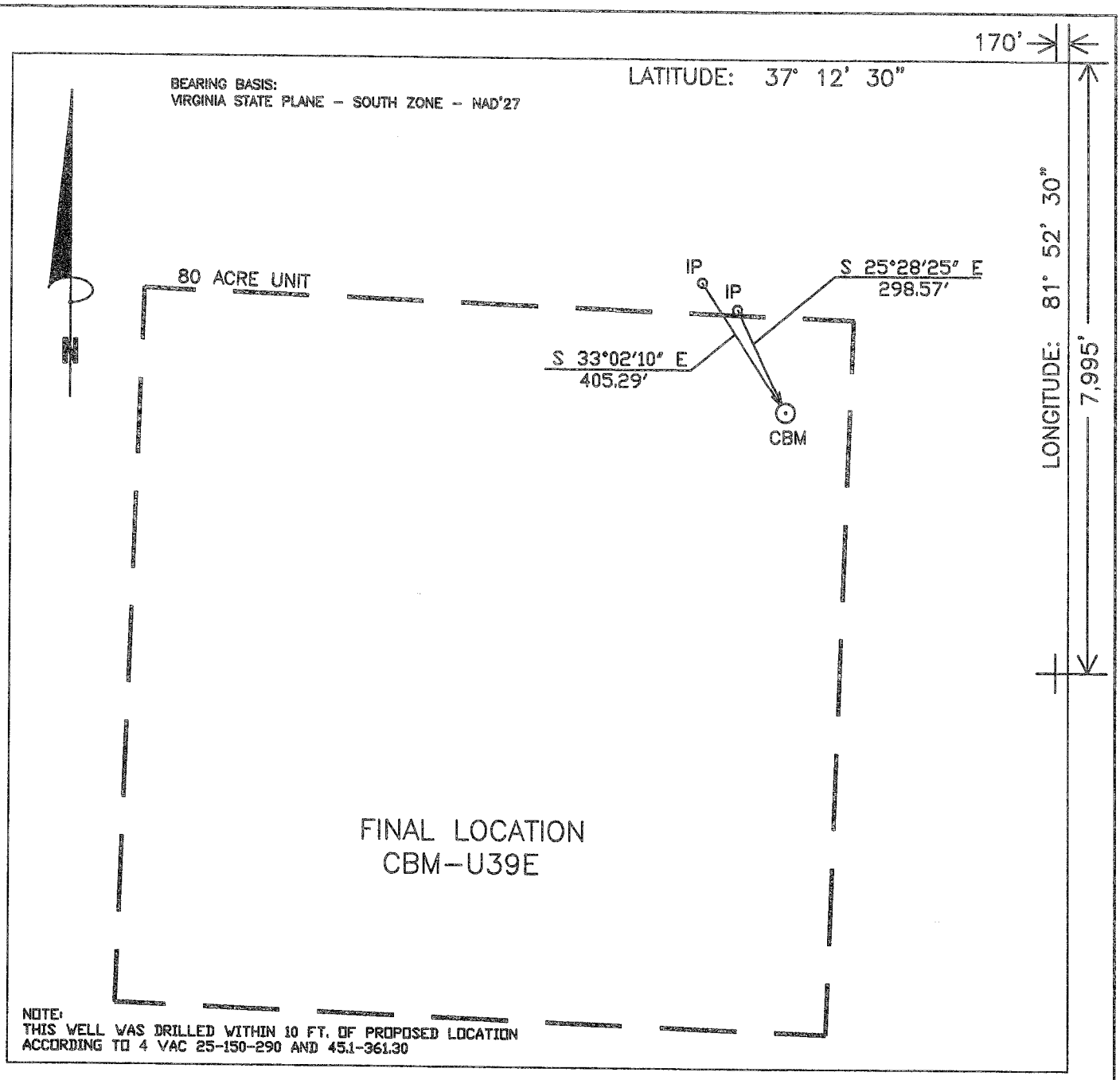
Signed By: Ken Kormendy Title: Supervisor

## INTERNAL USE ONLY

Submit Date: 4/22/2009

Status: A Date: 4/24/2009

Final PDF Date: 5/8/2009




# WELL LOCATION PLAT

U39EFNL
2N31/11–678/13

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–U39E

TRACT NUMBER COAL MOUNTAIN MINING CO QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): N 328,155.70 E 1,016,871.85

ELEVATION: 2422.11' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 05–29–08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price DRP

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
5-29-08
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

U39E.CMP
Exhibit A

Well Name: 08 CBM U39E
SURFACE ELEV: 2422.11 EASTING: 1016871.85 NORTHING: 328155.70

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 92.00 | 94.00 | 2330.11 | 2.00 | |
| | 94.00 | 136.10 | 2328.11 | 42.10 | |
| AL2 | 136.10 | 137.00 | 2286.01 | 0.90 | |
| | 137.00 | 237.00 | 2285.11 | 100.00 | |
| RA1 | 237.00 | 238.00 | 2185.11 | 1.00 | |
| | 238.00 | 241.90 | 2184.11 | 3.90 | |
| COAL | 241.90 | 243.00 | 2180.21 | 1.10 | |
| | 243.00 | 281.90 | 2179.11 | 38.90 | |
| RA2 | 281.90 | 283.80 | 2140.21 | 1.90 | |
| | 283.80 | 315.60 | 2138.31 | 31.80 | |
| RA3 | 315.60 | 316.30 | 2106.51 | 0.70 | |
| | 316.30 | 320.60 | 2105.81 | 4.30 | |
| COAL | 320.60 | 321.60 | 2101.51 | 1.00 | |
| | 321.60 | 330.00 | 2100.51 | 8.40 | |
| COAL | 330.00 | 330.80 | 2092.11 | 0.80 | |
| | 330.80 | 406.00 | 2091.31 | 75.20 | |
| JB1 | 406.00 | 409.90 | 2016.11 | 3.90 | |
| | 409.90 | 453.30 | 2012.21 | 43.40 | |
| JB3 | 453.30 | 457.00 | 1968.81 | 3.70 | |
| | 457.00 | 458.20 | 1965.11 | 1.20 | |
| COAL | 458.20 | 459.70 | 1963.91 | 1.50 | |
| | 459.70 | 529.70 | 1962.41 | 70.00 | |
| TI | 529.70 | 531.00 | 1892.41 | 1.30 | |
| | 531.00 | 533.20 | 1891.11 | 2.20 | |
| COAL | 533.20 | 534.70 | 1888.91 | 1.50 | |
| | 534.70 | 631.00 | 1887.41 | 96.30 | |
| *COAL | 631.00 | 632.00 | 1791.11 | 1.00 | |
| | 632.00 | 653.80 | 1790.11 | 21.80 | |
| *US1 | 653.80 | 654.80 | 1768.31 | 1.00 | |
| | 654.80 | 763.60 | 1767.31 | 108.80 | |
| *US2 | 763.60 | 764.20 | 1658.51 | 0.60 | |
| | 764.20 | 839.10 | 1657.91 | 74.90 | |
| *COAL | 839.10 | 840.40 | 1583.01 | 1.30 | |
| | 840.40 | 934.00 | 1581.71 | 93.60 | |
| *COAL | 934.00 | 935.00 | 1488.11 | 1.00 | |
| | 935.00 | 946.80 | 1487.11 | 11.80 | |
| *SE1 | 946.80 | 947.90 | 1475.31 | 1.10 | |
| | 947.90 | 966.00 | 1474.21 | 18.10 | |
| *COAL | 966.00 | 967.00 | 1456.11 | 1.00 | |
| | 967.00 | 988.00 | 1455.11 | 21.00 | |
| *SE2 | 988.00 | 989.50 | 1434.11 | 1.50 | |
| | 989.50 | 996.10 | 1432.61 | 6.60 | |
| *COAL | 996.10 | 997.00 | 1426.01 | 0.90 | |
| | 997.00 | 1123.90 | 1425.11 | 126.90 | |
| *COAL | 1123.90 | 1124.00 | 1298.21 | 0.10 | |
| | 1124.00 | 1148.80 | 1298.11 | 24.80 | |
| *UH2 | 1148.80 | 1149.10 | 1273.31 | 0.30 | |
| | 1149.10 | 1303.00 | 1273.01 | 153.90 | |
| *P11 | 1303.00 | 1304.20 | 1119.11 | 1.20 | |
| | 1304.20 | 1312.30 | 1117.91 | 8.10 | |
| *P10 | 1312.30 | 1315.00 | 1109.81 | 2.70 | |
| | 1315.00 | 1410.90 | 1107.11 | 95.90 | |
| *LH3 | 1410.90 | 1412.00 | 1011.21 | 1.10 | |
| | 1412.00 | 1490.00 | 1010.11 | 78.00 | |
| *P81 | 1490.00 | 1491.40 | 932.11 | 1.40 | |
| | 1491.40 | 1519.00 | 930.71 | 27.60 | |
| *P71 | 1519.00 | 1519.70 | 903.11 | 0.70 | |

| | | | | |
|---|---|---|---|---|
| | 1519.70 | 1788.10 | 902.41 | 268.40 |
| *P51 | 1788.10 | 1789.20 | 634.01 | 1.10 |
| | 1789.20 | 1882.00 | 632.91 | 92.80 |
| *P42 | 1882.00 | 1883.20 | 540.11 | 1.20 |
| | 1883.20 | 1966.18 | 538.91 | 82.98 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U39E.CMP
DATE: 07/09/08

Well: **U39E**

**Oil & Gas Show**

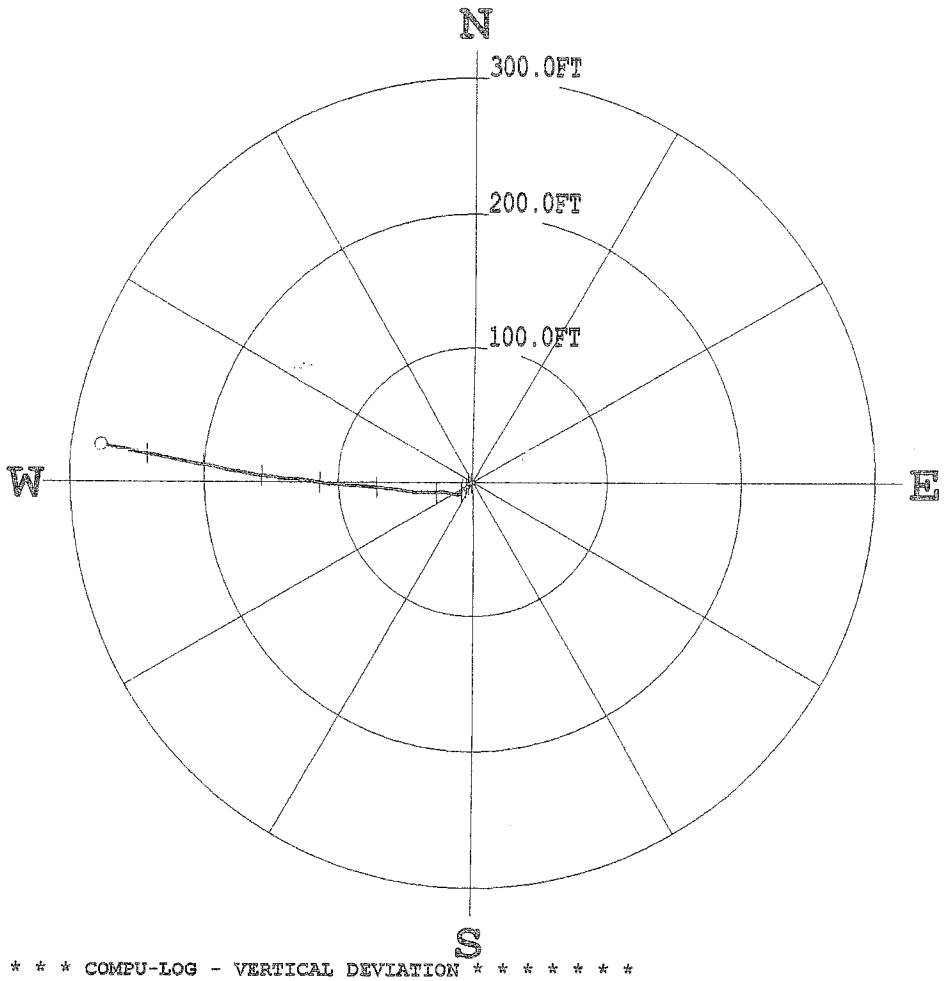
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 631.0 | 1491.4 | 860.4 | | | |
| Pocahontas | 1788.1 | 1883.2 | 95.1 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

LIENT: CNX GAS
)CATION: -
)LE ID: 08-CNX-U-39-E
ATE OF LOG: 06/04/08
ROBE: 0026C 777

MAG DECL: -7.1

SCALE: 100 FT/IN
TRUE DEPTH: 1925.58 FT
AZIMUTH: 275.6
DISTANCE: 277.6 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX GAS
FIELD OFFICE : O'DRISCOLL
DATA FROM : -
MAG. DECL. : -7.100
HOLE ID. : 08-CNX-U-39-E
DATE OF LOG : 06/04/08
PROBE : 0026C , 777
DEPTH UNITS : FEET
LOG: 08-CNX-U-39-E_06-04-08_18-33_0026C_.10_-7.90_1966.00_DEVI.log

| BLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| -1.30 | -1.30 | 0.00 | 0.00 | 0.0 | 0.0 | 0.7 | 34.9 |
| 2.10 | 2.10 | -0.02 | -0.01 | 0.0 | 201.3 | 0.7 | 276.4 |
| 12.10 | 12.10 | -0.02 | 0.08 | 0.1 | 106.4 | 0.6 | 54.4 |
| 22.10 | 22.10 | -0.03 | 0.16 | 0.2 | 99.1 | 0.6 | 245.9 |
| 32.10 | 32.10 | -0.01 | 0.08 | 0.1 | 96.7 | 0.6 | 350.8 |
| 42.10 | 42.10 | 0.09 | 0.13 | 0.2 | 55.9 | 0.6 | 51.3 |
| 52.10 | 52.10 | 0.11 | 0.21 | 0.2 | 62.8 | 0.6 | 61.6 |
| 62.10 | 62.10 | 0.19 | 0.22 | 0.3 | 48.4 | 0.4 | 64.8 |
| 72.10 | 72.10 | 0.15 | 0.28 | 0.3 | 61.2 | 0.5 | 160.5 |
| 82.10 | 82.09 | 0.09 | 0.17 | 0.2 | 62.4 | 1.0 | 276.6 |
| 92.10 | 92.09 | 0.10 | 0.05 | 0.1 | 27.9 | 0.9 | 226.1 |
| 102.10 | 102.09 | 0.10 | -0.07 | 0.1 | 324.3 | 0.8 | 325.6 |
| 112.10 | 112.09 | 0.17 | -0.16 | 0.2 | 317.9 | 0.8 | 292.4 |
| 122.10 | 122.09 | 0.20 | -0.15 | 0.3 | 322.5 | 0.3 | 134.7 |
| 132.10 | 132.09 | 0.26 | -0.14 | 0.3 | 331.9 | 0.4 | 351.6 |
| 142.10 | 142.09 | 0.27 | -0.11 | 0.3 | 337.7 | 0.6 | 146.4 |
| 152.10 | 152.09 | 0.15 | -0.11 | 0.2 | 323.2 | 0.7 | 168.2 |
| 162.10 | 162.09 | 0.05 | -0.11 | 0.1 | 294.0 | 0.8 | 233.9 |
| 172.10 | 172.09 | 0.06 | -0.22 | 0.2 | 284.2 | 0.6 | 310.7 |

| HOLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | DIRECTION | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|
| -1.30 | -1.30 | 0.00 | 0.00 | 0.0 | 0.0 | 0.7 | 34.9 |
| 2.10 | 2.10 | -0.02 | -0.01 | 0.0 | 201.3 | 0.7 | 276.4 |
| 12.10 | 12.10 | -0.02 | 0.08 | 0.1 | 106.4 | 0.6 | 54.4 |
| 22.10 | 22.10 | -0.03 | 0.16 | 0.2 | 99.1 | 0.6 | 245.9 |
| 32.10 | 32.10 | -0.01 | 0.08 | 0.1 | 96.7 | 0.6 | 350.8 |
| 42.10 | 42.10 | 0.09 | 0.13 | 0.2 | 55.9 | 0.6 | 51.3 |
| 52.10 | 52.10 | 0.11 | 0.21 | 0.2 | 62.8 | 0.6 | 61.6 |
| 62.10 | 62.10 | 0.19 | 0.22 | 0.3 | 48.4 | 0.4 | 64.8 |
| 72.10 | 72.10 | 0.15 | 0.28 | 0.3 | 61.2 | 0.5 | 160.5 |
| 82.10 | 82.09 | 0.09 | 0.17 | 0.2 | 62.4 | 1.0 | 276.6 |
| 92.10 | 92.09 | 0.10 | 0.05 | 0.1 | 27.9 | 0.9 | 226.1 |
| 102.10 | 102.09 | 0.10 | -0.07 | 0.1 | 324.3 | 0.8 | 325.6 |
| 112.10 | 112.09 | 0.17 | -0.16 | 0.2 | 317.9 | 0.8 | 292.4 |
| 122.10 | 122.09 | 0.20 | -0.15 | 0.3 | 322.5 | 0.3 | 134.7 |
| 132.10 | 132.09 | 0.26 | -0.14 | 0.3 | 331.9 | 0.4 | 351.6 |
| 142.10 | 142.09 | 0.27 | -0.11 | 0.3 | 337.7 | 0.6 | 146.4 |
| 152.10 | 152.09 | 0.15 | -0.11 | 0.2 | 323.2 | 0.7 | 168.2 |
| 162.10 | 162.09 | 0.05 | -0.11 | 0.1 | 294.0 | 0.8 | 233.9 |
| 172.10 | 172.09 | 0.06 | -0.22 | 0.2 | 284.2 | 0.6 | 310.7 |
| 182.10 | 182.09 | 0.10 | -0.32 | 0.3 | 288.1 | 0.6 | 295.0 |
| 192.10 | 192.09 | 0.17 | -0.34 | 0.4 | 296.5 | 0.1 | 146.0 |
| 202.10 | 202.09 | 0.09 | -0.32 | 0.3 | 285.0 | 0.4 | 119.4 |
| 212.10 | 212.09 | 0.09 | -0.29 | 0.3 | 287.6 | 0.5 | 149.4 |
| 222.10 | 222.09 | -0.01 | -0.28 | 0.3 | 267.5 | 0.3 | 64.9 |
| 232.10 | 232.09 | 0.02 | -0.28 | 0.3 | 274.8 | 0.5 | 136.1 |
| 242.10 | 242.08 | -0.06 | -0.35 | 0.4 | 257.7 | 1.3 | 259.3 |
| 252.10 | 252.08 | -0.15 | -0.47 | 0.5 | 252.4 | 0.7 | 209.6 |
| 262.10 | 262.08 | -0.25 | -0.62 | 0.7 | 248.1 | 1.0 | 254.0 |
| 272.10 | 272.08 | -0.29 | -0.78 | 0.8 | 249.8 | 0.7 | 275.7 |
| 282.10 | 282.08 | -0.28 | -0.92 | 1.0 | 253.1 | 1.1 | 253.0 |
| 292.10 | 292.08 | -0.26 | -1.02 | 1.1 | 255.8 | 0.4 | 314.9 |
| 302.10 | 302.08 | -0.27 | -1.06 | 1.1 | 255.8 | 0.3 | 263.8 |
| 312.10 | 312.08 | -0.33 | -1.22 | 1.3 | 254.8 | 1.0 | 258.9 |
| 322.10 | 322.07 | -0.32 | -1.36 | 1.4 | 256.9 | 1.1 | 264.8 |
| 332.10 | 332.07 | -0.32 | -1.49 | 1.5 | 257.8 | 0.2 | 131.5 |
| 342.10 | 342.07 | -0.32 | -1.57 | 1.6 | 258.6 | 0.4 | 279.1 |
| 352.10 | 352.07 | -0.34 | -1.76 | 1.8 | 259.0 | 1.0 | 267.0 |
| 362.10 | 362.07 | -0.34 | -1.92 | 2.0 | 259.8 | 0.9 | 262.0 |
| 372.10 | 372.07 | -0.46 | -2.11 | 2.2 | 257.7 | 1.5 | 235.6 |
| 382.10 | 382.06 | -0.56 | -2.32 | 2.4 | 256.3 | 1.0 | 262.5 |
| 392.10 | 392.06 | -0.63 | -2.50 | 2.6 | 255.9 | 1.2 | 234.2 |
| 402.10 | 402.06 | -0.71 | -2.69 | 2.8 | 255.2 | 0.6 | 254.8 |
| 412.10 | 412.06 | -0.78 | -2.87 | 3.0 | 254.7 | 1.5 | 221.1 |
| 422.10 | 422.05 | -0.98 | -3.00 | 3.2 | 251.9 | 1.4 | 229.8 |
| 432.10 | 432.05 | -1.17 | -3.17 | 3.4 | 249.7 | 1.6 | 230.3 |
| 442.10 | 442.05 | -1.37 | -3.30 | 3.6 | 247.4 | 1.2 | 209.6 |
| 452.10 | 452.05 | -1.54 | -3.36 | 3.7 | 245.4 | 2.0 | 227.1 |
| 462.10 | 462.04 | -1.77 | -3.53 | 4.0 | 243.3 | 1.6 | 208.2 |
| 472.10 | 472.04 | -1.98 | -3.61 | 4.1 | 241.3 | 1.5 | 209.5 |
| 482.10 | 482.04 | -2.12 | -3.66 | 4.2 | 239.9 | 0.8 | 176.9 |
| 492.10 | 492.04 | -2.20 | -3.66 | 4.3 | 238.9 | 1.2 | 48.7 |
| 502.10 | 502.03 | -2.23 | -3.69 | 4.3 | 238.8 | 1.6 | 217.0 |
| 512.10 | 512.03 | -2.40 | -3.82 | 4.5 | 237.8 | 0.8 | 215.5 |
| 522.10 | 522.03 | -2.59 | -3.94 | 4.7 | 236.7 | 1.4 | 209.0 |
| 532.10 | 532.03 | -2.78 | -4.04 | 4.9 | 235.5 | 1.3 | 214.8 |
| 542.10 | 542.02 | -2.98 | -4.18 | 5.1 | 234.5 | 1.3 | 203.3 |
| 552.10 | 552.02 | -3.19 | -4.33 | 5.4 | 233.7 | 1.3 | 245.7 |
| 562.10 | 562.02 | -3.39 | -4.48 | 5.6 | 232.9 | 1.6 | 221.4 |
| 572.10 | 572.01 | -3.60 | -4.66 | 5.9 | 232.3 | 1.5 | 215.0 |
| 582.10 | 582.01 | -3.81 | -4.83 | 6.1 | 231.7 | 1.6 | 210.8 |
| 592.10 | 592.01 | -4.01 | -5.00 | 6.4 | 231.3 | 1.6 | 214.4 |
| 602.10 | 602.00 | -4.22 | -5.18 | 6.7 | 230.8 | 1.7 | 224.5 |
| 612.10 | 612.00 | -4.43 | -5.37 | 7.0 | 230.4 | 1.7 | 220.3 |
| 622.10 | 621.99 | -4.63 | -5.57 | 7.2 | 230.3 | 1.7 | 239.6 |
| 632.10 | 631.99 | -4.88 | -5.84 | 7.6 | 230.1 | 1.9 | 207.7 |
| 642.10 | 641.98 | -4.94 | -6.15 | 7.9 | 231.2 | 1.4 | 278.8 |
| 652.10 | 651.98 | -4.89 | -6.34 | 8.0 | 232.4 | 1.0 | 289.0 |
| 662.10 | 661.98 | -4.86 | -6.46 | 8.1 | 233.0 | 1.2 | 279.6 |
| 672.10 | 671.98 | -4.83 | -6.62 | 8.2 | 233.9 | 0.6 | 277.7 |
| 682.10 | 681.97 | -4.78 | -6.80 | 8.3 | 234.9 | 0.4 | 300.5 |
| 692.10 | 691.97 | -4.75 | -6.89 | 8.4 | 235.5 | 0.8 | 284.5 |
| 702.10 | 701.97 | -4.69 | -7.06 | 8.5 | 236.4 | 1.1 | 288.8 |
| 712.10 | 711.97 | -4.64 | -7.27 | 8.6 | 237.5 | 1.3 | 282.4 |
| 722.10 | 721.97 | -4.59 | -7.52 | 8.8 | 238.6 | 1.5 | 281.1 |
| 732.10 | 731.96 | -4.65 | -7.77 | 9.1 | 239.1 | 1.3 | 175.8 |
| 742.10 | 741.96 | -4.95 | -7.88 | 9.3 | 237.9 | 2.1 | 204.1 |
| 752.10 | 751.95 | -5.25 | -7.96 | 9.5 | 236.6 | 1.7 | 191.7 |
| 762.10 | 761.95 | -5.44 | -7.97 | 9.6 | 235.7 | 0.7 | 168.5 |
| 772.10 | 771.95 | -5.66 | -8.05 | 9.8 | 234.9 | 2.1 | 210.0 |
| 782.10 | 781.94 | -5.89 | -8.33 | 10.2 | 234.7 | 2.0 | 200.8 |
| 792.10 | 791.93 | -6.18 | -8.51 | 10.5 | 234.0 | 1.9 | 202.8 |
| 802.10 | 801.93 | -6.48 | -8.63 | 10.8 | 233.1 | 1.8 | 197.7 |
| 812.10 | 811.92 | -6.72 | -8.68 | 11.0 | 232.2 | 0.2 | 148.3 |
| 822.10 | 821.92 | -6.68 | -8.75 | 11.0 | 232.6 | 1.0 | 296.7 |
| 832.10 | 831.92 | -6.63 | -8.82 | 11.0 | 233.1 | 0.6 | 306.5 |
| 842.10 | 841.92 | -6.77 | -8.85 | 11.1 | 232.6 | 1.8 | 209.3 |
| 852.10 | 851.92 | -7.05 | -8.91 | 11.4 | 231.7 | 1.6 | 183.9 |
| 862.10 | 861.91 | -7.32 | -8.98 | 11.6 | 230.8 | 1.4 | 177.8 |
| 872.10 | 871.91 | -7.56 | -8.95 | 11.7 | 229.8 | 1.3 | 171.9 |
| 882.10 | 881.91 | -7.76 | -8.89 | 11.8 | 228.9 | 1.3 | 167.8 |
| 892.10 | 891.91 | -7.90 | -8.80 | 11.8 | 228.1 | 0.6 | 123.8 |
| 902.10 | 901.90 | -8.07 | -8.73 | 11.9 | 227.3 | 1.3 | 171.3 |
| 912.10 | 911.90 | -8.21 | -8.77 | 12.0 | 226.9 | 2.0 | 212.5 |
| 922.10 | 921.89 | -8.54 | -9.00 | 12.4 | 226.5 | 3.0 | 215.9 |
| 932.10 | 931.88 | -8.77 | -9.50 | 12.9 | 227.3 | 3.7 | 254.3 |
| 942.10 | 941.85 | -8.87 | -10.24 | 13.5 | 229.1 | 4.5 | 265.7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 872.10 | 871.91 | -7.56 | -8.95 | 11.7 | 229.6 | 1.3 | 171.9 |
| 882.10 | 881.91 | -7.76 | -8.89 | 11.8 | 228.9 | 1.3 | 167.8 |
| 892.10 | 891.91 | -7.90 | -8.80 | 11.8 | 228.1 | 0.6 | 123.6 |
| 902.10 | 901.90 | -8.07 | -8.73 | 11.9 | 227.3 | 1.3 | 171.3 |
| 912.10 | 911.90 | -8.21 | -8.77 | 12.0 | 226.9 | 2.0 | 212.5 |
| 922.10 | 921.89 | -8.54 | -9.00 | 12.4 | 226.5 | 3.0 | 215.9 |
| 932.10 | 931.88 | -8.77 | -9.50 | 12.9 | 227.3 | 3.7 | 254.3 |
| 942.10 | 941.85 | -8.87 | -10.24 | 13.5 | 229.1 | 4.5 | 265.7 |
| 952.10 | 951.81 | -8.88 | -11.17 | 14.3 | 231.5 | 5.6 | 272.7 |
| 962.10 | 961.74 | -8.80 | -12.28 | 15.1 | 234.4 | 7.1 | 276.5 |
| 972.10 | 971.66 | -8.67 | -13.54 | 16.1 | 237.3 | 7.5 | 276.9 |
| 982.10 | 981.56 | -8.49 | -14.95 | 17.2 | 240.4 | 8.6 | 273.7 |
| 992.10 | 991.44 | -8.19 | -16.47 | 18.4 | 243.5 | 9.9 | 282.9 |
| 1002.10 | 1001.29 | -7.85 | -18.15 | 19.8 | 246.6 | 9.3 | 264.9 |
| 1012.10 | 1011.15 | -7.42 | -19.74 | 21.1 | 249.4 | 9.3 | 284.3 |
| 1022.10 | 1021.01 | -7.08 | -21.37 | 22.5 | 251.7 | 10.5 | 276.3 |
| 1032.10 | 1030.84 | -7.19 | -23.17 | 24.3 | 252.8 | 10.5 | 275.6 |
| 1042.10 | 1040.64 | -7.10 | -25.07 | 26.1 | 254.2 | 12.7 | 267.5 |
| 1052.10 | 1050.40 | -7.29 | -27.22 | 28.2 | 255.0 | 12.7 | 263.0 |
| 1062.10 | 1060.12 | -7.43 | -29.55 | 30.5 | 255.9 | 14.0 | 267.1 |
| 1072.10 | 1069.81 | -7.53 | -32.01 | 32.9 | 256.8 | 14.6 | 269.1 |
| 1082.10 | 1079.49 | -7.45 | -34.49 | 35.3 | 257.8 | 13.9 | 275.3 |
| 1092.10 | 1089.16 | -7.62 | -37.02 | 37.8 | 258.4 | 15.6 | 269.1 |
| 1102.10 | 1098.74 | -7.61 | -39.67 | 40.6 | 259.2 | 17.3 | 274.0 |
| 1112.10 | 1108.27 | -7.23 | -42.85 | 43.5 | 260.4 | 17.8 | 266.7 |
| 1122.10 | 1117.77 | -7.00 | -45.97 | 46.5 | 261.3 | 19.2 | 273.2 |
| 1132.10 | 1127.23 | -6.55 | -49.17 | 49.6 | 262.4 | 18.8 | 279.2 |
| 1142.10 | 1136.70 | -6.04 | -52.35 | 52.7 | 263.4 | 19.0 | 278.4 |
| 1152.10 | 1146.19 | -5.50 | -55.44 | 55.7 | 264.3 | 17.1 | 279.1 |
| 1162.10 | 1155.73 | -5.05 | -58.41 | 58.6 | 265.1 | 17.1 | 278.4 |
| 1172.10 | 1165.29 | -4.70 | -61.30 | 61.5 | 265.6 | 16.7 | 272.9 |
| 1182.10 | 1174.87 | -4.54 | -64.18 | 64.3 | 266.0 | 16.7 | 274.0 |
| 1192.10 | 1184.45 | -4.30 | -67.02 | 67.2 | 266.3 | 16.5 | 275.9 |
| 1202.10 | 1194.05 | -4.05 | -69.82 | 69.9 | 266.7 | 16.2 | 274.8 |
| 1212.10 | 1203.65 | -3.82 | -72.59 | 72.7 | 267.0 | 16.3 | 275.4 |
| 1222.10 | 1213.26 | -3.55 | -75.35 | 75.4 | 267.3 | 15.9 | 275.7 |
| 1232.10 | 1222.88 | -3.31 | -78.08 | 78.1 | 267.6 | 15.6 | 275.9 |
| 1242.10 | 1232.50 | -3.04 | -80.78 | 80.8 | 267.8 | 15.5 | 275.8 |
| 1252.10 | 1242.13 | -2.78 | -83.45 | 83.5 | 268.1 | 15.4 | 275.4 |
| 1262.10 | 1251.77 | -2.62 | -86.11 | 86.1 | 268.3 | 15.4 | 273.0 |
| 1272.10 | 1261.42 | -2.44 | -88.74 | 88.8 | 268.4 | 15.2 | 272.3 |
| 1282.10 | 1271.07 | -2.33 | -91.36 | 91.4 | 268.5 | 15.2 | 272.1 |
| 1292.10 | 1280.69 | -2.23 | -94.06 | 94.1 | 268.6 | 17.5 | 277.2 |
| 1302.10 | 1290.31 | -1.78 | -96.76 | 96.8 | 268.9 | 15.2 | 279.0 |
| 1312.10 | 1299.96 | -1.60 | -99.34 | 99.4 | 269.1 | 15.2 | 270.4 |
| 1322.10 | 1309.61 | -1.51 | -101.96 | 102.0 | 269.1 | 15.4 | 270.1 |
| 1332.10 | 1319.23 | -1.45 | -104.66 | 104.7 | 269.2 | 16.2 | 276.1 |
| 1342.10 | 1328.82 | -1.19 | -107.50 | 107.5 | 269.4 | 16.5 | 277.8 |
| 1352.10 | 1338.38 | -0.75 | -110.38 | 110.4 | 269.6 | 17.0 | 279.8 |
| 1362.10 | 1347.95 | -0.27 | -113.26 | 113.3 | 269.9 | 17.0 | 279.3 |
| 1372.10 | 1357.51 | 0.18 | -116.14 | 116.1 | 270.1 | 17.0 | 278.9 |
| 1382.10 | 1367.07 | 0.64 | -119.04 | 119.0 | 270.3 | 17.1 | 279.0 |
| 1392.10 | 1376.63 | 1.10 | -121.94 | 121.9 | 270.5 | 17.1 | 279.5 |
| 1402.10 | 1386.19 | 1.57 | -124.85 | 124.9 | 270.7 | 17.2 | 279.2 |
| 1412.10 | 1395.75 | 2.08 | -127.72 | 127.7 | 270.9 | 15.9 | 284.4 |
| 1422.10 | 1405.40 | 2.23 | -130.34 | 130.4 | 271.0 | 15.6 | 271.3 |
| 1432.10 | 1415.03 | 2.36 | -133.01 | 133.0 | 271.0 | 15.5 | 272.5 |
| 1442.10 | 1424.67 | 2.51 | -135.65 | 135.7 | 271.1 | 15.3 | 274.1 |
| 1452.10 | 1434.31 | 2.61 | -138.34 | 138.4 | 271.1 | 15.9 | 274.3 |
| 1462.10 | 1443.90 | 2.80 | -141.16 | 141.2 | 271.1 | 17.3 | 277.0 |
| 1472.10 | 1453.46 | 3.22 | -144.05 | 144.1 | 271.3 | 16.9 | 279.5 |
| 1482.10 | 1463.03 | 3.71 | -146.91 | 147.0 | 271.4 | 17.0 | 271.6 |
| 1492.10 | 1472.67 | 4.09 | -149.53 | 149.6 | 271.6 | 15.0 | 272.5 |
| 1502.10 | 1482.31 | 4.31 | -152.15 | 152.2 | 271.6 | 15.3 | 273.4 |
| 1512.10 | 1491.96 | 4.49 | -154.79 | 154.9 | 271.7 | 15.3 | 273.9 |
| 1522.10 | 1501.60 | 4.66 | -157.44 | 157.5 | 271.7 | 16.1 | 277.5 |
| 1532.10 | 1511.17 | 5.07 | -160.28 | 160.4 | 271.8 | 16.8 | 278.3 |
| 1542.10 | 1520.75 | 5.53 | -163.13 | 163.2 | 271.9 | 16.8 | 278.7 |
| 1552.10 | 1530.33 | 6.00 | -165.96 | 166.1 | 272.1 | 16.4 | 278.6 |
| 1562.10 | 1539.90 | 6.59 | -168.80 | 168.9 | 272.2 | 16.9 | 282.5 |
| 1572.10 | 1549.47 | 7.20 | -171.63 | 171.8 | 272.4 | 16.7 | 277.7 |
| 1582.10 | 1559.10 | 7.75 | -174.24 | 174.4 | 272.5 | 14.9 | 279.9 |
| 1592.10 | 1568.75 | 8.08 | -176.85 | 177.0 | 272.6 | 15.2 | 275.6 |
| 1602.10 | 1578.38 | 8.34 | -179.50 | 179.7 | 272.7 | 16.2 | 279.2 |
| 1612.10 | 1587.96 | 8.94 | -182.30 | 182.5 | 272.8 | 16.8 | 283.2 |
| 1622.10 | 1597.53 | 9.61 | -185.12 | 185.4 | 273.0 | 16.9 | 282.9 |
| 1632.10 | 1607.10 | 10.28 | -187.95 | 188.2 | 273.1 | 16.8 | 282.8 |
| 1642.10 | 1616.67 | 10.95 | -190.77 | 191.1 | 273.3 | 16.9 | 283.2 |
| 1652.10 | 1626.25 | 11.65 | -193.54 | 193.9 | 273.4 | 16.0 | 288.1 |
| 1662.10 | 1635.90 | 12.07 | -196.14 | 196.5 | 273.5 | 15.3 | 277.3 |
| 1672.10 | 1645.54 | 12.37 | -198.76 | 199.1 | 273.6 | 15.3 | 276.2 |
| 1682.10 | 1655.18 | 12.63 | -201.40 | 201.8 | 273.6 | 15.7 | 277.8 |
| 1692.10 | 1664.78 | 13.07 | -204.18 | 204.6 | 273.7 | 16.6 | 280.9 |
| 1702.10 | 1674.36 | 13.62 | -206.98 | 207.4 | 273.8 | 16.6 | 281.0 |
| 1712.10 | 1683.95 | 14.17 | -209.76 | 210.2 | 273.9 | 16.4 | 281.2 |
| 1722.10 | 1693.55 | 14.71 | -212.53 | 213.0 | 274.0 | 16.3 | 281.5 |
| 1732.10 | 1703.15 | 15.25 | -215.28 | 215.8 | 274.1 | 16.2 | 281.2 |
| 1742.10 | 1712.75 | 15.80 | -218.02 | 218.6 | 274.1 | 16.3 | 281.5 |
| 1752.10 | 1722.35 | 16.35 | -220.76 | 221.4 | 274.2 | 16.3 | 281.1 |
| 1762.10 | 1731.95 | 16.90 | -223.50 | 224.1 | 274.3 | 16.2 | 281.9 |
| 1772.10 | 1741.55 | 17.49 | -226.22 | 226.9 | 274.4 | 16.2 | 282.6 |
| 1782.10 | 1751.16 | 18.06 | -228.95 | 229.7 | 274.5 | 16.2 | 282.1 |
| 1792.10 | 1760.76 | 18.70 | -231.67 | 232.4 | 274.6 | 16.1 | 284.4 |
| 1802.10 | 1770.38 | 19.39 | -234.27 | 235.1 | 274.7 | 14.5 | 271.5 |
| 1812.10 | 1780.05 | 19.82 | -236.78 | 237.6 | 274.9 | 14.7 | 278.4 |
| 1822.10 | 1789.72 | 20.20 | -239.31 | 240.2 | 274.8 | 14.8 | 279.8 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 702.10 | 1674.36 | 13.62 | -206.86 | 207.1 | 273.9 | 16.4 | 281.2 |
| 712.10 | 1683.95 | 14.17 | -209.76 | 210.2 | 273.9 | 16.4 | 281.2 |
| 722.10 | 1693.55 | 14.71 | -212.53 | 213.0 | 274.0 | 16.3 | 281.5 |
| 732.10 | 1703.15 | 15.25 | -215.26 | 215.8 | 274.1 | 16.2 | 281.2 |
| 742.10 | 1712.75 | 15.80 | -218.02 | 218.6 | 274.1 | 16.3 | 281.5 |
| 752.10 | 1722.35 | 16.35 | -220.76 | 221.4 | 274.2 | 16.3 | 281.1 |
| 762.10 | 1731.95 | 16.90 | -223.50 | 224.1 | 274.3 | 16.2 | 281.9 |
| 772.10 | 1741.55 | 17.49 | -226.22 | 226.9 | 274.4 | 16.2 | 282.6 |
| 782.10 | 1751.16 | 18.06 | -228.95 | 229.7 | 274.5 | 16.2 | 282.1 |
| 792.10 | 1760.76 | 18.70 | -231.67 | 232.4 | 274.6 | 16.1 | 284.4 |
| 802.10 | 1770.36 | 19.39 | -234.27 | 235.1 | 274.7 | 14.5 | 271.5 |
| 812.10 | 1780.05 | 19.82 | -236.76 | 237.6 | 274.8 | 14.7 | 276.4 |
| 822.10 | 1789.72 | 20.20 | -239.31 | 240.2 | 274.8 | 14.8 | 279.8 |
| 832.10 | 1799.39 | 20.55 | -241.84 | 242.7 | 274.9 | 14.8 | 277.1 |
| 842.10 | 1809.05 | 20.88 | -244.40 | 245.3 | 274.9 | 15.6 | 281.2 |
| 852.10 | 1818.65 | 21.47 | -247.12 | 248.1 | 275.0 | 17.0 | 282.4 |
| 862.10 | 1828.24 | 22.06 | -249.88 | 250.9 | 275.0 | 16.2 | 283.0 |
| 872.10 | 1837.84 | 22.67 | -252.63 | 253.6 | 275.1 | 16.1 | 278.9 |
| 882.10 | 1847.43 | 23.32 | -255.40 | 256.5 | 275.2 | 16.7 | 286.4 |
| 892.10 | 1857.07 | 23.88 | -257.94 | 259.0 | 275.3 | 14.8 | 277.4 |
| 902.10 | 1866.73 | 24.33 | -260.49 | 261.6 | 275.3 | 15.0 | 280.5 |
| 912.10 | 1876.39 | 24.72 | -263.07 | 264.2 | 275.4 | 15.0 | 280.0 |
| 922.10 | 1886.04 | 25.19 | -265.65 | 266.8 | 275.4 | 16.2 | 284.5 |
| 932.10 | 1895.69 | 25.71 | -268.22 | 269.4 | 275.5 | 15.3 | 280.7 |
| 942.10 | 1905.33 | 26.25 | -270.80 | 272.1 | 275.5 | 15.4 | 281.8 |
| 952.10 | 1914.98 | 26.75 | -273.39 | 274.7 | 275.6 | 15.3 | 278.7 |
| 962.10 | 1924.62 | 27.15 | -276.01 | 277.3 | 275.6 | 15.3 | 278.0 |
| 963.10 | 1925.58 | 27.19 | -276.27 | 277.6 | 275.6 | 15.3 | 278.7 |

Well: **U39E**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 21 | 24" | 6 | | X | 5/28/08 | |
| Surface | 16" | 506 | 20" | 522 | X | | 5/29/08 | Basket@380 |
| Water Protection | 13 3/8" | 587 | 15 3/8" | 222 | X | | 5/30/08 | Basket@84 |
| Coal Protection | 13 3/8" | 587 | 15 3/8" | 222 | X | | 5/30/08 | Basket@84 |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY CNX

HOLE U-39E

RIG #: 99

LOCATION: BUCH VA

DATE STARTED: 5/27/2008

DATE COMPLETED: 6/5/2008

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION, VOIDS ETC. |
|---|---|---|---|
| 0 | 21 | 21 | |
| 21 | 58 | 37 | SANDSTONE |
| 58 | 89 | 31 | SAND/SHALE |
| 89 | 120 | 31 | SANDSTONE |
| 120 | 151 | 31 | SAND |
| 151 | 182 | 31 | SAND |
| 182 | 213 | 31 | SAND/COAL |
| 213 | 244 | 31 | SAND/SHALE |
| 244 | 276 | 32 | SAND |
| 276 | 307 | 31 | SAND/COAL |
| 307 | 339 | 32 | SAND/COAL |
| 339 | 371 | 32 | SAND |
| 371 | 402 | 31 | SAND/COAL |
| 402 | 434 | 32 | SAND/SHALE |
| 434 | 444 | 10 | SAND/COAL |
| 444 | 466 | 22 | SAND/SHALE |
| 466 | 506 | 40 | |
| 506 | 528 | 22 | SHALE |
| 528 | 560 | 32 | SHALE |
| 560 | 591 | 31 | SHALE |
| 591 | 620 | 29 | SHALE |
| 620 | 648 | 28 | SAND/COAL |
| 648 | 680 | 32 | SAND |
| 680 | 712 | 32 | SAND |
| 712 | 742 | 30 | SAND/SHALE |
| 742 | 774 | 32 | SAND/COAL |
| 774 | 806 | 32 | SAND/SHALE |
| 806 | 837 | 31 | SAND/SHALE |
| 837 | 869 | 32 | SAND/SHALE |
| 869 | 901 | 32 | SAND/SHALE |
| 901 | 913 | 12 | SHALE |
| 913 | 944 | 31 | SHALE/SAND |
| 944 | 976 | 32 | SAND/SHALE |
| 976 | 1006 | 30 | SAND/COAL |

| | | |
|---|---|---|
| 1006 | 1038 | 32 SHALE |
| 1038 | 1069 | 31 SHALE/COAL |
| 1069 | 1101 | 32 SAND/SHALE |
| 1101 | 1133 | 32 SANDSTONE |
| 1133 | 1169 | 36 SAND/SHALE/COAL |
| 1169 | 1201 | 32 SAND/SHALE |
| 1201 | 1232 | 31 SAND/SHALE/COAL |
| 1232 | 1263 | 31 SAND |
| 1263 | 1295 | 32 SAND/SHALE |
| 1295 | 1327 | 32 SAND/COAL |
| 1327 | 1358 | 31 SHALE/COAL |
| 1358 | 1390 | 32 SHALE/COAL |
| 1390 | 1421 | 31 SHALE/SAND |
| 1421 | 1453 | 32 SAND |
| 1453 | 1484 | 31 SAND/SHALE |
| 1484 | 1516 | 32 SAND/SHALE |
| 1516 | 1548 | 32 SAND |
| 1548 | 1579 | 31 SAND/SHALE |
| 1579 | 1611 | 32 SAND |
| 1611 | 1643 | 32 SAND |
| 1643 | 1674 | 31 SAND/SHALE |
| 1674 | 1705 | 31 SHALE |
| 1705 | 1734 | 29 SHALE/COAL |
| 1734 | 1769 | 35 SHALE/COAL/SAND |
| 1769 | 1800 | 31 SAND/COAL |
| 1800 | 1832 | 32 SAND/SHALE |
| 1832 | 1863 | 31 SAND/SHALE/COAL |
| 1863 | 1895 | 32 SAND/SHALE |
| 1895 | 1927 | 32 SAND/SHALE |
| 1927 | 1958 | 31 SAND/SHALE |

1958' TOTAL DEPTH
21' OF 22" CASING
506.4' OF 16" CASING
587.1' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1317 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3792 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 3/17/2008 |
| **Driller's Total Depth:** | 1528.00 | **Log's Total Depth:** | 1524.90 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/5/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 6/5/2008 | | |
| Status: | | Date: | 6/6/2008 |
| Final PDF Date: | 6/12/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1360 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3792 |
| **Operations Name:** | CBM U39F W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 3/4/2008

Drilling Contractor: Noah Horn

Date drilling completed: 3/17/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1528.03

Log Total Depth (feet): 1524.92

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1015666.10

Permitted State Plane Y: 326977.31

Final Plat State Plane X: 1015672.40

Final Plat State Plane Y: 326983.20

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | |
|---|---|
| Plat | U39F PLAT.pdf |

## 3. Geological Data

| | | |
|---|---|---|
| 150 | Damp | |

| | | |
|---|---|---|

List of Attached Items:

| | |
|---|---|
| Exhibit A | U39F EXHIBIT A.pdf |

List of Attached Items:

| | |
|---|---|
| Gas Show | U39F Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑

List of Attached Items:

| | |
|---|---|
| Deviation | U39F DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | U39F Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| Description | |
|---|---|
| Drill Data | U39F DRILL DATA.pdf |

## 9. Comments

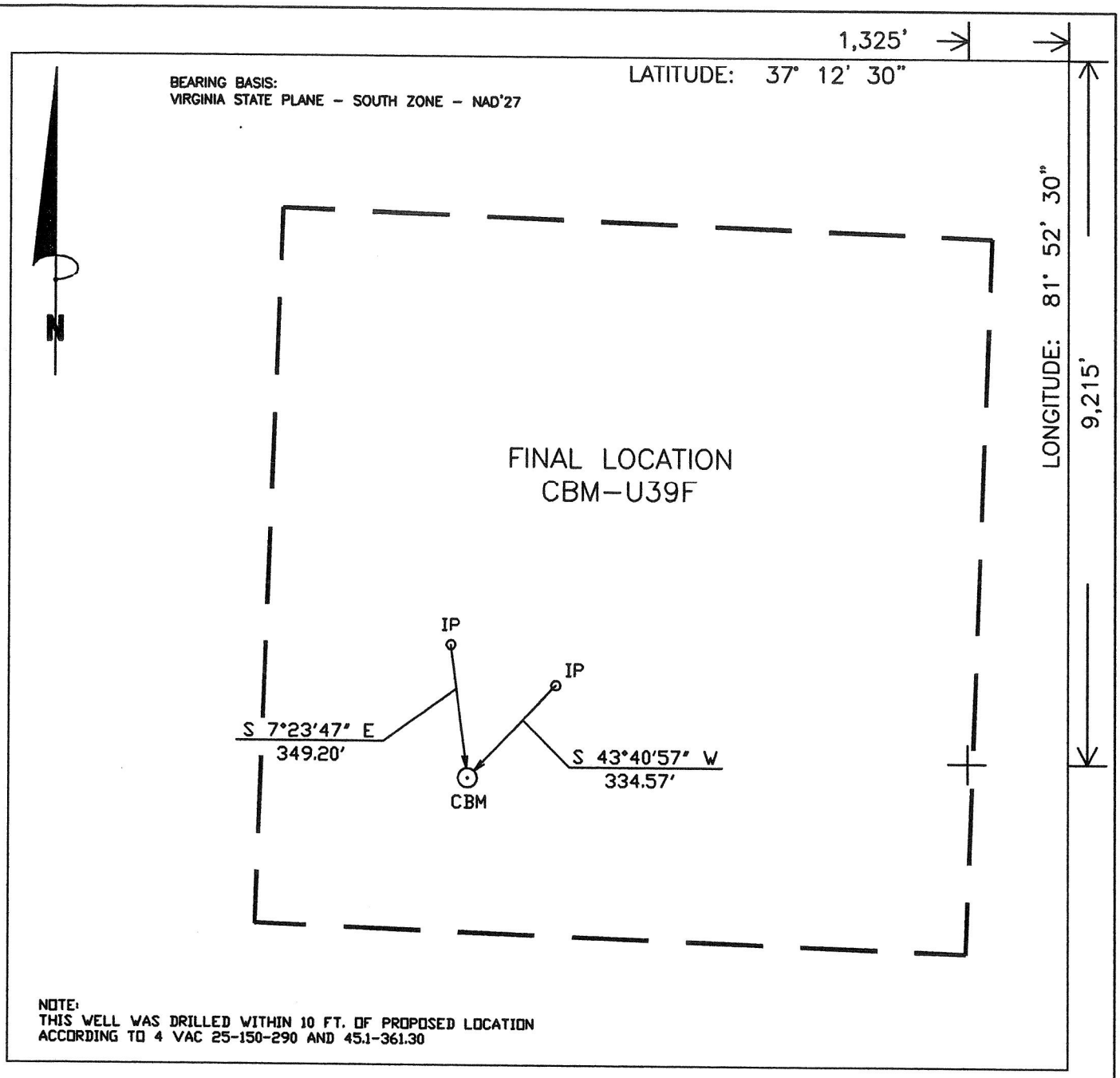
## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/5/2008

Signed By: Leslie Arrington Title: Director Environmental Permitting

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/5/2008 | | |
| Status: | A | Date: | 6/6/2008 |
| Final PDF Date: | 6/12/2008 | | |




# WELL LOCATION PLAT

U39FFNL
2N30/76-320/36

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-U39F

TRACT NUMBER COAL MOUNTAIN MINING QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 326,983.20 E 1,015,672.40

ELEVATION: 1987.69' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 03-12-08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown. (Optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DRP
DANNY R. PRICE
Lic. No. 008540
3/12/08
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 10/96

U39F.CMP
Exhibit A

Well Name: 08 CBM U39F
SURFACE ELEV: 1987.69 EASTING: 1015672.40 NORTHING: 326983.20

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| TI | 88.70 | 90.30 | 1898.99 | 1.60 | |
| | 90.30 | 97.90 | 1897.39 | 7.60 | |
| COAL | 97.90 | 98.50 | 1889.79 | 0.60 | |
| | 98.50 | 177.00 | 1889.19 | 78.50 | |
| COAL | 177.00 | 177.40 | 1810.69 | 0.40 | |
| | 177.40 | 215.00 | 1810.29 | 37.60 | |
| US1 | 215.00 | 215.90 | 1772.69 | 0.90 | |
| | 215.90 | 317.50 | 1771.79 | 101.60 | |
| COAL | 317.50 | 318.20 | 1670.19 | 0.70 | |
| | 318.20 | 332.50 | 1669.49 | 14.30 | |
| US2 | 332.50 | 333.40 | 1655.19 | 0.90 | |
| | 333.40 | 396.60 | 1654.29 | 63.20 | |
| *COAL | 396.60 | 397.90 | 1591.09 | 1.30 | |
| | 397.90 | 454.50 | 1589.79 | 56.60 | |
| *GC2 | 454.50 | 455.90 | 1533.19 | 1.40 | |
| | 455.90 | 514.90 | 1531.79 | 59.00 | |
| *SE1 | 514.90 | 516.20 | 1472.79 | 1.30 | |
| | 516.20 | 550.80 | 1471.49 | 34.60 | |
| *SE2 | 550.80 | 552.80 | 1436.89 | 2.00 | |
| | 552.80 | 597.70 | 1434.89 | 44.90 | |
| *LS1 | 597.70 | 600.10 | 1389.99 | 2.40 | |
| | 600.10 | 647.80 | 1387.59 | 47.70 | |
| *LS3 | 647.80 | 649.50 | 1339.89 | 1.70 | |
| | 649.50 | 666.00 | 1338.19 | 16.50 | |
| *COAL | 666.00 | 667.80 | 1321.69 | 1.80 | |
| | 667.80 | 683.00 | 1319.89 | 15.20 | |
| *COAL | 683.00 | 685.10 | 1304.69 | 2.10 | |
| | 685.10 | 713.00 | 1302.59 | 27.90 | |
| *UH3 | 713.00 | 715.60 | 1274.69 | 2.60 | |
| | 715.60 | 777.30 | 1272.09 | 61.70 | |
| *MH1 | 777.30 | 779.10 | 1210.39 | 1.80 | |
| | 779.10 | 866.90 | 1208.59 | 87.80 | |
| *P11 | 866.90 | 870.90 | 1120.79 | 4.00 | |
| | 870.90 | 903.90 | 1116.79 | 33.00 | |
| *P10 | 903.90 | 905.70 | 1083.79 | 1.80 | |
| | 905.70 | 965.80 | 1081.99 | 60.10 | |
| *LH3 | 965.80 | 966.90 | 1021.89 | 1.10 | |
| | 966.90 | 986.60 | 1020.79 | 19.70 | |
| *COAL | 986.60 | 987.90 | 1001.09 | 1.30 | |
| | 987.90 | 1052.80 | 999.79 | 64.90 | |
| *P92 | 1052.80 | 1055.00 | 934.89 | 2.20 | |
| | 1055.00 | 1088.30 | 932.69 | 33.30 | |
| *P71 | 1088.30 | 1090.90 | 899.39 | 2.60 | |
| | 1090.90 | 1111.70 | 896.79 | 20.80 | |
| *COAL | 1111.70 | 1112.90 | 875.99 | 1.20 | |
| | 1112.90 | 1134.60 | 874.79 | 21.70 | |
| *P72 | 1134.60 | 1135.90 | 853.09 | 1.30 | |
| | 1135.90 | 1217.10 | 851.79 | 81.20 | |
| *COAL | 1217.10 | 1217.90 | 770.59 | 0.80 | |
| | 1217.90 | 1238.00 | 769.79 | 20.10 | |
| *COAL | 1238.00 | 1239.10 | 749.69 | 1.10 | |
| | 1239.10 | 1331.00 | 748.59 | 91.90 | |
| *P51 | 1331.00 | 1331.80 | 656.69 | 0.80 | |
| | 1331.80 | 1370.20 | 655.89 | 38.40 | |
| *P52 | 1370.20 | 1372.00 | 617.49 | 1.80 | |
| | 1372.00 | 1472.20 | 615.69 | 100.20 | |
| *COAL | 1472.20 | 1473.10 | 515.49 | 0.90 | |

| | | | |
|---|---|---|---|
| 1473.10 | 1528.00 | 514.59 | 54.90 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U39F.CMP
DATE: 05/20/08

Well: **U39F**

**Oil & Gas Show**

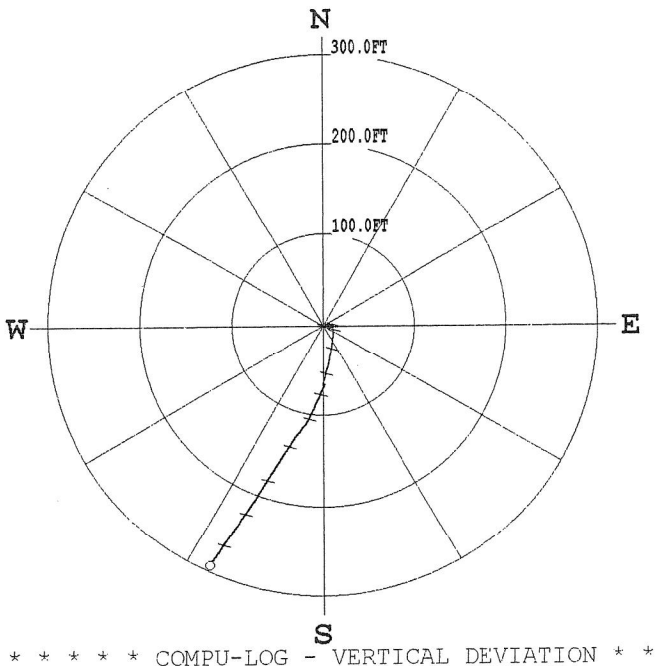
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 396.6 | 1055 | 658.4 | | | |
| Pocahontas | 1088.3 | 1372 | 283.7 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

IENT: Consol Energy
CATION:
LE ID: 08-CNX-U-39F
TE OF LOG: 03/17/08
OBE: 9136CA 962

MAG DECL: -6.9

SCALE: 100 FT/IN
TRUE DEPTH: 1463.64 FT
AZIMUTH: 205.1
DISTANCE: 293.2 FT
+ = 100 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 08-CNX-U-39F
DATE OF LOG : 03/17/08
PROBE : 9136CA , 962
DEPTH UNITS : FEET
LOG: 08-CNX-U-39F_03-17-08_11-19_9136CA_.02_0.00_1518.99_DEVI.log

| ABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 50.00 | -0.13 | 0.20 | 0.2 | 123.4 | 0.8 | 108.8 |
| 60.0 | 60.00 | -0.16 | 0.31 | 0.3 | 117.4 | 0.7 | 97.8 |
| 70.0 | 70.00 | -0.18 | 0.45 | 0.5 | 111.3 | 0.9 | 97.8 |
| 80.0 | 80.00 | -0.18 | 0.59 | 0.6 | 107.2 | 0.5 | 99.2 |
| 90.0 | 89.99 | -0.17 | 0.76 | 0.8 | 102.4 | 1.0 | 86.1 |
| 100.0 | 99.99 | -0.17 | 0.95 | 1.0 | 100.0 | 1.3 | 88.3 |
| 110.0 | 109.99 | -0.17 | 1.20 | 1.2 | 97.9 | 1.4 | 91.7 |
| 120.0 | 119.99 | -0.17 | 1.41 | 1.4 | 96.8 | 1.3 | 83.9 |
| 130.0 | 129.98 | -0.14 | 1.61 | 1.6 | 94.8 | 0.9 | 82.3 |
| 140.0 | 139.98 | -0.11 | 1.79 | 1.8 | 93.6 | 1.3 | 80.1 |
| 150.0 | 149.98 | -0.09 | 1.99 | 2.0 | 92.6 | 1.0 | 106.3 |
| 160.0 | 159.98 | -0.07 | 2.22 | 2.2 | 91.7 | 1.4 | 88.1 |
| 170.0 | 169.98 | -0.06 | 2.44 | 2.4 | 91.3 | 1.0 | 88.4 |
| 180.0 | 179.97 | 0.02 | 2.63 | 2.6 | 89.6 | 1.3 | 73.0 |
| 190.0 | 189.97 | 0.10 | 2.84 | 2.8 | 88.0 | 1.2 | 66.0 |
| 200.0 | 199.97 | 0.18 | 3.05 | 3.1 | 86.6 | 1.9 | 66.9 |
| 210.0 | 209.96 | 0.24 | 3.37 | 3.4 | 85.8 | 1.8 | 80.7 |
| 220.0 | 219.96 | 0.30 | 3.66 | 3.7 | 85.3 | 1.8 | 85.0 |
| 230.0 | 229.95 | 0.32 | 3.98 | 4.0 | 85.5 | 1.7 | 87.1 |
| 240.0 | 239.95 | 0.34 | 4.27 | 4.3 | 85.4 | 1.7 | 83.1 |
| 250.0 | 249.95 | 0.36 | 4.55 | 4.6 | 85.4 | 1.2 | 91.1 |
| 260.0 | 259.94 | 0.43 | 4.77 | 4.8 | 84.9 | 1.0 | 64.2 |
| 270.0 | 269.94 | 0.51 | 4.96 | 5.0 | 84.1 | 1.4 | 68.5 |
| 280.0 | 279.94 | 0.61 | 5.22 | 5.3 | 83.4 | 1.9 | 69.0 |
| 290.0 | 289.93 | 0.69 | 5.52 | 5.6 | 82.8 | 1.6 | 63.7 |
| 300.0 | 299.93 | 0.76 | 5.82 | 5.9 | 82.5 | 2.0 | 79.9 |
| 310.0 | 309.92 | 0.84 | 6.15 | 6.2 | 82.2 | 1.8 | 82.5 |
| 320.0 | 319.92 | 0.92 | 6.42 | 6.5 | 81.9 | 1.9 | 69.9 |
| 330.0 | 329.91 | 0.98 | 6.76 | 6.8 | 81.8 | 2.0 | 88.2 |
| 340.0 | 339.91 | 1.01 | 7.08 | 7.2 | 81.9 | 2.1 | 79.7 |
| 350.0 | 349.90 | 1.04 | 7.41 | 7.5 | 82.0 | 1.8 | 85.2 |
| 360.0 | 359.89 | 1.06 | 7.74 | 7.8 | 82.2 | 2.1 | 85.7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 230.0 | 229.95 | 0.32 | 3.98 | 4.0 | 85.5 | 1.7 | 87.1 |
| 240.0 | 239.95 | 0.34 | 4.27 | 4.3 | 85.4 | 1.7 | 83.1 |
| 250.0 | 249.95 | 0.36 | 4.55 | 4.6 | 85.4 | 1.2 | 91.1 |
| 260.0 | 259.94 | 0.43 | 4.77 | 4.8 | 84.9 | 1.0 | 64.2 |
| 270.0 | 269.94 | 0.51 | 4.96 | 5.0 | 84.1 | 1.4 | 68.5 |
| 280.0 | 279.94 | 0.61 | 5.22 | 5.3 | 83.4 | 1.9 | 69.0 |
| 290.0 | 289.93 | 0.69 | 5.52 | 5.6 | 82.8 | 1.6 | 63.7 |
| 300.0 | 299.93 | 0.76 | 5.82 | 5.9 | 82.5 | 2.0 | 79.9 |
| 310.0 | 309.92 | 0.84 | 6.15 | 6.2 | 82.2 | 1.8 | 82.5 |
| 320.0 | 319.92 | 0.92 | 6.42 | 6.5 | 81.9 | 1.9 | 69.9 |
| 330.0 | 329.91 | 0.98 | 6.76 | 6.8 | 81.8 | 2.0 | 88.2 |
| 340.0 | 339.91 | 1.01 | 7.08 | 7.2 | 81.9 | 2.1 | 79.7 |
| 350.0 | 349.90 | 1.04 | 7.41 | 7.5 | 82.0 | 1.8 | 85.2 |
| 360.0 | 359.89 | 1.06 | 7.74 | 7.8 | 82.2 | 2.1 | 85.7 |
| 370.0 | 369.89 | 1.09 | 8.08 | 8.2 | 82.3 | 1.7 | 83.2 |
| 380.0 | 379.88 | 1.12 | 8.36 | 8.4 | 82.3 | 1.6 | 78.1 |
| 390.0 | 389.88 | 1.20 | 8.41 | 8.5 | 81.9 | 1.0 | 87.9 |
| 400.0 | 399.88 | 1.17 | 8.43 | 8.5 | 82.1 | 1.4 | 158.0 |
| 410.0 | 409.88 | 1.17 | 8.39 | 8.5 | 82.0 | 1.2 | 93.8 |
| 420.0 | 419.87 | 1.18 | 8.59 | 8.7 | 82.2 | 1.0 | 87.2 |
| 430.0 | 429.87 | 1.14 | 8.77 | 8.8 | 82.6 | 0.9 | 110.5 |
| 440.0 | 439.87 | 1.16 | 8.87 | 8.9 | 82.5 | 0.8 | 338.6 |
| 450.0 | 449.87 | 1.26 | 9.03 | 9.1 | 82.1 | 1.8 | 89.9 |
| 460.0 | 459.86 | 1.24 | 9.35 | 9.4 | 82.4 | 1.9 | 87.2 |
| 470.0 | 469.86 | 1.23 | 9.66 | 9.7 | 82.7 | 1.8 | 93.0 |
| 480.0 | 479.85 | 1.23 | 9.98 | 10.1 | 83.0 | 1.8 | 92.5 |
| 490.0 | 489.85 | 1.27 | 10.26 | 10.3 | 82.9 | 1.6 | 31.5 |
| 500.0 | 499.84 | 1.51 | 10.39 | 10.5 | 81.7 | 1.5 | 21.9 |
| 510.0 | 509.84 | 1.70 | 10.43 | 10.6 | 80.8 | 0.7 | 53.5 |
| 520.0 | 519.84 | 1.73 | 10.52 | 10.7 | 80.7 | 0.7 | 54.2 |
| 530.0 | 529.84 | 1.63 | 10.58 | 10.7 | 81.2 | 0.9 | 161.5 |
| 540.0 | 539.84 | 1.39 | 10.63 | 10.7 | 82.5 | 1.8 | 170.7 |
| 550.0 | 549.83 | 0.99 | 10.68 | 10.7 | 84.7 | 3.1 | 175.5 |
| 560.0 | 559.81 | 0.41 | 10.71 | 10.7 | 87.8 | 3.9 | 175.2 |
| 570.0 | 569.78 | -0.38 | 10.74 | 10.7 | 92.0 | 5.1 | 180.7 |
| 580.0 | 579.73 | -1.36 | 10.73 | 10.8 | 97.2 | 6.0 | 181.3 |
| 590.0 | 589.66 | -2.52 | 10.74 | 11.0 | 103.2 | 7.2 | 181.6 |
| 600.0 | 599.57 | -3.87 | 10.79 | 11.5 | 109.7 | 7.8 | 193.2 |
| 610.0 | 609.46 | -5.38 | 10.77 | 12.0 | 116.6 | 9.3 | 177.7 |
| 620.0 | 619.32 | -7.03 | 10.76 | 12.9 | 123.2 | 10.0 | 177.4 |
| 630.0 | 629.15 | -8.85 | 10.74 | 13.9 | 129.5 | 10.7 | 182.0 |
| 640.0 | 638.96 | -10.77 | 10.74 | 15.2 | 135.1 | 11.6 | 182.9 |
| 650.0 | 648.75 | -12.82 | 10.59 | 16.6 | 140.4 | 12.1 | 182.9 |
| 660.0 | 658.50 | -15.01 | 10.30 | 18.2 | 145.6 | 13.0 | 181.9 |
| 670.0 | 668.23 | -17.31 | 10.16 | 20.1 | 149.6 | 13.8 | 183.8 |
| 680.0 | 677.93 | -19.73 | 9.91 | 22.1 | 153.3 | 14.4 | 190.9 |
| 690.0 | 687.60 | -22.23 | 9.57 | 24.2 | 156.7 | 15.0 | 185.1 |
| 700.0 | 697.25 | -24.83 | 9.25 | 26.5 | 159.6 | 15.4 | 196.2 |
| 710.0 | 706.88 | -27.44 | 8.62 | 28.8 | 162.6 | 16.1 | 190.5 |
| 720.0 | 716.49 | -30.15 | 8.32 | 31.3 | 164.6 | 15.8 | 190.9 |
| 730.0 | 726.11 | -32.83 | 7.72 | 33.7 | 166.8 | 16.1 | 189.1 |
| 740.0 | 735.71 | -35.52 | 7.03 | 36.2 | 168.8 | 16.2 | 189.8 |
| 750.0 | 745.32 | -38.29 | 6.66 | 38.9 | 170.1 | 16.1 | 193.7 |
| 760.0 | 754.93 | -41.01 | 6.40 | 41.5 | 171.1 | 15.9 | 195.3 |
| 770.0 | 764.55 | -43.55 | 5.43 | 43.9 | 172.9 | 15.6 | 202.1 |
| 780.0 | 774.17 | -46.24 | 5.04 | 46.5 | 173.8 | 15.7 | 186.2 |
| 790.0 | 783.79 | -48.70 | 4.03 | 48.9 | 175.3 | 15.7 | 210.0 |
| 800.0 | 793.42 | -51.32 | 3.42 | 51.4 | 176.2 | 15.8 | 197.2 |
| 810.0 | 803.06 | -53.86 | 2.72 | 53.9 | 177.1 | 15.2 | 177.8 |
| 820.0 | 812.70 | -56.42 | 2.11 | 56.5 | 177.9 | 15.4 | 192.3 |
| 830.0 | 822.35 | -59.01 | 1.65 | 59.0 | 178.4 | 15.3 | 197.5 |
| 840.0 | 832.01 | -61.45 | 0.82 | 61.5 | 179.2 | 14.8 | 184.8 |
| 850.0 | 841.67 | -63.96 | 0.29 | 64.0 | 179.7 | 15.0 | 194.1 |
| 860.0 | 851.33 | -66.50 | -0.24 | 66.5 | 180.2 | 15.2 | 177.9 |
| 870.0 | 860.98 | -66.14 | 1.71 | 66.2 | 178.5 | 16.1 | 165.3 |
| 880.0 | 870.57 | -68.75 | 0.61 | 68.8 | 179.5 | 16.8 | 205.0 |
| 890.0 | 880.15 | -71.32 | -0.62 | 71.3 | 180.5 | 16.5 | 201.1 |
| 900.0 | 889.74 | -73.91 | -1.80 | 73.9 | 181.4 | 16.6 | 204.9 |
| 910.0 | 899.33 | -76.46 | -3.02 | 76.5 | 182.3 | 16.3 | 202.9 |
| 920.0 | 908.92 | -79.06 | -4.18 | 79.2 | 183.0 | 16.6 | 202.1 |
| 930.0 | 918.50 | -81.64 | -5.38 | 81.8 | 183.8 | 16.5 | 209.6 |
| 940.0 | 928.09 | -84.17 | -6.66 | 84.4 | 184.5 | 16.4 | 204.6 |
| 950.0 | 937.68 | -86.74 | -7.85 | 87.1 | 185.2 | 16.5 | 207.6 |
| 960.0 | 947.27 | -89.33 | -8.96 | 89.8 | 185.7 | 16.4 | 196.4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 870.0 | 860.98 | -66.14 | 1.71 | 66.2 | 178.3 | 16.1 | 198.3 |
| 880.0 | 870.57 | -68.75 | 0.61 | 68.8 | 179.5 | 16.8 | 205.0 |
| 890.0 | 880.15 | -71.32 | -0.62 | 71.3 | 180.5 | 16.5 | 201.1 |
| 900.0 | 889.74 | -73.91 | -1.80 | 73.9 | 181.4 | 16.6 | 204.9 |
| 910.0 | 899.33 | -76.46 | -3.02 | 76.5 | 182.3 | 16.3 | 202.9 |
| 920.0 | 908.92 | -79.06 | -4.18 | 79.2 | 183.0 | 16.6 | 202.1 |
| 930.0 | 918.50 | -81.64 | -5.38 | 81.8 | 183.8 | 16.5 | 209.6 |
| 940.0 | 928.09 | -84.17 | -6.66 | 84.4 | 184.5 | 16.4 | 204.6 |
| 950.0 | 937.68 | -86.74 | -7.85 | 87.1 | 185.2 | 16.5 | 207.6 |
| 960.0 | 947.27 | -89.33 | -8.96 | 89.8 | 185.7 | 16.4 | 196.4 |
| 970.0 | 956.87 | -91.96 | -9.93 | 92.5 | 186.2 | 16.1 | 202.8 |
| 980.0 | 966.47 | -94.51 | -11.08 | 95.2 | 186.7 | 16.4 | 213.2 |
| 990.0 | 976.07 | -96.91 | -12.51 | 97.7 | 187.4 | 16.4 | 205.4 |
| 1000.0 | 985.66 | -99.34 | -13.90 | 100.3 | 188.0 | 16.7 | 214.9 |
| 1010.0 | 995.21 | -102.00 | -15.05 | 103.1 | 188.4 | 18.0 | 200.9 |
| 1020.0 | 1004.71 | -104.79 | -16.37 | 106.1 | 188.9 | 18.2 | 220.5 |
| 1030.0 | 1014.22 | -107.46 | -17.93 | 108.9 | 189.5 | 17.9 | 208.0 |
| 1040.0 | 1023.74 | -109.90 | -19.79 | 111.7 | 190.2 | 18.0 | 217.8 |
| 1050.0 | 1033.24 | -112.24 | -21.85 | 114.4 | 191.0 | 18.4 | 223.9 |
| 1060.0 | 1042.72 | -114.79 | -23.64 | 117.2 | 191.6 | 19.3 | 209.0 |
| 1070.0 | 1052.11 | -117.53 | -25.70 | 120.3 | 192.3 | 20.3 | 220.3 |
| 1080.0 | 1061.46 | -120.31 | -27.91 | 123.5 | 193.1 | 21.3 | 221.0 |
| 1090.0 | 1070.75 | -123.11 | -30.32 | 126.8 | 193.8 | 22.1 | 212.9 |
| 1100.0 | 1079.99 | -126.36 | -32.36 | 130.4 | 194.4 | 22.9 | 213.2 |
| 1110.0 | 1089.17 | -129.49 | -34.74 | 134.1 | 195.0 | 23.5 | 212.3 |
| 1120.0 | 1098.34 | -132.93 | -36.76 | 137.9 | 195.5 | 23.7 | 215.2 |
| 1130.0 | 1107.51 | -136.20 | -39.02 | 141.7 | 196.0 | 23.4 | 211.8 |
| 1140.0 | 1116.68 | -139.40 | -41.37 | 145.4 | 196.5 | 23.6 | 218.9 |
| 1150.0 | 1125.84 | -142.78 | -43.54 | 149.3 | 197.0 | 23.7 | 209.5 |
| 1160.0 | 1134.99 | -146.12 | -45.77 | 153.1 | 197.4 | 23.7 | 214.4 |
| 1170.0 | 1144.15 | -149.52 | -47.88 | 157.0 | 197.8 | 23.6 | 214.5 |
| 1180.0 | 1153.32 | -152.94 | -49.98 | 160.9 | 198.1 | 23.8 | 212.1 |
| 1190.0 | 1162.46 | -156.24 | -52.29 | 164.8 | 198.5 | 23.7 | 211.7 |
| 1200.0 | 1171.62 | -159.77 | -54.24 | 168.7 | 198.8 | 23.9 | 213.4 |
| 1210.0 | 1180.76 | -163.06 | -56.59 | 172.6 | 199.1 | 23.7 | 213.5 |
| 1220.0 | 1189.91 | -166.50 | -58.70 | 176.5 | 199.4 | 23.9 | 210.0 |
| 1230.0 | 1199.05 | -169.89 | -60.92 | 180.5 | 199.7 | 24.0 | 210.4 |
| 1240.0 | 1208.19 | -173.41 | -62.89 | 184.5 | 199.9 | 24.0 | 218.4 |
| 1250.0 | 1217.34 | -176.75 | -65.16 | 188.4 | 200.2 | 24.1 | 209.7 |
| 1260.0 | 1226.46 | -180.33 | -67.12 | 192.4 | 200.4 | 24.0 | 212.2 |
| 1270.0 | 1235.60 | -183.65 | -69.43 | 196.3 | 200.7 | 23.7 | 211.8 |
| 1280.0 | 1244.75 | -187.06 | -71.59 | 200.3 | 200.9 | 23.9 | 212.4 |
| 1290.0 | 1253.91 | -190.40 | -73.84 | 204.2 | 201.2 | 23.7 | 212.6 |
| 1300.0 | 1263.06 | -193.82 | -75.93 | 208.2 | 201.4 | 23.7 | 216.3 |
| 1310.0 | 1272.22 | -196.99 | -78.40 | 212.0 | 201.7 | 23.6 | 215.3 |
| 1320.0 | 1281.38 | -200.36 | -80.60 | 216.0 | 201.9 | 23.9 | 213.6 |
| 1330.0 | 1290.52 | -203.72 | -82.85 | 219.9 | 202.1 | 23.8 | 216.1 |
| 1340.0 | 1299.67 | -207.07 | -85.10 | 223.9 | 202.3 | 23.8 | 215.1 |
| 1350.0 | 1308.82 | -210.37 | -87.41 | 227.8 | 202.6 | 23.8 | 214.2 |
| 1360.0 | 1317.97 | -213.60 | -89.83 | 231.7 | 202.8 | 23.8 | 216.3 |
| 1370.0 | 1327.13 | -217.12 | -91.73 | 235.7 | 202.9 | 23.7 | 203.9 |
| 1380.0 | 1336.28 | -220.56 | -93.80 | 239.7 | 203.0 | 23.7 | 216.5 |
| 1390.0 | 1345.44 | -223.72 | -96.26 | 243.6 | 203.3 | 23.5 | 214.4 |
| 1400.0 | 1354.61 | -227.01 | -98.52 | 247.5 | 203.5 | 23.5 | 216.4 |
| 1410.0 | 1363.78 | -230.32 | -100.74 | 251.4 | 203.6 | 23.6 | 214.9 |
| 1420.0 | 1372.95 | -233.61 | -103.01 | 255.3 | 203.8 | 23.5 | 214.6 |
| 1430.0 | 1382.12 | -236.87 | -105.20 | 259.2 | 203.9 | 23.5 | 211.0 |
| 1440.0 | 1391.29 | -240.21 | -107.36 | 263.1 | 204.1 | 23.6 | 217.4 |
| 1450.0 | 1400.47 | -243.50 | -109.59 | 267.0 | 204.2 | 23.5 | 212.9 |
| 1460.0 | 1409.63 | -246.82 | -111.83 | 271.0 | 204.4 | 23.6 | 212.2 |
| 1470.0 | 1418.79 | -250.37 | -113.56 | 274.9 | 204.4 | 23.6 | 205.0 |
| 1480.0 | 1427.95 | -253.35 | -116.17 | 278.7 | 204.6 | 23.5 | 219.6 |
| 1490.0 | 1437.11 | -256.73 | -118.32 | 282.7 | 204.7 | 23.8 | 215.3 |
| 1500.0 | 1446.26 | -260.00 | -120.66 | 286.6 | 204.9 | 23.7 | 218.1 |
| 1510.0 | 1455.42 | -263.29 | -122.97 | 290.6 | 205.0 | 23.8 | 212.8 |
| 1519.0 | 1463.66 | -265.52 | -124.33 | 293.2 | 205.1 | 0.0 | 0.0 |

Well: **U39F**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 18" | 23 | 22" | | | X | 3/4/2008 | |
| Surface | 16" | | 20" | | | | | |
| Water Protection | 13 3/8" | 377 | 15 3/8" | 212.4 | X | | 3/6/2008 | Basket @ 88' |
| Coal Protection | 13 3/8" | 377 | 15 3/8" | 212.4 | X | | 3/6/2008 | Basket @ 88' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY: CNX
HOLE: U-39F
RIG #: 109
LOCATION: CLIFTON FORK

DATE STARTED: 3/4/2008
DATE COMPLETED: 3/7/2008

ELECTRIC LOGGED: YES
GROUTED: YES

| DEPTH FROM | THICKNES TO | FT | STRATA DESCRIPTION,VOIDS ETC |
|---|---|---|---|
| 0 | 23 | 23 | OVERBURDEN/SAND |
| 23 | 30 | 7 | SAND/SANDY SHALE |
| 30 | 60 | 30 | SAND/SHALE/COAL |
| 60 | 90 | 30 | |
| 90 | 120 | 30 | SAND/SHALE/COAL |
| 120 | 150 | 30 | SAND/SHALE/COAL |
| 150 | 180 | 30 | SAND/SHALE |
| 180 | 210 | 30 | SAND/SHALE/COAL |
| 210 | 240 | 30 | SAND/SHALE |
| 240 | 270 | 30 | SAND/SHALE |
| 270 | 300 | 30 | SAND/SHALE |
| 300 | 330 | 30 | SAND/SANDY SHALE/COAL |
| 330 | 360 | 30 | SAND/SANDY SHALE/COAL |
| 360 | 390 | 30 | SAND/SANDY SHALE |
| 390 | 410 | 20 | SAND/SANDY SHALE |

410' TOTAL DEPTH
23' OF 18" CASING
376.86' OF 13 3/8" CASING
W/ RIG 109

COMPANY: CNX
HOLE: U-39F
RIG #: 148
LOCATION: CLIFTON FORK

DATE STARTED: 3/12/2008
DATE COMPLETED: 3/17/2008

ELECTRIC LOGGED: YES
GROUTED: YES

| DEPTH FROM | THICKNES TO | FT | STRATA DESCRIPTION,VOIDS ETC |
|---|---|---|---|
| 410 | 422.27 | 12.27 | SANDY SHALE/SAND |
| 422.27 | 453.77 | 31.5 | SAND/SANDY SHALE |
| 453.77 | 484.37 | 30.6 | SANDY SHALE/SAND |
| 484.37 | 500.37 | 16 | SAND/SHALE/COAL |
| 500.37 | 520.37 | 20 | SAND/SHALE/COAL |
| 520.37 | 552.07 | 31.7 | SAND/SHALE/COAL |
| 552.07 | 583.61 | 31.54 | SANDY SHALE/COALSAND |
| 583.61 | 615.23 | 31.62 | SAND/SANDY SHALE |
| 615.23 | 646.76 | 31.53 | SANDY SHALE/COAL/SAND |
| 646.76 | 678.56 | 31.8 | SAND |
| 678.56 | 710.26 | 31.7 | SAND |
| | REAMING HOLE | | |
| 500.37 | 712.26 | 211.89 | |
| 712.26 | 717.29 | 5.03 | SAND/COAL |
| 717.29 | 748.23 | 30.94 | SAND/SANDY SHALE |
| 748.23 | 779.18 | 30.95 | SANDY SHALE/SAND |
| 779.18 | 810.93 | 31.75 | SAND/COAL/SANDY SHALE |
| 810.93 | 842.68 | 31.75 | SANDY SHALE |
| 842.68 | 874.32 | 31.64 | SANDY SHALE/COAL/SANDY SHALE |
| 874.32 | 905.37 | 31.05 | SANDY SHALE |
| 905.37 | 936.37 | 31 | SANDY SHALE/SAND |
| 936.37 | 967.37 | 31 | SAND |
| 967.37 | 998.44 | 31.07 | |
| 998.44 | 1022.54 | 24.1 | SAND/SHALE |
| 1022.54 | 1054.19 | 31.65 | SAND/SHALE/COAL |
| 1054.19 | 1085.59 | 31.4 | SANDY SHALE/SAND |
| 1085.59 | 1116.07 | 30.48 | SAND |
| 1116.07 | 1124.95 | 8.88 | SAND/SHALE |
| 1124.95 | 1186.33 | 61.38 | SAND/SHALE/COAL |
| 1186.33 | 1248.51 | 62.18 | SAND/SHALE |
| 1248.51 | 1310.24 | 61.73 | SAND/SHALE/COAL |
| 1310.24 | 1341.04 | 30.8 | SAND/SANDY SHALE |
| 1341.04 | 1371.92 | 30.88 | SANDY SHALE/SAND |
| 1371.92 | 1402.79 | 30.87 | SAND/SANDY SHALE |
| 1402.79 | 1434.19 | 31.4 | SANDY SHALE/SAND |
| 1434.19 | 1465.49 | 31.3 | SAND |
| 1465.49 | 1496.93 | 31.44 | SAND/COAL/SANDY SHALE |
| 1496.93 | 1528.03 | 31.1 | SANDY SHALE/SAND |

410'-1528.03' TOTAL DEPTH
WITH RIG 148

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1375 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3795 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 3/22/2008 |
| **Driller's Total Depth:** | 1479.90 | **Log's Total Depth:** | 1472.50 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 8/6/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 8/6/2008 | | |
| Status: | | Date: | 8/7/2008 |
| Final PDF Date: | 8/22/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1418 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3795 |
| **Operations Name:** | CBM U39G W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 3/10/2008

Drilling Contractor: NOAH HORN

Date drilling completed: 3/22/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1479.86

Log Total Depth (feet): 1472.46

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1015559.50

Permitted State Plane Y: 327184.97

Final Plat State Plane X: 1015558.92

Final Plat State Plane Y: 327185.68

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | |
|---|---|
| PLAT | U39G PLAT.pdf |

| | | |
|---|---|---|
| 90 | 1/2 | GPM |

| | | |
|---|---|---|
| | | |

List of Attached Items:

| | |
|---|---|
| EXHIBIT A | U39G EXHIBIT A.pdf |

List of Attached Items:

| | |
|---|---|
| GAS SHOW | U39G Gas Show.xls |

**4. Electric Logs (As required by 4VAC25-150-280.A)**

List all logs run: CALIPER GAMMA DENSITY TEMP DEVIATION

Did logs disclose vertical locations of a coal seam? ☑

List of Attached Items:

| | |
|---|---|
| DEVIATION | U39G DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| CASING | U39G Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: NOAH HORN

List of Attached Items:

| Description | |
|---|---|
| DRILL DATA | U39G DRILL DATA.pdf |

## 9. Comments

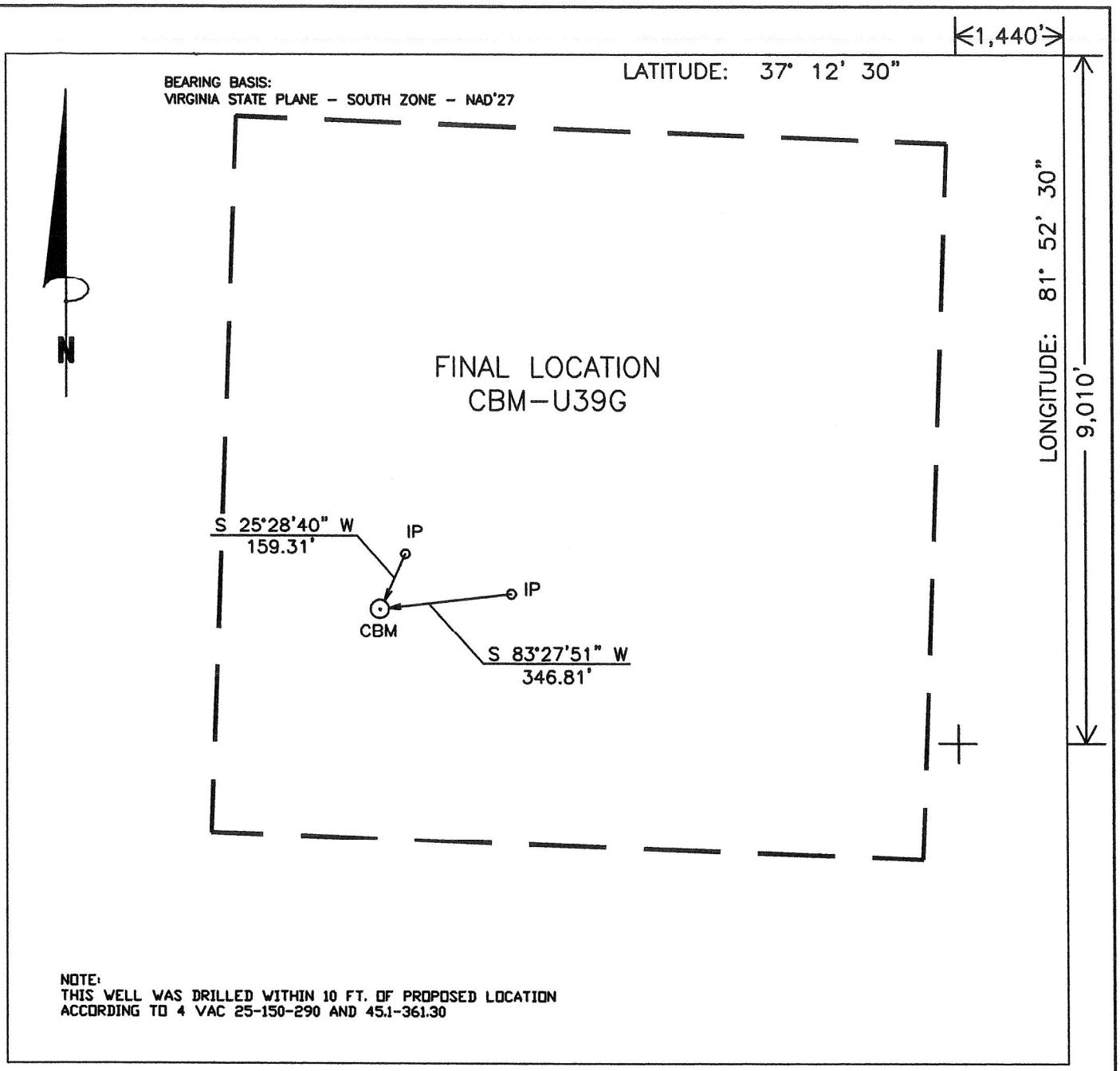
## 10. Signature

Permitee: CNX Gas Company LLC Date: 8/6/2008

Signed By: LESLIE ARRINGTON Title: DIRECTOR ENVIRONMENTAL PERMITTING

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 8/6/2008 | | |
| Status: | A | Date: | 8/7/2008 |
| Final PDF Date: | 8/21/2008 | | |




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25-150-290 AND 45.1-361.30

U39GFNL
2N30/78-621/73

# WELL LOCATION PLAT

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-U39G

TRACT NUMBER COAL MOUNTAIN MINIG QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 327,185.68 E 1,015,558.92

ELEVATION: 1985.23' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 03-12-08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DRP
DANNY R. PRICE
Lic. No. 008540
3/12/08
PROFESSIONAL ENGINEER

Form DGO-GO-7
Rev. 10/96

U39G.CMP
Exhibit A

Well Name: 08-DG-U39-G
SURFACE ELEV: 1985.23 EASTING: 1015558.92 NORTHING: 327185.68

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| JB3 | 25.10 | 27.60 | 1960.13 | 2.50 | |
| | 27.60 | 41.90 | 1957.63 | 14.30 | |
| COAL | 41.90 | 42.50 | 1943.33 | 0.60 | |
| | 42.50 | 63.10 | 1942.73 | 20.60 | |
| COAL | 63.10 | 63.90 | 1922.13 | 0.80 | |
| | 63.90 | 66.10 | 1921.33 | 2.20 | |
| COAL | 66.10 | 67.00 | 1919.13 | 0.90 | |
| | 67.00 | 67.90 | 1918.23 | 0.90 | |
| COAL | 67.90 | 68.50 | 1917.33 | 0.60 | |
| | 68.50 | 78.30 | 1916.73 | 9.80 | |
| TI | 78.30 | 79.90 | 1906.93 | 1.60 | |
| | 79.90 | 89.20 | 1905.33 | 9.30 | |
| COAL | 89.20 | 90.80 | 1896.03 | 1.60 | |
| | 90.80 | 92.20 | 1894.43 | 1.40 | |
| COAL | 92.20 | 93.20 | 1893.03 | 1.00 | |
| | 93.20 | 160.10 | 1892.03 | 66.90 | |
| COAL | 160.10 | 161.50 | 1825.13 | 1.40 | |
| | 161.50 | 219.00 | 1823.73 | 57.50 | |
| US1 | 219.00 | 220.80 | 1766.23 | 1.80 | |
| | 220.80 | 329.90 | 1764.43 | 109.10 | |
| US2 | 329.90 | 330.40 | 1655.33 | 0.50 | |
| | 330.40 | 453.00 | 1654.83 | 122.60 | |
| *GC2 | 453.00 | 454.80 | 1532.23 | 1.80 | |
| | 454.80 | 515.00 | 1530.43 | 60.20 | |
| *SE1 | 515.00 | 515.60 | 1470.23 | 0.60 | |
| | 515.60 | 550.70 | 1469.63 | 35.10 | |
| *SE2 | 550.70 | 552.90 | 1434.53 | 2.20 | |
| | 552.90 | 594.90 | 1432.33 | 42.00 | |
| *LS1 | 594.90 | 597.10 | 1390.33 | 2.20 | |
| | 597.10 | 611.50 | 1388.13 | 14.40 | |
| *LS2 | 611.50 | 612.50 | 1373.73 | 1.00 | |
| | 612.50 | 645.50 | 1372.73 | 33.00 | |
| *LS3 | 645.50 | 646.90 | 1339.73 | 1.40 | |
| | 646.90 | 708.70 | 1338.33 | 61.80 | |
| *UH3 | 708.70 | 710.90 | 1276.53 | 2.20 | |
| | 710.90 | 770.10 | 1274.33 | 59.20 | |
| *MH1 | 770.10 | 772.00 | 1215.13 | 1.90 | |
| | 772.00 | 864.90 | 1213.23 | 92.90 | |
| *P11 | 864.90 | 866.20 | 1120.33 | 1.30 | |
| | 866.20 | 887.80 | 1119.03 | 21.60 | |
| *P10 | 887.80 | 889.00 | 1097.43 | 1.20 | |
| | 889.00 | 955.80 | 1096.23 | 66.80 | |
| *LH3 | 955.80 | 956.90 | 1029.43 | 1.10 | |
| | 956.90 | 1038.00 | 1028.33 | 81.10 | |
| *P92 | 1038.00 | 1040.00 | 947.23 | 2.00 | |
| | 1040.00 | 1067.30 | 945.23 | 27.30 | |
| *P71 | 1067.30 | 1068.30 | 917.93 | 1.00 | |
| | 1068.30 | 1111.90 | 916.93 | 43.60 | |
| *COAL | 1111.90 | 1112.80 | 873.33 | 0.90 | |
| | 1112.80 | 1126.90 | 872.43 | 14.10 | |
| *P72 | 1126.90 | 1127.90 | 858.33 | 1.00 | |
| | 1127.90 | 1143.00 | 857.33 | 15.10 | |
| *COAL | 1143.00 | 1143.90 | 842.23 | 0.90 | |
| | 1143.90 | 1174.90 | 841.33 | 31.00 | |
| *COAL | 1174.90 | 1175.80 | 810.33 | 0.90 | |
| | 1175.80 | 1207.70 | 809.43 | 31.90 | |
| *COAL | 1207.70 | 1208.40 | 777.53 | 0.70 | |

| | | | | |
|---|---|---|---|---|
| | 1208.40 | 1236.40 | 776.83 | 28.00 |
| *COAL | 1236.40 | 1237.50 | 748.83 | 1.10 |
| | 1237.50 | 1266.40 | 747.73 | 28.90 |
| *P61 | 1266.40 | 1267.70 | 718.83 | 1.30 |
| | 1267.70 | 1297.80 | 717.53 | 30.10 |
| *P62 | 1297.80 | 1298.80 | 687.43 | 1.00 |
| | 1298.80 | 1328.90 | 686.43 | 30.10 |
| *P51 | 1328.90 | 1330.10 | 656.33 | 1.20 |
| | 1330.10 | 1360.00 | 655.13 | 29.90 |
| *P52 | 1360.00 | 1361.90 | 625.23 | 1.90 |
| | 1361.90 | 1420.00 | 623.33 | 58.10 |
| *P42 | 1420.00 | 1421.10 | 565.23 | 1.10 |
| | 1421.10 | 1480.00 | 564.13 | 58.90 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U39G.CMP
DATE: 05/20/08

Well: **U39G**

## Oil & Gas Show

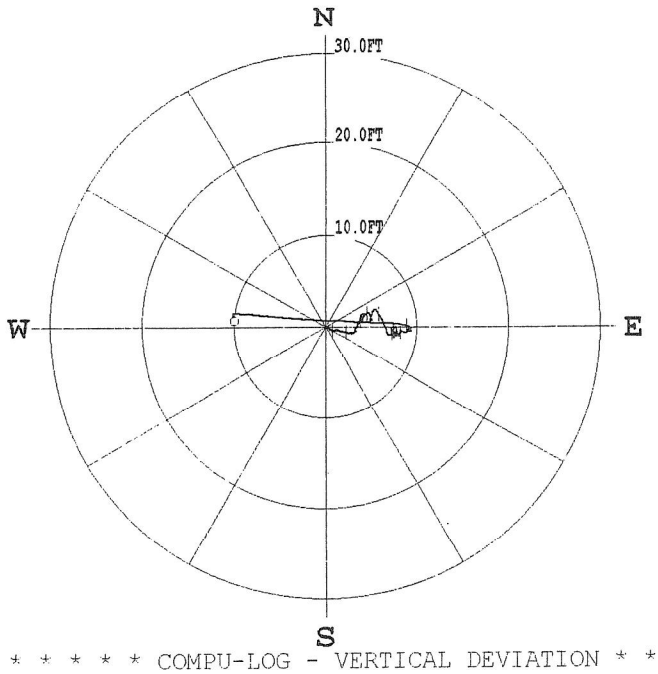
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 453 | 1040 | 587 | | | |
| Pocahontas | 1067.3 | 1421.1 | 353.8 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

LIENT: Consol Energy
OCATION:
OLE ID: 08-CNX-U-39-G
ATE OF LOG: 03/22/08
ROBE: 9136CA 956

MAG DECL: -6.9

SCALE: 10 FT/IN
TRUE DEPTH: 1468.95 FT
AZIMUTH: 273.8
DISTANCE: 9.9 FT
+ = 150 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 08-CNX-U-39-G
DATE OF LOG : 03/22/08
PROBE : 9136CA , 956
DEPTH UNITS : FEET
LOG: 08-CNX-U-39-G_03-22-08_05-38_9136CA_.02_-3.60_1471.21_DEVI.log

| ABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 50.00 | -0.13 | 0.22 | 0.3 | 120.7 | 0.7 | 67.6 |
| 60.0 | 59.99 | -0.09 | 0.22 | 0.2 | 112.4 | 0.4 | 299.8 |
| 70.0 | 69.99 | -0.01 | 0.21 | 0.2 | 91.7 | 0.6 | 23.4 |
| 80.0 | 79.99 | -0.03 | 0.28 | 0.3 | 96.7 | 1.0 | 188.5 |
| 90.0 | 89.99 | -0.15 | 0.39 | 0.4 | 111.0 | 0.7 | 166.4 |
| 100.0 | 99.99 | -0.27 | 0.38 | 0.5 | 125.3 | 1.2 | 151.1 |
| 110.0 | 109.99 | -0.31 | 0.43 | 0.5 | 126.3 | 0.8 | 70.3 |
| 120.0 | 119.99 | -0.32 | 0.59 | 0.7 | 118.3 | 0.9 | 144.3 |
| 130.0 | 129.99 | -0.36 | 0.62 | 0.7 | 120.0 | 1.0 | 108.0 |
| 140.0 | 139.99 | -0.46 | 0.73 | 0.9 | 122.0 | 0.5 | 185.0 |
| 150.0 | 149.99 | -0.52 | 0.72 | 0.9 | 125.9 | 0.3 | 316.0 |
| 160.0 | 159.98 | -0.46 | 0.72 | 0.9 | 122.3 | 0.7 | 35.8 |
| 170.0 | 169.98 | -0.39 | 0.87 | 1.0 | 114.4 | 1.3 | 97.6 |
| 180.0 | 179.98 | -0.50 | 0.94 | 1.1 | 118.0 | 0.5 | 180.1 |
| 190.0 | 189.98 | -0.48 | 0.94 | 1.1 | 117.1 | 0.7 | 12.2 |
| 200.0 | 199.98 | -0.39 | 1.08 | 1.1 | 109.9 | 1.3 | 71.8 |
| 210.0 | 209.98 | -0.41 | 1.25 | 1.3 | 108.3 | 0.7 | 349.1 |
| 220.0 | 219.98 | -0.42 | 1.37 | 1.4 | 107.0 | 0.4 | 181.1 |
| 230.0 | 229.98 | -0.41 | 1.48 | 1.5 | 105.5 | 1.1 | 124.9 |
| 240.0 | 239.97 | -0.52 | 1.51 | 1.6 | 108.8 | 0.5 | 161.5 |
| 250.0 | 249.97 | -0.51 | 1.58 | 1.7 | 107.8 | 1.3 | 91.5 |
| 260.0 | 259.97 | -0.59 | 1.68 | 1.8 | 109.3 | 0.5 | 142.1 |
| 270.0 | 269.97 | -0.55 | 1.82 | 1.9 | 106.9 | 1.2 | 102.7 |
| 280.0 | 279.97 | -0.61 | 1.88 | 2.0 | 107.9 | 0.4 | 51.6 |
| 290.0 | 289.97 | -0.61 | 2.06 | 2.2 | 106.4 | 1.1 | 120.9 |
| 300.0 | 299.97 | -0.69 | 2.13 | 2.2 | 107.9 | 0.7 | 30.9 |
| 310.0 | 309.96 | -0.64 | 2.33 | 2.4 | 105.3 | 1.1 | 126.5 |
| 320.0 | 319.96 | -0.75 | 2.41 | 2.5 | 107.2 | 0.2 | 105.0 |
| 330.0 | 329.96 | -0.76 | 2.56 | 2.7 | 106.6 | 0.1 | 230.1 |
| 340.0 | 339.96 | -0.71 | 2.68 | 2.8 | 104.8 | 1.6 | 81.8 |
| 350.0 | 349.96 | -0.79 | 2.79 | 2.9 | 105.7 | 0.5 | 224.7 |
| 360.0 | 359.96 | -0.76 | 2.80 | 2.9 | 105.2 | 1.0 | 54.5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 210.0 | 209.98 | -0.41 | 1.25 | 1.3 | 108.3 | 0.7 | 349.1 |
| 220.0 | 219.98 | -0.42 | 1.37 | 1.4 | 107.0 | 0.4 | 181.1 |
| 230.0 | 229.98 | -0.41 | 1.48 | 1.5 | 105.5 | 1.1 | 124.9 |
| 240.0 | 239.97 | -0.52 | 1.51 | 1.6 | 108.8 | 0.5 | 161.5 |
| 250.0 | 249.97 | -0.51 | 1.58 | 1.7 | 107.8 | 1.3 | 91.5 |
| 260.0 | 259.97 | -0.59 | 1.68 | 1.8 | 109.3 | 0.5 | 142.1 |
| 270.0 | 269.97 | -0.55 | 1.82 | 1.9 | 106.9 | 1.2 | 102.7 |
| 280.0 | 279.97 | -0.61 | 1.88 | 2.0 | 107.9 | 0.4 | 51.6 |
| 290.0 | 289.97 | -0.61 | 2.06 | 2.2 | 106.4 | 1.1 | 120.9 |
| 300.0 | 299.97 | -0.69 | 2.13 | 2.2 | 107.9 | 0.7 | 30.9 |
| 310.0 | 309.96 | -0.64 | 2.33 | 2.4 | 105.3 | 1.1 | 126.5 |
| 320.0 | 319.96 | -0.75 | 2.41 | 2.5 | 107.2 | 0.2 | 105.0 |
| 330.0 | 329.96 | -0.76 | 2.56 | 2.7 | 106.6 | 0.1 | 230.1 |
| 340.0 | 339.96 | -0.71 | 2.68 | 2.8 | 104.8 | 1.6 | 81.8 |
| 350.0 | 349.96 | -0.79 | 2.79 | 2.9 | 105.7 | 0.5 | 224.7 |
| 360.0 | 359.96 | -0.76 | 2.80 | 2.9 | 105.2 | 1.0 | 54.5 |
| 370.0 | 369.96 | -0.77 | 2.91 | 3.0 | 104.8 | 0.4 | 314.7 |
| 380.0 | 379.96 | -0.68 | 3.05 | 3.1 | 102.5 | 1.1 | 78.8 |
| 390.0 | 389.95 | -0.64 | 3.14 | 3.2 | 101.6 | 1.7 | 50.0 |
| 400.0 | 399.95 | -0.44 | 3.28 | 3.3 | 97.7 | 1.4 | 332.2 |
| 410.0 | 409.94 | -0.27 | 3.20 | 3.2 | 94.8 | 1.5 | 38.7 |
| 420.0 | 419.94 | -0.10 | 3.39 | 3.4 | 91.6 | 1.5 | 49.7 |
| 430.0 | 429.94 | 0.13 | 3.48 | 3.5 | 87.8 | 1.5 | 359.4 |
| 440.0 | 439.93 | 0.36 | 3.58 | 3.6 | 84.2 | 1.6 | 36.9 |
| 450.0 | 449.93 | 0.56 | 3.75 | 3.8 | 81.5 | 1.6 | 58.0 |
| 460.0 | 459.93 | 0.78 | 3.90 | 4.0 | 78.7 | 1.5 | 54.5 |
| 470.0 | 469.92 | 0.95 | 4.10 | 4.2 | 76.9 | 1.5 | 23.6 |
| 480.0 | 479.92 | 1.19 | 4.17 | 4.3 | 74.0 | 1.3 | 307.7 |
| 490.0 | 489.92 | 1.34 | 4.04 | 4.3 | 71.6 | 1.3 | 344.8 |
| 500.0 | 499.91 | 1.30 | 3.96 | 4.2 | 71.8 | 1.1 | 160.7 |
| 510.0 | 509.91 | 1.11 | 3.96 | 4.1 | 74.3 | 1.2 | 156.8 |
| 520.0 | 519.91 | 0.92 | 4.01 | 4.1 | 77.1 | 1.1 | 179.4 |
| 530.0 | 529.91 | 0.72 | 4.01 | 4.1 | 79.8 | 1.2 | 165.1 |
| 540.0 | 539.91 | 0.58 | 3.94 | 4.0 | 81.7 | 1.2 | 240.8 |
| 550.0 | 549.90 | 0.66 | 3.82 | 3.9 | 80.2 | 1.8 | 345.7 |
| 560.0 | 559.90 | 0.77 | 3.73 | 3.8 | 78.3 | 1.6 | 30.4 |
| 570.0 | 569.90 | 0.98 | 3.89 | 4.0 | 75.9 | 1.6 | 47.3 |
| 580.0 | 579.89 | 1.20 | 4.05 | 4.2 | 73.5 | 1.6 | 39.8 |
| 590.0 | 589.89 | 1.31 | 4.26 | 4.5 | 72.8 | 1.3 | 109.5 |
| 600.0 | 599.89 | 1.42 | 4.46 | 4.7 | 72.4 | 1.7 | 53.6 |
| 610.0 | 609.88 | 1.53 | 4.69 | 4.9 | 71.9 | 1.3 | 112.4 |
| 620.0 | 619.88 | 1.38 | 4.81 | 5.0 | 74.0 | 1.2 | 178.7 |
| 630.0 | 629.88 | 1.20 | 4.88 | 5.0 | 76.2 | 1.2 | 159.3 |
| 640.0 | 639.88 | 1.03 | 4.98 | 5.1 | 78.3 | 1.2 | 144.1 |
| 650.0 | 649.87 | 0.85 | 5.05 | 5.1 | 80.4 | 1.1 | 168.9 |
| 660.0 | 659.87 | 0.66 | 5.05 | 5.1 | 82.5 | 1.2 | 226.7 |
| 670.0 | 669.87 | 0.64 | 4.87 | 4.9 | 82.6 | 1.3 | 303.0 |
| 680.0 | 679.87 | 0.88 | 4.94 | 5.0 | 79.9 | 1.6 | 0.6 |
| 690.0 | 689.86 | 1.13 | 5.02 | 5.1 | 77.3 | 1.6 | 21.4 |
| 700.0 | 699.86 | 1.38 | 5.10 | 5.3 | 74.9 | 1.6 | 338.7 |
| 710.0 | 709.86 | 1.61 | 5.17 | 5.4 | 72.7 | 1.6 | 36.3 |
| 720.0 | 719.85 | 1.83 | 5.34 | 5.6 | 71.1 | 1.6 | 51.2 |
| 730.0 | 729.85 | 1.75 | 5.52 | 5.8 | 72.5 | 1.1 | 147.0 |
| 740.0 | 739.85 | 1.58 | 5.62 | 5.8 | 74.3 | 1.2 | 139.1 |
| 750.0 | 749.85 | 1.42 | 5.72 | 5.9 | 76.1 | 1.1 | 150.5 |
| 760.0 | 759.84 | 1.26 | 5.84 | 6.0 | 77.8 | 1.2 | 128.1 |
| 770.0 | 769.84 | 1.11 | 5.97 | 6.1 | 79.5 | 1.1 | 146.5 |
| 780.0 | 779.84 | 0.94 | 6.05 | 6.1 | 81.2 | 1.1 | 145.6 |
| 790.0 | 789.84 | 0.76 | 6.15 | 6.2 | 82.9 | 1.2 | 145.4 |
| 800.0 | 799.84 | 0.59 | 6.24 | 6.3 | 84.6 | 1.1 | 161.4 |
| 810.0 | 809.83 | 0.40 | 6.31 | 6.3 | 86.4 | 1.2 | 162.5 |
| 820.0 | 819.83 | 0.20 | 6.36 | 6.4 | 88.2 | 1.2 | 167.6 |
| 830.0 | 829.83 | 0.02 | 6.45 | 6.5 | 89.8 | 1.2 | 151.2 |
| 840.0 | 839.83 | -0.17 | 6.54 | 6.5 | 91.5 | 1.2 | 151.4 |
| 850.0 | 849.83 | -0.35 | 6.61 | 6.6 | 93.1 | 1.1 | 169.8 |
| 860.0 | 859.82 | -0.55 | 6.63 | 6.7 | 94.8 | 1.2 | 149.1 |
| 870.0 | 869.82 | -0.74 | 6.70 | 6.7 | 96.3 | 1.2 | 158.2 |
| 880.0 | 879.82 | -0.89 | 6.83 | 6.9 | 97.4 | 1.3 | 117.4 |
| 890.0 | 889.82 | -0.96 | 7.02 | 7.1 | 97.8 | 1.5 | 77.8 |
| 900.0 | 899.81 | -0.79 | 7.22 | 7.3 | 96.2 | 1.5 | 24.6 |
| 910.0 | 909.81 | -0.54 | 7.32 | 7.3 | 94.3 | 1.5 | 22.0 |
| 920.0 | 919.81 | -0.31 | 7.41 | 7.4 | 92.4 | 1.5 | 354.5 |
| 930.0 | 929.80 | -0.06 | 7.41 | 7.4 | 90.5 | 1.5 | 333.5 |
| 940.0 | 939.80 | 0.13 | 7.28 | 7.3 | 91.0 | 1.4 | 295.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 900.0 | 899.81 | -0.79 | 7.22 | 7.3 | 90.2 | 1.5 | 24.3 |
| 910.0 | 909.81 | -0.54 | 7.32 | 7.3 | 94.3 | 1.5 | 22.0 |
| 920.0 | 919.81 | -0.31 | 7.41 | 7.4 | 92.4 | 1.5 | 354.5 |
| 930.0 | 929.80 | -0.06 | 7.41 | 7.4 | 90.5 | 1.5 | 333.5 |
| 940.0 | 939.80 | -0.13 | 7.28 | 7.3 | 91.0 | 1.4 | 295.1 |
| 950.0 | 949.80 | -0.23 | 7.18 | 7.2 | 91.8 | 1.2 | 167.4 |
| 960.0 | 959.80 | -0.47 | 7.16 | 7.2 | 93.7 | 1.6 | 183.2 |
| 970.0 | 969.79 | -0.72 | 7.25 | 7.3 | 95.7 | 1.6 | 117.4 |
| 980.0 | 979.79 | -0.87 | 7.50 | 7.5 | 96.6 | 1.6 | 149.8 |
| 990.0 | 989.78 | -1.01 | 7.75 | 7.8 | 97.4 | 1.7 | 105.6 |
| 1000.0 | 999.78 | -0.79 | 7.88 | 7.9 | 95.7 | 1.8 | 347.4 |
| 1010.0 | 1009.77 | -0.50 | 7.78 | 7.8 | 93.7 | 1.8 | 342.6 |
| 1020.0 | 1019.77 | -0.20 | 7.75 | 7.7 | 91.5 | 1.7 | 351.1 |
| 1030.0 | 1029.76 | -0.12 | 7.57 | 7.6 | 90.9 | 1.7 | 265.9 |
| 1040.0 | 1039.76 | -0.29 | 7.40 | 7.4 | 92.3 | 1.6 | 173.3 |
| 1050.0 | 1049.76 | -0.56 | 7.46 | 7.5 | 94.3 | 1.7 | 162.5 |
| 1060.0 | 1059.75 | -0.84 | 7.38 | 7.4 | 96.5 | 1.7 | 200.4 |
| 1070.0 | 1069.75 | -1.12 | 7.42 | 7.5 | 98.6 | 1.7 | 169.9 |
| 1080.0 | 1079.74 | -1.12 | 7.57 | 7.6 | 98.4 | 1.6 | 334.4 |
| 1090.0 | 1089.74 | -0.89 | 7.47 | 7.5 | 96.8 | 1.7 | 2.9 |
| 1100.0 | 1099.74 | -0.64 | 7.41 | 7.4 | 94.9 | 1.6 | 12.2 |
| 1110.0 | 1109.73 | -0.66 | 7.54 | 7.6 | 95.0 | 1.1 | 138.2 |
| 1120.0 | 1119.73 | -0.78 | 7.67 | 7.7 | 95.8 | 1.1 | 123.5 |
| 1130.0 | 1129.73 | -0.92 | 7.77 | 7.8 | 96.7 | 1.1 | 166.6 |
| 1140.0 | 1139.73 | -1.01 | 7.68 | 7.7 | 97.5 | 1.9 | 342.2 |
| 1150.0 | 1149.72 | -0.76 | 7.74 | 7.8 | 95.6 | 1.6 | 319.9 |
| 1160.0 | 1159.72 | -0.81 | 7.75 | 7.8 | 96.0 | 1.1 | 125.6 |
| 1170.0 | 1169.72 | -0.87 | 7.93 | 8.0 | 96.3 | 1.2 | 198.9 |
| 1180.0 | 1179.72 | -0.94 | 8.08 | 8.1 | 96.6 | 1.0 | 156.8 |
| 1190.0 | 1189.71 | -0.91 | 8.04 | 8.1 | 96.5 | 1.8 | 22.6 |
| 1200.0 | 1199.71 | -0.68 | 8.18 | 8.2 | 94.7 | 1.3 | 33.7 |
| 1210.0 | 1209.71 | -0.53 | 8.17 | 8.2 | 93.7 | 1.3 | 86.3 |
| 1220.0 | 1219.70 | -0.53 | 8.29 | 8.3 | 93.6 | 1.1 | 133.9 |
| 1230.0 | 1229.70 | -0.60 | 8.46 | 8.5 | 94.1 | 1.2 | 103.2 |
| 1240.0 | 1239.70 | -0.67 | 8.63 | 8.7 | 94.4 | 1.1 | 125.8 |
| 1250.0 | 1249.70 | -0.64 | 8.87 | 8.9 | 94.1 | 1.6 | 77.1 |
| 1260.0 | 1259.69 | -0.48 | 8.98 | 9.0 | 93.1 | 1.8 | 304.5 |
| 1270.0 | 1269.69 | -0.52 | 9.23 | 9.2 | 93.3 | 1.3 | 94.4 |
| 1280.0 | 1279.68 | -0.33 | 9.26 | 9.3 | 92.0 | 2.1 | 297.8 |
| 1290.0 | 1289.67 | -0.32 | 8.98 | 9.0 | 92.0 | 2.1 | 252.9 |
| 1300.0 | 1299.67 | -0.36 | 9.00 | 9.0 | 92.3 | 0.8 | 120.7 |
| 1310.0 | 1309.67 | -0.36 | 9.15 | 9.2 | 92.3 | 1.0 | 88.4 |
| 1320.0 | 1319.67 | -0.32 | 9.29 | 9.3 | 92.0 | 0.8 | 57.7 |
| 1330.0 | 1329.67 | -0.21 | 9.33 | 9.3 | 91.3 | 0.7 | 347.9 |
| 1340.0 | 1339.67 | -0.07 | 9.19 | 9.2 | 90.4 | 1.6 | 303.1 |
| 1350.0 | 1349.66 | 0.08 | 8.84 | 8.8 | 89.5 | 2.7 | 278.8 |
| 1360.0 | 1359.64 | 0.23 | 8.30 | 8.3 | 88.4 | 3.6 | 281.5 |
| 1370.0 | 1369.61 | 0.32 | 7.55 | 7.6 | 87.6 | 4.9 | 278.1 |
| 1380.0 | 1379.57 | 0.39 | 6.59 | 6.6 | 86.6 | 6.1 | 270.3 |
| 1390.0 | 1389.50 | 0.42 | 5.43 | 5.5 | 85.6 | 7.1 | 265.9 |
| 1400.0 | 1399.41 | 0.46 | 4.08 | 4.1 | 83.5 | 8.8 | 268.3 |
| 1410.0 | 1409.28 | 0.56 | 2.49 | 2.6 | 77.4 | 9.4 | 275.3 |
| 1420.0 | 1419.12 | 0.61 | 0.73 | 0.9 | 50.3 | 10.4 | 269.5 |
| 1430.0 | 1428.94 | 0.74 | -1.16 | 1.4 | 302.4 | 11.6 | 271.5 |
| 1440.0 | 1438.72 | 0.87 | -3.25 | 3.4 | 285.1 | 12.5 | 273.4 |
| 1450.0 | 1448.45 | 1.07 | -5.52 | 5.6 | 281.0 | 13.7 | 278.0 |
| 1460.0 | 1458.15 | 1.33 | -7.96 | 8.1 | 279.5 | 14.8 | 275.8 |
| 1470.0 | 1467.79 | 0.98 | -9.98 | 10.0 | 275.6 | 15.9 | 169.0 |
| 1471.2 | 1468.97 | 0.65 | -9.91 | 9.9 | 273.8 | 0.0 | 0.0 |

Well: **U39G**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 18" | 22 | 20" | | | X | 3/11/08 | |
| Surface | 16" | | 20" | | X | | | |
| Water Protection | 13 3/8" | 378 | 15 3/8" | 150 | X | | 3/13/08 | Basket@88' |
| Coal Protection | 13 3/8" | 378 | 15 3/8" | 150 | X | | 3/13/08 | Basket@88' |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY: CNX
HOLE: U-39G
RIG #: 109/148
LOCATION: CLIFTON FORK RD, VA

DATE STARTED 3/10/2008
DATE COMPLET 3/22/2008

ELECTRIC LOGGED: YES
GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION,VOIDS ETC |
|---|---|---|---|
| 0 | 22 | 22 | OVERBURDEN |
| 22 | 30 | 8 | SAND |
| 30 | 60 | 30 | SAND/SANDY SHALE |
| 60 | 90 | 30 | SAND/SANDY SHALE/COAL |
| 90 | 120 | 30 | SAND |
| 120 | 150 | 30 | SAND/SANDY SHALE |
| 150 | 180 | 30 | SAND/SANDY SHALE/COAL |
| 180 | 210 | 30 | SAND/SANDY SHALE/COAL |
| 210 | 240 | 30 | SAND/SANDY SHALE |
| 240 | 270 | 30 | SAND/SANDY SHALE |
| 270 | 300 | 30 | SAND |
| 300 | 330 | 30 | SAND |
| 330 | 360 | 30 | SAND/SANDY SHALE/COAL |
| 360 | 395 | 35 | SAND |
| 395 | 425.08 | 30.08 | SANDY SHALE/SAND |
| 425.08 | 456.7 | 31.62 | SANDY SHALE/COAL/SAND |
| 456.7 | 488.08 | 31.38 | SAND/SANDY SHALE |
| 488.08 | 519.68 | 31.6 | SANDY SHALE/COAL/SAND |
| 519.68 | 551.42 | 31.74 | SAND/SANDY SHALE/COAL |
| 551.42 | 582.42 | 31 | SANDY SHALE/SAND |
| 582.42 | 614.14 | 31.72 | SANDY SHALE/COAL/SANDY SHALE |
| 614.14 | 644.76 | 30.62 | SANDY SHALE/SAND |
| 644.76 | 675.42 | 30.66 | SAND/SANDY SHALE |
| 675.42 | 707.15 | 31.73 | SAND |
| 707.15 | 738.15 | 31 | SAND |
| 738.15 | 769.12 | 30.97 | SAND/SANDY SHALE |
| 769.12 | 800.89 | 31.77 | SANDY SHALE/COAL/SAND |
| 800.89 | 831.84 | 30.95 | SAND/SANDY SHALE |
| 831.84 | 862.72 | 30.88 | SANDY SHALE |
| 862.72 | 893.69 | 30.97 | SANDY SHALE/COAL/SANDY SHALE |
| 893.69 | 924.59 | 30.9 | SANDY SHALE/SAND/COAL |
| 924.59 | 955.19 | 30.6 | SAND |
| 955.19 | 986.84 | 31.65 | SAND/SANDY SHALE/COAL |
| 986.84 | 1017.82 | 30.98 | SAND/SHALE |
| 1017.82 | 1049.47 | 31.65 | SAND/SHALE/COAL |
| 1049.47 | 1081.17 | 31.7 | SAND/SHALE/COAL |
| 1081.17 | 1100 | 18.83 | SAND/SHALE |
| 1100 | 1115.6 | 15.6 | SANDY SHALE/SAND |
| 1115.6 | 1147.18 | 31.58 | SANDY SHALE/COAL/SAND |

| | | | |
|---|---|---|---|
| **1147.18** | **1178.7** | **31.52** | **SAND** |
| **1178.7** | **1209.65** | **30.95** | **SAND/SANDY SHALE** |
| **1209.65** | **1240.55** | **30.9** | **SAND/SHALE** |
| **1240.55** | **1271.63** | **31.08** | **SAND/SHALE** |
| **1271.63** | **1274.36** | **2.73** | **SANDY SHALE/SAND** |
| **1274.36** | **1306.01** | **31.65** | **SAND/COAL/SANDY SHALE** |
| **1306.01** | **1337.71** | **31.7** | **SANDY SHALE/SAND** |
| **1337.71** | **1369.26** | **31.55** | **SAND/COAL/SANDY SHALE** |
| **1369.26** | **1400.76** | **31.5** | **SAND/SHALE** |
| **1400.76** | **1432.41** | **31.65** | **SAND/SHALE/COAL** |
| **1432.41** | **1464.01** | **31.6** | **SAND/SHALE** |
| **1464.01** | **1479.86** | **15.85** | **SAND/SHALE** |

1479.86' TOTAL DEPTH
22' OF 18" CASING
378.19' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1308 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3793 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 3/12/2008 |
| **Driller's Total Depth:** | 1525.40 | **Log's Total Depth:** | 1524.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/2/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 6/2/2008 | | |
| Status: | | Date: | 6/2/2008 |
| Final PDF Date: | 6/12/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1348 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3793 |
| **Operations Name:** | CBM U39H W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 3/3/2008

Drilling Contractor: Noah Horn

Date drilling completed: 3/12/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1525.35

Log Total Depth (feet): 1523.98

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1015383.70

Permitted State Plane Y: 327716.57

Final Plat State Plane X: 1015382.56

Final Plat State Plane Y: 327716.37

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | |
|---|---|
| Plat | U39H PLAT.pdf |

**3. Geological Data**

| | | |
|---|---|---|
| 170 | 2-3 | GPM |

| | | |
|---|---|---|
| | | |

List of Attached Items:

| | |
|---|---|
| Exhibit A | U39H EXHIBIT A.pdf |

List of Attached Items:

| | |
|---|---|
| Gas Show | U39H Gas Show.xls |

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑

List of Attached Items:

| | |
|---|---|
| Deviation | U39H DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| Casing | U39H Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| Description | |
|---|---|
| Drill Data | U39H DRILL DATA.pdf |

## 9. Comments

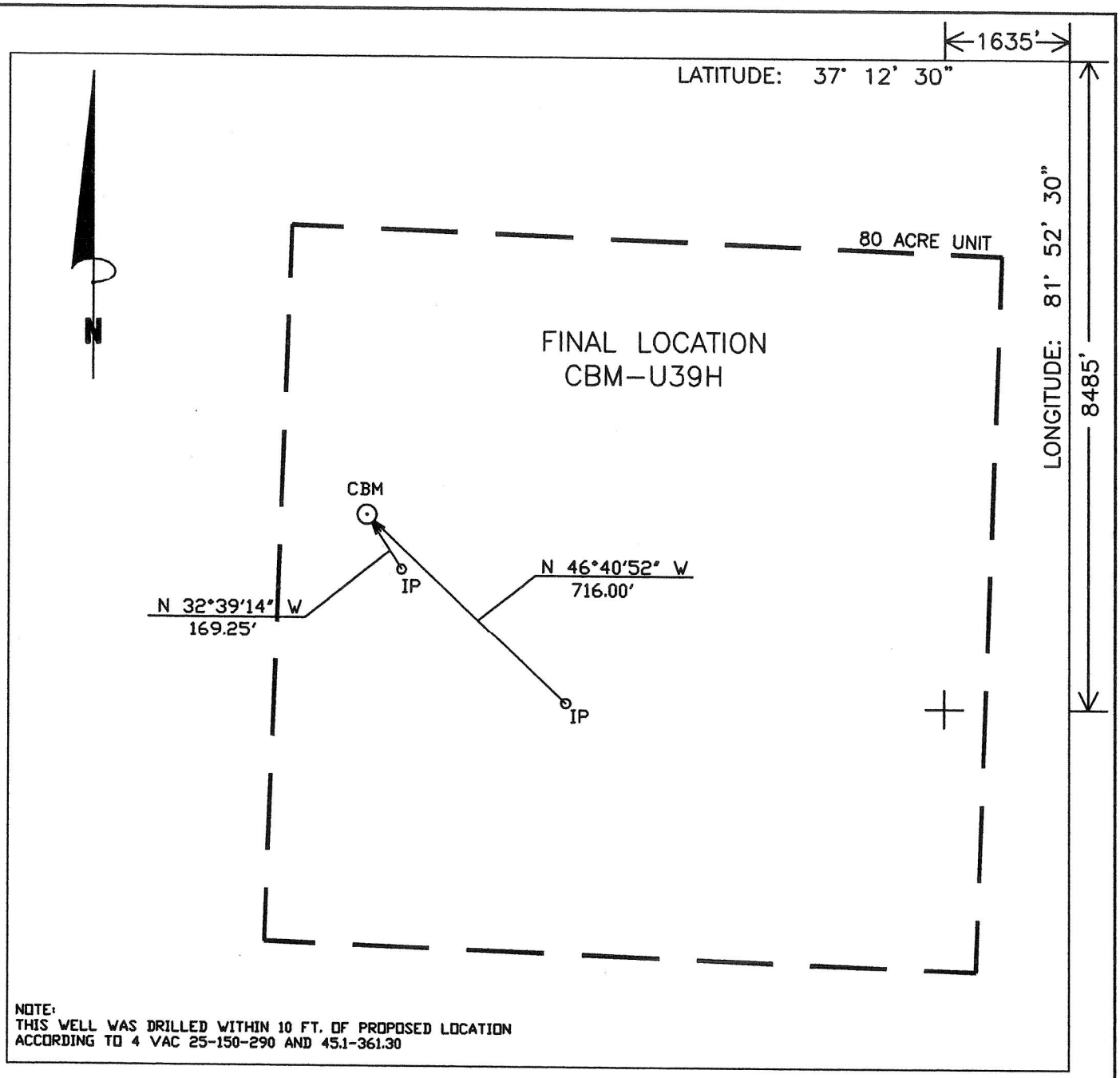
## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/2/2008

Signed By: Leslie Arrington Title: Director Environmental Permitting

**INTERNAL USE ONLY**

| | | | |
|---|---|---|---|
| Submit Date: | 6/2/2008 | | |
| Status: | A | Date: | 6/2/2008 |
| Final PDF Date: | 6/12/2008 | | |




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25-150-290 AND 45.1-361.30

# WELL LOCATION PLAT

U39HFNL
2N30/82-320/31

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–U39H

TRACT NUMBER COAL MOUNTAIN MINING QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 327,716.37 E 1,015,382.56

ELEVATION: 2014.80' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 03–12–08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
3/12/08
PROFESSIONAL ENGINEER

Form DGO–GO–7
Rev. 10/96

U39H.CMP
Exhibit A

Well Name: 08 CBM U39H
SURFACE ELEV: 2143.57 EASTING: 1015518.13 NORTHING: 328267.76

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 80.90 | 82.00 | 2062.67 | 1.10 | |
| | 82.00 | 115.10 | 2061.57 | 33.10 | |
| TI | 115.10 | 117.40 | 2028.47 | 2.30 | |
| | 117.40 | 120.40 | 2026.17 | 3.00 | |
| COAL | 120.40 | 122.70 | 2023.17 | 2.30 | |
| | 122.70 | 182.90 | 2020.87 | 60.20 | |
| COAL | 182.90 | 184.80 | 1960.67 | 1.90 | |
| | 184.80 | 223.30 | 1958.77 | 38.50 | |
| COAL | 223.30 | 224.20 | 1920.27 | 0.90 | |
| | 224.20 | 245.70 | 1919.37 | 21.50 | |
| US1 | 245.70 | 246.80 | 1897.87 | 1.10 | |
| | 246.80 | 357.20 | 1896.77 | 110.40 | |
| US2 | 357.20 | 358.00 | 1786.37 | 0.80 | |
| | 358.00 | 477.00 | 1785.57 | 119.00 | |
| *GC2 | 477.00 | 478.20 | 1666.57 | 1.20 | |
| | 478.20 | 543.60 | 1665.37 | 65.40 | |
| *SE1 | 543.60 | 544.00 | 1599.97 | 0.40 | |
| | 544.00 | 576.80 | 1599.57 | 32.80 | |
| *SE2 | 576.80 | 578.80 | 1566.77 | 2.00 | |
| | 578.80 | 625.10 | 1564.77 | 46.30 | |
| *LS1 | 625.10 | 628.20 | 1518.47 | 3.10 | |
| | 628.20 | 638.60 | 1515.37 | 10.40 | |
| *LS2 | 638.60 | 639.70 | 1504.97 | 1.10 | |
| | 639.70 | 671.30 | 1503.87 | 31.60 | |
| *LS3 | 671.30 | 672.70 | 1472.27 | 1.40 | |
| | 672.70 | 728.50 | 1470.87 | 55.80 | |
| *UH3 | 728.50 | 729.70 | 1415.07 | 1.20 | |
| | 729.70 | 793.20 | 1413.87 | 63.50 | |
| *MH1 | 793.20 | 794.80 | 1350.37 | 1.60 | |
| | 794.80 | 878.20 | 1348.77 | 83.40 | |
| *COAL | 878.20 | 881.10 | 1265.37 | 2.90 | |
| | 881.10 | 892.90 | 1262.47 | 11.80 | |
| *P11 | 892.90 | 895.40 | 1250.67 | 2.50 | |
| | 895.40 | 918.70 | 1248.17 | 23.30 | |
| *P10 | 918.70 | 920.00 | 1224.87 | 1.30 | |
| | 920.00 | 983.00 | 1223.57 | 63.00 | |
| *LH3 | 983.00 | 984.90 | 1160.57 | 1.90 | |
| | 984.90 | 991.90 | 1158.67 | 7.00 | |
| *COAL | 991.90 | 993.10 | 1151.67 | 1.20 | |
| | 993.10 | 1009.90 | 1150.47 | 16.80 | |
| *COAL | 1009.90 | 1010.90 | 1133.67 | 1.00 | |
| | 1010.90 | 1068.00 | 1132.67 | 57.10 | |
| *P92 | 1068.00 | 1069.80 | 1075.57 | 1.80 | |
| | 1069.80 | 1073.00 | 1073.77 | 3.20 | |
| *P81 | 1073.00 | 1075.00 | 1070.57 | 2.00 | |
| | 1075.00 | 1098.50 | 1068.57 | 23.50 | |
| *P71 | 1098.50 | 1099.90 | 1045.07 | 1.40 | |
| | 1099.90 | 1127.40 | 1043.67 | 27.50 | |
| *COAL | 1127.40 | 1128.30 | 1016.17 | 0.90 | |
| | 1128.30 | 1150.10 | 1015.27 | 21.80 | |
| *P72 | 1150.10 | 1152.80 | 993.47 | 2.70 | |
| | 1152.80 | 1227.70 | 990.77 | 74.90 | |
| *COAL | 1227.70 | 1227.90 | 915.87 | 0.20 | |
| | 1227.90 | 1251.00 | 915.67 | 23.10 | |
| *COAL | 1251.00 | 1253.80 | 892.57 | 2.80 | |
| | 1253.80 | 1302.90 | 889.77 | 49.10 | |
| *P62 | 1302.90 | 1303.80 | 840.67 | 0.90 | |

| | | | | |
|---|---|---|---|---|
| | 1303.80 | 1344.10 | 839.77 | 40.30 |
| *P51 | 1344.10 | 1344.70 | 799.47 | 0.60 |
| | 1344.70 | 1350.10 | 798.87 | 5.40 |
| *COAL | 1350.10 | 1352.00 | 793.47 | 1.90 |
| | 1352.00 | 1403.80 | 791.57 | 51.80 |
| *P41 | 1403.80 | 1404.20 | 739.77 | 0.40 |
| | 1404.20 | 1448.00 | 739.37 | 43.80 |
| *P42 | 1448.00 | 1448.90 | 695.57 | 0.90 |
| | 1448.90 | 1525.00 | 694.67 | 76.10 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U39H.CMP
DATE: 05/20/08

Well: **U39H**

**Oil & Gas Show**

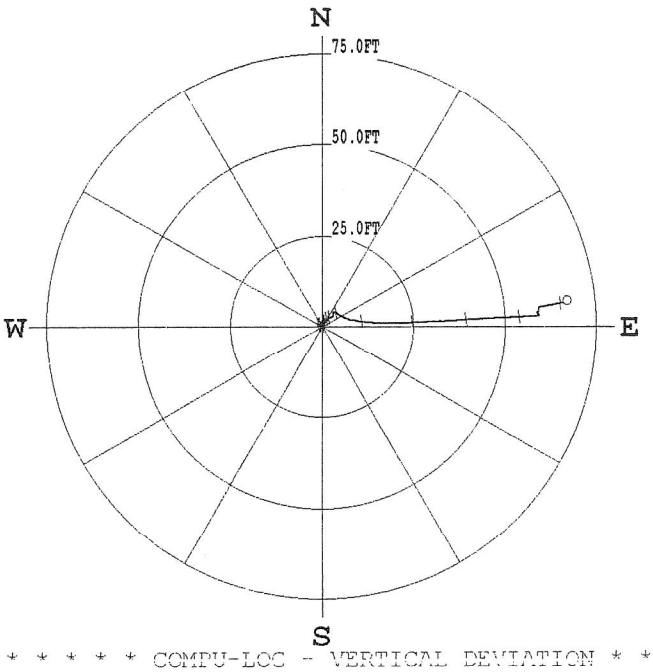
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 477 | 1075 | 598 | | | |
| Pocahontas | 1098.5 | 1352 | 253.5 | | | |
| Total IPF | | | | NOT TAKEN | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

LIENT: Consol Energy
OCATION:
OLE ID: 08-CNX-U-39-H
ATE OF LOG: 03/11/08
ROBE: 9136CA 956

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1516.12 FT
AZIMUTH: 83.9
DISTANCE: 67.3 FT
+ = 100 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 08-CNX-U-39-H
DATE OF LOG : 03/11/08
PROBE : 9136CA , 956
DEPTH UNITS : FEET
LOG: 08-CNX-U-39-H_03-11-08_21-33_9136CA_.02_-0.02_1521.12_DEVI.log

| ABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | 0.15 | -0.60 | 0.6 | 283.9 | 1.4 | 206.7 |
| 60.0 | 59.98 | 0.09 | -0.47 | 0.5 | 281.5 | 1.4 | 80.6 |
| 70.0 | 69.98 | 0.23 | -0.29 | 0.4 | 309.4 | 1.4 | 24.7 |
| 80.0 | 79.98 | 0.46 | -0.25 | 0.5 | 331.3 | 1.4 | 327.6 |
| 90.0 | 89.97 | 0.63 | -0.43 | 0.8 | 325.8 | 1.4 | 308.8 |
| 100.0 | 99.97 | 0.77 | -0.63 | 1.0 | 321.0 | 1.4 | 293.1 |
| 110.0 | 109.97 | 0.73 | -0.85 | 1.1 | 310.7 | 1.4 | 225.1 |
| 120.0 | 119.97 | 0.54 | -1.00 | 1.1 | 298.4 | 1.4 | 204.3 |
| 130.0 | 129.96 | 0.30 | -1.03 | 1.1 | 286.0 | 1.5 | 178.0 |
| 140.0 | 139.96 | 0.07 | -0.95 | 1.0 | 273.9 | 1.4 | 136.2 |
| 150.0 | 149.96 | 0.02 | -0.72 | 0.7 | 271.8 | 1.4 | 69.7 |
| 160.0 | 159.95 | 0.19 | -0.54 | 0.6 | 289.4 | 1.4 | 30.2 |
| 170.0 | 169.95 | 0.41 | -0.42 | 0.6 | 314.2 | 1.5 | 20.3 |
| 180.0 | 179.95 | 0.65 | -0.46 | 0.8 | 324.3 | 1.4 | 329.6 |
| 190.0 | 189.94 | 0.77 | -0.68 | 1.0 | 318.7 | 1.4 | 298.0 |
| 200.0 | 199.94 | 0.81 | -0.91 | 1.2 | 311.6 | 1.4 | 242.3 |
| 210.0 | 209.94 | 0.67 | -1.12 | 1.3 | 300.9 | 1.4 | 224.9 |
| 220.0 | 219.93 | 0.44 | -1.18 | 1.3 | 290.6 | 1.5 | 153.5 |
| 230.0 | 229.93 | 0.23 | -1.03 | 1.1 | 282.8 | 1.4 | 134.3 |
| 240.0 | 239.93 | 0.15 | -0.80 | 0.8 | 280.5 | 1.4 | 96.4 |
| 250.0 | 249.93 | 0.26 | -0.59 | 0.6 | 293.8 | 1.4 | 42.4 |
| 260.0 | 259.92 | 0.49 | -0.51 | 0.7 | 313.8 | 1.4 | 355.0 |
| 270.0 | 269.92 | 0.72 | -0.59 | 0.9 | 320.8 | 1.4 | 322.1 |
| 280.0 | 279.92 | 0.77 | -0.81 | 1.1 | 313.5 | 1.4 | 246.6 |
| 290.0 | 289.91 | 0.67 | -1.04 | 1.2 | 302.7 | 1.4 | 238.6 |
| 300.0 | 299.91 | 0.46 | -1.15 | 1.2 | 291.8 | 1.4 | 180.2 |
| 310.0 | 309.91 | 0.22 | -1.09 | 1.1 | 281.5 | 1.4 | 142.0 |
| 320.0 | 319.90 | 0.13 | -0.86 | 0.9 | 278.4 | 1.4 | 89.8 |
| 330.0 | 329.90 | 0.24 | -0.65 | 0.7 | 290.6 | 1.5 | 47.9 |
| 340.0 | 339.90 | 0.44 | -0.49 | 0.7 | 312.1 | 1.5 | 14.9 |
| 350.0 | 349.89 | 0.68 | -0.59 | 0.9 | 318.7 | 1.6 | 310.8 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 210.0 | 209.94 | 0.67 | -1.12 | 1.3 | 300.9 | 1.4 | 224.9 |
| 220.0 | 219.93 | 0.44 | -1.18 | 1.3 | 290.6 | 1.5 | 153.5 |
| 230.0 | 229.93 | 0.23 | -1.03 | 1.1 | 282.8 | 1.4 | 134.3 |
| 240.0 | 239.93 | 0.15 | -0.80 | 0.8 | 280.5 | 1.4 | 96.4 |
| 250.0 | 249.93 | 0.26 | -0.59 | 0.6 | 293.8 | 1.4 | 42.4 |
| 260.0 | 259.92 | 0.49 | -0.51 | 0.7 | 313.8 | 1.4 | 355.0 |
| 270.0 | 269.92 | 0.72 | -0.59 | 0.9 | 320.8 | 1.4 | 322.1 |
| 280.0 | 279.92 | 0.77 | -0.81 | 1.1 | 313.5 | 1.4 | 246.6 |
| 290.0 | 289.91 | 0.67 | -1.04 | 1.2 | 302.7 | 1.4 | 238.6 |
| 300.0 | 299.91 | 0.46 | -1.15 | 1.2 | 291.8 | 1.4 | 180.2 |
| 310.0 | 309.91 | 0.22 | -1.09 | 1.1 | 281.5 | 1.4 | 142.0 |
| 320.0 | 319.90 | 0.13 | -0.86 | 0.9 | 278.4 | 1.4 | 89.8 |
| 330.0 | 329.90 | 0.24 | -0.65 | 0.7 | 290.6 | 1.5 | 47.9 |
| 340.0 | 339.90 | 0.44 | -0.49 | 0.7 | 312.1 | 1.5 | 14.9 |
| 350.0 | 349.89 | 0.68 | -0.59 | 0.9 | 318.7 | 1.6 | 310.8 |
| 360.0 | 359.89 | 0.83 | -0.81 | 1.2 | 315.8 | 1.5 | 278.4 |
| 370.0 | 369.89 | 0.74 | -1.05 | 1.3 | 305.5 | 1.4 | 220.1 |
| 380.0 | 379.88 | 0.50 | -1.10 | 1.2 | 294.5 | 1.5 | 163.5 |
| 390.0 | 389.88 | 0.28 | -0.96 | 1.0 | 286.3 | 1.5 | 123.5 |
| 400.0 | 399.88 | 0.20 | -0.71 | 0.7 | 285.7 | 1.5 | 92.2 |
| 410.0 | 409.87 | 0.25 | -0.45 | 0.5 | 299.6 | 1.5 | 63.0 |
| 420.0 | 419.87 | 0.45 | -0.28 | 0.5 | 328.1 | 1.5 | 15.1 |
| 430.0 | 429.87 | 0.25 | -0.19 | 0.3 | 323.0 | 1.3 | 144.3 |
| 440.0 | 439.86 | 0.09 | -0.03 | 0.1 | 343.8 | 1.4 | 124.6 |
| 450.0 | 449.86 | -0.00 | 0.20 | 0.2 | 90.4 | 1.4 | 93.3 |
| 460.0 | 459.86 | 0.07 | 0.43 | 0.4 | 80.5 | 1.4 | 50.5 |
| 470.0 | 469.85 | 0.29 | 0.56 | 0.6 | 62.9 | 1.5 | 21.0 |
| 480.0 | 479.85 | 0.55 | 0.59 | 0.8 | 47.4 | 1.5 | 350.9 |
| 490.0 | 489.85 | 0.80 | 0.51 | 0.9 | 32.6 | 1.5 | 339.9 |
| 500.0 | 499.84 | 1.03 | 0.38 | 1.1 | 20.1 | 1.5 | 309.5 |
| 510.0 | 509.84 | 1.18 | 0.17 | 1.2 | 8.3 | 1.4 | 287.3 |
| 520.0 | 519.84 | 1.20 | -0.07 | 1.2 | 356.9 | 1.3 | 256.1 |
| 530.0 | 529.83 | 1.07 | -0.22 | 1.1 | 348.2 | 1.2 | 205.2 |
| 540.0 | 539.83 | 0.87 | -0.21 | 0.9 | 346.5 | 1.3 | 167.4 |
| 550.0 | 549.83 | 0.67 | -0.11 | 0.7 | 350.9 | 1.3 | 136.6 |
| 560.0 | 559.83 | 0.55 | 0.09 | 0.6 | 9.8 | 1.4 | 110.1 |
| 570.0 | 569.82 | 0.59 | 0.34 | 0.7 | 30.1 | 1.7 | 57.1 |
| 580.0 | 579.82 | 0.80 | 0.51 | 0.9 | 32.4 | 1.7 | 31.2 |
| 590.0 | 589.82 | 1.07 | 0.57 | 1.2 | 27.9 | 1.6 | 354.1 |
| 600.0 | 599.81 | 1.33 | 0.47 | 1.4 | 19.4 | 1.6 | 322.7 |
| 610.0 | 609.81 | 1.48 | 0.27 | 1.5 | 10.2 | 1.4 | 289.3 |
| 620.0 | 619.81 | 1.48 | 0.04 | 1.5 | 1.5 | 1.3 | 253.5 |
| 630.0 | 629.80 | 1.33 | -0.10 | 1.3 | 355.9 | 1.1 | 191.6 |
| 640.0 | 639.80 | 1.14 | -0.07 | 1.1 | 356.3 | 1.2 | 151.2 |
| 650.0 | 649.80 | 0.98 | 0.08 | 1.0 | 4.4 | 1.2 | 124.7 |
| 660.0 | 659.80 | 0.90 | 0.29 | 0.9 | 18.0 | 1.4 | 100.5 |
| 670.0 | 669.79 | 0.94 | 0.53 | 1.1 | 29.3 | 1.4 | 58.8 |
| 680.0 | 679.79 | 1.13 | 0.70 | 1.3 | 31.7 | 1.6 | 13.7 |
| 690.0 | 689.79 | 1.41 | 0.69 | 1.6 | 26.3 | 1.7 | 339.2 |
| 700.0 | 699.78 | 1.61 | 0.52 | 1.7 | 18.0 | 1.5 | 293.0 |
| 710.0 | 709.78 | 1.61 | 0.30 | 1.6 | 10.7 | 1.2 | 251.9 |
| 720.0 | 719.78 | 1.47 | 0.18 | 1.5 | 6.9 | 1.1 | 190.3 |
| 730.0 | 729.78 | 1.28 | 0.21 | 1.3 | 9.5 | 1.1 | 162.7 |
| 740.0 | 739.77 | 1.12 | 0.36 | 1.2 | 17.6 | 1.4 | 123.2 |
| 750.0 | 749.77 | 1.06 | 0.58 | 1.2 | 28.9 | 1.4 | 102.0 |
| 760.0 | 759.77 | 1.10 | 0.83 | 1.4 | 37.3 | 1.6 | 65.1 |
| 770.0 | 769.76 | 1.28 | 1.04 | 1.6 | 39.1 | 1.7 | 41.0 |
| 780.0 | 779.76 | 1.53 | 1.21 | 1.9 | 38.3 | 1.8 | 29.4 |
| 790.0 | 789.75 | 1.82 | 1.24 | 2.2 | 34.1 | 1.6 | 335.7 |
| 800.0 | 799.75 | 2.05 | 1.08 | 2.3 | 27.7 | 1.1 | 280.5 |
| 810.0 | 809.75 | 1.96 | 0.94 | 2.2 | 25.6 | 0.9 | 206.3 |
| 820.0 | 819.75 | 1.80 | 0.97 | 2.0 | 28.2 | 1.1 | 127.1 |
| 830.0 | 829.74 | 1.71 | 1.16 | 2.1 | 34.2 | 1.3 | 98.7 |
| 840.0 | 839.74 | 1.74 | 1.42 | 2.2 | 39.3 | 1.6 | 59.4 |
| 850.0 | 849.74 | 1.94 | 1.65 | 2.5 | 40.4 | 1.8 | 44.8 |
| 860.0 | 859.73 | 2.24 | 1.79 | 2.9 | 38.6 | 2.0 | 12.8 |
| 870.0 | 869.72 | 2.57 | 1.78 | 3.1 | 34.7 | 1.9 | 337.0 |
| 880.0 | 879.72 | 2.72 | 1.60 | 3.2 | 30.4 | 0.7 | 209.5 |
| 890.0 | 889.72 | 2.60 | 1.62 | 3.1 | 32.0 | 0.9 | 172.1 |
| 900.0 | 899.72 | 2.50 | 1.75 | 3.0 | 35.0 | 1.1 | 122.4 |
| 910.0 | 909.72 | 2.43 | 1.95 | 3.1 | 38.7 | 1.4 | 93.3 |
| 920.0 | 919.71 | 2.47 | 2.23 | 3.3 | 42.0 | 1.7 | 72.6 |
| 930.0 | 929.71 | 2.59 | 2.51 | 3.6 | 44.0 | 1.7 | 60.9 |
| 940.0 | 939.70 | 2.78 | 2.78 | 3.9 | 45.0 | 1.9 | 49.7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 880.0 | 879.72 | 2.72 | 1.60 | 3.2 | 30.4 | 0.7 | 209.5 |
| 890.0 | 889.72 | 2.60 | 1.62 | 3.1 | 32.0 | 0.9 | 172.1 |
| 900.0 | 899.72 | 2.50 | 1.75 | 3.0 | 35.0 | 1.1 | 122.4 |
| 910.0 | 909.72 | 2.43 | 1.95 | 3.1 | 38.7 | 1.4 | 93.3 |
| 920.0 | 919.71 | 2.47 | 2.23 | 3.3 | 42.0 | 1.7 | 72.6 |
| 930.0 | 929.71 | 2.59 | 2.51 | 3.6 | 44.0 | 1.7 | 60.9 |
| 940.0 | 939.70 | 2.78 | 2.78 | 3.9 | 45.0 | 1.9 | 49.7 |
| 950.0 | 949.69 | 3.08 | 2.95 | 4.3 | 43.8 | 2.0 | 358.3 |
| 960.0 | 959.69 | 3.45 | 3.02 | 4.6 | 41.2 | 2.1 | 348.9 |
| 970.0 | 969.68 | 3.84 | 3.05 | 4.9 | 38.4 | 2.2 | 347.9 |
| 980.0 | 979.68 | 3.92 | 3.08 | 5.0 | 38.2 | 1.5 | 73.9 |
| 990.0 | 989.67 | 3.98 | 3.31 | 5.2 | 39.7 | 1.4 | 80.5 |
| 1000.0 | 999.67 | 4.02 | 3.56 | 5.4 | 41.5 | 1.4 | 82.4 |
| 1010.0 | 1009.67 | 3.93 | 3.77 | 5.4 | 43.8 | 1.3 | 137.3 |
| 1020.0 | 1019.66 | 3.74 | 3.93 | 5.4 | 46.4 | 1.7 | 141.1 |
| 1030.0 | 1029.66 | 3.49 | 4.16 | 5.4 | 50.0 | 2.3 | 116.7 |
| 1040.0 | 1039.65 | 3.20 | 4.55 | 5.6 | 54.9 | 3.4 | 119.0 |
| 1050.0 | 1049.62 | 2.88 | 5.12 | 5.9 | 60.7 | 4.6 | 116.5 |
| 1060.0 | 1059.59 | 2.51 | 5.90 | 6.4 | 67.0 | 5.4 | 114.4 |
| 1070.0 | 1069.53 | 2.10 | 6.87 | 7.2 | 73.0 | 6.8 | 110.0 |
| 1080.0 | 1079.46 | 1.76 | 8.02 | 8.2 | 77.6 | 6.3 | 100.6 |
| 1090.0 | 1089.37 | 1.61 | 9.29 | 9.4 | 80.2 | 7.4 | 103.7 |
| 1100.0 | 1099.29 | 1.37 | 10.52 | 10.6 | 82.6 | 7.2 | 95.5 |
| 1110.0 | 1109.20 | 1.25 | 11.83 | 11.9 | 84.0 | 7.6 | 95.8 |
| 1120.0 | 1119.11 | 1.15 | 13.17 | 13.2 | 85.0 | 7.9 | 92.5 |
| 1130.0 | 1129.02 | 1.02 | 14.51 | 14.5 | 86.0 | 7.9 | 94.9 |
| 1140.0 | 1138.93 | 0.94 | 15.88 | 15.9 | 86.6 | 8.0 | 90.6 |
| 1150.0 | 1148.83 | 0.93 | 17.25 | 17.3 | 86.9 | 7.8 | 93.4 |
| 1160.0 | 1158.74 | 0.89 | 18.62 | 18.6 | 87.3 | 8.1 | 88.0 |
| 1170.0 | 1168.64 | 0.89 | 20.01 | 20.0 | 87.4 | 8.2 | 88.3 |
| 1180.0 | 1178.54 | 0.96 | 21.42 | 21.4 | 87.4 | 8.1 | 87.2 |
| 1190.0 | 1188.44 | 1.00 | 22.83 | 22.9 | 87.5 | 8.3 | 89.0 |
| 1200.0 | 1198.34 | 1.07 | 24.25 | 24.3 | 87.5 | 8.5 | 86.3 |
| 1210.0 | 1208.23 | 1.15 | 25.71 | 25.7 | 87.4 | 8.5 | 87.5 |
| 1220.0 | 1218.12 | 1.21 | 27.18 | 27.2 | 87.5 | 8.5 | 87.2 |
| 1230.0 | 1228.01 | 1.28 | 28.66 | 28.7 | 87.4 | 8.6 | 88.7 |
| 1240.0 | 1237.90 | 1.35 | 30.14 | 30.2 | 87.4 | 8.5 | 88.6 |
| 1250.0 | 1247.79 | 1.43 | 31.61 | 31.6 | 87.4 | 8.5 | 85.4 |
| 1260.0 | 1257.68 | 1.45 | 33.07 | 33.1 | 87.5 | 8.3 | 88.0 |
| 1270.0 | 1267.58 | 1.57 | 34.52 | 34.6 | 87.4 | 8.2 | 85.2 |
| 1280.0 | 1277.48 | 1.61 | 35.94 | 36.0 | 87.4 | 8.1 | 88.0 |
| 1290.0 | 1287.37 | 1.72 | 37.38 | 37.4 | 87.4 | 8.3 | 87.4 |
| 1300.0 | 1297.27 | 1.86 | 38.80 | 38.8 | 87.3 | 8.1 | 84.5 |
| 1310.0 | 1307.17 | 1.91 | 40.21 | 40.3 | 87.3 | 8.2 | 87.0 |
| 1320.0 | 1317.06 | 1.99 | 41.65 | 41.7 | 87.3 | 8.2 | 93.1 |
| 1330.0 | 1326.96 | 2.08 | 43.07 | 43.1 | 87.2 | 8.1 | 86.5 |
| 1340.0 | 1336.86 | 2.09 | 44.48 | 44.5 | 87.3 | 8.2 | 89.2 |
| 1350.0 | 1346.76 | 2.19 | 45.90 | 46.0 | 87.3 | 8.2 | 86.7 |
| 1360.0 | 1356.66 | 2.30 | 47.31 | 47.4 | 87.2 | 8.1 | 83.1 |
| 1370.0 | 1366.55 | 2.31 | 48.75 | 48.8 | 87.3 | 8.2 | 85.4 |
| 1380.0 | 1376.45 | 2.39 | 50.20 | 50.3 | 87.3 | 8.2 | 85.9 |
| 1390.0 | 1386.34 | 2.48 | 51.64 | 51.7 | 87.2 | 8.4 | 84.2 |
| 1400.0 | 1396.24 | 2.58 | 53.09 | 53.2 | 87.2 | 8.3 | 86.4 |
| 1410.0 | 1406.13 | 2.63 | 54.56 | 54.6 | 87.2 | 8.6 | 87.0 |
| 1420.0 | 1416.02 | 2.74 | 56.03 | 56.1 | 87.2 | 8.6 | 86.3 |
| 1430.0 | 1425.91 | 2.82 | 57.50 | 57.6 | 87.2 | 8.4 | 82.2 |
| 1440.0 | 1435.80 | 2.90 | 58.99 | 59.1 | 87.2 | 8.6 | 83.6 |
| 1450.0 | 1445.68 | 3.76 | 58.76 | 58.9 | 86.3 | 8.6 | 329.0 |
| 1460.0 | 1455.56 | 5.07 | 59.19 | 59.4 | 85.1 | 9.1 | 13.3 |
| 1470.0 | 1465.47 | 5.50 | 60.37 | 60.6 | 84.8 | 7.6 | 89.1 |
| 1480.0 | 1475.38 | 5.71 | 61.68 | 61.9 | 84.7 | 7.6 | 76.7 |
| 1490.0 | 1485.29 | 5.94 | 63.00 | 63.3 | 84.6 | 7.7 | 81.5 |
| 1500.0 | 1495.20 | 6.21 | 64.32 | 64.6 | 84.5 | 7.7 | 80.1 |
| 1510.0 | 1505.10 | 6.39 | 65.66 | 66.0 | 84.4 | 7.8 | 84.5 |
| 1520.0 | 1515.01 | 7.08 | 66.78 | 67.2 | 84.0 | 7.8 | 52.4 |
| 1521.1 | 1516.12 | 7.16 | 66.91 | 67.3 | 83.9 | 7.7 | 57.5 |

Well: **U39H**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 35 | 24" | | | X | 3/3/2008 | |
| Surface | 18" | 50 | 20" | | X | | 3/4/2008 | |
| Water Protection | 13 3/8" | 418 | 15 3/8" | 216 | X | | 3/5/2008 | Basket @ 85.1 |
| Coal Protection | 13 3/8" | 418 | 15 3/8" | 216 | X | | 3/5/2008 | |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

DRILL DATA
NOAH HORN WELL DRILLING

COMPANY: CNX
HOLE: U-39H
RIG #: 148
LOCATION:

DATE STARTEI 3/3/2008
DATE COMPLE 3/12/2008

ELECTRIC LOGGED: YES
GROUTED: YES

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION,VOIDS ETC |
|---|---|---|---|
| 0 | 27 | 27 | |
| 27 | 50 | 23 | OVERBURDEN |
| 50 | 64.45 | 14.45 | SANDY SHALE/SAND |
| 64.45 | 94.72 | 30.27 | SAND/COAL/SANDY SHALE |
| 94.72 | 123.62 | 28.9 | SANDY SHALE/COAL/SANDY SHALE |
| 123.62 | 152.57 | 28.95 | SANDY SHALE/SAND |
| 152.57 | 182.77 | 30.2 | SAND/SANDY SHALE/COAL |
| 182.77 | 213.02 | 30.25 | SANDY SHALE/SAND |
| 213.02 | 244.72 | 31.7 | SANDY SHALE |
| 244.72 | 276.12 | 31.4 | SANDY SHALE/SAND |
| 276.12 | 307.82 | 31.7 | SAND |
| 307.82 | 339.52 | 31.7 | SAND/SANDY SHALE |
| 339.52 | 371.27 | 31.75 | SANDY SHALE/COAL/SANDY SHALE |
| 371.27 | 403.02 | 31.75 | SANDY SHALE |
| 403.02 | 434.67 | 31.65 | SANDY SHALE/SAND/SANDY SHALE |
| 434.67 | 466.26 | 31.59 | SAND/SHALE/COAL |
| 466.26 | 497.83 | 31.57 | SAND/SHALE/COAL |
| 497.83 | 529.48 | 31.65 | SAND/SHALE |
| 529.48 | 560.88 | 31.4 | SAND/SHALE |
| 560.88 | 592.48 | 31.6 | SAND/SHALE/COAL |
| 592.48 | 624.01 | 31.53 | SAND/SHALE/COAL |
| 624.01 | 655.56 | 31.55 | SAND/SHALE/COAL |
| 655.56 | 686.44 | 30.88 | SAND/SHALE/COAL |
| 686.44 | 717.3 | 30.86 | SAND/SHALE |
| 717.3 | 747.85 | 30.55 | SAND/SHALE/COAL |
| 747.85 | 778.8 | 30.95 | SAND/SHALE |
| 778.8 | 809.8 | 31 | SANDY SHALE/COAL/SANDY SHALE |
| 809.8 | 840.7 | 30.9 | SANDY SHALE/SAND |
| 840.7 | 871.49 | 30.79 | SAND/COAL/SANDY SHALE |
| 871.49 | 902.39 | 30.9 | SANDY SHALE/COAL/SAND |
| 902.39 | 933.34 | 30.95 | SAND/SANDY SHALE |
| 933.34 | 964.34 | 31 | SANDY SHALE/COAL/SAND |
| 964.34 | 995.24 | 30.9 | SAND/SANDY SHALE |
| 995.24 | 1017.76 | 22.52 | SANDY SHALE/COAL/SAND |
| 1017.76 | 1048.55 | 30.79 | SAND/SANDY SHALE |
| 1048.55 | 1079.45 | 30.9 | SANDY SHALE/COAL/SANDY SHALE |
| 1079.45 | 1097.45 | 18 | SANDY SHALE/SAND |
| 1097.45 | 1124.13 | 26.68 | SAND/SHALE/COAL |
| 1124.13 | 1155.03 | 30.9 | SAND/SHALE/COAL |

DRILL DATA
NOAH HORN WELL DRILLING

| DEPTH FROM | THICKNESS TO | FT | STRATA DESCRIPTION,VOIDS ETC |
|---|---|---|---|
| 1155.03 | 1186.41 | 31.38 | SAND/SHALE |
| 1186.41 | 1217.25 | 30.84 | SAND/SHALE |
| 1217.25 | 1248.07 | 30.82 | SANDY SHALE/SAND |
| 1248.07 | 1278.6 | 30.53 | COAL/SANDY SHALE/SAND |
| 1278.6 | 1309.58 | 30.98 | SANDY SHALE/SAND |
| 1309.58 | 1340.45 | 30.87 | SAND/SANDY SHALE |
| 1340.45 | 1371.35 | 30.9 | SANDY SHALE/COAL/SAND |
| 1371.35 | 1402.2 | 30.85 | SAND |
| 1402.2 | 1433.15 | 30.95 | SAND |
| 1433.15 | 1463.85 | 30.7 | SAND/COAL/SANDY SHALE |
| 1463.85 | 1493.9 | 30.05 | SANDY SHALE/SAND |
| 1493.9 | 1525.35 | 31.45 | SAND |

**1525.35' TOTAL DEPTH**
**35' OF 22" CASING**
**50' OF 18" CASING**
**418' OF 13 3/8" CASING**

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1309 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3794 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 3/12/2008 |
| **Driller's Total Depth:** | 1652.00 | **Log's Total Depth:** | 1639.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

| | | | | |
|---|---|---|---|---|
| Permittee: | CNX Gas Company LLC | Date: | 6/2/2008 | *(Company)* |
| By: | Leslie Arrington | Title: | Director Environmental Permitting | *(Signature)* |

## INTERNAL USE ONLY

| | | | |
|---|---|---|---|
| Submit Date: | 6/2/2008 | | |
| Status: | | Date: | 6/3/2008 |
| Final PDF Date: | 6/12/2008 | | |

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1350 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3794 |
| **Operations Name:** | CBM U39I W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

Date drilling commenced: 3/5/2008

Drilling Contractor: Noah Horn

Date drilling completed: 3/12/2008

Rig Type: ☑ Rotary ☐ Cable

Driller's Total Depth (feet): 1652.00

Log Total Depth (feet): 1638.96

Coal Seam at Total Depth: Pocahontas

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1015510.70

Permitted State Plane Y: 328266.57

Final Plat State Plane X: 1015518.13

Final Plat State Plane Y: 328267.76

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | U39I PLAT.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| EXHIBIT A | U39I EXHIBIT A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| GAS SHOW | G26 Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Caliper Gamma Density Temp Deviation

Did logs disclose vertical locations of a coal seam? ☑

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| DEVIATION | U39I DEVIATION.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| | |
|---|---|
| CASING | U39I Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| | |
|---|---|
| DRILL DATA | U39I DRILL DATA.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 6/2/2008

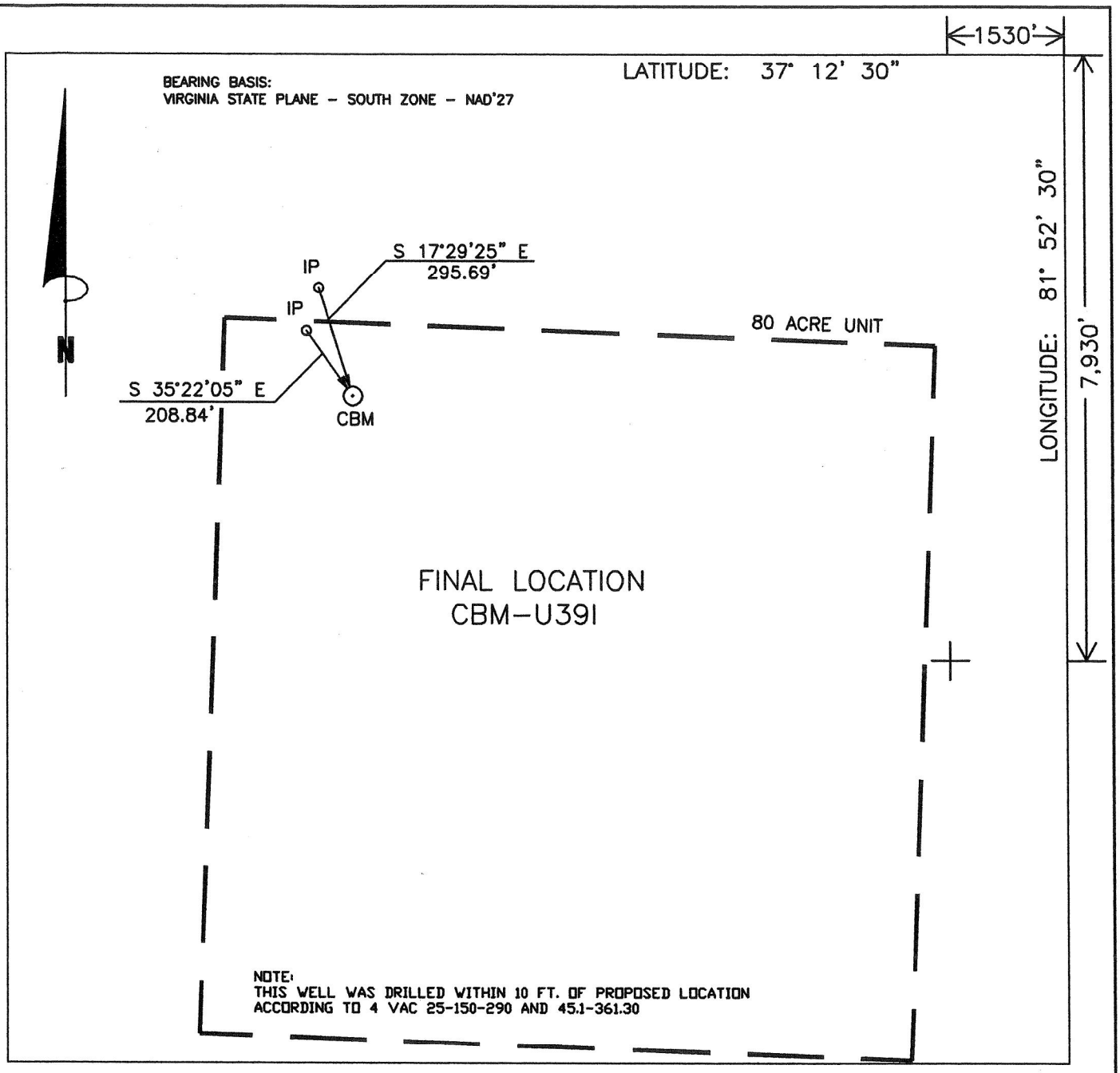
Signed By: Leslie Arrington Title: Director Environmental Permitting

## INTERNAL USE ONLY

Submit Date: 6/2/2008

Status: A Date: 6/3/2008

Final PDF Date: 6/12/2008




# WELL LOCATION PLAT

U39IFNL
2N30/74-621/72

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-U39I

TRACT NUMBER COAL MOUNTAIN MINING QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 328,267.76 E 1,015,518.13

ELEVATION: 2143.57' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 03-10-08

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
PROFESSIONAL ENGINEER
DRP
3/12/08

Form DGO-GO-7
Rev. 10/96

U39I.CMP
Exhibit A

Well Name: 08 CBM U39I
SURFACE ELEV: 2143.57 EASTING: 1015518.13 NORTHING: 328267.76

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| COAL | 106.00 | 106.40 | 2037.57 | 0.40 | |
| | 106.40 | 129.90 | 2037.17 | 23.50 | |
| JB1 | 129.90 | 132.20 | 2013.67 | 2.30 | |
| | 132.20 | 170.00 | 2011.37 | 37.80 | |
| JB3 | 170.00 | 174.60 | 1973.57 | 4.60 | |
| | 174.60 | 184.90 | 1968.97 | 10.30 | |
| COAL | 184.90 | 185.30 | 1958.67 | 0.40 | |
| | 185.30 | 210.90 | 1958.27 | 25.60 | |
| COAL | 210.90 | 211.20 | 1932.67 | 0.30 | |
| | 211.20 | 256.80 | 1932.37 | 45.60 | |
| TI | 256.80 | 259.00 | 1886.77 | 2.20 | |
| | 259.00 | 263.80 | 1884.57 | 4.80 | |
| COAL | 263.80 | 264.90 | 1879.77 | 1.10 | |
| | 264.90 | 363.10 | 1878.67 | 98.20 | |
| COAL | 363.10 | 363.70 | 1780.47 | 0.60 | |
| | 363.70 | 378.80 | 1779.87 | 15.10 | |
| US1 | 378.80 | 379.20 | 1764.77 | 0.40 | |
| | 379.20 | 493.90 | 1764.37 | 114.70 | |
| US2 | 493.90 | 494.80 | 1649.67 | 0.90 | |
| | 494.80 | 614.30 | 1648.77 | 119.50 | |
| *GC2 | 614.30 | 615.90 | 1529.27 | 1.60 | |
| | 615.90 | 681.90 | 1527.67 | 66.00 | |
| *SE1 | 681.90 | 683.60 | 1461.67 | 1.70 | |
| | 683.60 | 720.50 | 1459.97 | 36.90 | |
| *SE2 | 720.50 | 722.90 | 1423.07 | 2.40 | |
| | 722.90 | 766.20 | 1420.67 | 43.30 | |
| *LS1 | 766.20 | 768.70 | 1377.37 | 2.50 | |
| | 768.70 | 771.80 | 1374.87 | 3.10 | |
| *LS2 | 771.80 | 772.70 | 1371.77 | 0.90 | |
| | 772.70 | 804.90 | 1370.87 | 32.20 | |
| *LS3 | 804.90 | 805.80 | 1338.67 | 0.90 | |
| | 805.80 | 869.10 | 1337.77 | 63.30 | |
| *UH3 | 869.10 | 871.80 | 1274.47 | 2.70 | |
| | 871.80 | 924.00 | 1271.77 | 52.20 | |
| *MH1 | 924.00 | 927.00 | 1219.57 | 3.00 | |
| | 927.00 | 1020.00 | 1216.57 | 93.00 | |
| *P11 | 1020.00 | 1024.80 | 1123.57 | 4.80 | |
| | 1024.80 | 1050.10 | 1118.77 | 25.30 | |
| *P10 | 1050.10 | 1051.80 | 1093.47 | 1.70 | |
| | 1051.80 | 1107.10 | 1091.77 | 55.30 | |
| *LH3 | 1107.10 | 1107.90 | 1036.47 | 0.80 | |
| | 1107.90 | 1182.90 | 1035.67 | 75.00 | |
| *P92 | 1182.90 | 1184.00 | 960.67 | 1.10 | |
| | 1184.00 | 1187.40 | 959.57 | 3.40 | |
| *COAL | 1187.40 | 1187.90 | 956.17 | 0.50 | |
| | 1187.90 | 1191.80 | 955.67 | 3.90 | |
| *P81 | 1191.80 | 1192.50 | 951.77 | 0.70 | |
| | 1192.50 | 1210.10 | 951.07 | 17.60 | |
| *P71 | 1210.10 | 1211.60 | 933.47 | 1.50 | |
| | 1211.60 | 1270.90 | 931.97 | 59.30 | |
| *COAL | 1270.90 | 1271.80 | 872.67 | 0.90 | |
| | 1271.80 | 1294.80 | 871.77 | 23.00 | |
| *P72 | 1294.80 | 1295.80 | 848.77 | 1.00 | |
| | 1295.80 | 1434.10 | 847.77 | 138.30 | |
| *P61 | 1434.10 | 1434.90 | 709.47 | 0.80 | |
| | 1434.90 | 1453.00 | 708.67 | 18.10 | |
| *P62 | 1453.00 | 1453.80 | 690.57 | 0.80 | |

| | | | | |
|---|---|---|---|---|
| | 1453.80 | 1486.10 | 689.77 | 32.30 |
| *P51 | 1486.10 | 1487.10 | 657.47 | 1.00 |
| | 1487.10 | 1577.50 | 656.47 | 90.40 |
| *P42 | 1577.50 | 1578.70 | 566.07 | 1.20 |
| | 1578.70 | 1652.00 | 564.87 | 73.30 |

GAMMA-CALIPER LOG FROM 0 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\U39I.CMP
DATE: 05/20/08

Well: **G26**

## Oil & Gas Show

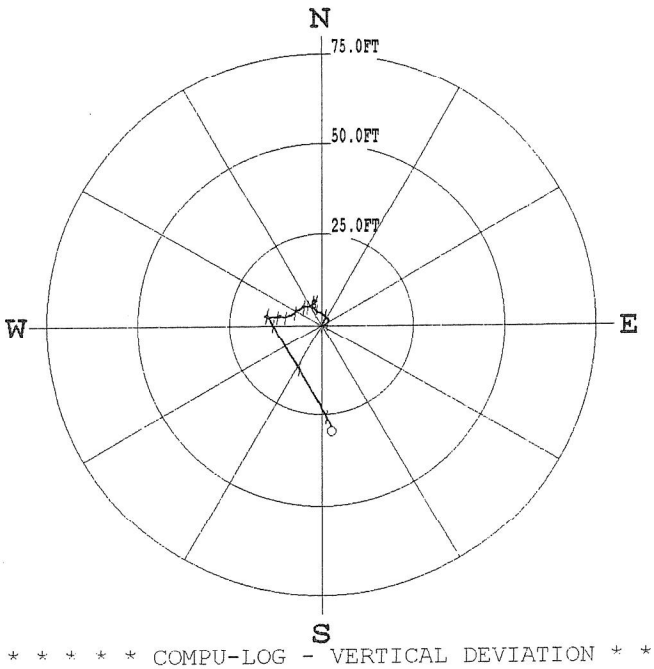
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 1412.5 | 1862.9 | 450.4 | | | |
| Pocahontas | 2100 | 2242.1 | 142.1 | | | |
| Total IPF | | | | 5440 | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: Consol Energy
LOCATION:
HOLE ID: 08-CNX-U-39-I
DATE OF LOG: 03/13/08
PROBE: 9136CA 962

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1633.73 FT
AZIMUTH: 175.0
DISTANCE: 29.6 FT
+ = 100 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : Consol Energy
FIELD OFFICE :
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 08-CNX-U-39-I
DATE OF LOG : 03/13/08
PROBE : 9136CA , 962
DEPTH UNITS : FEET
LOG: 08-CNX-U-39-I_03-13-08_00-33_9136CA_.02_-0.02_1636.91_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 49.99 | -0.03 | 0.70 | 0.7 | 92.6 | 1.2 | 81.6 |
| 60.0 | 59.99 | 0.01 | 0.89 | 0.9 | 89.4 | 0.8 | 37.8 |
| 70.0 | 69.98 | 0.10 | 1.07 | 1.1 | 84.8 | 1.1 | 49.2 |
| 80.0 | 79.98 | 0.28 | 1.17 | 1.2 | 76.6 | 1.2 | 25.9 |
| 90.0 | 89.98 | 0.42 | 1.31 | 1.4 | 72.0 | 1.2 | 57.8 |
| 100.0 | 99.98 | 0.55 | 1.49 | 1.6 | 69.8 | 1.3 | 46.5 |
| 110.0 | 109.98 | 0.74 | 1.62 | 1.8 | 65.4 | 1.4 | 30.9 |
| 120.0 | 119.97 | 0.94 | 1.75 | 2.0 | 61.7 | 1.4 | 32.1 |
| 130.0 | 129.97 | 1.15 | 1.86 | 2.2 | 58.2 | 1.5 | 6.0 |
| 140.0 | 139.97 | 1.39 | 1.89 | 2.3 | 53.6 | 1.4 | 3.5 |
| 150.0 | 149.96 | 1.62 | 1.76 | 2.4 | 47.3 | 1.6 | 318.3 |
| 160.0 | 159.96 | 1.84 | 1.59 | 2.4 | 40.8 | 1.5 | 320.5 |
| 170.0 | 169.95 | 2.04 | 1.40 | 2.5 | 34.5 | 1.9 | 305.5 |
| 180.0 | 179.95 | 2.25 | 1.18 | 2.5 | 27.7 | 1.6 | 317.4 |
| 190.0 | 189.95 | 2.48 | 1.02 | 2.7 | 22.3 | 1.7 | 313.0 |
| 200.0 | 199.94 | 2.67 | 0.81 | 2.8 | 16.8 | 1.6 | 325.5 |
| 210.0 | 209.94 | 2.87 | 0.64 | 2.9 | 12.5 | 1.6 | 318.4 |
| 220.0 | 219.93 | 3.03 | 0.43 | 3.1 | 8.1 | 1.4 | 306.9 |
| 230.0 | 229.93 | 3.21 | 0.25 | 3.2 | 4.4 | 1.4 | 312.8 |
| 240.0 | 239.93 | 3.37 | 0.04 | 3.4 | 0.6 | 1.5 | 307.8 |
| 250.0 | 249.92 | 3.47 | -0.22 | 3.5 | 356.4 | 1.4 | 285.4 |
| 260.0 | 259.92 | 3.56 | -0.49 | 3.6 | 352.1 | 1.9 | 286.3 |
| 270.0 | 269.92 | 3.61 | -0.78 | 3.7 | 347.8 | 1.8 | 285.8 |
| 280.0 | 279.91 | 3.74 | -1.05 | 3.9 | 344.3 | 1.6 | 309.4 |
| 290.0 | 289.91 | 3.92 | -1.26 | 4.1 | 342.2 | 1.6 | 304.8 |
| 300.0 | 299.90 | 4.07 | -1.52 | 4.3 | 339.6 | 1.8 | 301.1 |
| 310.0 | 309.90 | 4.26 | -1.73 | 4.6 | 337.9 | 1.6 | 315.6 |
| 320.0 | 319.89 | 4.49 | -1.92 | 4.9 | 336.8 | 1.8 | 321.1 |
| 330.0 | 329.89 | 4.70 | -2.14 | 5.2 | 335.5 | 1.6 | 300.3 |
| 340.0 | 339.88 | 4.89 | -2.36 | 5.4 | 334.2 | 1.7 | 320.0 |
| 350.0 | 349.88 | 5.13 | -2.46 | 5.7 | 334.4 | 1.5 | 353.3 |
| 360.0 | 359.88 | 5.38 | -2.48 | 5.9 | 335.3 | 1.4 | 3.4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 210.0 | 209.94 | 2.67 | 0.04 | 3.3 | 11.6 | 1.4 | 306.9 |
| 220.0 | 219.93 | 3.03 | 0.43 | 3.1 | 8.1 | 1.4 | 306.9 |
| 230.0 | 229.93 | 3.21 | 0.25 | 3.2 | 4.4 | 1.4 | 312.8 |
| 240.0 | 239.93 | 3.37 | 0.04 | 3.4 | 0.6 | 1.5 | 307.8 |
| 250.0 | 249.92 | 3.47 | -0.22 | 3.5 | 356.4 | 1.4 | 285.4 |
| 260.0 | 259.92 | 3.56 | -0.49 | 3.6 | 352.1 | 1.9 | 286.3 |
| 270.0 | 269.92 | 3.61 | -0.78 | 3.7 | 347.8 | 1.8 | 285.8 |
| 280.0 | 279.91 | 3.74 | -1.05 | 3.9 | 344.3 | 1.6 | 309.4 |
| 290.0 | 289.91 | 3.92 | -1.26 | 4.1 | 342.2 | 1.6 | 304.8 |
| 300.0 | 299.90 | 4.07 | -1.52 | 4.3 | 339.6 | 1.8 | 301.1 |
| 310.0 | 309.90 | 4.26 | -1.73 | 4.6 | 337.9 | 1.6 | 315.6 |
| 320.0 | 319.89 | 4.49 | -1.92 | 4.9 | 336.8 | 1.8 | 321.1 |
| 330.0 | 329.89 | 4.70 | -2.14 | 5.2 | 335.5 | 1.6 | 300.3 |
| 340.0 | 339.88 | 4.89 | -2.36 | 5.4 | 334.2 | 1.7 | 320.0 |
| 350.0 | 349.88 | 5.13 | -2.46 | 5.7 | 334.4 | 1.5 | 353.3 |
| 360.0 | 359.88 | 5.38 | -2.48 | 5.9 | 335.3 | 1.4 | 3.4 |
| 370.0 | 369.88 | 5.63 | -2.47 | 6.1 | 336.3 | 1.4 | 5.4 |
| 380.0 | 379.87 | 5.88 | -2.50 | 6.4 | 337.0 | 1.6 | 342.0 |
| 390.0 | 389.87 | 6.14 | -2.53 | 6.6 | 337.6 | 1.5 | 356.9 |
| 400.0 | 399.87 | 6.37 | -2.47 | 6.8 | 338.8 | 1.3 | 25.3 |
| 410.0 | 409.86 | 6.56 | -2.35 | 7.0 | 340.3 | 1.3 | 46.0 |
| 420.0 | 419.86 | 6.74 | -2.23 | 7.1 | 341.7 | 1.2 | 36.9 |
| 430.0 | 429.86 | 6.87 | -2.09 | 7.2 | 343.1 | 1.1 | 55.4 |
| 440.0 | 439.86 | 6.94 | -1.92 | 7.2 | 344.5 | 1.0 | 64.4 |
| 450.0 | 449.85 | 6.97 | -1.90 | 7.2 | 344.8 | 1.8 | 103.4 |
| 460.0 | 459.85 | 6.79 | -1.73 | 7.0 | 345.7 | 1.4 | 83.8 |
| 470.0 | 469.84 | 6.87 | -1.66 | 7.1 | 346.4 | 1.3 | 357.1 |
| 480.0 | 479.84 | 6.88 | -1.50 | 7.0 | 347.7 | 1.2 | 97.9 |
| 490.0 | 489.84 | 6.73 | -1.38 | 6.9 | 348.4 | 1.7 | 229.2 |
| 500.0 | 499.83 | 6.52 | -1.56 | 6.7 | 346.5 | 1.7 | 163.2 |
| 510.0 | 509.83 | 6.30 | -1.64 | 6.5 | 345.4 | 1.6 | 213.3 |
| 520.0 | 519.83 | 6.07 | -1.83 | 6.3 | 343.2 | 1.8 | 225.1 |
| 530.0 | 529.82 | 5.90 | -2.07 | 6.3 | 340.6 | 1.7 | 243.1 |
| 540.0 | 539.82 | 5.79 | -2.35 | 6.3 | 337.9 | 1.7 | 243.7 |
| 550.0 | 549.81 | 5.62 | -2.60 | 6.2 | 335.2 | 1.7 | 250.4 |
| 560.0 | 559.81 | 5.50 | -2.87 | 6.2 | 332.5 | 1.6 | 243.5 |
| 570.0 | 569.80 | 5.36 | -3.12 | 6.2 | 329.8 | 1.7 | 221.3 |
| 580.0 | 579.80 | 5.17 | -3.34 | 6.2 | 327.1 | 1.6 | 245.7 |
| 590.0 | 589.80 | 5.15 | -3.62 | 6.3 | 324.9 | 1.6 | 266.1 |
| 600.0 | 599.79 | 5.15 | -3.91 | 6.5 | 322.8 | 1.6 | 285.9 |
| 610.0 | 609.79 | 5.21 | -4.17 | 6.7 | 321.3 | 1.5 | 313.3 |
| 620.0 | 619.78 | 5.26 | -4.42 | 6.9 | 320.0 | 1.8 | 256.1 |
| 630.0 | 629.78 | 5.16 | -4.71 | 7.0 | 317.6 | 1.8 | 250.2 |
| 640.0 | 639.77 | 5.13 | -5.02 | 7.2 | 315.7 | 1.8 | 279.2 |
| 650.0 | 649.77 | 5.10 | -5.33 | 7.4 | 313.8 | 1.5 | 315.0 |
| 660.0 | 659.77 | 5.21 | -5.20 | 7.4 | 315.1 | 1.2 | 92.5 |
| 670.0 | 669.76 | 5.23 | -5.00 | 7.2 | 316.3 | 1.1 | 31.1 |
| 680.0 | 679.76 | 5.34 | -4.83 | 7.2 | 317.9 | 1.2 | 46.5 |
| 690.0 | 689.76 | 5.30 | -4.67 | 7.1 | 318.6 | 1.6 | 201.3 |
| 700.0 | 699.75 | 5.15 | -4.92 | 7.1 | 316.3 | 1.7 | 251.3 |
| 710.0 | 709.75 | 5.01 | -5.17 | 7.2 | 314.1 | 1.8 | 223.1 |
| 720.0 | 719.75 | 4.78 | -5.34 | 7.2 | 311.8 | 1.7 | 201.8 |
| 730.0 | 729.74 | 4.60 | -5.58 | 7.2 | 309.5 | 1.7 | 274.6 |
| 740.0 | 739.74 | 4.51 | -5.84 | 7.4 | 307.7 | 1.9 | 249.7 |
| 750.0 | 749.73 | 4.34 | -6.09 | 7.5 | 305.4 | 1.9 | 243.9 |
| 760.0 | 759.73 | 4.27 | -6.38 | 7.7 | 303.8 | 1.7 | 244.0 |
| 770.0 | 769.72 | 4.10 | -6.64 | 7.8 | 301.7 | 1.7 | 228.7 |
| 780.0 | 779.72 | 3.88 | -6.81 | 7.8 | 299.6 | 1.7 | 206.7 |
| 790.0 | 789.71 | 3.72 | -7.03 | 8.0 | 297.8 | 1.7 | 261.4 |
| 800.0 | 799.71 | 3.50 | -7.23 | 8.0 | 295.9 | 1.8 | 227.7 |
| 810.0 | 809.70 | 3.30 | -7.47 | 8.2 | 293.9 | 1.9 | 235.2 |
| 820.0 | 819.70 | 3.14 | -7.67 | 8.3 | 292.3 | 1.8 | 258.5 |
| 830.0 | 829.69 | 3.01 | -7.96 | 8.5 | 290.7 | 1.8 | 235.8 |
| 840.0 | 839.69 | 2.85 | -8.24 | 8.7 | 289.1 | 1.8 | 243.6 |
| 850.0 | 849.68 | 2.82 | -8.54 | 9.0 | 288.3 | 1.8 | 266.1 |
| 860.0 | 859.68 | 2.64 | -8.78 | 9.2 | 286.7 | 1.8 | 225.1 |
| 870.0 | 869.67 | 2.46 | -9.03 | 9.4 | 285.2 | 1.8 | 241.9 |
| 880.0 | 879.67 | 2.39 | -9.34 | 9.6 | 284.4 | 1.9 | 259.5 |
| 890.0 | 889.66 | 2.20 | -9.59 | 9.8 | 282.9 | 1.9 | 257.2 |
| 900.0 | 899.66 | 2.16 | -9.88 | 10.1 | 282.4 | 1.7 | 284.4 |
| 910.0 | 909.65 | 2.20 | -10.16 | 10.4 | 282.2 | 1.6 | 295.5 |
| 920.0 | 919.65 | 2.31 | -10.41 | 10.7 | 282.5 | 1.6 | 285.1 |
| 930.0 | 929.65 | 2.33 | -10.68 | 10.9 | 282.3 | 1.7 | 291.0 |
| 940.0 | 939.64 | 2.36 | -10.98 | 11.2 | 282.1 | 1.8 | 239.0 |
| 950.0 | 949.64 | 2.30 | -11.28 | 11.5 | 281.5 | 1.9 | 243.3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 910.0 | 909.65 | 2.20 | -10.16 | 10.4 | 282.2 | 1.6 | 295.5 |
| 920.0 | 919.65 | 2.31 | -10.41 | 10.7 | 282.5 | 1.6 | 285.1 |
| 930.0 | 929.65 | 2.33 | -10.68 | 10.9 | 282.3 | 1.7 | 291.0 |
| 940.0 | 939.64 | 2.36 | -10.98 | 11.2 | 282.1 | 1.8 | 239.0 |
| 950.0 | 949.64 | 2.30 | -11.28 | 11.5 | 281.5 | 1.9 | 243.3 |
| 960.0 | 959.63 | 2.21 | -11.58 | 11.8 | 280.8 | 1.9 | 265.9 |
| 970.0 | 969.63 | 2.13 | -11.89 | 12.1 | 280.2 | 1.9 | 282.0 |
| 980.0 | 979.62 | 2.16 | -12.20 | 12.4 | 280.0 | 1.9 | 243.1 |
| 990.0 | 989.62 | 2.27 | -12.26 | 12.5 | 280.5 | 1.1 | 47.7 |
| 1000.0 | 999.62 | 2.37 | -12.10 | 12.3 | 281.1 | 1.0 | 34.7 |
| 1010.0 | 1009.61 | 2.32 | -11.97 | 12.2 | 281.0 | 1.1 | 9.0 |
| 1020.0 | 1019.61 | 2.48 | -11.88 | 12.1 | 281.8 | 1.1 | 54.2 |
| 1030.0 | 1029.61 | 2.60 | -11.73 | 12.0 | 282.5 | 1.1 | 58.4 |
| 1040.0 | 1039.61 | 2.66 | -11.57 | 11.9 | 283.0 | 1.1 | 15.8 |
| 1050.0 | 1049.61 | 2.78 | -11.45 | 11.8 | 283.6 | 1.2 | 115.7 |
| 1060.0 | 1059.60 | 2.75 | -11.26 | 11.6 | 283.7 | 1.1 | 57.8 |
| 1070.0 | 1069.60 | 2.65 | -11.18 | 11.5 | 283.3 | 1.9 | 232.6 |
| 1080.0 | 1079.60 | 2.56 | -11.49 | 11.8 | 282.6 | 2.0 | 233.0 |
| 1090.0 | 1089.59 | 2.40 | -11.79 | 12.0 | 281.5 | 2.0 | 255.9 |
| 1100.0 | 1099.58 | 2.28 | -12.11 | 12.3 | 280.6 | 2.0 | 248.2 |
| 1110.0 | 1109.58 | 2.24 | -12.44 | 12.6 | 280.2 | 1.9 | 286.7 |
| 1120.0 | 1119.57 | 2.28 | -12.74 | 12.9 | 280.2 | 2.0 | 253.6 |
| 1130.0 | 1129.57 | 2.33 | -13.05 | 13.3 | 280.1 | 1.8 | 298.6 |
| 1140.0 | 1139.56 | 2.34 | -13.34 | 13.5 | 280.0 | 1.8 | 295.0 |
| 1150.0 | 1149.56 | 2.32 | -13.60 | 13.8 | 279.7 | 1.8 | 221.7 |
| 1160.0 | 1159.55 | 2.20 | -13.93 | 14.1 | 279.0 | 2.0 | 242.1 |
| 1170.0 | 1169.54 | 2.07 | -14.21 | 14.4 | 278.3 | 1.9 | 231.9 |
| 1180.0 | 1179.54 | 2.10 | -14.54 | 14.7 | 278.2 | 2.0 | 298.2 |
| 1190.0 | 1189.53 | 2.24 | -14.83 | 15.0 | 278.6 | 2.1 | 268.8 |
| 1200.0 | 1199.53 | 2.37 | -15.11 | 15.3 | 278.9 | 2.1 | 283.1 |
| 1210.0 | 1209.52 | 2.40 | -15.47 | 15.7 | 278.8 | 2.0 | 282.3 |
| 1220.0 | 1219.52 | 2.55 | -15.45 | 15.7 | 279.4 | 1.1 | 43.2 |
| 1230.0 | 1229.52 | 2.64 | -15.29 | 15.5 | 279.8 | 1.1 | 73.9 |
| 1240.0 | 1239.51 | 2.69 | -15.12 | 15.4 | 280.1 | 1.1 | 44.2 |
| 1250.0 | 1249.51 | 2.81 | -14.99 | 15.3 | 280.6 | 1.1 | 56.5 |
| 1260.0 | 1259.51 | 2.93 | -14.85 | 15.1 | 281.1 | 1.1 | 19.7 |
| 1270.0 | 1269.51 | 3.02 | -14.83 | 15.1 | 281.5 | 0.2 | 33.2 |
| 1280.0 | 1279.51 | 3.07 | -14.78 | 15.1 | 281.7 | 0.4 | 21.9 |
| 1290.0 | 1289.51 | 3.10 | -14.77 | 15.1 | 281.8 | 0.3 | 106.4 |
| 1300.0 | 1299.51 | 3.10 | -14.82 | 15.1 | 281.8 | 0.8 | 327.2 |
| 1310.0 | 1309.51 | 2.96 | -14.87 | 15.2 | 281.3 | 1.0 | 146.0 |
| 1320.0 | 1319.51 | 3.03 | -14.75 | 15.1 | 281.6 | 0.5 | 63.0 |
| 1330.0 | 1329.51 | 3.07 | -14.73 | 15.1 | 281.8 | 0.5 | 359.1 |
| 1340.0 | 1339.51 | 3.04 | -14.71 | 15.0 | 281.7 | 0.5 | 168.6 |
| 1350.0 | 1349.50 | 2.88 | -14.65 | 14.9 | 281.1 | 0.9 | 117.0 |
| 1360.0 | 1359.50 | 2.59 | -14.53 | 14.8 | 280.1 | 2.2 | 167.3 |
| 1370.0 | 1369.49 | 2.15 | -14.37 | 14.5 | 278.5 | 2.9 | 160.8 |
| 1380.0 | 1379.47 | 1.57 | -14.10 | 14.2 | 276.3 | 4.0 | 145.8 |
| 1390.0 | 1389.43 | 0.82 | -13.81 | 13.8 | 273.4 | 5.8 | 152.3 |
| 1400.0 | 1399.38 | -0.04 | -13.34 | 13.3 | 269.8 | 5.9 | 145.4 |
| 1410.0 | 1409.32 | -0.95 | -12.66 | 12.7 | 265.7 | 6.9 | 156.3 |
| 1420.0 | 1419.24 | -2.05 | -12.15 | 12.3 | 260.4 | 7.4 | 155.8 |
| 1430.0 | 1429.15 | -3.20 | -11.53 | 12.0 | 254.5 | 8.1 | 150.3 |
| 1440.0 | 1439.05 | -4.42 | -10.77 | 11.6 | 247.7 | 8.4 | 148.3 |
| 1450.0 | 1448.94 | -5.68 | -10.03 | 11.5 | 240.5 | 8.4 | 151.5 |
| 1460.0 | 1458.83 | -6.95 | -9.30 | 11.6 | 233.2 | 8.5 | 151.0 |
| 1470.0 | 1468.72 | -8.22 | -8.54 | 11.8 | 226.1 | 8.6 | 147.7 |
| 1480.0 | 1478.61 | -9.49 | -7.77 | 12.3 | 219.3 | 8.6 | 136.0 |
| 1490.0 | 1488.50 | -10.78 | -7.06 | 12.9 | 213.2 | 8.5 | 152.9 |
| 1500.0 | 1498.39 | -12.05 | -6.29 | 13.6 | 207.6 | 8.5 | 151.5 |
| 1510.0 | 1508.28 | -13.33 | -5.56 | 14.4 | 202.6 | 8.6 | 157.7 |
| 1520.0 | 1518.17 | -14.65 | -4.85 | 15.4 | 198.3 | 8.6 | 151.5 |
| 1530.0 | 1528.05 | -15.93 | -4.08 | 16.4 | 194.4 | 8.6 | 145.8 |
| 1540.0 | 1537.94 | -17.22 | -3.35 | 17.5 | 191.0 | 8.6 | 151.8 |
| 1550.0 | 1547.83 | -18.53 | -2.64 | 18.7 | 188.1 | 8.6 | 151.4 |
| 1560.0 | 1557.72 | -19.82 | -1.88 | 19.9 | 185.4 | 8.6 | 149.3 |
| 1570.0 | 1567.60 | -21.14 | -1.15 | 21.2 | 183.1 | 8.7 | 153.0 |
| 1580.0 | 1577.49 | -22.38 | -0.34 | 22.4 | 180.9 | 8.3 | 161.0 |
| 1590.0 | 1587.38 | -23.76 | 0.24 | 23.8 | 179.4 | 8.6 | 151.6 |
| 1600.0 | 1597.26 | -25.07 | 0.98 | 25.1 | 177.8 | 8.7 | 153.3 |
| 1610.0 | 1607.15 | -26.43 | 1.67 | 26.5 | 176.4 | 8.7 | 152.9 |
| 1620.0 | 1617.03 | -27.76 | 2.42 | 27.9 | 175.0 | 8.7 | 154.0 |
| 1630.0 | 1626.91 | -29.11 | 3.14 | 29.3 | 173.8 | 8.8 | 144.2 |
| 1636.9 | 1633.75 | -29.54 | 2.60 | 29.7 | 175.0 | 0.0 | 0.0 |

Well: **U39I**

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 37.4 | 24" | | | X | 3/6/2008 | |
| Surface | 16" | | 20" | | | | | |
| Water Protection | 13 3/8" | 458.8 | 15 3/8" | 360 | X | | 3/7/2008 | Basket @ 126' |
| Coal Protection | 13 3/8" | 458.8 | 15 3/8" | 360 | X | | 3/7/2008 | |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

COMPANY: CNX
HOLE: U-39I
RIG #: 93
LOCATION: OSBORNE MTN/KNOX CREEK

DATE STARTED: 3/5/2008
DATE COMPLETED: 3/12/2008

ELECTRIC LOGGED: YES
GROUTED: YES

| DEPTH FROM | THICKNES TO | FT | STRATA DESCRIPTION,VOIDS ETC |
|---|---|---|---|
| 0 | 37 | 37 | |
| 37 | 156 | 119 | SANDY SHALE |
| 156 | 190 | 34 | SAND/SHALE/SAND/SHALE/ 170 COAL |
| 190 | 272 | 82 | SANDY SHALE/COAL |
| 272 | 429 | 157 | SANDY SHALE |
| 303 | 429 | 126 | SANDY SHALE |
| 429 | 492 | 63 | SANDY SHALE |
| 492 | 500 | 8 | |
| 500 | 509 | 9 | |
| 509 | 541 | 32 | SAND/SHALE/COAL |
| 541 | 573 | 32 | COAL/SANDY SHALE |
| 573 | 604 | 31 | SAND STONE |
| 604 | 636 | 32 | SANDY SHALE/COAL/SHALE |
| 636 | 667 | 31 | SANDY SHALE/SAND STONE |
| 667 | 699 | 32 | SANDY SHALE/COAL/SANDY SHALE |
| 699 | 731 | 32 | SANDY SHALE/COAL/SAND STONE |
| 731 | 763 | 32 | SAND STONE/COAL/SAND STONE |
| 763 | 795 | 32 | SAND STONE/COAL |
| 795 | 827 | 32 | SAND STONE//SAND STONE |
| 827 | 1335 | 508 | |
| 1335 | 1388 | 53 | SAND |
| 1388 | 1420 | 32 | SANDY SHALE |
| 1420 | 1435 | 15 | SANDY SHALE |
| 1435 | 1450 | 15 | SANDY SHALE/COAL/SHALE |
| 1450 | 1481 | 31 | SHALE |
| 1481 | 1513 | 32 | SHALE/COAL/SANDY SHALE |
| 1513 | 1555 | 42 | SAND STONE |
| 1555 | 1587 | 32 | SAND STONE/COAL |
| 1587 | 1618 | 31 | SANDY SHALE/SAND STONE |
| 1618 | 1652 | 34 | SANDY SHALE |

1652' TOTAL DEPTH
37.4' OF 22" CASING
458.8' OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1058 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3490 |
| **Operations Name:** | CBM T38G W/PL |
| **Operation Type:** | Coalbed/Pipeline |
| **Drilling Report Type:** | Original |

# DRILLING REPORT (DGO-GO-14)

## 1. Drilling Data

| | | | |
|---|---|---|---|
| Date drilling commenced: | 6/27/2007 | Drilling Contractor: | Noah Horn |
| Date drilling completed: | 7/12/2007 | Rig Type: | ☑ Rotary ☐ Cable |
| Driller's Total Depth (feet): | 1645.00 | | |
| Log Total Depth (feet): | 1650.27 | Coal Seam at Total Depth: | Pocahontas |

## 2. Final Location Plat (as required by 4 VAC25-150-360.C.)

| | | | |
|---|---|---|---|
| Permitted State Plane X: | 1014550.30 | Final Plat State Plane X: | 1014550.27 |
| Permitted State Plane Y: | 329329.99 | Final Plat State Plane Y: | 329330.39 |

Plat Previously Submitted Or... ☐

List of Attached Items:

| Description | FileName |
|---|---|
| Plat | T38G Plat.pdf |

## 3. Geological Data

*Fresh Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Salt Water At:*

| Depth (in feet) | Rate | Unit of Measure |
|---|---|---|

*Coal Seams:*

List of Attached Items:

| Description | FileName |
|---|---|
| Exhibit A | T38G Exhibit A.pdf |

*Gas and Oil Shows:*

List of Attached Items:

| Description | FileName |
|---|---|
| Show Gas | T38G Gas Show.xls |

## 4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Caliper,Gamma,Density,Temp,Deviation

Did logs disclose vertical locations of a coal seam? ☐

## 5. Survery Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|---|---|
| Deviation | T38G Deviation.pdf |

## 6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|---|---|
| Casing | T38G Casing.xls |

## 7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurence.

## 8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|---|---|
| Drill Data | T38G Drill Data.pdf |

## 9. Comments

## 10. Signature

Permitee: CNX Gas Company LLC Date: 1/15/2008

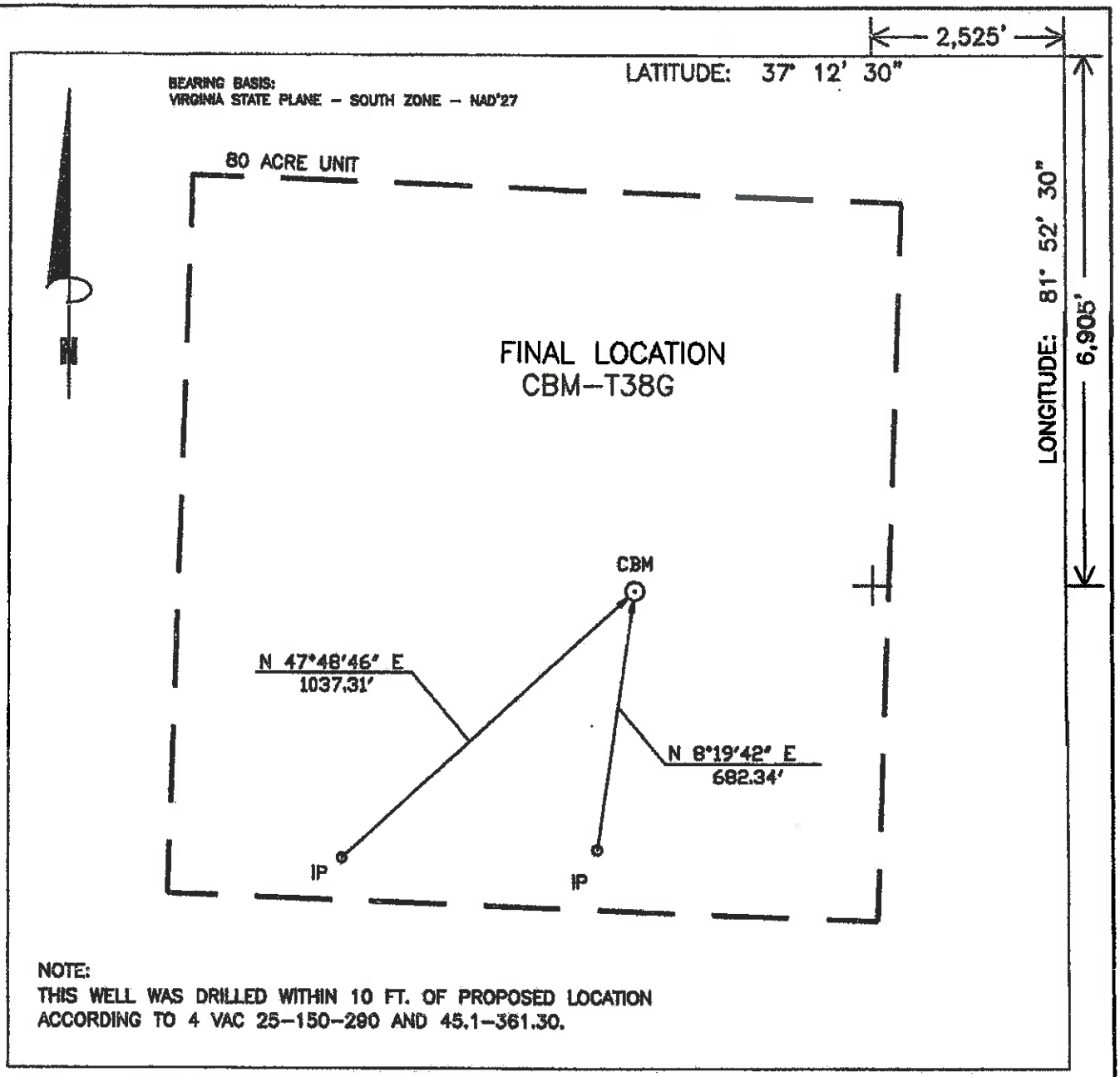
Signed By: Leslie K. Arrington Title: Manager

**INTERNAL USE ONLY**

Submit Date: 1/15/2008

Status: A Date: 1/17/2008

Final PDF Date: 2/27/2008




NOTE:
THIS WELL WAS DRILLED WITHIN 10 FT. OF PROPOSED LOCATION
ACCORDING TO 4 VAC 25–150–290 AND 45.1–361.30.

# WELL LOCATION PLAT

T38GFNL
2N25/177–594/27

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM–T38G

TRACT NUMBER COAL MOUNTAIN MINING CO. QUADRANGLE KEEN MOUNTAIN

DISTRICT: GARDEN

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 329,330.39 E 1,014,550.27

ELEVATION: 2117.97' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S

COUNTY BUCHANAN Scale: 1" = 400' Date 06–29–07

THIS PLAT IS A NEW PLAT ____; AN UPDATED PLAT ____; OR A FINAL LOCATION PLAT X

┼ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown (optional).

Danny R. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

COMMONWEALTH OF VIRGINIA
DANNY R. PRICE
Lic. No. 008540
PROFESSIONAL ENGINEER
6/29/07

Form DGO–GO–7
Rev. 10/96

Exhibit A

Well Name: 07 CBM T38G
SURFACE ELEV: 2117.97 EASTING: 1014550.27 NORTHING: 329330.36

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|---|---|---|---|---|---|
| RA3 | 42.70 | 44.90 | 2075.27 | 2.20 | |
| | 44.90 | 124.20 | 2073.07 | 79.30 | |
| JB1 | 124.20 | 127.20 | 1993.77 | 3.00 | |
| | 127.20 | 168.80 | 1990.77 | 41.60 | |
| JB3 | 168.80 | 171.80 | 1949.17 | 3.00 | |
| | 171.80 | 242.80 | 1946.17 | 71.00 | |
| T1 | 242.80 | 243.80 | 1875.17 | 1.00 | |
| | 243.80 | 255.00 | 1874.17 | 11.20 | |
| TI | 255.00 | 256.90 | 1862.97 | 1.90 | |
| | 256.90 | 262.50 | 1861.07 | 5.60 | |
| COAL | 262.50 | 263.20 | 1855.47 | 0.70 | |
| | 263.20 | 312.80 | 1854.77 | 49.60 | |
| COAL | 312.80 | 313.20 | 1805.17 | 0.40 | |
| | 313.20 | 358.70 | 1804.77 | 45.50 | |
| *COAL | 358.70 | 359.90 | 1759.27 | 1.20 | |
| | 359.90 | 373.40 | 1758.07 | 13.50 | |
| *US1 | 373.40 | 374.20 | 1744.57 | 0.80 | |
| | 374.20 | 476.80 | 1743.77 | 102.60 | |
| *US2 | 476.80 | 477.30 | 1641.17 | 0.50 | |
| | 477.30 | 656.70 | 1640.67 | 179.40 | |
| *SE1 | 656.70 | 657.30 | 1461.27 | 0.60 | |
| | 657.30 | 696.90 | 1460.67 | 39.60 | |
| *SE2 | 696.90 | 699.50 | 1421.07 | 2.60 | |
| | 699.50 | 733.20 | 1418.47 | 33.70 | |
| *LS1 | 733.20 | 735.70 | 1384.77 | 2.50 | |
| | 735.70 | 750.40 | 1382.27 | 14.70 | |
| *LS2 | 750.40 | 751.60 | 1367.57 | 1.20 | |
| | 751.60 | 783.70 | 1366.37 | 32.10 | |
| *UH1 | 783.70 | 784.80 | 1334.27 | 1.10 | |
| | 784.80 | 842.10 | 1333.17 | 57.30 | |
| *UH2 | 842.10 | 843.90 | 1275.87 | 1.80 | |
| | 843.90 | 896.50 | 1274.07 | 52.60 | |
| *MH1 | 896.50 | 898.50 | 1221.47 | 2.00 | |
| | 898.50 | 962.20 | 1219.47 | 63.70 | |
| *MH2 | 962.20 | 963.70 | 1155.77 | 1.50 | |
| | 963.70 | 1004.20 | 1154.27 | 40.50 | |
| *P11 | 1004.20 | 1006.90 | 1113.77 | 2.70 | |
| | 1006.90 | 1028.90 | 1111.07 | 22.00 | |
| *P10 | 1028.90 | 1030.00 | 1089.07 | 1.10 | |
| | 1030.00 | 1083.30 | 1087.97 | 53.30 | |
| *LH2 | 1083.30 | 1083.80 | 1034.67 | 0.50 | |
| | 1083.80 | 1152.60 | 1034.17 | 68.80 | |
| *P91 | 1152.60 | 1154.00 | 965.37 | 1.40 | |
| | 1154.00 | 1174.90 | 963.97 | 20.90 | |
| *COAL | 1174.90 | 1175.10 | 943.07 | 0.20 | |
| | 1175.10 | 1179.30 | 942.87 | 4.20 | |
| *P92 | 1179.30 | 1180.00 | 938.67 | 0.70 | |
| | 1180.00 | 1217.30 | 937.97 | 37.30 | |

| | | | | |
|---|---|---|---|---|
| *P81 | 1217.30 | 1217.70 | 900.67 | 0.40 |
| | 1217.70 | 1244.80 | 900.27 | 27.10 |
| *P82 | 1244.80 | 1245.80 | 873.17 | 1.00 |
| | 1245.80 | 1466.90 | 872.17 | 221.10 |
| *P51 | 1466.90 | 1468.60 | 651.07 | 1.70 |
| | 1468.60 | 1557.50 | 649.37 | 88.90 |
| *P41 | 1557.50 | 1557.90 | 560.47 | 0.40 |
| | 1557.90 | 1650.27 | 560.07 | 92.37 |

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\T38G.CMP
DATE: 08/27/07

Well: T38G

## Oil & Gas Show

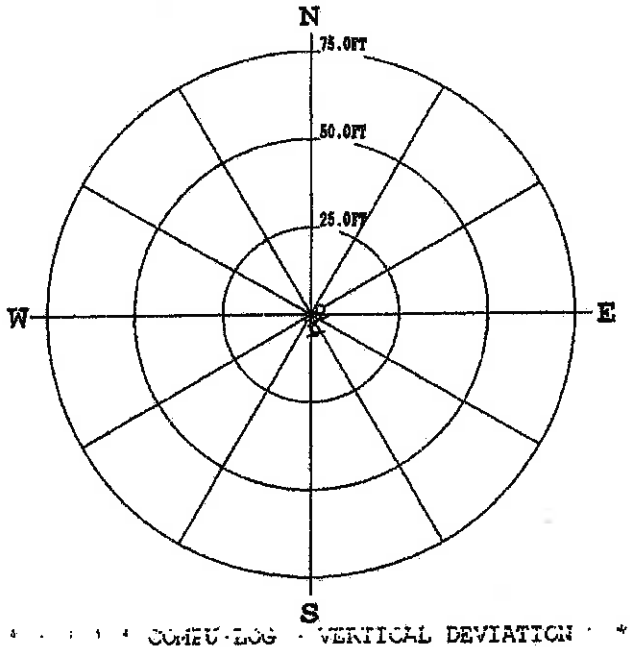
| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|---|---|---|---|---|---|---|
| Lee/Norton | 359 | 1154 | 795 | | | |
| Pocahontas | 1467 | 1469 | 2 | | | |
| Total IPF | | | | Not Taken | | |
| | | | | | | |

# PLAN VIEW
# COMPU-LOG DEVIATION

CLIENT: CNX Gas
LOCATION: Osbourne Mtn.
HOLE ID: 07-CNX-T-38-G
DATE OF LOG: 07/12/07
PROBE: 0019C 732

MAG DECL: -6.9

SCALE: 25 FT/IN
TRUE DEPTH: 1643.12 FT
AZIMUTH: 63.9
DISTANCE: 3.0 FT
+ = 300 FT INCR
○ = BOTTOM OF HOLE




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CNX Gas
FIELD OFFICE : M.Sammons
DATA FROM :
MAG. DECL. : -6.900
HOLE ID. : 07-CNX-T-38-G
DATE OF LOG : 07/12/07
PROBE : 0019C , 732
DEPTH UNITS : FEET
LOG: 07-CNX-T-38-G_07-12-07_16-27_0019C_.02_-9.17_1643.68_DEVI.log

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|---|---|---|---|---|---|---|---|
| 50.0 | 50.00 | -0.53 | -0.40 | 0.7 | 217.0 | 1.3 | 175.9 |
| 60.0 | 59.99 | -0.75 | -0.37 | 0.8 | 205.9 | 1.3 | 150.8 |
| 70.0 | 69.99 | -0.89 | -0.19 | 0.9 | 192.2 | 1.3 | 121.3 |
| 80.0 | 79.99 | -0.94 | 0.03 | 0.9 | 178.0 | 1.3 | 92.4 |
| 90.0 | 89.99 | -0.92 | 0.26 | 1.0 | 164.1 | 1.3 | 72.3 |
| 100.0 | 99.98 | -0.83 | 0.47 | 1.0 | 150.5 | 1.2 | 55.1 |
| 110.0 | 109.98 | -0.68 | 0.63 | 0.9 | 137.4 | 1.3 | 41.4 |
| 120.0 | 119.98 | -0.58 | 0.82 | 1.0 | 125.6 | 1.3 | 91.9 |
| 130.0 | 129.98 | -0.60 | 1.06 | 1.2 | 119.3 | 1.4 | 79.7 |
| 140.0 | 139.97 | -0.57 | 1.30 | 1.4 | 113.8 | 1.3 | 72.7 |
| 150.0 | 149.97 | -0.48 | 1.49 | 1.6 | 107.7 | 1.2 | 56.8 |
| 160.0 | 159.97 | -0.35 | 1.62 | 1.7 | 102.1 | 1.2 | 34.1 |
| 170.0 | 169.97 | -0.17 | 1.67 | 1.7 | 95.8 | 0.7 | 21.1 |
| 180.0 | 179.97 | -0.02 | 1.63 | 1.6 | 90.8 | 1.0 | 334.4 |
| 190.0 | 189.97 | 0.09 | 1.55 | 1.6 | 86.8 | 0.8 | 317.6 |
| 200.0 | 199.96 | 0.17 | 1.42 | 1.4 | 83.2 | 0.8 | 286.6 |
| 210.0 | 209.96 | 0.18 | 1.24 | 1.3 | 81.9 | 1.0 | 262.0 |
| 220.0 | 219.96 | 0.11 | 1.04 | 1.0 | 83.8 | 1.3 | 238.2 |
| 230.0 | 229.96 | 0.02 | 0.84 | 0.8 | 88.5 | 1.1 | 255.5 |
| 240.0 | 239.96 | 0.01 | 0.65 | 0.7 | 89.1 | 1.0 | 269.8 |
| 250.0 | 249.95 | -0.04 | 0.46 | 0.5 | 94.8 | 1.2 | 248.1 |
| 260.0 | 259.95 | -0.17 | 0.27 | 0.3 | 121.9 | 1.5 | 220.6 |
| 270.0 | 269.95 | -0.40 | 0.13 | 0.4 | 161.6 | 1.7 | 203.9 |
| 280.0 | 279.94 | -0.69 | 0.04 | 0.7 | 177.0 | 1.8 | 197.4 |
| 290.0 | 289.94 | -0.98 | -0.06 | 1.0 | 183.5 | 1.7 | 199.9 |
| 300.0 | 299.93 | -1.24 | -0.19 | 1.3 | 188.6 | 1.6 | 210.7 |
| 310.0 | 309.93 | -1.48 | -0.34 | 1.5 | 192.9 | 1.5 | 218.9 |
| 320.0 | 319.93 | -1.67 | -0.50 | 1.7 | 196.7 | 1.4 | 227.2 |
| 330.0 | 329.92 | -1.84 | -0.68 | 2.0 | 200.3 | 1.3 | 233.4 |
| 340.0 | 339.92 | -1.95 | -0.87 | 2.1 | 204.0 | 0.8 | 249.2 |
| 350.0 | 349.92 | -1.90 | -0.76 | 2.1 | 201.8 | 1.3 | 75.3 |
| 360.0 | 359.92 | -1.91 | -0.52 | 2.0 | 195.1 | 1.6 | 104.6 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 359.92 | -1.91 | -0.32 | 2.0 | [illegible] | [illegible] | [illegible] |
| 369.91 | -2.07 | -0.23 | 2.1 | 186.5 | 1.9 | 135.1 |
| 379.90 | -2.40 | -0.04 | 2.4 | 180.9 | 2.2 | 156.4 |
| 389.90 | -2.76 | -0.04 | 2.8 | 180.9 | 2.0 | 190.3 |
| 399.89 | -3.05 | -0.17 | 3.1 | 183.2 | 1.7 | 211.3 |
| 409.89 | -3.28 | -0.35 | 3.3 | 186.1 | 1.6 | 227.8 |
| 419.88 | -3.46 | -0.53 | 3.5 | 188.7 | 1.2 | 241.7 |
| 429.88 | -3.45 | -0.67 | 3.5 | 190.9 | 0.9 | 356.9 |
| 439.88 | -3.32 | -0.65 | 3.4 | 191.1 | 0.3 | 354.8 |
| 449.88 | -3.29 | -0.60 | 3.3 | 190.4 | 0.9 | 64.5 |
| 459.88 | -3.25 | -0.41 | 3.3 | 187.2 | 1.1 | 92.5 |
| 469.87 | -3.39 | -0.13 | 3.4 | 182.1 | 2.5 | 138.0 |
| 479.86 | -3.80 | 0.09 | 3.8 | 178.6 | 2.7 | 160.4 |
| 489.85 | -4.22 | 0.13 | 4.2 | 178.3 | 2.1 | 177.0 |
| 499.85 | -4.52 | 0.02 | 4.5 | 179.7 | 1.6 | 221.9 |
| 509.85 | -4.56 | -0.18 | 4.6 | 182.2 | 1.0 | 290.6 |
| 519.84 | -4.44 | -0.27 | 4.5 | 183.4 | 0.9 | 20.4 |
| 529.84 | -4.37 | -0.08 | 4.4 | 181.1 | 1.6 | 96.1 |
| 539.84 | -4.51 | 0.19 | 4.5 | 177.6 | 2.0 | 136.1 |
| 549.83 | -4.78 | 0.43 | 4.8 | 174.8 | 2.0 | 135.6 |
| 559.82 | -5.07 | 0.64 | 5.1 | 172.8 | 2.0 | 153.6 |
| 569.82 | -5.40 | 0.73 | 5.5 | 172.3 | 1.9 | 183.8 |
| 579.81 | -5.68 | 0.66 | 5.7 | 173.3 | 1.5 | 203.5 |
| 589.81 | -5.78 | 0.47 | 5.8 | 175.4 | 1.4 | 274.6 |
| 599.81 | -5.66 | 0.28 | 5.7 | 177.2 | 1.4 | 323.6 |
| 609.81 | -5.47 | 0.16 | 5.5 | 178.3 | 1.1 | 334.6 |
| 619.80 | -5.26 | 0.20 | 5.3 | 177.9 | 1.3 | 28.2 |
| 629.80 | -5.13 | 0.39 | 5.1 | 175.6 | 1.6 | 87.4 |
| 639.80 | -5.15 | 0.68 | 5.2 | 172.5 | 1.6 | 90.5 |
| 649.79 | -5.23 | 0.96 | 5.3 | 169.6 | 1.8 | 118.0 |
| 659.79 | -5.39 | 1.20 | 5.5 | 167.5 | 1.7 | 132.9 |
| 669.78 | -5.64 | 1.33 | 5.8 | 166.8 | 1.6 | 170.3 |
| 679.78 | -5.90 | 1.32 | 6.0 | 167.4 | 1.5 | 188.3 |
| 689.78 | -6.13 | 1.23 | 6.3 | 168.7 | 1.4 | 219.6 |
| 699.77 | -6.23 | 1.02 | 6.3 | 170.7 | 1.3 | 267.1 |
| 709.77 | -6.15 | 0.81 | 6.2 | 172.5 | 1.4 | 311.9 |
| 719.77 | -5.93 | 0.70 | 6.0 | 173.3 | 1.5 | 339.6 |
| 729.76 | -5.69 | 0.61 | 5.7 | 173.8 | 1.5 | 349.2 |
| 739.76 | -5.45 | 0.68 | 5.5 | 172.8 | 1.5 | 43.2 |
| 749.76 | -5.31 | 0.89 | 5.4 | 170.5 | 1.4 | 61.2 |
| 759.76 | -5.27 | 1.14 | 5.4 | 167.8 | 1.5 | 100.4 |
| 769.75 | -5.36 | 1.38 | 5.5 | 165.6 | 1.5 | 123.3 |
| 779.75 | -5.54 | 1.56 | 5.8 | 164.3 | 1.4 | 149.0 |
| 789.75 | -5.78 | 1.63 | 6.0 | 164.2 | 1.4 | 177.5 |
| 799.74 | -6.01 | 1.58 | 6.2 | 165.3 | 1.4 | 209.8 |
| 809.74 | -6.18 | 1.42 | 6.3 | 167.1 | 1.5 | 247.4 |
| 819.73 | -6.12 | 1.14 | 6.2 | 169.5 | 1.8 | 306.2 |
| 829.73 | -5.87 | 0.94 | 5.9 | 170.9 | 2.0 | 334.9 |
| 839.73 | -5.59 | 1.01 | 5.7 | 169.7 | 1.5 | 31.6 |
| 849.72 | -5.36 | 1.16 | 5.5 | 167.8 | 1.5 | 44.3 |
| 859.72 | -5.24 | 1.36 | 5.4 | 165.4 | 1.3 | 76.6 |
| 869.72 | -5.23 | 1.57 | 5.5 | 163.3 | 1.2 | 68.6 |
| 879.71 | -5.25 | 1.75 | 5.5 | 161.5 | 1.1 | 121.2 |
| 889.71 | -5.28 | 1.92 | 5.6 | 160.0 | 1.0 | 94.8 |
| 899.71 | -5.37 | 2.02 | 5.7 | 159.4 | 0.9 | 167.9 |
| 909.71 | -5.52 | 2.04 | 5.9 | 159.7 | 0.8 | 173.8 |
| 919.71 | -5.66 | 2.03 | 6.0 | 160.3 | 0.9 | 186.0 |
| 929.71 | -5.79 | 2.00 | 6.1 | 160.9 | 0.7 | 183.7 |
| 939.71 | -5.93 | 1.92 | 6.2 | 162.1 | 1.2 | 232.2 |
| 949.71 | -6.05 | 1.74 | 6.3 | 164.0 | 1.2 | 233.2 |
| 959.70 | -6.14 | 1.51 | 6.3 | 166.2 | 1.7 | 262.8 |
| 969.70 | -6.05 | 1.18 | 6.2 | 168.9 | 2.2 | 294.7 |
| 979.69 | -5.90 | 0.86 | 6.0 | 171.7 | 2.0 | 303.1 |
| 989.68 | -5.62 | 0.62 | 5.7 | 173.7 | 2.1 | 328.2 |
| 999.68 | -5.26 | 0.58 | 5.3 | 173.7 | 2.0 | 354.0 |
| 1009.67 | -4.91 | 0.54 | 4.9 | 173.7 | 2.0 | 4.6 |
| 1019.66 | -4.58 | 0.52 | 4.6 | 173.5 | 2.0 | 344.1 |
| 1029.66 | -4.24 | 0.49 | 4.3 | 173.4 | 1.9 | 353.4 |
| 1039.65 | -3.92 | 0.46 | 3.9 | 173.4 | 1.8 | 358.5 |
| 1049.65 | -3.59 | 0.45 | 3.6 | 172.9 | 1.9 | 353.0 |
| 1059.64 | -3.29 | 0.46 | 3.3 | 172.0 | 1.7 | 4.8 |
| 1069.64 | -3.00 | 0.49 | 3.0 | 170.7 | 1.6 | 19.8 |
| 1079.63 | -2.73 | 0.57 | 2.8 | 168.2 | 1.7 | 5.2 |
| 1089.63 | -2.51 | 0.67 | 2.6 | 165.1 | 1.4 | 60.9 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1069.64 | -3.00 | 0.49 | 3.0 | 170.7 | 1.6 | 19.8 |
| 1079.63 | -2.73 | 0.57 | 2.8 | 168.2 | 1.7 | 5.2 |
| 1089.63 | -2.51 | 0.67 | 2.6 | 165.1 | 1.4 | 60.9 |
| 1099.63 | -2.39 | 0.88 | 2.6 | 159.8 | 1.4 | 69.7 |
| 1109.62 | -2.48 | 1.09 | 2.7 | 156.2 | 1.4 | 136.8 |
| 1119.62 | -2.62 | 1.27 | 2.9 | 154.1 | 1.2 | 121.1 |
| 1129.62 | -2.71 | 1.45 | 3.1 | 151.9 | 1.0 | 130.3 |
| 1139.62 | -2.89 | 1.47 | 3.2 | 153.0 | 1.1 | 198.3 |
| 1149.62 | -3.03 | 1.30 | 3.3 | 156.8 | 1.7 | 278.6 |
| 1159.61 | -2.92 | 1.02 | 3.1 | 160.7 | 1.8 | 314.0 |
| 1169.61 | -2.64 | 0.86 | 2.8 | 161.9 | 1.8 | 337.4 |
| 1179.60 | -2.34 | 0.84 | 2.5 | 160.3 | 1.7 | 28.3 |
| 1189.60 | -2.10 | 1.01 | 2.3 | 154.4 | 1.6 | 53.3 |
| 1199.59 | -1.97 | 1.24 | 2.3 | 147.9 | 1.5 | 71.9 |
| 1209.59 | -1.89 | 1.48 | 2.4 | 141.9 | 1.4 | 82.3 |
| 1219.59 | -1.89 | 1.71 | 2.5 | 137.9 | 1.1 | 105.7 |
| 1229.59 | -1.99 | 1.83 | 2.7 | 137.4 | 1.0 | 172.0 |
| 1239.58 | -2.17 | 1.76 | 2.8 | 141.0 | 1.1 | 213.6 |
| 1249.58 | -2.31 | 1.66 | 2.8 | 144.4 | 1.0 | 240.0 |
| 1259.58 | -2.40 | 1.49 | 2.8 | 148.1 | 1.1 | 253.9 |
| 1269.58 | -2.43 | 1.29 | 2.7 | 152.0 | 1.2 | 273.5 |
| 1279.57 | -2.14 | 1.20 | 2.5 | 150.7 | 2.0 | 3.9 |
| 1289.57 | -1.84 | 1.34 | 2.3 | 143.9 | 1.8 | 35.7 |
| 1299.56 | -1.64 | 1.57 | 2.3 | 136.2 | 1.7 | 57.3 |
| 1309.56 | -1.53 | 1.83 | 2.4 | 129.9 | 1.5 | 75.5 |
| 1319.56 | -1.50 | 2.07 | 2.6 | 125.8 | 1.3 | 93.2 |
| 1329.55 | -1.49 | 2.31 | 2.7 | 122.7 | 1.4 | 83.3 |
| 1339.55 | -1.48 | 2.55 | 2.9 | 120.1 | 1.2 | 88.7 |
| 1349.55 | -1.48 | 2.76 | 3.1 | 118.2 | 1.2 | 95.7 |
| 1359.55 | -1.50 | 2.92 | 3.3 | 117.2 | 0.7 | 119.6 |
| 1369.54 | -1.55 | 3.04 | 3.4 | 117.0 | 0.7 | 110.7 |
| 1379.54 | -1.60 | 3.09 | 3.5 | 117.3 | 0.3 | 144.5 |
| 1389.54 | -1.64 | 3.16 | 3.6 | 117.4 | 0.5 | 121.2 |
| 1399.54 | -1.67 | 3.27 | 3.7 | 117.1 | 0.7 | 103.1 |
| 1409.54 | -1.71 | 3.38 | 3.8 | 116.8 | 0.7 | 106.3 |
| 1419.54 | -1.76 | 3.40 | 3.8 | 117.3 | 0.4 | 227.4 |
| 1429.54 | -1.79 | 3.31 | 3.8 | 118.3 | 0.8 | 272.5 |
| 1439.54 | -1.79 | 3.21 | 3.7 | 119.2 | 0.4 | 265.1 |
| 1449.54 | -1.76 | 3.10 | 3.6 | 119.6 | 0.7 | 289.3 |
| 1459.54 | -1.67 | 2.94 | 3.4 | 119.6 | 1.5 | 307.9 |
| 1469.53 | -1.42 | 2.93 | 3.3 | 115.9 | 2.2 | 52.7 |
| 1479.53 | -1.17 | 3.22 | 3.4 | 110.0 | 1.9 | 65.6 |
| 1489.52 | -1.16 | 3.42 | 3.6 | 108.7 | 0.7 | 134.9 |
| 1499.52 | -1.23 | 3.44 | 3.7 | 109.6 | 0.3 | 223.4 |
| 1509.52 | -1.28 | 3.41 | 3.6 | 110.6 | 0.3 | 148.7 |
| 1519.52 | -1.31 | 3.35 | 3.6 | 111.4 | 0.6 | 249.8 |
| 1529.52 | -1.31 | 3.20 | 3.5 | 112.3 | 1.2 | 286.2 |
| 1539.52 | -1.16 | 3.00 | 3.2 | 111.2 | 1.2 | 292.6 |
| 1549.51 | -0.96 | 2.80 | 3.0 | 108.9 | 1.9 | 331.7 |
| 1559.51 | -0.58 | 2.76 | 2.8 | 101.8 | 2.2 | 343.6 |
| 1569.50 | -0.19 | 2.76 | 2.8 | 93.9 | 2.1 | 4.4 |
| 1579.49 | 0.18 | 2.91 | 2.9 | 86.5 | 2.2 | 15.1 |
| 1589.48 | 0.52 | 3.05 | 3.1 | 80.3 | 1.9 | 48.9 |
| 1599.48 | 0.48 | 3.16 | 3.2 | 81.3 | 0.6 | 141.0 |
| 1609.48 | 0.43 | 3.15 | 3.2 | 82.3 | 0.7 | 244.4 |
| 1619.48 | 0.47 | 2.95 | 3.0 | 80.9 | 1.2 | 294.2 |
| 1629.47 | 0.73 | 2.80 | 2.9 | 75.5 | 2.5 | 354.7 |
| 1639.46 | 1.17 | 2.78 | 3.0 | 67.1 | 2.9 | 345.5 |
| 1643.12 | 1.33 | 2.72 | 3.0 | 63.9 | 2.7 | 331.7 |

Well: T38G

## Casing & Tubing Program

| | Casing | Casing Interval | Hole Size | Cement used in cu/ft | Cemented to Surface Yes | Cemented to Surface No | Date Cemented | Packers or Bridge Plugs |
|---|---|---|---|---|---|---|---|---|
| Conductor | 22" | 2410' | 24" | | | X | 06/27/07 | |
| Surface | 13 3/8" | 338.35' | 15 3/8" | 211.5 | X | | 06/29/07 | bskt @ 85' |
| Water Protection | 13 3/8" | 338.35' | 15 3/8" | 211.5 | X | | 06/29/07 | bskt @ 85' |
| Coal Protection | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Other Casing & Tubing | | | | | | | | |
| Liners | | | | | | | | |

**DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC**

**COMPANY:** CNX **HOLE #: T-38G**

**LOCATION:** OSBORNE MTN **DRILL RIG #: 87**

**DATE STARTED: 06-27-07** **DATED COMPLETED: 07-12-07**

**ELECTRIC LOGGED:YES** **GROUTED:YES**

| DEPTH | | THICKNESS | STRATA REMARKS |
|---|---|---|---|
| FROM | TO | FT | DESCRIPTION,VOIDS ETC |
| 0 | 24 | 24 | OVERBURDEN/SOFT SAND/SAND STONE |
| 24 | 35 | 11 | SAND STONE/SOFT SAND |
| 35 | 65 | 30 | SAND STONE/COAL/SANDY SHALE |
| 65 | 95 | 30 | SANDY SHALE/SAND STONE |
| 95 | 125 | 30 | SAND STONE/SANDY SHALE STR |
| 125 | 156 | 31 | SANDY SHALE/COAL/SAND STONE |
| 156 | 188 | 32 | SAND STONE STR/SANDY |
| SHALE/COAL/SANDY SHALE/SAND STONE | | | |
| 188 | 219 | 31 | SAND STONE |
| 219 | 251 | 32 | SAND STONE/SANDY SHALE STRKS |
| 251 | 282 | 31 | SANDY SHALE/COAL/SAND STONE/SANDY |
| SHALE | | | |
| 282 | 314 | 32 | SANDY SHALE STR/COAL STR/SAND STONE |
| 314 | 346 | 32 | SANDY SHALE/COAL/SAND STONE |
| 346 | 358 | 12 | SAND STONE/SANDY SHALE STR |
| 358 | 404 | 46 | |
| 404 | 467 | 63 | SANDY SHALE |
| 467 | 499 | 32 | SAND STONE |
| 499 | 530 | 31 | SAND STONE STR/COAL/SANDY SHALE/ |
| SAND STONE | | | |
| 530 | 562 | 32 | SAND STONE/SANDY SHALE STRKS |
| 562 | 594 | 32 | SAND STONE |
| 594 | 657 | 63 | SAND STONE/SANDY SHALE STRKS |
| 657 | 689 | 32 | SAND |
| 689 | 720 | 31 | SAND/SANDY SHALE |
| 720 | 783 | 63 | SANDY SHALE/COAL/SAND STONE/SANDY |
| SHALE | | | |
| 783 | 815 | 32 | SANDY SHALE/COAL/SANDY SHALE/COAL |
| 815 | 846 | 31 | SANDY SHALE STR/SAND STONE |
| 846 | 878 | 32 | SAND/SANDY SHALE |
| 878 | 910 | 32 | SAND/SANDY SHALE/COAL/SANDY SHALE |
| 910 | 941 | 31 | SAND/SANDY SHALE/COAL |
| 941 | 1005 | 64 | SAND/SANDY SHALE |
| 1005 | 1036 | 31 | SANDY SHALE/SAND/SANDY SHALE/COAL |
| 1036 | 1068 | 32 | SAND/SANDY SHALE |
| 1068 | 1090 | 22 | SAND/SANDY SHALE/COAL/SAND |
| 1090 | 1121 | 31 | SAND/SANDY SHALE/COAL |
| 1121 | 1153 | 32 | SAND STONE/SANDY SHALE STR |
| 1153 | 1185 | 32 | SANDY SHALE/COAL |
| 1185 | 1216 | 31 | COAL/SAND STONE/SANDY SHALE/COAL |
| 1216 | 1247 | 31 | SANDY SHALE/COAL/SAND STONE |
| 1247 | 1279 | 32 | SAND STONE |

| | | | |
|---|---|---|---|
| 1279 | 1311 | 32 | SAND STONE/SHALE STRKS |
| 1311 | 1343 | 32 | SAND STONE |
| 1343 | 1374 | 31 | SAND STONE/SHALE STR |
| 1374 | 1406 | 32 | SAND STONE/SANDY SHALE STR |
| 1406 | 1437 | 31 | SAND STONE |
| 1437 | 1469 | 32 | SAND STONE/COAL/SANDY SHALE |
| 1469 | 1501 | 32 | SANDY SHALE/COAL/SAND STONE |
| 1501 | 1532 | 31 | SANDY SHALE/SAND STONE |
| 1532 | 1595 | 63 | SAND STONE /COAL /SHALE /SAND STONE |
| 1595 | 1627 | 32 | SAND STONE |
| 1627 | 1645 | 18 | SANDY SHALE |

1645.00 FT. TOTAL DEPTH
24.10 FT. OF 22" CASING
338.35 FT. OF 13 3/8" CASING

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416, Abingdon, VA 24212
Telephone: (276) 676-5423

| | |
|---|---|
| **Tracking Number:** | 1038 |
| **Company:** | CNX Gas Company LLC |
| **File Number:** | BU-3490 |
| **Completion Report Type:** | Original |

# COMPLETION REPORT (DGO-GO-15)

| | | | |
|---|---|---|---|
| **Well Type:** | Coalbed/Pipeline | **Date Well Completed:** | 7/12/2007 |
| **Driller's Total Depth:** | 1645.00 | **Log's Total Depth:** | 1650.00 |

## 1. Changes In Casing/Tubing from Approved Drilling Report

| Description | FileName |
|---|---|

## 2. Stimulation Record

Stimulation Status: ☐ Stimulated ☑ GOB ☐ Not Stimulated ☐ Service Well

| Description | FileName |
|---|---|

## 3. Final Production

| Description | FileName |
|---|---|

## 4. Comments

*Notes:*

## 5. Signature

Permittee: CNX Gas Company LLC Date: 1/23/2008 *(Company)*

By: Les Arrington Title: Manager *(Signature)*

**INTERNAL USE ONLY**

Submit Date: 1/23/2008

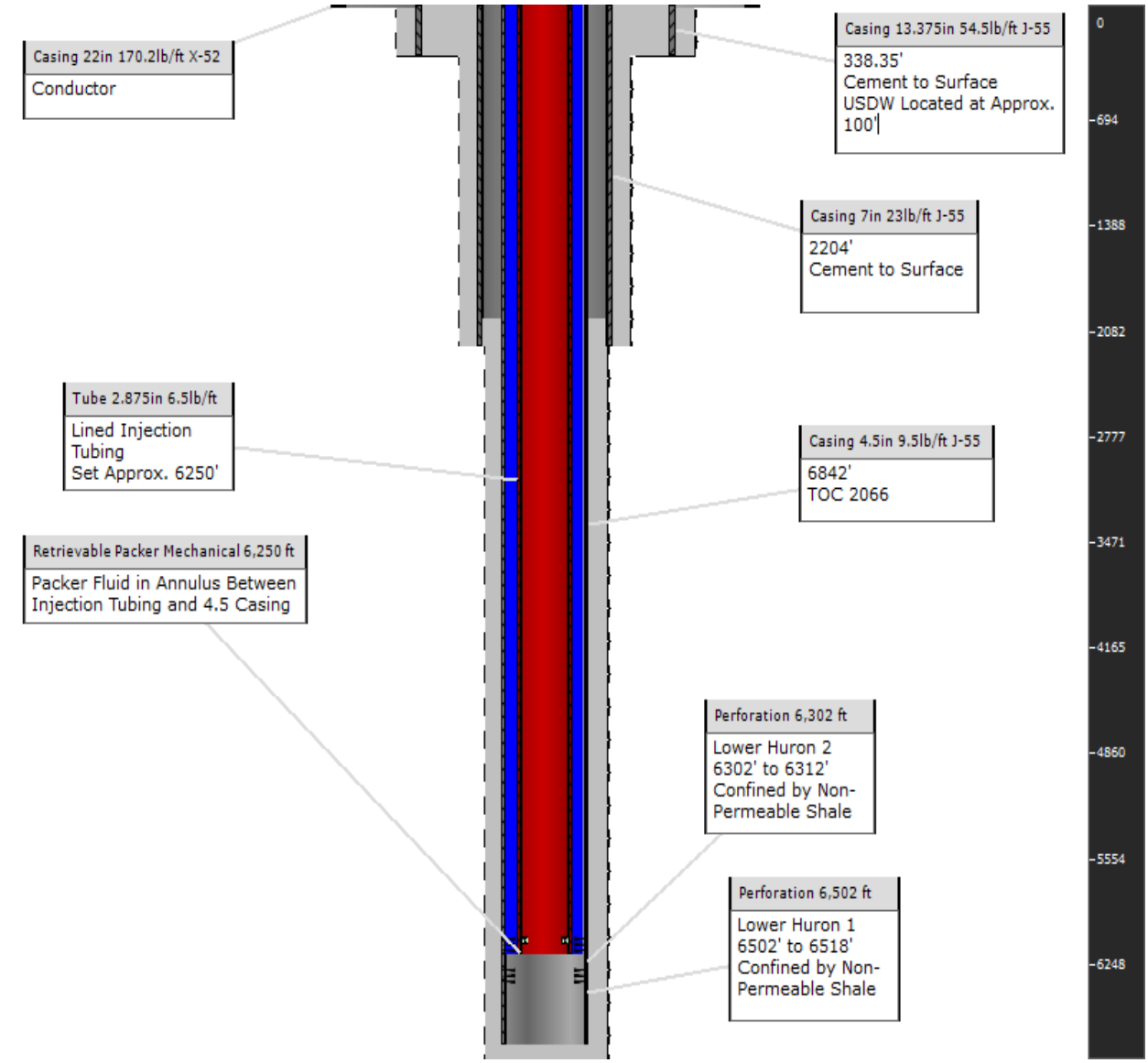
Status: Date: 1/24/2008

Final PDF Date: 2/28/2008

Attachment C: Well Construction/Conversion Information

Part I. Well Schematic Diagram

Part II. Well Construction or Conversion Procedures




Measured Depth - 6943 ft

Legend:

- Open Hole
- Tubing
- Perforation
- Retrievable Packer Mechanical
- Casing

**Attachment D. Injection Operation and Monitoring Program**

The injection well facility will be monitor by the following:

- Discharge Flow Meter, to monitor injection rate and accumulated injection amount
- Discharge Pressure Transducer, to monito injection pump discharge pressure
- Tank Level Switch, to monitor tank levels
- Annulus Pressure Transducer, to monitor pressure in annulus between injection tubing and 4.5" casing
- Wellhead Pressure Transducer, to monitor pressure at the wellhead

Flow rate, wellhead pressure and annulus pressure will be continuously monitored and recorded. There will be shutdowns programed for high injection pressure, and high annulus pressure. The upper shutdown limit for the injection pressure will be 25 psi below the Maximum Injection Pressure. Annular pressure shut down will be set at 200 psi. Tank level will not trigger a shutdown but will trigger an audible and visual alarm. All alarms will be communicated to command center.

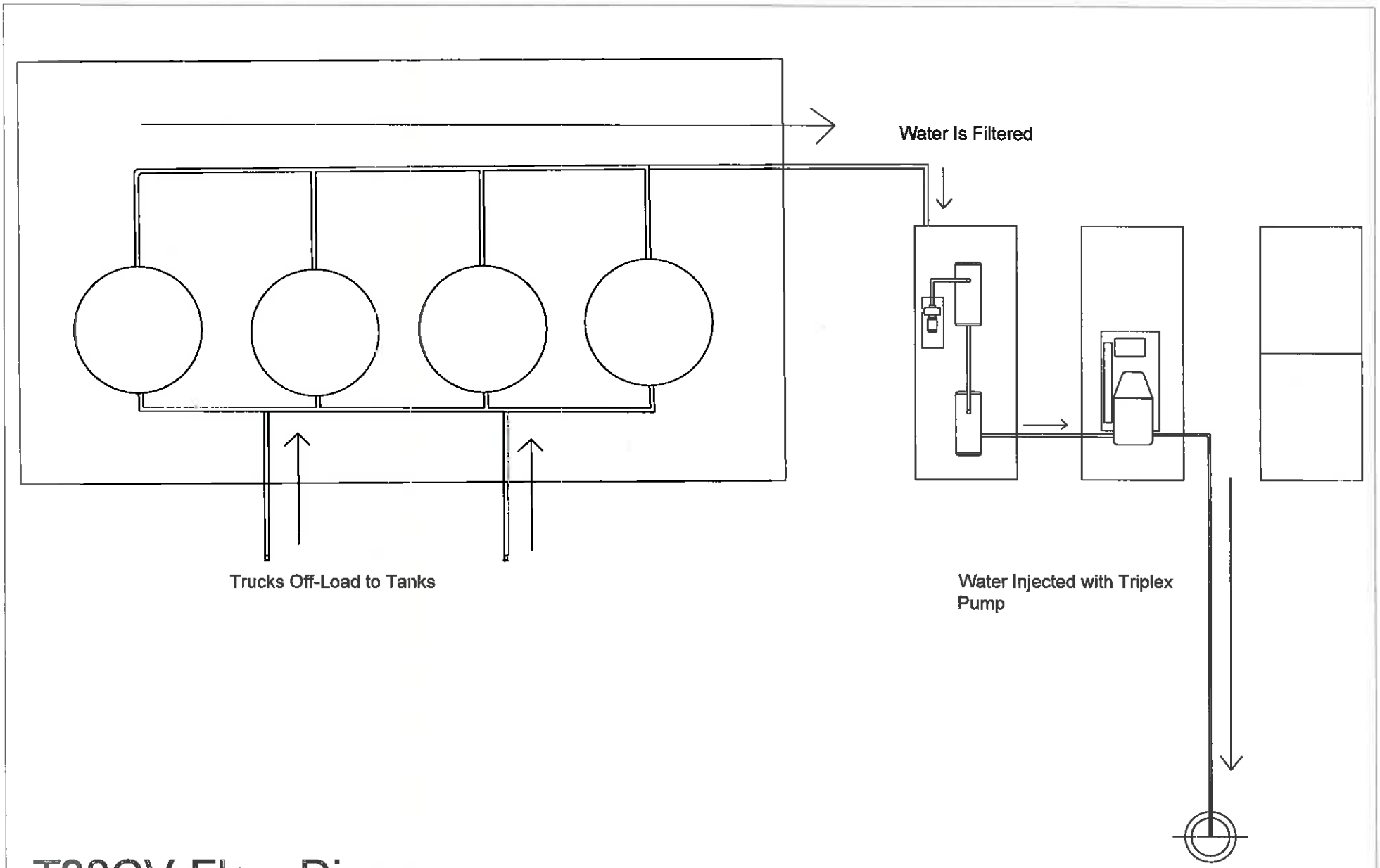
In the event of a well failure Pocahontas Gas, LLC has contractors in place with various expertise to remediate the failure as soon as possible. The EPA will be notified within 24 hours of the nature of the failure and the plan to remediate.

A maximum of 45,000 bbls per month or average of 1500 bbls per day at a maximum injection pressure of **931 psi**.

Analysis of injected fluids will be conducted quarterly and include the following: pH, specific gravity, TDS, and conductivity. All fluid will be from Pocahontas Gas, LLC, Virginia Operation. The Specific Gravity of injected fluid will be checked daily and any loads originating from outside Pocahontas Gas, LLC, Virginia Operation will have SG check prior to disposal.

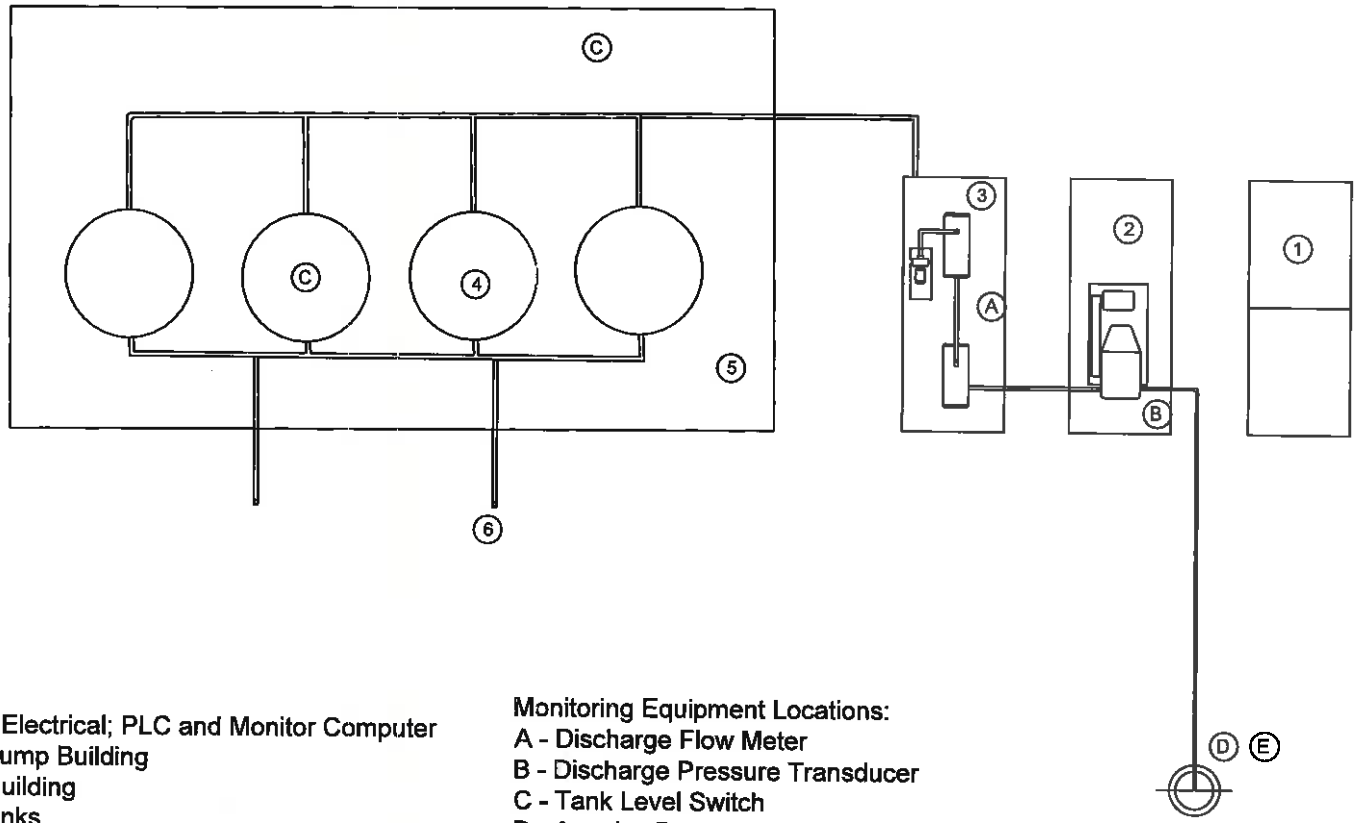
Attached manifest will be filled out for each load.

Annular fluid will consist of a mixture of water and a commercially available "packer fluid."




# T38CV-Flow Diagram

# T38CV Construction and Monitoring




Notes:
1 - Office and Electrical; PLC and Monitor Computer
2 - Injection Pump Building
3 - Filtration Building
4 - 210 bbl Tanks
5 - Earthen Dike 1.5x Capacity
6 - Basket Strainer

Monitoring Equipment Locations:
A - Discharge Flow Meter
B - Discharge Pressure Transducer
C - Tank Level Switch
D - Annulus Pressure Transducer
E - Wellhead Pressure Transducer

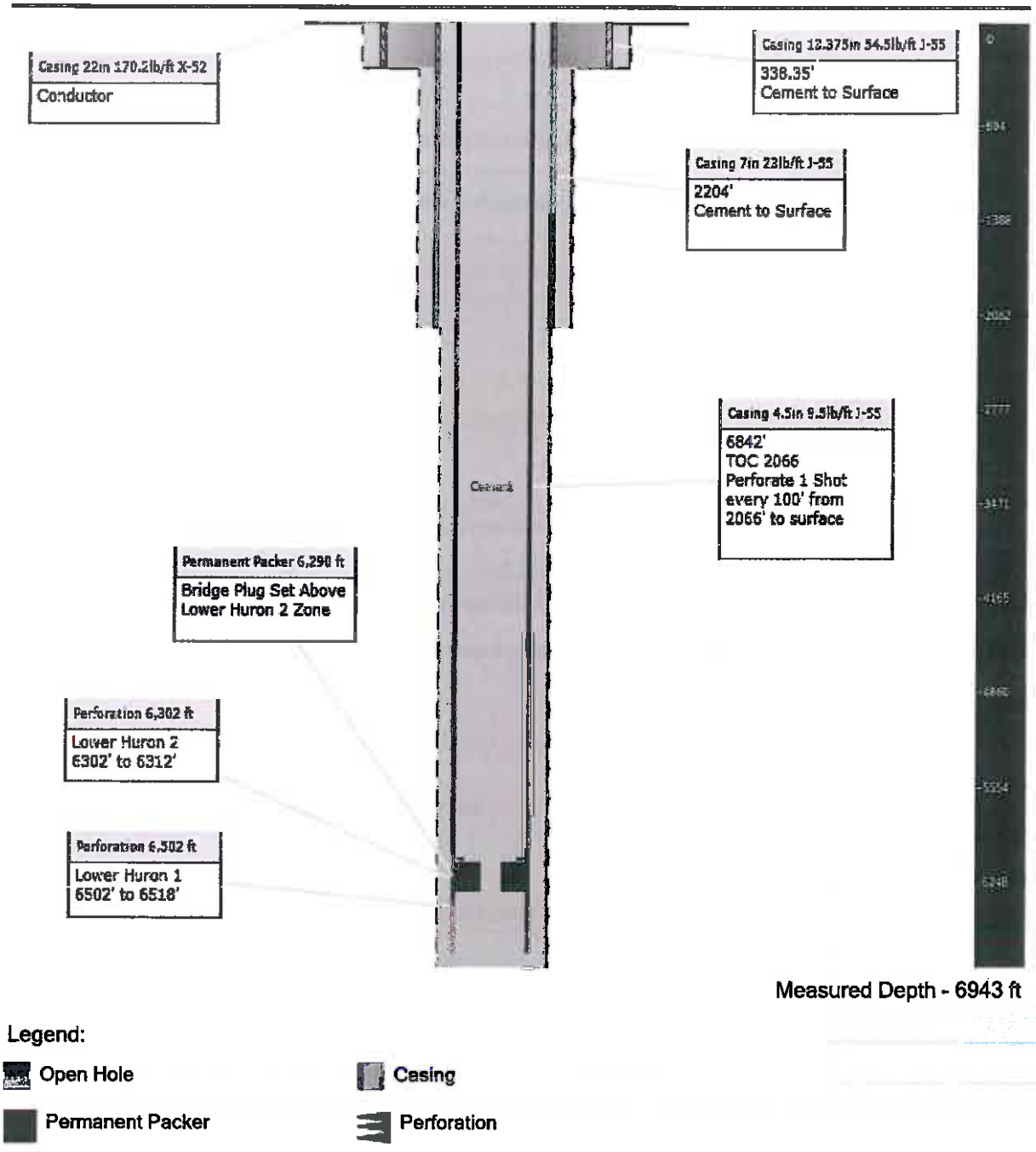
**Attachment E.** Plugging and Abandonment Plan

*New Cost Estimate for Plugging*

T38CV Plug to Abandon Plan

- Pump cement to level below packer
- Release packer and pull injection tubing
- Set cast iron bridge plug above Lower Huron 2 using wireline
- Perforate 4.5" casing 1 hot every 100' to surface
- Cement to surface using Class A Cement
- Remove wellhead and install Plugging Monument according to state regulations.

PTA Schematic
Pochantas Gas, LLC.
T38CV




Legend:

- Open Hole
- Casing
- Permanent Packer
- Perforation

Skyline Contracting Inc.
PO Box 663
Oakwood, VA 24631
(276) 498-3560

CNX Resources LLC.
1000 Consol Energy Drive
Canonsburg, PA 15317

RE: Well Plugging Proposal
Well #: T38CV

October 20, 2020

Mr. Statzer,

We are pleased to present the following proposal for your consideration. If you have questions please feel free to call on us at any time.

Scope of Work:

1. Move service rig on location and rig up, release packer and pull tubing, establish well total depth.

   Total Cost: $5,575.00

2. Set steel bridge plug and perforate

   Total Cost: $6,000.00

3. Trip in tubing and tag steel plug. Prepare to pump cement to surface.

   Total Cost: $1,895.00

4. Pump cement to surface, trip out tubing, and install plug monument.

   Total Cost: $2,970.00

5. Cement

   Total Cost: $18,750.00

6. Move all equipment, tubing, and casing off location.

Total Cost: $1,575.00

Total Plugging Cost for this well: $36,765.00

Regards,

Kenneth Horne, Pres.
Skyline Contracting Inc.

OMB No. 2040-0042 Approval Expires 4/30/2022

United States Environmental Protection Agency

# WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

**Name and Address, Phone Number and/or Email of Permittee**

Pocahontas Gas LLC
PO Box 570
Pounding Mill, VA 24637
276-596-5048
andrewstatzer@cnx.com

| Permit or EPA ID Number | API Number | Full Well Name |
|---|---|---|
| | 450270349000 | T38CV |

| State | County |
|---|---|
| Virginia | Buchanan |

**Locate well in two directions from nearest lines of quarter section and drilling unit**

**Surface Location**

Latitude: 37.18938

Longitude: -81.8837

[ ] 1/4 of [ ] 1/4 of Section [ ] Township [ ] Range [ ]

[ ] ft. from (N/S) [ ] Line of quarter section

[ ] ft. from (E/W) [ ] Line of quarter section.

| Well Class | Timing of Action (pick one) | Type of Action (pick one) |
|---|---|---|
| [ ] Class I | [✔] Notice Prior to Work | [ ] Well Rework |
| [✔] Class II | Date Expected to Commence: N/A Plugging Plan | [✔] Plugging and Abandonment |
| [ ] Class III | [ ] Report After Work | [ ] Conversion to a Non-Injection Well |
| [ ] Class V | Date Work Ended: | |

**Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.**

## Certification

**I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)**

| Name and Official Title *(Please type or print)* | Signature | Date Signed |
|---|---|---|
| Mary Beth McGlothlin | | |

**Attachment F.** Financial Assurance

*Surety Bond Included*

*III. Performance Surety Bond*

A surety bond guaranteeing performance of [Injection Well Plugging , as specified in this chapter, may be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Performance Bond

Date bond executed: April 4, 2022

Effective date: April 4, 2022

Principal: [legal name and business address of owner or operator] Pocahontas Gas LLC
1000 Consol Energy Drive, Canonsburg, PA 15317

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]
Corporation

State of incorporation: N/A

Surety(ies): [name(s) and business address(es)] RLI Insurance Company
9026 N. Lindbergh Drive, Peoria, IL 61615

EPA Identification Number, name, address, and Injection Well Plugging amounts(s) for each injection well guaranteed by this bond

: Injection Well Plugging, T38CV UIC

Total penal sum of bond: $ Fifty Thousand and 00/100 Dollars ($50,000.00)

Surety's bond number: CMS0347661

Know All Persons By These Presents, That We, the Principal and Surety(ies) hereto are firmly bound to United States Environmental Protection Agency , in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Underground Injection Control Regulations, as amended, to have a permit or comply with provisions to operate under the Class VI Rule for each injection well identified above, and

Whereas said Principal is required to provide financial assurance for Injection Well Plugging

as a condition of the permit or approval to operate under the Rule, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are such that if the Principal shall faithfully perform |Injection Well Plugging

, whenever required to do so, of each injection well for which this bond guarantees |Injection Well Plugging

, in accordance with the Injection Well Plugging

Plan and other requirements of the permit or provisions for operating under the Rule and other requirements of the permit or provisions for operating under the Rule as may be amended, pursuant to all applicable laws, statutes, rules and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance and obtain the UIC Program Director's written approval of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the UIC Program Director from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the UIC Program Director that the Principal has been found in violation of the Injection Well Plugging

requirements of 40 CFR part 146, for an injection well which this bond guarantees performances of Injection Well Plugging

the Surety(ies) shall either perform Injection Well Plugging

in accordance with the Injection Well Plugging

Plan and other permit requirements or provisions for operating under the Rule and other requirements or place the amount for Injection Well Plugging

into a standby trust fund for the fulfillment of Injection Well Plugging

obligations described at 40 CFR 146.84, 146.92, 146.93, and/or 146.94, respectively.

Upon notification by the UIC Program Director that the Principal has failed to provide alternate financial assurance and obtain written approval of such assurance from the UIC Program Director during the 90 days following receipt by both the Principal and the UIC Program Director of a notice of cancellation of the bond, the Surety(ies) shall place funds in the amount guaranteed for the injection well(s) into the standby trust fund.

The surety(ies) hereby waive(s) notification of amendments to Injection Well Plugging Plans, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond only for failure to pay and by sending notice by certified mail to the owner or operator and to the UIC Program Director of the area in which the injection well(s) is (are) located. EPA requires that cancellation not become final for 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the UIC Program Director, as evidenced by the return receipts.

The principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the UIC Program Director of the area in which the bonded injection well(s) is (are) located.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new Injection Well Plugging amount, provided that the penal sum does not increase by more than 20 percent in any one year, unless the UIC Program Director determines in writing that the reduced amount is adequate to fulfill the Principal's obligations under 40 CFR 146.84, 146.92, 146.93, and/or 146.94, respectively.

In Witness Whereof, The Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies).

Pocahontas Gas LLC
Principal
[Signature(s)] [Name(s)] [Title(s)] [Corporate seal][20]

Signature 
Name Alexander J. Reyes
Title Vice President + Secretary

[20] A corporate seal is only recommended if the company has a corporate seal.

Corporate Surety(ies)

RLI Insurance Company, 9025 N. Lindbergh Drive, Peoria, IL 60615

State of incorporation: Illinois

Liability limit: $50,000.00

Kristin Darling, Attorney-In-Fact

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: $ 375.00

[21] A corporate seal is only recommended if the company has a corporate seal.

# POWER OF ATTORNEY

**RLI Insurance Company**
**Contractors Bonding and Insurance Company**

9025 N. Lindbergh Dr. Peoria, IL 61615
Phone: 800-645-2402

***Know All Men by These Presents:***

That this Power of Attorney is not valid or in effect unless attached to the bond which it authorizes executed, but may be detached by the approving officer if desired.

That **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, each an Illinois corporation, (separately and together, the "Company") do hereby make, constitute and appoint:

Timothy F. Kelly, R. F. Bobo, Florence McClellan, Kristin Darling, Autumn Stockton, Aaron P Clark, Nicholas Patetta, jointly or severally

in the City of Houston, State of Texas its true and lawful Agent(s) and Attorney(s) in Fact, with full power and authority hereby conferred, to sign, execute, acknowledge and deliver for and on its behalf as Surety, in general, any and all bonds and undertakings in an amount not to exceed **Twenty Five Million** Dollars (**$25,000,000.00**) for any single obligation.

The acknowledgment and execution of such bond by the said Attorney in Fact shall be as binding upon the Company as if such bond had been executed and acknowledged by the regularly elected officers of the Company.

**RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, as applicable, have each further certified that the following is a true and exact copy of a Resolution adopted by the Board of Directors of each such corporation, and is now in force, to-wit:

> "All bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, any Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or Agents who shall have authority to issue bonds, policies or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile."

IN WITNESS WHEREOF, the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, as applicable, have caused these presents to be executed by its respective Vice President with its corporate seal affixed this 31st day of March, 2022.

CONTRACTORS BONDING AND INSURANCE COMPANY CORPORATE SEAL ILLINOIS

RLI INSURANCE COMPANY CORPORATE SEAL ILLINOIS

**RLI Insurance Company**
**Contractors Bonding and Insurance Company**

By: _____
Barton W. Davis — Vice President

State of Illinois }
County of Peoria } SS

On this 31st day of March, 2022, before me, a Notary Public, personally appeared Barton W. Davis, who being by me duly sworn, acknowledged that he signed the above Power of Attorney as the aforesaid officer of the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company** and acknowledged said instrument to be the voluntary act and deed of said corporation.

By: _____
Catherine D. Glover — Notary Public

CATHERINE D. GLOVER
OFFICIAL SEAL
Notary Public - State of Illinois
My Commission Expires
March 24, 2024

**CERTIFICATE**

I, the undersigned officer of **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, do hereby certify that the attached Power of Attorney is in full force and effect and is irrevocable; and furthermore, that the Resolution of the Company as set forth in the Power of Attorney, is now in force. In testimony whereof, I have hereunto set my hand and the seal of the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company** this 4th day of April, 2022.

**RLI Insurance Company**
**Contractors Bonding and Insurance Company**

By: _____
Jeffrey D Fick — Corporate Secretary

*4234903020212*

A0058D19

Attachment G Site Security and Manifest

Site security will consist of cameras with a recording capacity of at least one week, and have the ability to be monitored at Gas Command Center. Facility will be fenced in to prevent unauthorized dumping into holding tanks or well. Facility will be staffed during operation hours and water will only be off-loaded while facility is staffed.

NO.

# POCHANTAS GAS LLC DISPOSAL WELL MANIFEST

GENERATING COMPANY _____

HAULING COMPANY _____

DRIVER/TRUCK NO. _____

PICKUP LOCATION _____ TYPE_____

PERMIT NO. _____ STATE _____

DATE _____ PICKUP TIME _____

ESTIMATED AMOUNT _____bbl

TANK LEVEL _____ SPECIFIC GRAVITY _____

DROP-OFF LOCATION:

☐ AW114A ☐ U7 ☐ BB8/BALL WELL ☐ 25451

☐ 25453 ☐ EE43 ☐ T38CV

☐ OTHER_____

DROP-OFF TIME _____

METERED AMOUNT_____bbl

WAIT TIME: ☐ YES ☐ NO

REASON: _____

_____

_____

DRIVER:_____

OPERATOR:_____

**Attachment I.** Existing EPA Permits

| Name | Permit Number |
|---|---|
| Ball A-1 | *VAS2D921BBUC* |
| BPC-01 | *VAS2D960BBUC* |
| U7 | *VAS2D926BBUC* |
| AW114A | *VAS2D970BRUS* |
| 25453 | *VAS2D980BBUC* |
| EE43CV | VAS2D990BTAZ |

**Attachment J.** Description of Business

*Pocahontas Gas LLC is an Operator, Explorer, Gatherer and Producer of natural gas extracted from Coalbed Methane Gas Wells and Conventional Gas Wells, located in southwestern Commonwealth of Virginia. Pocahontas Gas LLC is a subsidiary of CNX Gas Company LLC located at 1000 Consol Energy Drive, Canonsburg, Pennsylvania.*

**Attachment K.** Optional Additional Project Information

# National Flood Hazard Layer FIRMette

FEMA

81°53'19"W 37°11'36"N




0 250 500 1,000 1,500 2,000 Feet

1:6,000

81°52'42"W 37°11'7"N

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainag areas of less than one square mile *Zone*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone*

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represe an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **7/27/2022 at 2:23 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Virginia Dept. of Historic Resources

# V-CRIS

Virginia Cultural Resource Information System

## Legend

- Architecture Labels
- Public View Architecture Points
- Public View Historic Districts
- USGS GIS Place names
- County Boundaries



N

Feet

0 50 100 150 200

1:2,257 / 1"=188 Feet

**Title:**

**Date: 7/27/2022**

*DISCLAIMER:Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years from a variety of sources and the representation depicted is a cumulative view of field observations over time and may not reflect current ground conditions.The map is for general information purposes and is not intended for engineering, legal or other site-specific uses. Map may contain errors and is provided "as-is". More information is available in the DHR Archives located at DHR's Richmond office.*

*Notice if AE sites:Locations of archaeological sites may be sensitive the National Historic Preservation Act (NHPA), and the Archaeological Resources Protection Act (ARPA) and Code of Virginia §2.2-3705.7 (10). Release of precise locations may threaten archaeological sites and historic resources.*

U.S. Fish and Wildlife Service

# National Wetlands Inventory

## No Wetlands




July 28, 2022

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Site

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

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## Location

Buchanan County, Virginia



## Local office

Virginia Ecological Services Field Office

(804) 693-6694
(804) 693-9032

6669 Short Lane
Gloucester, VA 23061-4410

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

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# Mammals

| NAME | STATUS |
|---|---|
| **Gray Bat** Myotis grisescens<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/6329 | Endangered |
| **Indiana Bat** Myotis sodalis<br>Wherever found<br>There is final critical habitat for this species. The location of the critical habitat is not available.<br>https://ecos.fws.gov/ecp/species/5949 | Endangered |
| **Northern Long-eared Bat** Myotis septentrionalis<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/9045 | Threatened |
| **Virginia Big-eared Bat** Corynorhinus (=Plecotus) townsendii virginianus<br>Wherever found<br>There is final critical habitat for this species. The location of the critical habitat is not available.<br>https://ecos.fws.gov/ecp/species/8369 | Endangered |

# Insects

| NAME | STATUS |
|---|---|
| **Monarch Butterfly** Danaus plexippus<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/9743 | Candidate |

# Crustaceans

| NAME | STATUS |
|---|---|
| **Big Sandy Crayfish** Cambarus callainus<br>Wherever found<br>There is final critical habitat for this species. The location of the critical habitat is not available.<br>https://ecos.fws.gov/ecp/species/8285 | Threatened |

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# Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

**The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

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For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.) |
|---|---|
| **Canada Warbler** Cardellina canadensis<br>**This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.** | **Breeds May 20 to Aug 10** |
| **Cerulean Warbler** Dendroica cerulea<br>**This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.**<br>https://ecos.fws.gov/ecp/species/2974 | **Breeds Apr 27 to Jul 20** |
| **Chimney Swift** Chaetura pelagica<br>**This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.** | **Breeds Mar 15 to Aug 25** |
| **Kentucky Warbler** Oporornis formosus<br>**This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.** | **Breeds Apr 20 to Aug 20** |
| **Wood Thrush** Hylocichla mustelina<br>**This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.** | **Breeds May 10 to Aug 31** |

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# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence (■)**

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season (■)**

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort (|)**

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

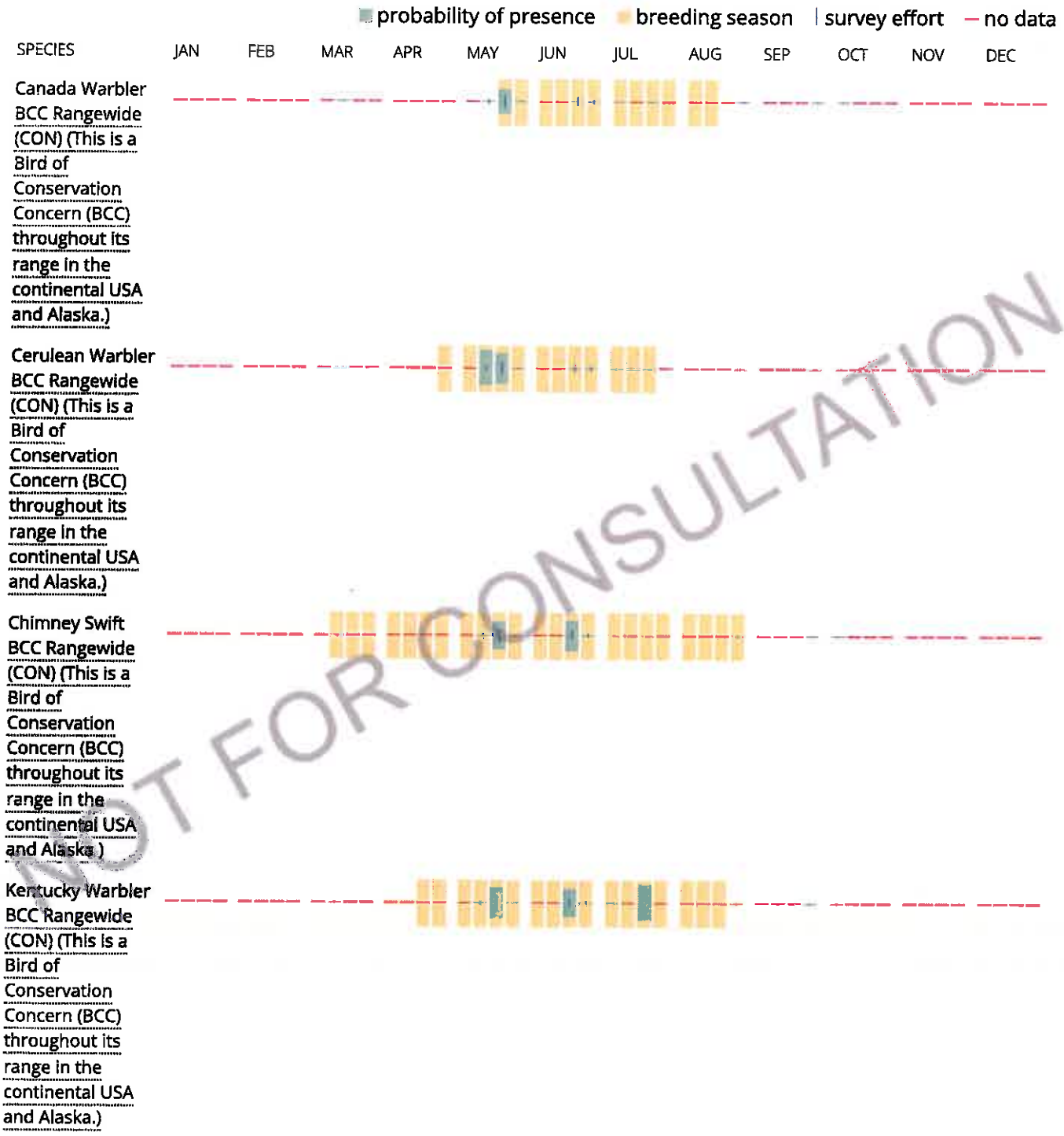
**No Data (–)**

A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**

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Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.




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Wood Thrush BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering or migrating in my area?**

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To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

**What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

**Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the

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existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION

**Data limitations**

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

**Data exclusions**

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

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# Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

# Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

# Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

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**Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

**Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

**Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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