# Sliverville Oil Company, LLC Underground Injection Control Permit Application



Evans Lease Well 106
Lafayette Township, Mckean County, PA



11548 Cotton Road Meadville, PA 16335 814-724-4970

Submitted: January 19, 2018

# Permit Application and General Information

United States Environmental Protection Agency

# Underground Injection Control

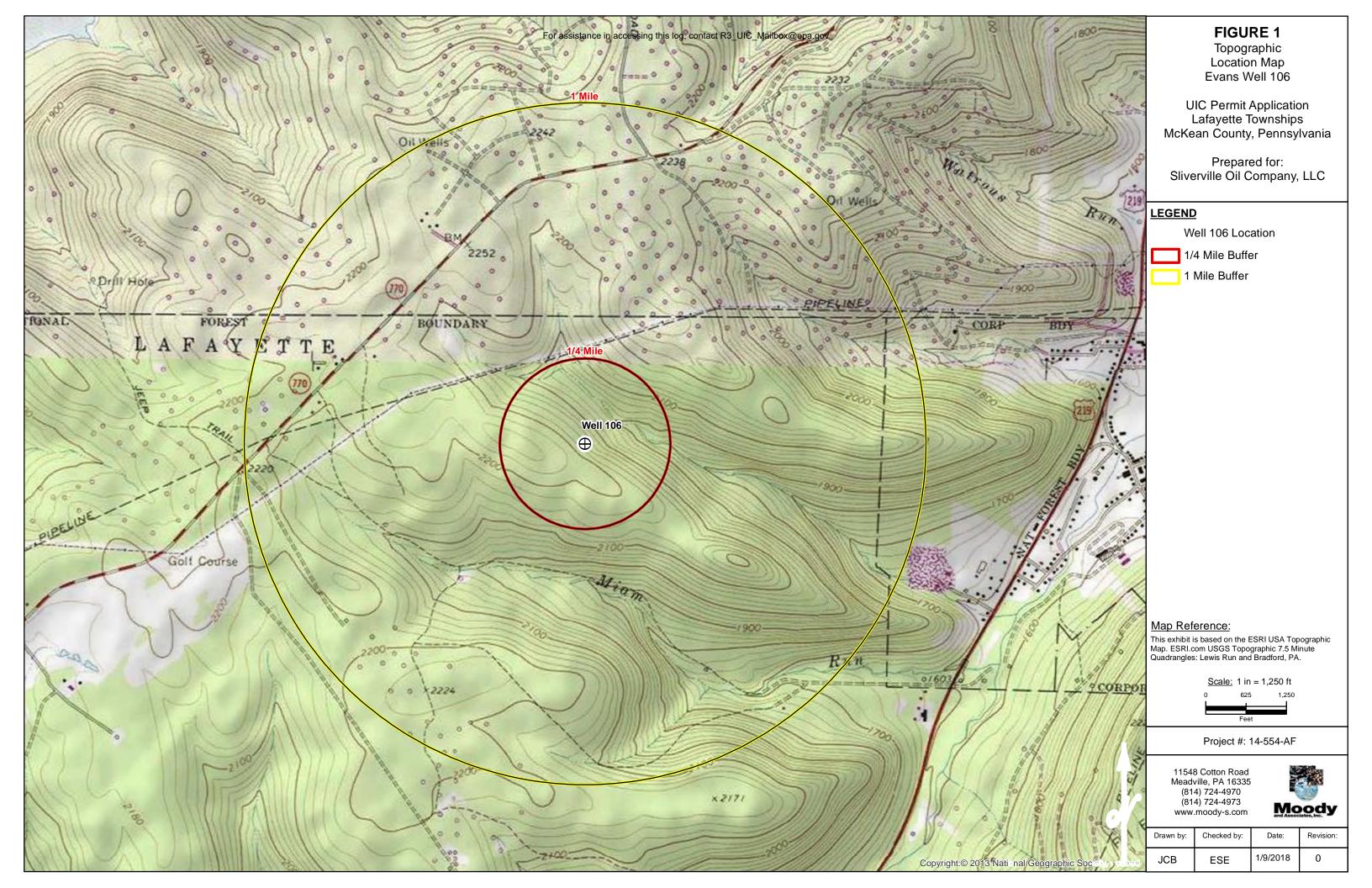
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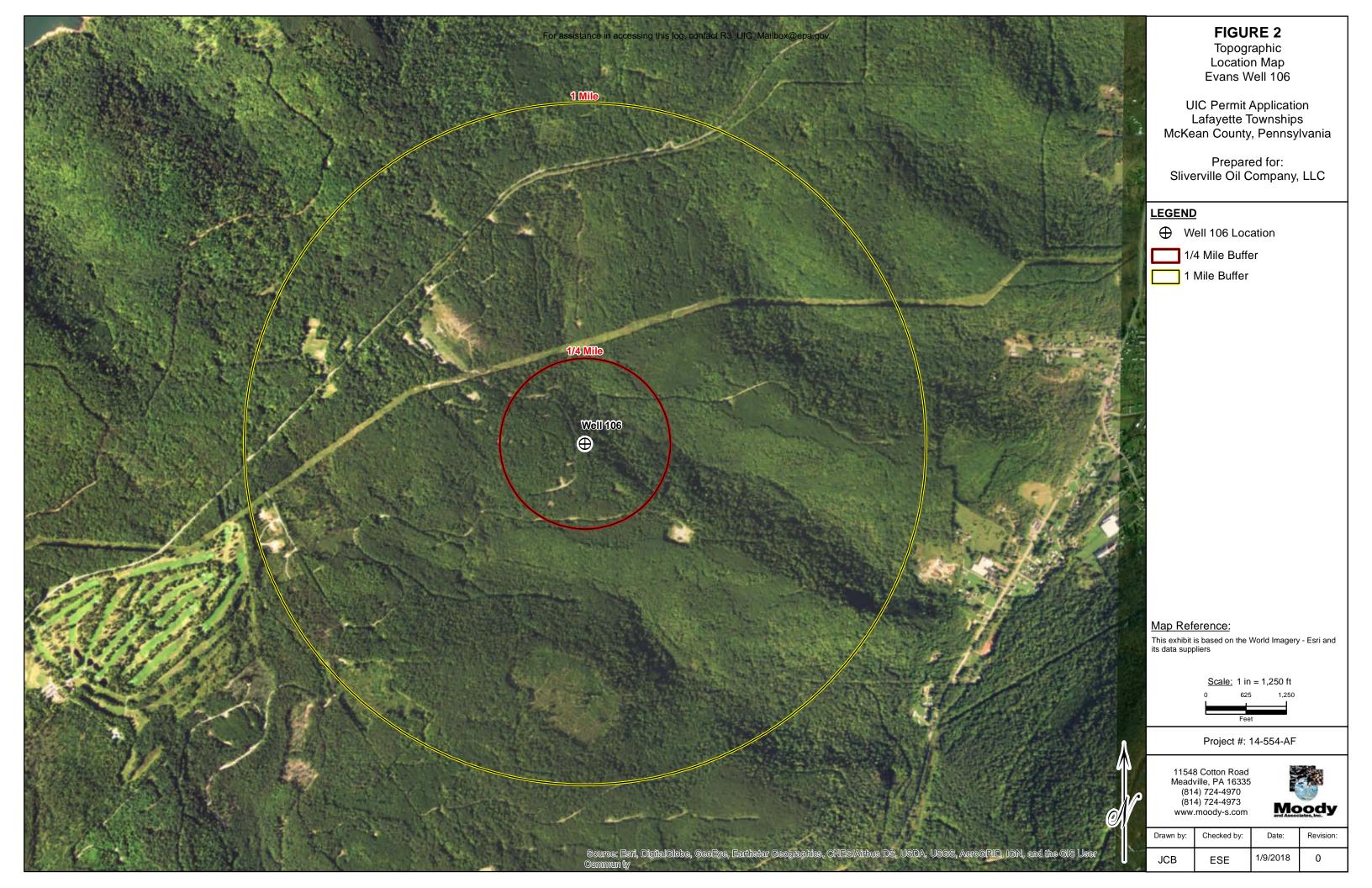
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Bradf	ord			PA	16701		Bradford				State PA	167	ODE 01	]
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### **General Information**

Sliverville Oil Company, LLC (Sliverville) is proposing to permit their existing Evans Well 106 (Permit Number: 37-083-56582-00-00) as a Class II, Type R Underground Injection Control (UIC) well. The well is located in Lafayette Township, McKean County, Pennsylvania. The well is located on a lease currently owned and operated by Sliverville. Sliverville intends to dispose of production fluids, produced via conventional oil and gas operations into the Lewis Run Formation. Figure 1 and Figure 2 shows the location of the well. The current well permit and records have been attached in Appendix A.

Injectivity testing was conducted on the well from July 17, 2017 to August 16, 2017. The cumulative injection total was 2,479 barrels of fluid injected at an average rate of 3.443 barrels per hour (bbl/hr). The maximum rate of injection was 15 bbl/hr.





# **Attachment Pages**

ATTACHMENT A	Area of Review Methods
ATTACHMENT B	Maps of Well/ Area and Area of Review
ATTACHMENT C	Corrective Action Plan and Well Data
ATTACHMENT E	Name and Depth of USDWs
ATTACHMENT G	Geological Data on Injection and Confining Zones
ATTACHMENT H	Operating Data
ATTACHMENT M	Construction Details
ATTACHMENT P	Monitoring Program
ATTACHMENT Q	Plugging and Abandonment Plan
ATTACHMENT R	Necessary Resources

# **ATTACHMENT A**

# Area of Review Methods

### **Area of Review Methods**

Moody and Associates, Inc. (Moody) completed this permit on behalf of Sliverville Oil Company, LLC (Sliverville) with information obtained from Sliverville and referenced cites. The fixed radius method was used to determine the area of review. Based on permit guidance, a fixed radius of 0.25 mile was used. A 0.25 mile buffer from the center of the proposed injection well was determined via ArcGIS 10.3. Data from the following references were examined and used in completing this permit:

- Pennsylvania Internet Record Imaging System (PAIRIS): https://edwin.onbaseonline.com/1500AppNet/Login.aspx
- Pennsylvania Department of Environmental Protection (PADEP): http://www.depgis.state.pa.us/emappa/
- Pennsylvania Groundwater Information System (PAGWIS):
   <a href="http://www.dcnr.state.pa.us/topogeo/groundwater/pagwis/records/index.htm">http://www.dcnr.state.pa.us/topogeo/groundwater/pagwis/records/index.htm</a>
- Pennsylvania Spatial Data Access (PASDA): http://www.pasda.psu.edu
- Pennsylvania Department of Environmental Protection (PaDEP)
   http://www.dep.pa.gov/Pages/default.aspx
- U.S. Fish & Wildlife Service National Wetlands Inventory https://www.fws.gov/wetlands/
- Pennsylvania Department of Conservation and Natural Resources http://www.gis.dcnr.state.pa.us/geology/index.html
- Pennsylvania Oil and Gas Mapping
   http://www.depgis.state.pa.us/PaOilAndGasMapping/OilGasWellsStrayGasMap.html
- DEP Spud Report
   http://www.depreportingservices.states.pa.us/ReportServer/Pages/ReportViewer.as
   px?/Oil Gas/Spud External Data
- DCNR Open File Report OFOG 15-01.2 (Map 10)
   <a href="http://www.dcnr.state.pa.us/topogeo/publications/digitaldata/index.htm#oil">http://www.dcnr.state.pa.us/topogeo/publications/digitaldata/index.htm#oil</a>
- USGS Mineral Resources On-line Spatial Data. Geologic Units in McKean County, Pennsylvania. <a href="http://mrdata.usgs.gov/geology/state/fips-unit.php?code=f42083">http://mrdata.usgs.gov/geology/state/fips-unit.php?code=f42083</a>
- Fettke, C. R. 1941. Music Mountain Oil Pool and Other Oil Pools in Lafayette Township, McKean County, Pennsylvania. Commonweath of Pennsylvania Department of Internal Affairs, Progress Report 125
- Fettke, C. R. 1951. *Oil and Gas Field Atlas of the Bradford Quadrangle, Pennsylvania*. Commonweath of Pennsylvania Department of Internal Affairs, Special Bulletin 5
- Shultz, C.H. 1999. The Geology of Pennsylvania. Pittsburgh Geological Survey and Pittsburgh Geological Society.

# **ATTACHMENT B**

# Maps of Well/ Area and Area of Review

# **Area of Review Maps**

Based on the references noted in Attachment A and information provided by Sliverville, there are two pipeline/conduit's, an erosion and sediment control facility, and three abandon oil wells within one mile of the proposed well and included on Figure 3. There were no surface water intakes or discharge structures, hazardous waste treatments, groundwater wells, mines, quarries, storage or disposal facilities.

### Oil and Gas Wells:

A search of the references (Attachment A) was conducted to determine the locations of oil and gas wells within area of review. The results of those searches are shown on the attached Oil and Gas Well Maps (Figure 4 and 5). Table 1 includes oil and gas well information from the search.

### **Injection Well:**

A search of the references (Attachment A) was conducted to determine the locations of injection wells within the area of review. There were no injection wells found.

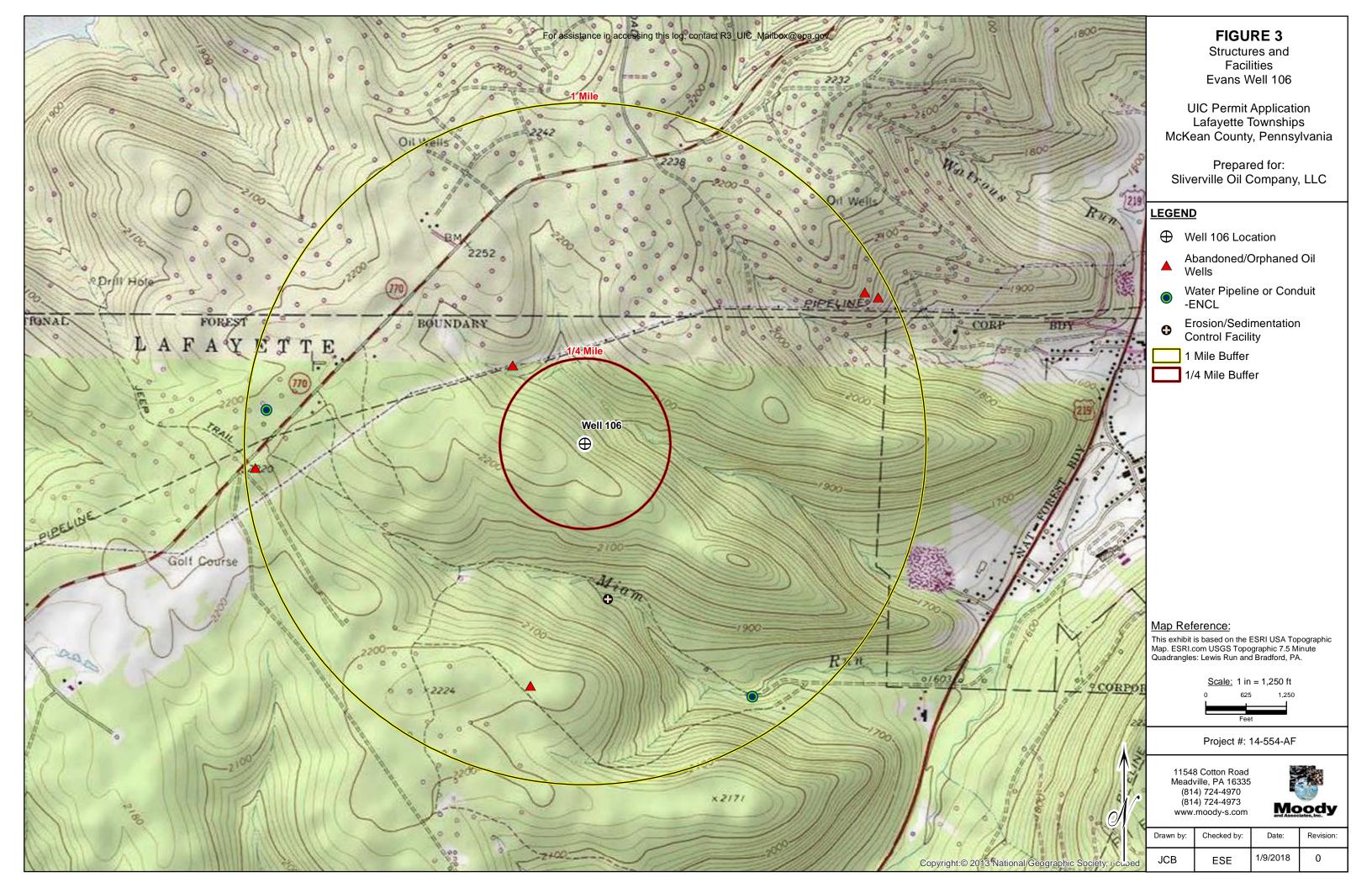
### **Surface Water:**

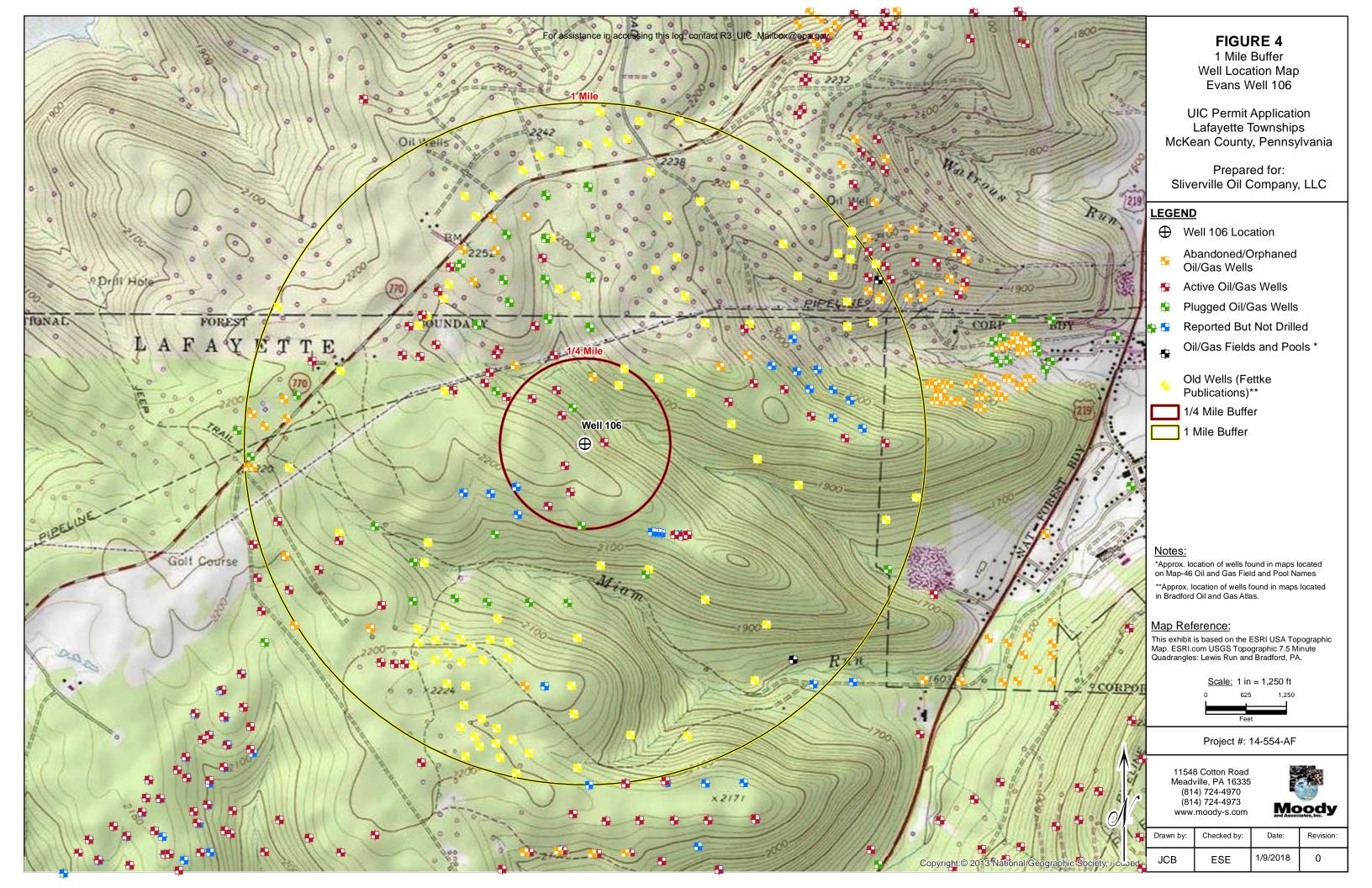
Based on the Chapter 93 designated use data from PASDA, there is one tributary to Lewis Run that extends through the area of review. Lewis Brook crosses the area of review from northwest to southeast. It is approximately 600 feet northeast of Well 106 at its closest point. Lewis Brook has a Chapter 93 designated use of High Quality, Cold Water Fishes (HQ-CWF).

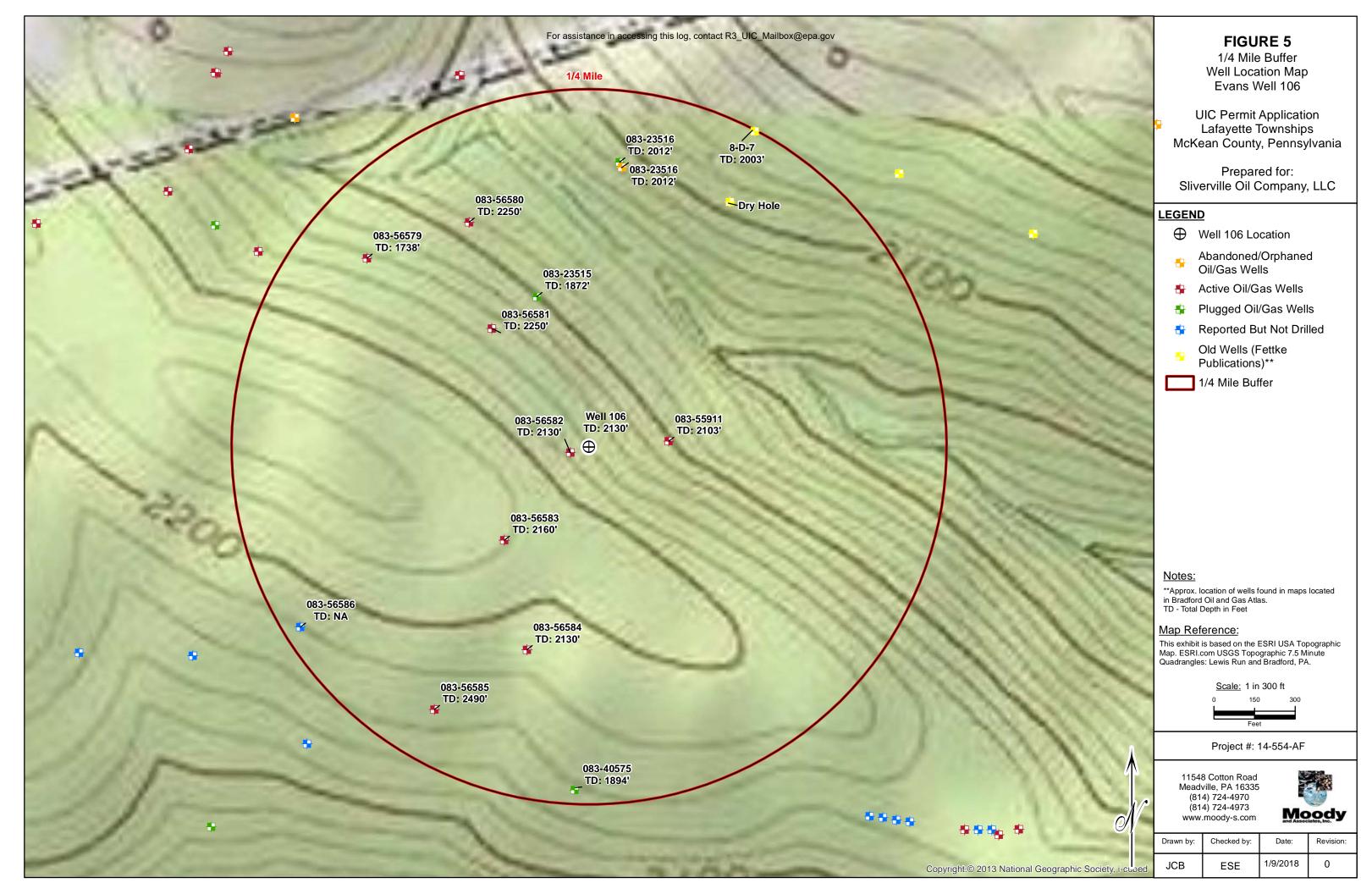
Based on the National Wetland Inventory data collected from PASDA, there are no wetlands mapped within one mile of the proposed injection well. Figure 6 shows the location of surface water in the area.

### **Injection Formation and Proposed Well:**

- Initial Pressure at Top of Injection Formation:
- Injection Rate:
- Specific Gravity of Injection Fluid: 1.12
- Permeability:
- Reservoir Thickness: 30ft (Ground Elevations from 198ft to 168ft)
- Porosity:
- Surface Elevation: 2178ft
- Depth to Injection Zone: Ground Elevation of 198ft
- Depth to Lowermost Underground Source of Drinking Water: Ground Elevation of 1971ft







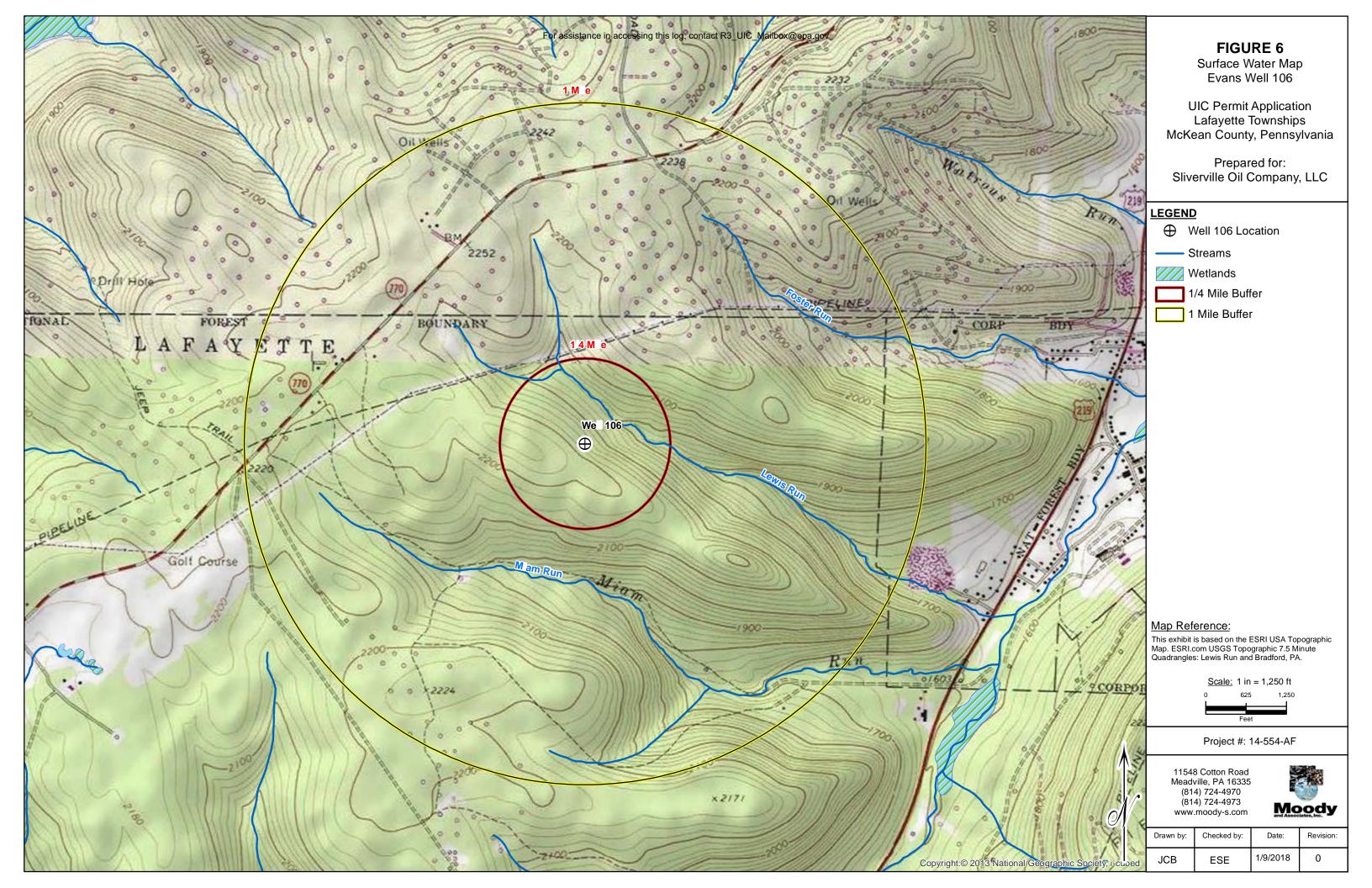
# Oil and Gas Wells

Evans Well 106 Silverville Oil Company, LLC Lafayette Township, McKean County, PA

Table 1

Permit						
Number /			Total Depth	Well		
API	Operator	Farm Name	Formation	Type	Municipality	Status
		Flood 3 Warrant				
083-23515	Minard Run Oil Co	3903 A-2	Bradford 3rd	Injection	Lafayette	Plugged OG Well
		Flood 3 Warrant				
083-23516	Minard Run Oil Co	3903 3A 3	41530	Injection	Lafayette	Plugged OG Well
	HL Murry Drilling Co & US	USFS Music				
083-40575	Gold Co	Mountain VE-9	41530	Oil	Lafayette	Plugged OG Well
				Comb.		
083-55911	Horizontal Exploration LLC	Swamp Angel 3 HF 2	Lewis Run	Oil & Gas	Lafayette	Active
083-56579	Pecora Enterprises	Evans 103	Lewis Run	Oil	Lafayette	Active
083-56580	Pecora Enterprises	Evans 104	Lewis Run	Oil	Lafayette	Active
083-56581	Pecora Enterprises	Evans 105	Lewis Run	Oil	Lafayette	Active
083-56582	Pecora Enterprises	Evans 106	Lewis Run	Oil	Lafayette	Active
083-56583	Pecora Enterprises	Evans 107	Lewis Run	Oil	Lafayette	Active
083-56584	Pecora Enterprises	Evans 108	Lewis Run	Oil	Lafayette	Active
083-56585	Pecora Enterprises	Evans 109	Lewis Run	Oil	Lafayette	Active
						Proposed But
083-56586	Pecora Enterprises	Evans 110	NA	Oil	Lafayette	Never Materialized
*8-D-7	Minard Run Oil Co	Brown Lot 4	Lewis Run	Unknown	Lafayette	Unknown
*Dry Hole	Unknown	Unknown	Unknown	Unknown	Lafayette	NA

<sup>\*</sup> Information came from Table 1 in Fettke, C.R. 1951. Oil and Gas Field Atlas of the Bradford Quadrangle, Pennsylvania. Commonwealth of Pennsylvania Department of Internal Affairs, Special Bulletin 5



# **ATTACHMENT C**

# Corrective Action Plan and Well Data

### **Corrective Action and Well Data**

A search of the referenced sites listed in Attachment A and information provided by Sliverville was conducted to determine the locations of oil and gas wells within the area of review. The results of those searches are shown on the attached Oil and Gas Well Maps (Figure 4 & 5) in Attachment B. A tabulation of the requested data has been included as Table 2. Available completion reports and well records have been attached in Appendix A.

There were some wells found while conducting the search of the above referenced that had limited information available. For this reason, Sliverville will use monitoring wells to monitor fluid level changes to insure injected water does not migrate into USDWs.

Sliverville will utilize two existing active oil wells (083-56581 and 083-56583) for monitoring fluid levels in the injection zone (Lewis Run sand). Figure 7 shows the proposed monitoring locations. Figure 8 is a generalized geologic cross section through the area of review and shows the approximate location of the average bottom of casings, approximate location of the top of the Lewis Run formation and the trigger levels. The Completion report, well reports and records for the proposed UIC well have been included in Appendix A.

All wells will be monitored quarterly. Injection will cease three days prior to monitoring in Well 106 and any well that is also used for production will stop production for at least three days prior to fluid level assessment. The following are action trigger levels for the fluid within the wells:

- If the fluid level has risen to 500 feet below the average bottom of surface casing (500 feet) within any monitoring well (1000 feet from surface), monitoring will be changed from quarterly to monthly.
- If the fluid level has risen to within 50 feet below the average bottom of surface casing within any monitoring well (550 feet from surface), the UIC well will be shut down and EPA will be immediately notified. A modified operation plan will be submitted to EPA prior to reinitiating injection operations. The following six months will consist of monthly monitoring of the injection system and monitoring wells. Following the six months of monitoring, if the fluid levels have consistently stayed below 500 feet below the average bottom of surface casing (1000 feet from surface), quarterly monitoring will be resumed.

# Oil and Gas Data

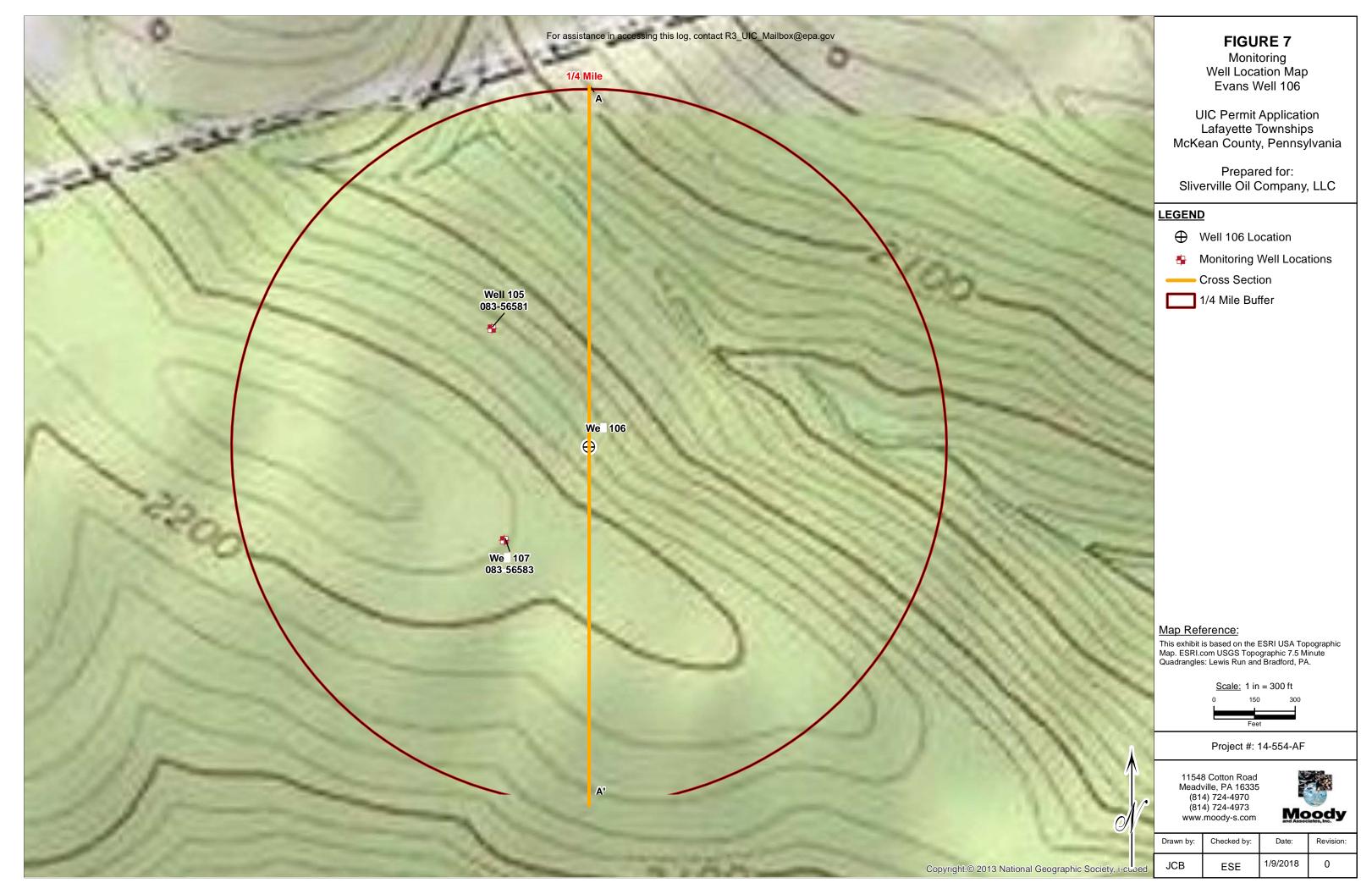
Evans Well 106 Silverville Oil Company, LLC Lafayette Township, McKean County, PA

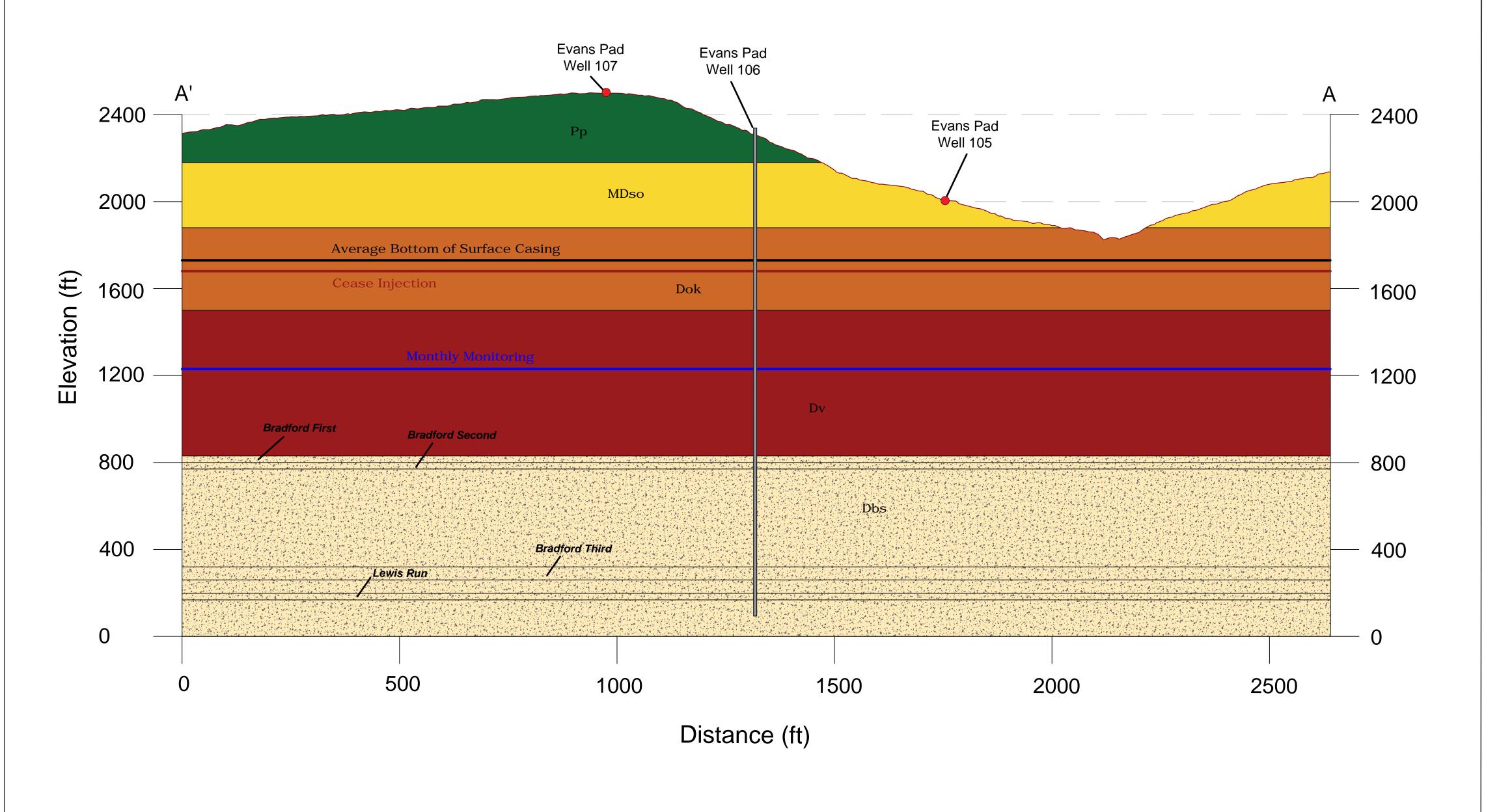
Table 2

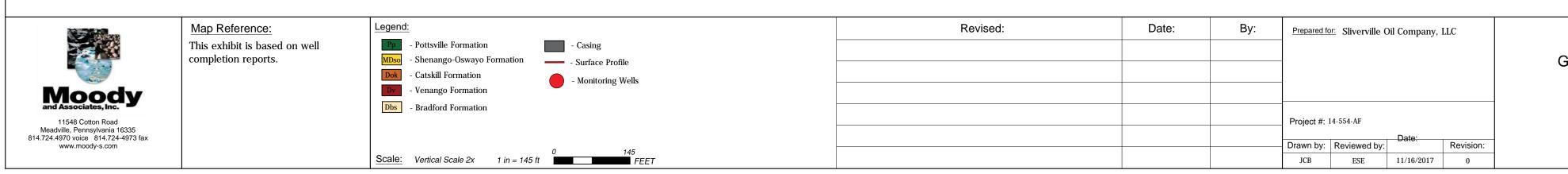
Permit								Total	Total
Number		Farm			Well		Date	Measured	Depth
/ API	Operator	Name	Municipality	County	Type	Status	Drilled	Depth (ft)	Formation
		Flood 3							
	Minard Run	Warrant				Plugged OG			
083-23515	Oil Co	3903 A-2	Lafayette	Mckean	Injection	Well	6/16/1966	1872	Bradford 3rd
		Flood 3							
	Minard Run	Warrant				Plugged OG			
083-23516	Oil Co	3903 3A 3	Lafayette	Mckean	Injection	Well	7/26/1966	2012	41530
	HL Murry	USFS Music							
	Drilling Co &	Mountain				Plugged OG			
083-40575	US Gold Co	VE-9	Lafayette	Mckean	Oil	Well	1/1/1901	1894	41530
	Horizontal	Swamp							
	Exploration	Angel 3 HF			Comb.				
083-55911	LLC	2	Lafayette	Mckean	Oil&Gas	Active	3/14/2013	2103	Lewis Run
	Pecora								
083-56579	Enterprises	Evans 103	Lafayette	Mckean	Oil	Active	9/5/2014	1738	Lewis Run
	Pecora								
083-56580	Enterprises	Evans 104	Lafayette	Mckean	Oil	Active	9/10/2014	2250	Lewis Run
	Pecora								
083-56581	Enterprises	Evans 105	Lafayette	Mckean	Oil	Active	9/12/2014	2250	Lewis Run
	Pecora								
083-56582	Enterprises	Evans 106	Lafayette	Mckean	Oil	Active	9/19/2014	2130	Lewis Run

Permit								Total	Total
Number		Farm			Well		Date	Measured	Depth
/ API	Operator	Name	Municipality	County	Type	Status	Drilled	Depth (ft)	Formation
	Pecora								
083-56583	Enterprises	Evans 107	Lafayette	Mckean	Oil	Active	9/24/2014	2160	Lewis Run
	Pecora								
083-56584	Enterprises	Evans 108	Lafayette	Mckean	Oil	Active	9/26/2014	2130	Lewis Run
	Pecora								
083-56585	Enterprises	Evans 109	Lafayette	Mckean	Oil	Active	10/2/2014	2490	Lewis Run
						Proposed But			
	Pecora					Never			
083-56586	Enterprises	Evans 110	Lafayette	Mckean	Oil	Materialized	<null></null>	NA	NA
	Minard Run	Brown Lot							
*8-D-7	Oil Co	4	Lafayette	Mckean	Unknown	Unknown	11/11/2016	2003	Lewis Run
*Dry Hole	Unknown	Unknown	Lafayette	Mckean	Unknown	NA	Unknown	Unknown	Unknown

<sup>\*</sup> Information came from Table 1 in Fettke, C.R. 1951. Oil and Gas Field Atlas of the Bradford Quadrangle, Pennsylvania. Commonwealth of Pennsylvania Department of Internal Affairs, Special Bulletin 5







# FIGURE 8 Generalized Cross-Section Across Area Of Review Evans Well 106 UIC Permit Application

Evans Well 106
UIC Permit Application
Lafayette Township
Mckean County, Pennsylvania

# **ATTACHMENT E**

# Name and Depth of USDWs

# Name and Depth of USDWs

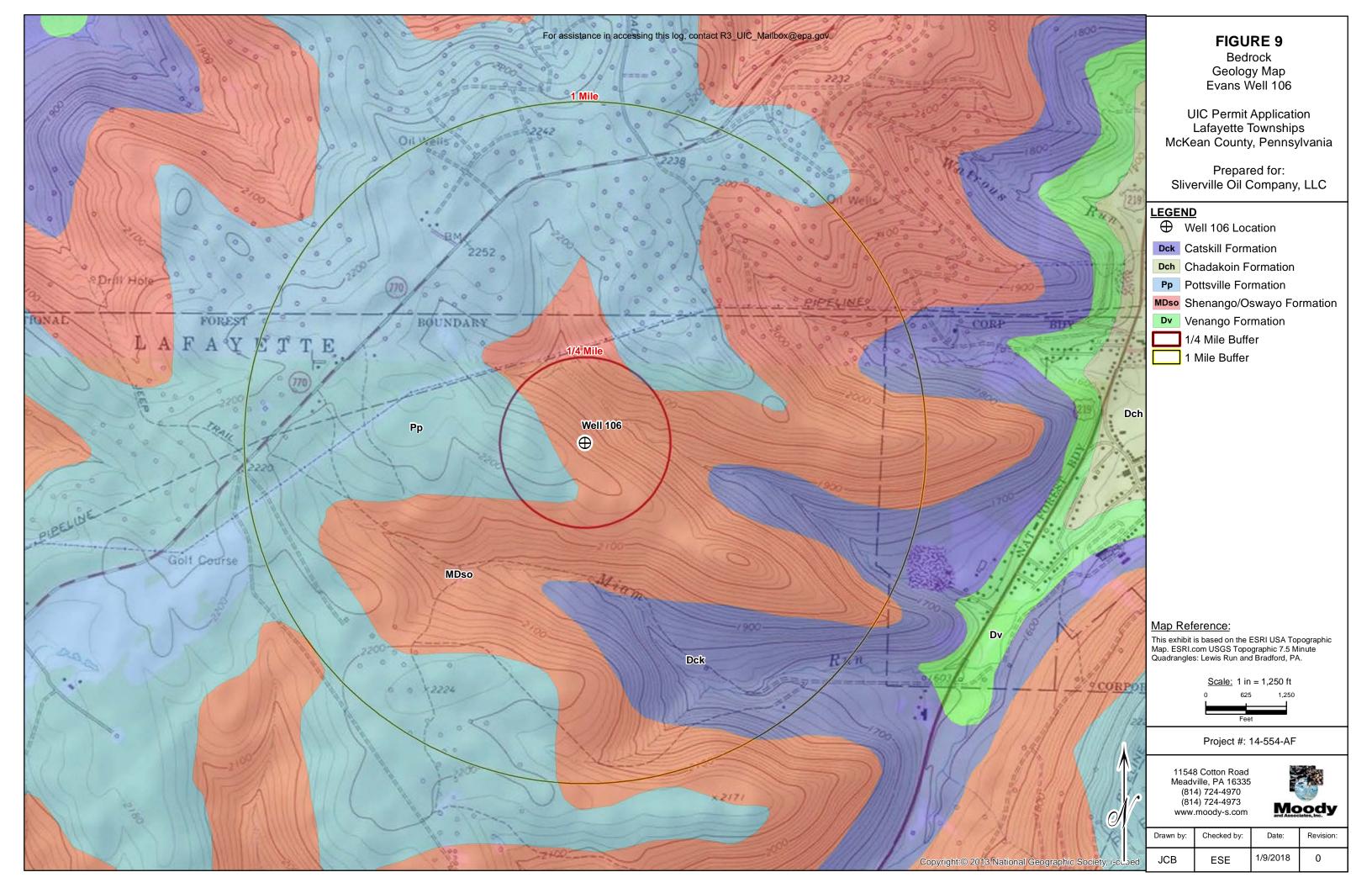
A search of the references noted in Attachment A and of information provided by Sliverville was completed for the area of review. The search did not show any groundwater wells within 0.25 miles of the proposed injection well.

There are 2 bedrock formations in the area of review, the Pocono Formation (also known as the Shenago though Oswayo formation, undivided) and the Pottsville Formation. The Pocono Formation is Devonian to Mississippian in age. The Pocono Formation includes greenish gray, olive buff sandstone and siltstone, and gray shale in varying proportions. This Pottsville Formation, which overlies the Pocono Formation, is Pennsylvanian in age. The Pottsville Formation consists of predominantly gray sandstones and conglomerates. The Pottsville and Pocono formations supply water for bedrock wells within this area. Figure 9 shows the bedrock geology in the area.

A review of the surrounding oil and gas well logs showed that the surface casing strings extend to between 230 and 520 feet below ground surface (bgs), and fresh water was encountered between 70 and 205 feet bgs (Table 3). Based on this information, the base of the USDW has been set at 300 feet bgs. Monitoring trigger levels have been established to the average bottom of the surface casing for wells in the area cased to below 230 feet (468 feet) to further ensure protection of USDWs. Additional information on monitoring has been included in Attachment C.

The closest public water supply is located in Lewis Run, Pennsylvania, approximately 1.25 miles east of the proposed injection well. Lewis Run is supplied by Bradford City Water Authority.

The closest groundwater well is located approximately 0.8 mile northwest of the proposed UIC well. The well is owned by Taylor/Tharp Sub Contractors and is used for domestic use (Figure 10).



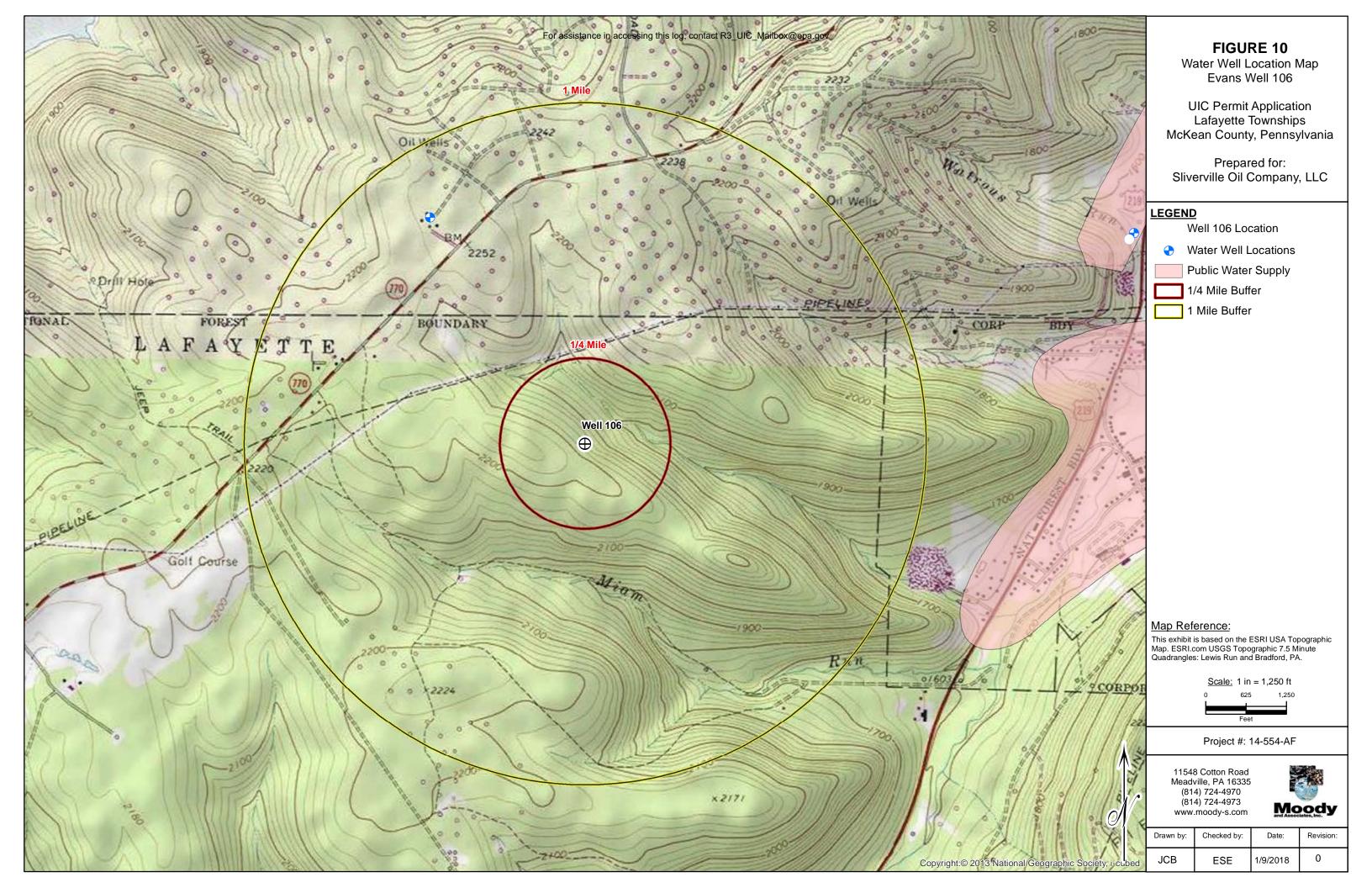
# **Surface Casing Data**

Evans Well 106 Sliverville Oil Company, LLC Lafayette Township, McKean County, PA

Table 3

Permit			Fresh GW	End of Surface	Total
Number /			encountered (ft	Casing (ft	Measured
API	Operator	Farm Name	below surface)	below surface)	Depth (ft)
083-23515	Minard Run Oil Co	Flood 3 Warrant 3903 A-2	NA	411	1872
083-23516	Minard Run Oil Co	Flood 3 Warrant 3903 3A 3	NA	401	2012
083-40575	HL Murry Drilling Co & US Gold Co	USFS Music Mountain VE-9	Unknown	Unknown	1894
083-55911	Horizontal Exploration LLC	Swamp Angel 3 HF 2	NA	520	2103
083-56579	Pecora Enterprises	Evans 103	70	488	1738
083-56580	Pecora Enterprises	Evans 104	100	518	2250
083-56581	Pecora Enterprises	Evans 105	170	514	2250
083-56582	Pecora Enterprises	Evans 106	85	456	2130
083-56583	Pecora Enterprises	Evans 107	80	453	2160
083-56584	Pecora Enterprises	Evans 108	80	464	2130
083-56585	Pecora Enterprises	Evans 109	205	455	2490
083-56586	Pecora Enterprises	Evans 110	NA	NA	NA
*8-D-7	Minard Run Oil Co	Brown Lot 4	NA	230	2003
*Dry Hole	Unknown	Unknown	NA	NA	Unknown
PA Well ID	Driller	Owner			
		Taylor/Tharp Sub			
540545	KELLNER WELL DRILLING	Contractors	181	40	200

<sup>\*</sup> Information came from Table 1 in Fettke, C.R. 1951. Oil and Gas Field Atlas of the Bradford Quadrangle, Pennsylvania. Commonwealth of Pennsylvania Department of Internal Affairs, Special Bulletin 5



# **ATTACHMENT G**

Geological Data on Injection and Confining Zones

# **Geological Data on Injection and Confining Zones**

Evans Lease Well 106 (Well 106) is drilled and completed into the Bradford group, specifically the Lewis Run sand. The Bradford group is Upper Devonian in age and consists of interbedded sandstone, siltstone and shale (Shultz). The Lewis Run sand acts as the reservoir rock for the Lewis Run pool and is located approximately 100 feet below the Bradford Third sand. The Lewis Run sand is profiled for Well 106 at approximately 1,980 feet below the surface with a confining layer approximately 60 feet thick above and a confining layer at least 20 feet thick below. The Lewis Run sand is described as a chocolate-brown sandstone, ranging from 6 to 12 feet in thickness (Fettke, 1941). A generalized stratigraphic column has been included as Figure 11.

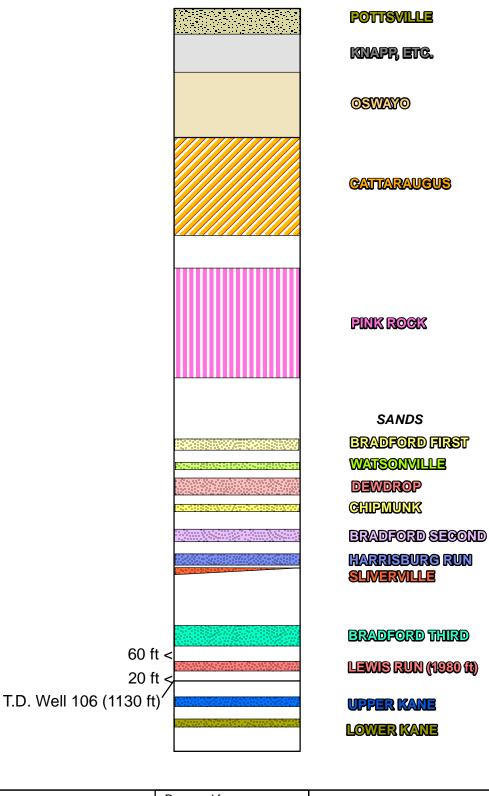
The oil and gas sands in this area were deposited in shallow marine areas, in a near shore/continental shelf type setting. The sand bodies were deposited as elongated lenses, representing off-shore sand bars or dunes (Fettke, 1941). The siltsone and shale between the sandstone lenses act as confining layers and limit the upward migration of fluids from the injection zone (Lewis Run sand). The Bradford anticline, located just to the southeast of the injection well acts as an additional structural barrier. The anticline will trap fluids at the top of the fold, below rocks with low permeability.

Structurally, this area is comprised of broad asymmetrical synclines and anticlines, with long axes trending northeast to southwest (Fettke, 1938). The Bradford anticline is located approximately 2,200 feet southeast of the proposed injection well.

A fracture trace analysis was completed by Moody for the area surrounding Well 106. Fracture traces are linear zones of concentrated, nearly vertical cracks formed in the bedrock that are naturally occurring and expressed on the ground surface. These geologic features are identified using stereoscopic aerial photography and other remote sensing techniques, including LiDAR-derived digital elevation models and infrared aerial photography. The analysis was completed to determine the prevalence, orientation, and extent of lineaments identified. The linear features identified during the analysis are included on Figure 12.

Based on data obtained from the fracture trace analysis there are a two lineaments within the area of review. The first is approximately 3,360 feet in length in an approximate north-south orientation. The southernmost 625 feet of the lineament extends in to the northern area of review, and is approximately 780 feet north-northwest of Well 106 at its closest approach. The second lineament is approximately 8,600 feet in length and is oriented northwest-southeast. The northeasternmost 2,187 feet of the lineament extends through the northern half of the area of review, and is approximately 900 feet northeast of Well 106 at its closest approach.

For assistance in accessing this log, contact R3\_UIC\_Mailbox@epa.gov



Reference: Adapted from columnar section in Oil and Gas Atlas for Bradford, PA (Fettke, 1951)

Prepared for:

Sliverville Oil Company, LLC

# FIGURE 11

GENERALIZED STATIGRAPHIC COLUMN Evans Well 106 **UIC Permit Application** Lafayette Township, McKean County, Pennsylvania

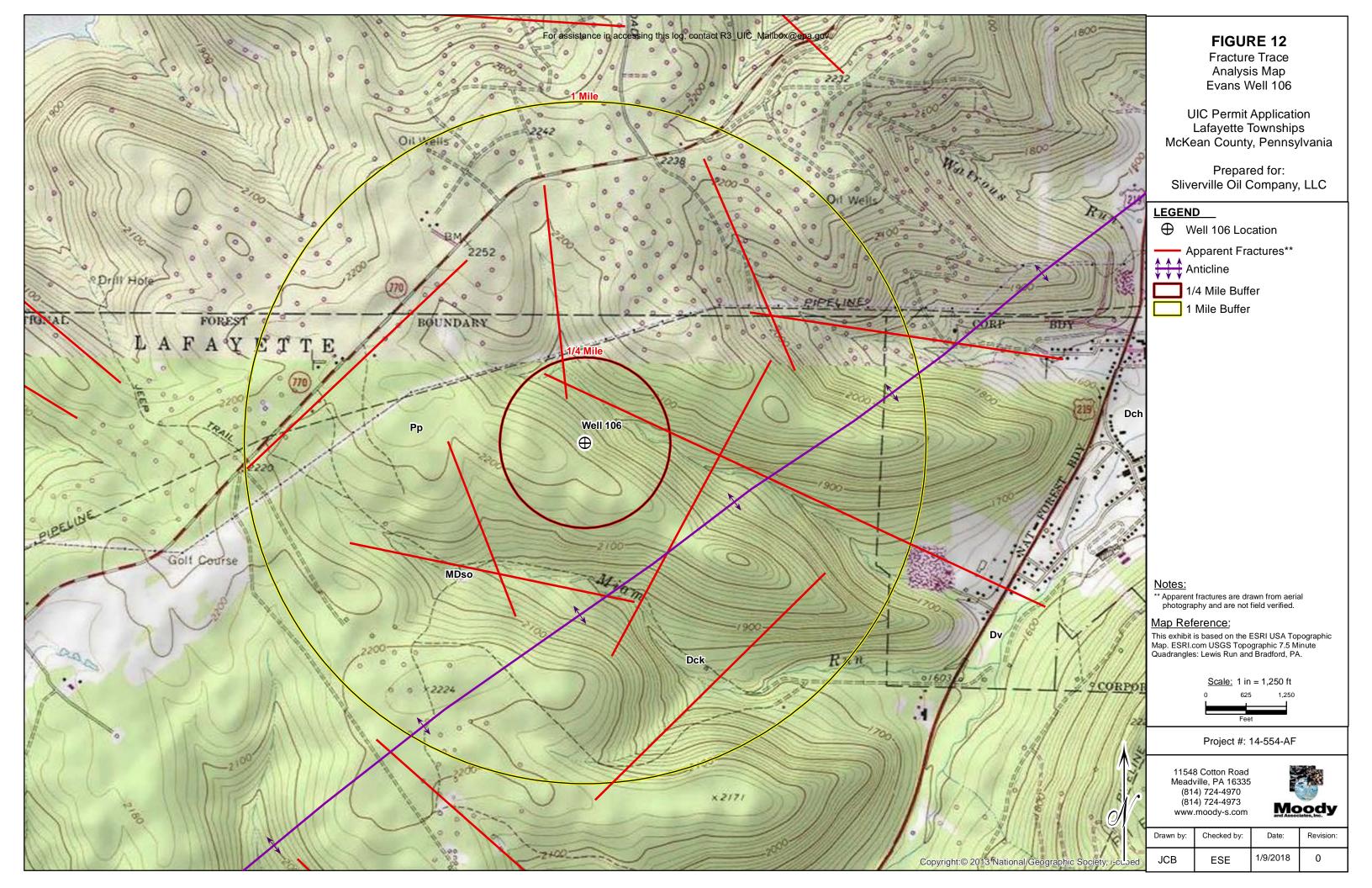
Scale:

**SCHEMATIC NOT TO SCALE** 

Project #: 14-554-AF							
Drawn by: Checked by: Date: Revision							
JCB	ESE	1/9/2018	0				

11548 Cotton Road Meadville, PA 16335 814.724.4970 voice 814.724.4973 fax www.moody-s.com





# **ATTACHMENT H**

# **Operating Data**

# **Operating Data**

Sliverville is proposing to inject a maximum of 1,000 bbls/day. The maximum injection pressure will be 1733 psi (see calculation below). A copy of Sliverville analytical results for their production fluid has been included for your review.

Sliverville will utilize a series of monitoring wells to monitoring fluid level changes. Additional information on the monitoring plan is located in Attachment C.

### Calculation of Maximum Injection Pressure

### MIP Calculation

 $MIP=\{[FG - 0.433 \text{ psi/ft x (SG} + 0.050)] \text{ x (depth)}\} -14.7 \text{psgi}$ 

Fracture Gradient (FG) (if unknown, 0.8psi)	1.23
Specific Gravity (SG)=	1.12
Depth to top of injection zone(ft)=	1980
Maximum Injection Pressure (psig)=	1,417.61

Breakdown Pressure:	2468	psi
Feet below surface:	2010	feet
Fracture gradient:	1.23	psi/ft

### For assistance in accessing this log, contact R3\_UIC\_Mailbox@epa.gov



1803 Philadelphia St. Indiana, PA 15701 P: (724) 463-TEST F: (724) 465-4209 PADEP: 32-00382 1276 Bentleyville Rd. Van Voorhis, PA 15366 P: (724) 258-TEST F: (724) 258-8376 PADEP: 63-04247

1200 River Avenue Williamsport, PA 17701 P: (570) 321-9002 F: (570) 321-1957 PADEP: 41-04880

27 January 2015 Work Order: 5010170

**Project: UIC Testing** 

Pecora Enterprises Attn: Jay Pecora 42 Parkway Lane Bradford, PA 16701

### Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
Sample	5010170-01	Water	01/02/2015 14:20	01/06/2015 14:15	

### **Report Narrative**

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

### **Definitions**

Zz Laboratory not accredited for analysis in the specified matrix.

R Received out of recommended hold time.D The reported value is from a dilution.

ND Less than reporting limit

RL Reporting Limit
CFU Colony Forming Units

### Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.

Environmental Service Laboratories, Inc., Indiana, PA/TNI Certification #32-00382

Approved By

DRAFT REPORT DATA SUBJECT TO CHANGE





### For assistance in accessing this log, contact R3\_UIC\_Mailbox@epa.gov



1803 Philadelphia St. Indiana, PA 15701 P: (724) 463-TEST F: (724) 465-4209 PADEP: 32-00382 1276 Bentleyville Rd. Van Voorhis, PA 15366 P: (724) 258-TEST F: (724) 258-8376 PADEP: 63-04247 1200 River Avenue Williamsport, PA 17701 P: (570) 321-9002 F: (570) 321-1957 PADEP: 41-04880

Pecora Enterprises

Reported: 01/27/2015 13:23
42 Parkway Lane

Bradford, PA 16701

Lab Sample ID#:5010170-01Sample Type:WaterSample Source:GrabSampler:ClientClient Sample ID:Sample

**Sample Date:** 01/02/2015 14:20 **Receipt Date:** 01/06/2015 14:15

Analyte	Sample Result	Units	Data Qualifier	RL	Method	Analyst/ Certification	Analysis Date/Time
<b>General Chemistry</b>							
Alkalinity, Total (CaCO3)	ND	mg/L		20.0	SM2320 B-97	ABO	01/06/15 16:24
Chloride	107000	mg/L	D	5.00	SM4500-Cl D-97	SMM	01/08/15 20:28
pH	4.89	S.U.	R	1.00	SM4500-H B-00	ABO	01/06/15 16:22
Specific Conductance	272200	umhos/cm		1.0	SM2510 B-97	JMF	01/06/15 22:23
Specific Gravity	1.12		Zz		-	ZTR	01/23/15 11:43
Total Dissolved Solids	223000	mg/L		25	SM2540 C-97	LMB	01/08/15 13:30
<b>Total Metals</b>							
Barium	ND	mg/L	D	0.500	EPA200.7 4.4	SFS	01/08/15 14:13
Calcium	18500	mg/L	D	50.0	EPA200.7 4.4	SFS	01/08/15 14:13
Hardness	57400	mg/L			SM2340 B-97	SFS	01/08/15 14:13
Iron	39.4	mg/L	D	1.00	EPA200.7 4.4	SFS	01/08/15 14:13
Magnesium	2750	mg/L	D	50.0	EPA200.7 4.4	SFS	01/08/15 14:13
Manganese	20.2	mg/L	D	0.500	EPA200.7 4.4	SFS	01/08/15 14:13
Sodium	49900	mg/L	D	125	EPA200.7 4.4	SFS	01/14/15 14:55

	NTAL SERVICE ORIES, INC. For assistance in	accessing the AND LEE REQUES TX & GHAIN OF CU	0
HEADQUARTERS 1803 Philadelphia St. Indiana, PA 15701	SOUTHERN DIVISION 1276 Bentleyville Road Van Voorhis, PA 15366	NORTHERN DIVISION 1200 River Avenue Williamsport, PA 17701	Page 3 of
(724) 463-TEST FAX: (724) 465-4209	(724) 258-TEST FAX: (724) 258-8376	(570) 321-9003 FAX: (570) 321-1957	<u> </u>
FOR INTERNAL LAN	BORATORY USE ONLY		_

		Sample Type							
Sample Identification	ESL#	Composite		Grab		Matrix	# of Containers	Container Type	Analysis Requested
50	10170	Date on/off	Time on/off	Date	Time			Preservative	Analysis Nequested
	01			1-2-15	2:20pm	w	\ 2	Poly Liter Unpreserved	pH, SpecificGravity, SC, TDS, Chloride, Alkalinity
				1-2-15	2:22pm	W	\ 1	Poly Pint HNO3	Iron, Sodium, Manganese, Barium, Hardness
				1-2-15	2:24pm	W	\ 1	25 ml Amber Glass H3PO4	LZ TOC
							Field		Hydrogen Sulfide:
							Field		Dissolved Oxygen:
						i e			
							5010170		
						¥1			
THE UNDERSIGNED PURCHASER HER  1 THESE SERVICE CHARGES WILL A						2.6		Project Notes:	
<ol> <li>THESE SERVICE CHARGES WILL ACCRUE AT THE RATE OF 1 1/2% PER MONTH (18% PER ANNUM OR THE MAXIMUM ALLOWED BY LAW.)</li> <li>THE UNDERSIGNED PURCHASER AGREES TO PAY, IN THE EVENT HIS ACCOUNT BECOMES DELINQUENT AND IS TURNED OVER TO ANY ATTORNEY FOR COLLECTION, REASONABLE ATTORNEY'S FEES PLUS ALL COURT AND ATTENDANT COLLECTION COSTS.</li> </ol>									UIC Testing
- Ite	2 1-7	2-15 2!	30 pm					Company/Name:	Pecora Enterprises
Sampled By: (Signature) Date/ Time					1.	en Liberton		Jay Pecora	
				U.G1	1-6.	15- 16	115		
Relinquished By: (Signature)  Date/ Time  Received By: (Signature)  Eth. h 1-6-			nature)	Date/	Time				
				Ebhh 1-6-1		15 1433		Contact Person:	
Relinquished By: (Signature) Date/ Time		1	Received By: (Signature)		Date/ Time		Address:	42 Parkway Lane	
							3	Bradford, PA 16701	
Relinquished By: (Signature)	Date/	Time	7	Received By: (Sign	nature)	Date/	Time	Phone:	814-368-8480
								Cell#	

From:

Sent:

Subject: 0

RE: Bottle set for UIC testing Theresa Ortz; Gabriel Taylor Thursday, December 18, 2014 09:18 Alicia Furey <AFurey@moody-s.com>

Log it under Pecora Enterprises.

From: Theresa Ortz [mailto:tortz@envlabs.com]

Sent: Thursday, December 18, 2014 9:14 AM

To: Alicia Furey; Gabriel Taylor

Subject: RE: Bottle set for UIC testing

with the so there is no delay on getting them logged in and its done correctly... When we log this sample in will it be under Moody Meadville or will it be under Jay Pecora? I just like to know ahead

Erom: Alicia Furey [mailto:AFurey@moody-s.com]

Sent: Wednesday, December 17, 2014 9:35 AM To: Theresa Ortz; Gabriel Taylor Subject: RE: Bottle set for UIC testing

©k. Thanks.

Subject: FW: Bottle set for UIC testing

Dsista aear Alicia,

Sulfide and the Dissolved Oxygen they should be done in the field. We can complete the list of analyticals for UIC testing, However in order for the results to be valid for the Hydrogen

I can get a set of bottles sent to the address below today.

Theresa Ortz Thank you,

From: Alicia Furey [mailto:AFurey@moody-s.com]

Sent: Wednesday, December 17, 2014 8:56 AM

To: Theresa Ortz

Subject: Bottle set for UIC testing

Trisha,

Page 5 of 6

If you can, could you please send a bottle set, per the attached list, to the following address: Good morning. Can you complete the attached list of analyticals for UIC testing?

Thanks, Bradford, PA 16701 42 Parkway Lane

Jay Pecora

Alicia Furey, G.I.T.

Environmental Scientist

Moody and Associates, Inc. 11548 Cotton Road

Meadville, PA 16335

E-mail: afurey@moody-s.com

Office: (814) 724-4970

Rgx: (814) 724-4973 Mobile: (814) 795-6037

We value client feedback! Please click HERE to take our online survey and you will be entered to win a prize!

#### SUBCONTRACT ORDER

For assistance in accessing this log contact R3 UIC Mailbox@epa.gov

#### 5010170

#### SENDING LABORATORY:

Environmental Service Laboratories, Inc.

1803 Philadelphia Street

Indiana, PA 15701

Phone: 724-463-8378

Fax: 724-465-4209

Project Manager: Jessica Stile

RECEIVING LABORATORY:

Summit Environmental Technologies, Inc.

3310 Win Street

Cuyahoga Falls, OHIO 44223

Phone:(330) 253-8211

Fax: (330) 253-4489

Analysis	Due		Expires	Laboratory ID	Comments
Sample ID: 5010170-01	Water	Sampl	ed:01/02/2015 14:20		
TOC	01/20/201	5 14:00	01/30/2015 14:20	W.	
Containers Supplied:					

Theresaly 1/23/151600

Received By

Date

Date

Release



Received By

1007cm - 1000

## **ATTACHMENT M**

### **Construction Details**

#### **Construction Details**

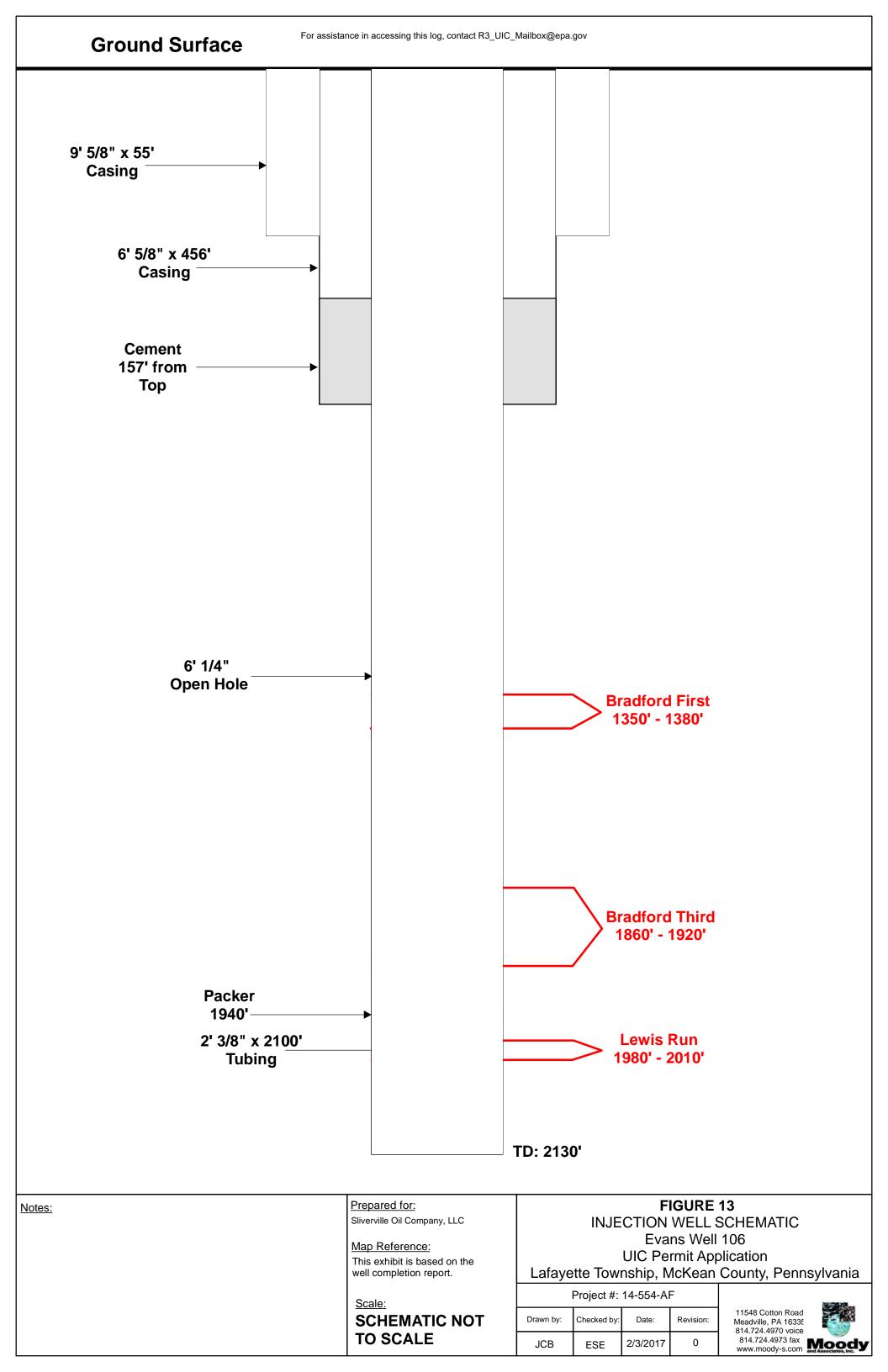
The following is information provided by Sliverville on the conversion of Evans Well 106 to a UIC well. Figure 13 shows the current well schematic for the UIC well.

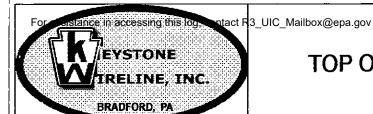
#### Specifications to note:

- Open Hole: 6 1/4 inch
- Casing -outside diameter: 6 5/8"
- Weight of 6 5/8 Inch Casing: 23 lb. /ft.
- Yield of Cement: "1 A" (yield measured in: ft.cubed / a sack)
- Area Calculation: 0.1782 ft. squared
- Packer Depth Setting: 1940 ft. Measured Depth (MD)
- Cement Depth: Top of Cement MD = 157 ft.
   Bottom of Cement = 456 ft.

**Cement Calculation:** 299 ft. (x) .1782 ft. squared = 53.3 cubic feet = 53.3 ft. cubed / 1 % by cement yield = 53 Sacks of cement in true open hole (with the 10% excess); therefore (53 Sacks x 10%) = 58 total sacks of cement. The well should be cemented with 58 sacks of Class A Type I cement with 2% CaCl2 per sack. It was reported that 55 sacks of cement were used which agrees with the calculation.

Packer: A packer is set at a measured depth (M.D) of 1940 ft.





## TOP OF CEMENT LOG

	<del></del>				
Company	PECORA ENTE	RPRISES			
Well	EVANS 106				
Field	EVANS				
EVANS 106 EVANS 108 EVANS ACKEAN PA TOCATION:	MCKEAN	State	PA		
Location:	AP	#: 37-083-56582	-00-00	Other Services	
EVANS 106  EVANS 106  MCKEAN MCKEAN TOGING.	LEWIS RUN	QUAD.			
EVANS 10 EVANS 10 EVANS MCKEAN PA	LAT,-41-52	-17.62			
W W W W W TARRES	LONG78-4	1-33.88			
1 1 1 1 1 1 1 1 1 1 1 1	YETTE			Elevation	
Permanent D Log Measure Drilling Meas	atum GROUND LI	EVEL Elevation	2178'	K.B.	
를 모 를 및 Log Measure	d From TOP OF 7" (	COLL. 0.7' ABVE P.	D.	D.F.	
Comparate Log Measure Log Measure Drilling Meas	ured From TOP OF 7" (	CASING COLLAR		G.L. 2178'	
Date	9-28-2014		ļ		
Run Number	ONE				
Depth Driller	2135.6'				
Depth Logger	2135.6'		TR	UCK DEPTHS	
Bottom Logged Interval	2130.6'			MAST 151	
Top Log Interval	0'				
Casing Driller	7" @ 455'				
Casing Logger	7" @ 455'				
Bit Size	6.25"			<u> </u>	
Type Fluid in Hole	WATER/OIL	@ 1870'			
Density / Viscosity	N/A				
pH / Fluid Loss	N/A				
Source of Sample	N/A N/A				
Rm @ Meas, Temp	N/A · N/A				
Rmf @ Meas. Temp	N/A				
Rmc @ Meas. Temp Source of Rmf / Rmc					
Source of Rmf / Rmc         N/A           Rm @ BHT         N/A					
Time Circulation Stopped					
Time Logger on Bottom 14:30					
Maximum Recorded Temperature 72 DEG F					
Equipment Number	155				
Location	BRADFORD PA				
Recorded By	MR C BURNS	- "-			

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and wershall and rescapitate the gase of guarantee the accuracy or correctness of any interpretation, and wershall and rescaled by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

2.68 G/CC MATRIX DENSITY 1.0 G/CC FLUID DENSITY LOGGED OFF OF KEYSTONE MAST UNIT 151 CREW: ADAMS/CARPENTER THANK YOU FOR USING KEYSTONE WIRELINE!!



# **CEMENT TOP LOG**

Database File:

pecora enterprise evans 106.db

Dataset Pathname:

106/run1/pass3.1

Presentation Format:

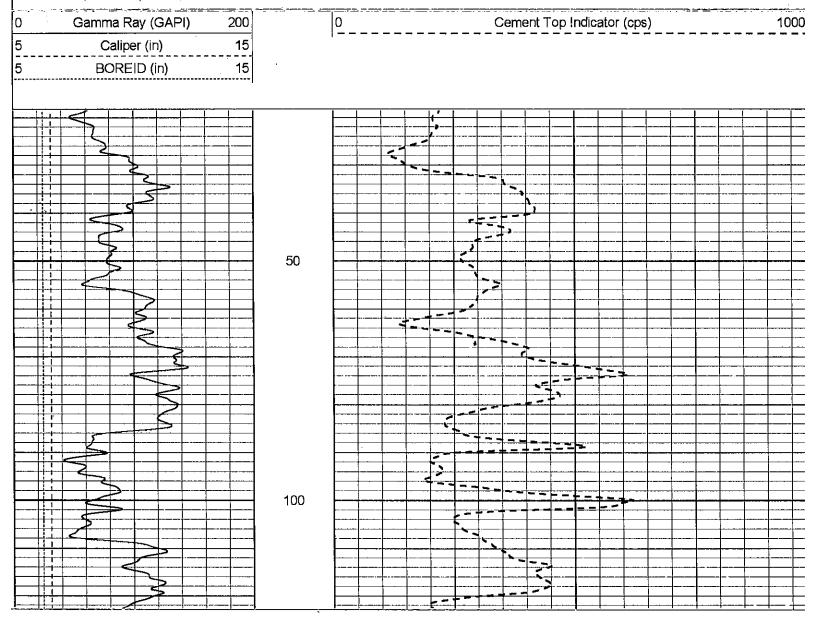
ajaxceme

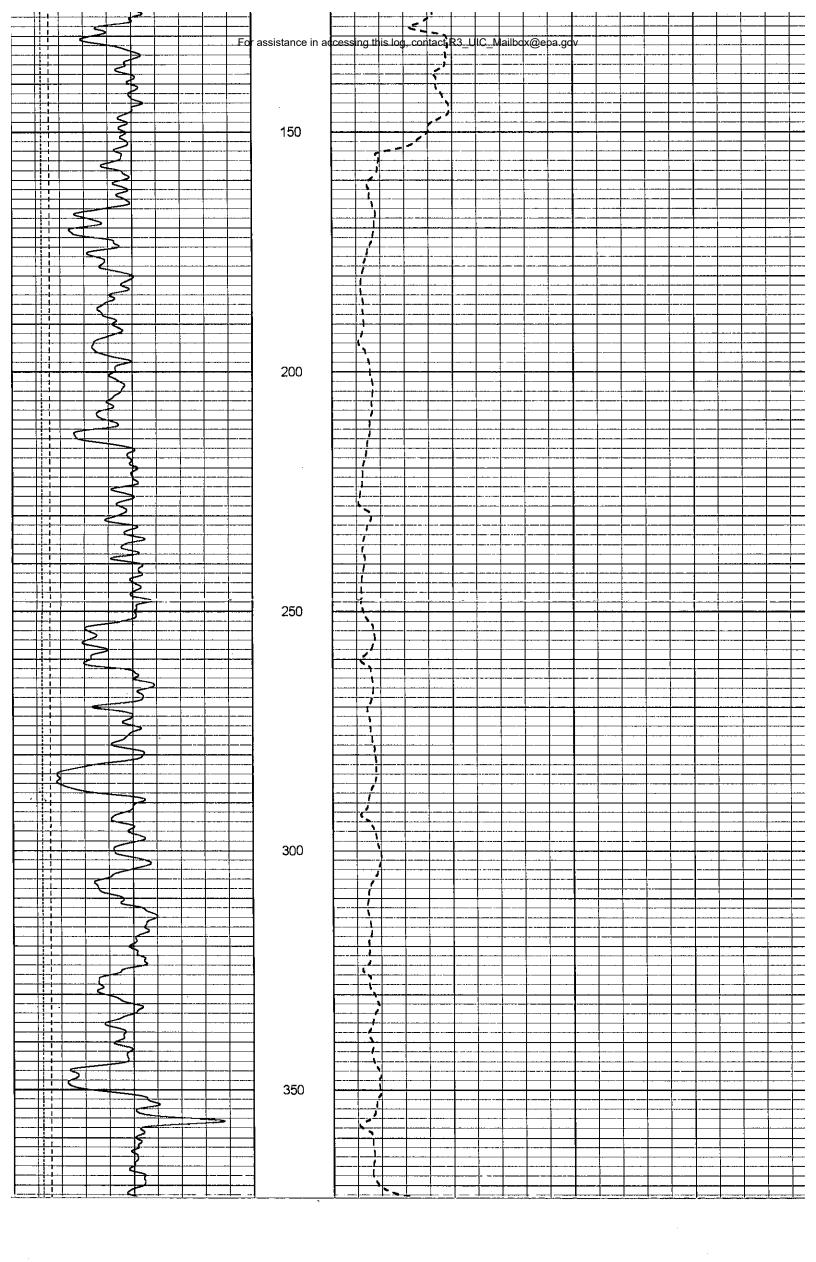
Dataset Creation:

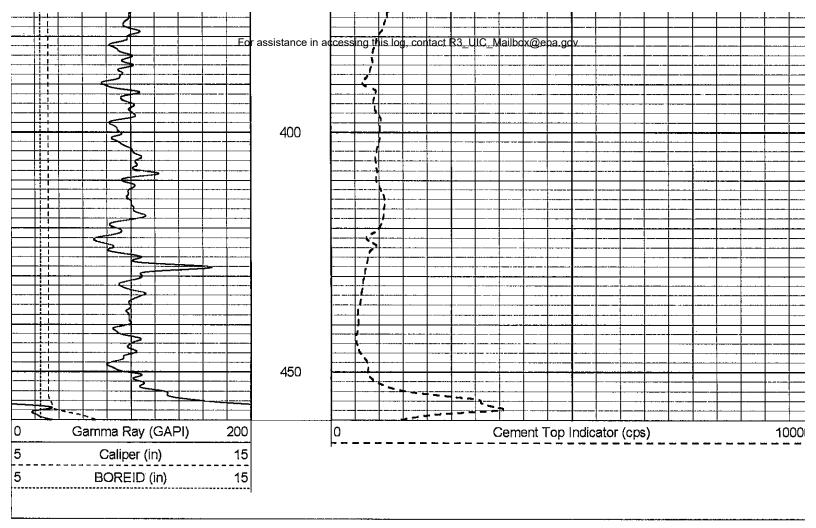
Thu Sep 25 15:49:05 2014 by Calc SOC 120430

Charted by:

Depth in Feet scaled 1:240









Company PECORA ENTERPRISES

-Well \_\_\_ EVANS 106\_ -- -- --

Field EVANS
County MCKEAN

State PA

## **ATTACHMENT P**

# **Monitoring Program**

### **Underground Injection Control Monitoring Plan**

The flow rate and cumulative injected volume of produced water will be monitored with a totalizing flow meter, sized to measure the anticipated range of flow rates. Installation of the measuring device will be in accordance with manufacture's specifications. Calibration and preventive maintenance of the measuring device will be conducted per the manufacture's recommendations. Visual inspections will be conducted prior to startup and periodically during operation to check for issues with the connections, water well pump discharges, flow meter, hoses, pump, piping, holding tanks, fittings, etc.

Flow data and support information will be recorded on a daily basis and/or per truckload. Metering data will be compared to truckload data. If any variances occur, they will be reconciled. Recorded information may include, but not be limited to the following: site, location, date, meter ID, times, flow measurements, transport volume, truck load information, etc. In addition to these items, the operator will note any issues identified and corrective actions taken during the daily inspection. Calibration and preventive maintenance activities will be recorded as performed.

A dual pen chart recorder will be used to continuously monitor the injection pressure and annular pressure. Pressure information will be monitored and recorded 24 hours per day, 7 days per week. If the annular pressure reaches a level which equals the down-hole pressure, or the down-hole pressure exceeds the fracture gradient, an automatic high pressure shut off valve will halt any further injection. Operation of the injection well will not recommence until the cause of the pressure increase has been located and rectified. Installation of the recording device and shut off valve will be in accordance with manufacture's specifications. Calibration and preventive maintenance of the recording device and shut off valve will be conducted per the manufacture's recommendations. Visual inspections will be conducted prior to startup and periodically during operation to check for issues.

Sliverville will utilize two existing active oil wells (083-56581 and 083-56583) for monitoring fluid levels in the injection zone (Lewis Run sand). Figure 7 shows the proposed monitoring locations. Figure 8 is a generalized geologic cross section through the area of review and shows the approximate location of the average bottom of casings, approximate location of the top of the Lewis Run formation and the trigger levels. The Completion report, well reports and records for the proposed UIC well and monitoring wells have been included in Appendix A.

All wells will be monitored quarterly. Any well that is also used for production will stop production for at least one week prior to fluid level assessment. The flowing are action trigger levels for the fluid within the wells:

- If the fluid level has risen to 500 feet below the average bottom of surface casing (500 feet) within any monitoring well (1000 feet from surface), monitoring will be changed from quarterly to monthly.
- If the fluid level has risen to within 50 feet below the average bottom of surface casing within any monitoring well (550 feet from surface), the UIC well will be shut down and EPA will be immediately notified. A modified operation plan will be submitted to EPA prior to reinitiating injection operations. The following six months will consist of monthly monitoring of the injection system and monitoring wells. Following the six months of monitoring, if the fluid levels have consistently stayed below 500 feet below the average bottom of surface casing (1000 feet from surface), quarterly monitoring will be resumed.

# **ATTACHMENT Q**

# Plugging and Abandonment Plan

## **ATTACHMENT R**

# **Necessary Resources**

#### **Necessary Resources**

Sliverville has obtained an Irrevocable Standby Letter of Credit No. S-715 up to the aggregate amount of 15,007.40 which shall be deposited into a Standby Trust Fund (the Fund). The Fund has been established to assure compliance with the plugging and abandonment requirements established by the EPA. The Irrevocable Standby Letter of Credit and Standby Trust Agreement are included below.



# HAMLIN BANK AND TRUST COMPANY

Established 1863

### IRREVOCABLE STANDBY LETTER OF CREDIT S-715

U.S. Environmental Protection Agency Underground Injection Control Financial Responsibility Requirement

To: Regional Administrator Environmental Protection Agency, Region 3 1650 Arch Street, Philadelphia, PA 19103-2029

#### Dear Sir or Madam:

We hereby establish our Irrevocable Standby **Letter of Credit No. S-715** in your favor, at the request and the account of **Sliverville Oil Company, LLC** with an address and place of business at 42 Parkway Lane, Bradford, PA 16701, up to the aggregate amount of Fifteen Thousand Seven Dollars and 40/100 Dollars, (\$15,007.40), available upon presentation of:

- Your sight draft, bearing reference to this Letter of Credit No.S-715 and
- 2. Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the Safe Drinking Water Act."

This Letter of Credit is effective as of December 21, 2017, and shall expire on December 21, 2018, but such expiration date shall be automatically extended for a period of at least one year on December 21, 2018, and each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you and Sliverville Oil Company, LLC by certified mail that we have decided not to extend this Letter of Credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both you and SlivervilleOil Company. LLC as shown on the signed return receipts.

Whenever this Letter of Credit is drawn on under and in compliance with terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of SlivervilleOil Company, LLC in accordance with your instructions.

(Officer Signature)

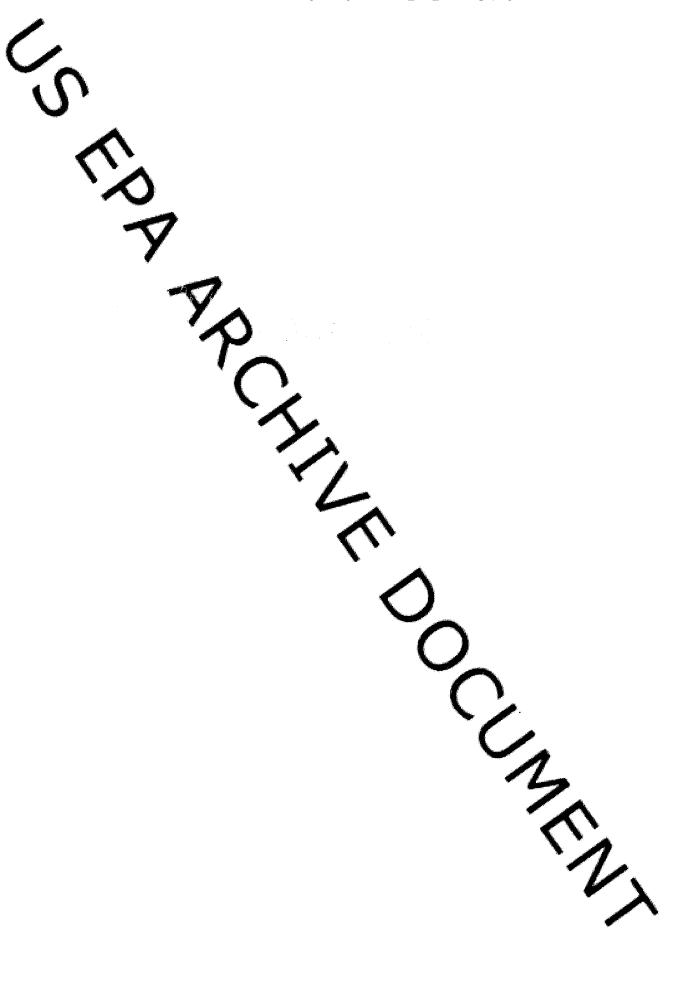
(Printed Officer Name)

(Date)

(Title)

### CERTIFICATE OF ACKNOWLEDGMENT FOR STANDBY TRUST FUND AGREEMENT

STATE OF Pennsylvania
COUNTY OF _ McKean_
On this day of December, 2017, before me personally came
to me known, who, being by me duly sworn, did depose
and say that he/she resides at 42 Pankway Lane, Bradford PA 16701, (Address)
that he/she is Chief Executive Manage of Sliverville Oil Company, LC (Corporation)
the corporation described in and which executed the above instrument; that he/she knows the seal of said corporation; that the seal affixed to such instrument in such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he/she signed his/her name thereto by like order.
J. J. Sher Merchelle H. Alffren
COMMONWEALT HUP FORNSYLVANIA  NOTARIAL SEAL  Mischelle G. Heffner, Notary Public  Smethport Boro, McKean County  My Commission Expires Aug. 27, 2021  MEMBER, HENSEL VANIAASSOCIATION OF NOTARIES



#### STANDBY TRUST AGREEMENT

U.S. Environmental Protection Agency Underground Injection Control Financial Responsibility Requirement

THIS TRUST AGREEMENT (the "Agreement") is entered into as of 12/21/17 by and between Sliverville Oil Company, LLC (Record), owner or operator, a Pennsylvania corporation / partnership / association / proprietorship (the "Grantor"), and tamin Bankt Trust Company (the "Trustee"), a Pennsylvania corporation/financial institution.

Whereas, the United States Environmental Protection Agency ("EPA"), an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an injection well shall provide assurance that funds will be available when needed for plugging and abandonment of the injection well or wells,

Whereas, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facility or facilities identified herein, and

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement: (a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor. (b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee. (c) Facility or activity means any "underground injection well" or any other facility or activity that is subject to regulation under the Underground Injection Control Program.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A.

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund (the "Fund") for the purpose of assuring compliance with the plugging and abandonment requirements established by EPA for the facilities identified on Schedule A. The Underground Injection Control regulations which govern the authorization to inject include a requirement for such financial assurance that the well or wells shall be plugged and abandoned at the time designated by EPA. The Grantor and the Trustee acknowledge that the Fund and all expenditures from the Fund shall be to fulfill the legal obligations of the Grantor under such regulations, and not any obligation of EPA. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred

to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible, nor shall it undertake any responsibility, for the amount or adequacy of any additional payments necessary to discharge any liabilities of the Grantor established by EPA, nor shall the Trustee have any duty to collect such additional amounts from the Grantor.

Section 4. Payment for Plugging and Abandonment. The Trustee shall make payments from the Fund only for the costs of plugging and abandonment ("P&A") of the injection wells covered by this Agreement and the associated P&A Plan, only after EPA has advised the Trustee that work has been completed under the P&A Plan that complies with 40 C.F.R. § 144.28 and/or § 144.52. The Trustee shall not refund to the Grantor any amounts from the Fund unless and until EPA has advised the Trustee that the P&A Plan has been successfully completed. The Trustee shall not release any funds to the Grantor that are necessary to cover liability for any injection wells covered by this Agreement that remain unplugged.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;
- (ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and
- (iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion: (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other

trusts participating therein; and (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U. S. C. 80a-1 *et seq.*, including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered: (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition; (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted; (c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund; (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and (e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the appropriate EPA Regional Administrator a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the EPA Regional Administrator shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement of any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the EPA Regional Administrator, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the EPA Regional Administrator to the Trustee shall be in writing, signed by the EPA Regional Administrators of the Regions in which the facilities are located, or their designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or EPA hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or EPA, except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor and the appropriate EPA Regional Administrator, by certified mail within 10 days following the expiration of the 30-day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the appropriate EPA Regional Administrator, or by the Trustee and the appropriate EPA Regional Administrator if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the EPA Regional Administrator, or by the Trustee and the EPA Regional Administrator if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the EPA Regional Administrator issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of fennsylvania.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

IN WITNESS WHEREOF the parties below have caused this Agreement to be executed by their respective representatives duly authorized and their seals to be hereunto affixed and attested as of the date first above written.

GRANTOR	TRUSTEE Hamlin Bank + Trust Company
Sliverville Oil Company, LLC  By: JAY J. PECOVA  [Print name] Its: Chief Executive Manager  [Title]  Attest:  Christia G. Budick	By: Stay Wallace  [Print name]  Its: Trust Officer  [Title]  Attest: Valence Radio
Its: Option [Title] [SEAL]	Its: Assistant Trust Officer [Title] [SEAL]
Before me came the individual whose identity I confirmed as, and whose true signature is set forth above; wherefor have I set my hand and seal this, day of, 2017.	Before me came the individual whose identity I confirmed as Stacy wave, and whose true signature is set forth above; wherefor have I set my hand and seal this 2 (st day of , 2017.
Notation of Pennsylvania Notarial Seal Mischelle G. Heffner, Notary Public Smethport Boro, McKean County My Commission Expires Aug. 27. 2021  MEMBER, PENNSYLVANIAASSOCIATION OF NOTARIES  This bank/institution has the authority to act	Notary Public NOTARIAL SEAL  Notary Public NOTARIAL SEAL  Mischelle G. Heffner, Notary Public Smethport Boro, McKean County My Commission Expires Aug. 27. 2021  MEMBER, PENNSYLVANIAASSOCIATION OF NOTARIES  as trustee and its trust activities are examined

and regulated by a State or Federal agency.

### SCHEDULE A

#### **Identification of Facilities and Cost Estimates**

	Inlastonin
Schedule A is referenced in the Standby Trust A	greement dated   2 2 2 2017 by and
between Slivenille Oil Comp (Name of owner or operation)	
Hamlin Bankt Trust (o (Name of trustee)	, the "Trustee."
EPA identification number	( <u></u> )
Name of facility	Evans Well 106 API: 37-083-56582-00-00
Address of facility	41° 52' 17.6" -78° 41' 33.9"
Current plugging and abandonment cost estimate  Date of estimate	
EPA identification number	NA
Name of facility	_NA
Address of facility	_NA
	NA
Current plugging and abandonment cost estimate	NA
Date of estimate	NA

### **APPENDIX A**

### **Completion Reports and Well Reports**

### **Completion Reports**

083-23515

083-23516

083-55911

083-56579

083-56580

083-56581

083-56582

083-56583

083-56584

083-56585

### **Location Plats**

083-23515

083-55911

083-56579

083-56580

083-56581

083-56582

083-56583

083-56584

083-56585

083-56586

### **Plugging Certificates**

083-23515

083-23516

083-40575

# **Completion Reports**

DM --OG---11-57

# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF MINES

Oil and Gas Division HARRISBURG

083-23515	

MAP REFERENCE: Topo, Project  WELL RECORD  SIZE OF  COMPANY: Minard Run Oll Company  ADDRESS: P. O. Box 18, Bradford Pa.  ** see FARM Flood 3 ACRES 150 below  Well (FARM) NO. #3A=2 CO. SERIAL NO.  ELEVATION: 1778' LEASE:  TOMNSHIP: Lafayette COUNTY: McKeam DRILLING COMPLETED: 7/22/66  PRODUCTION:  ROCK PRESSURE: psig. hrs.  Well TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)  Hydrafrac  CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)  124' pipe  104'6' = 20 bags	QUADRANGLE: Bradford   71/2'   15'	PERMI	T NO	111(1) · 1.4	MCK2DID
WELL RECORD  COMPANY: Minard Run OII Gompany  CASING AND DIREST: P. O. Box 18, Bradford Pa.  ADDRESS: P. O. Box 18, Bradford Pa.  ** see FARM Flood 3 ACRES L50 below  WELL (FARM) NO. #3A-2 CO. SERIAL NO. ELEVATION: 1778¹ LEASE:  TOWNSHIP: Lafayette COUNTY: McKeam DRILLING COMMENCED: 6/16/66 COMPLETED: 7/22/66  PRODUCTION:  ROCK PRESSURE: psig. hrs.  WELL TREATMENT: (Shoeting, Acidizing, Fracturing, Etc.)  Hydrafrac  CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)  1½¹ pipe 104¹6¹ = 20 bags	•	KIND	OF WELL:	( Wat	er sve/
COMPANY: Minard Run Oll Company  ADDRESS: P. O. Box 18, Bradford Pa.  ** see FARM Flood 3 ACRES 150 below  Well (FARM) NO. #3A-2 CO. SERIAL NO.  ELEVATION: 1778 LEASE:  TOWNSHIP: Lafayette COUNTY: McKean DRILLING COMMENCED: 6/16/66 COMPLETED: 7/22/66  PRODUCTION:  ROCK PRESSURE: psig. hrs.  Well TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)  Hydrafrac  CASING AND DRILLING DEPTH  Well EFT IN Well IST IN Well TAIL  TYPE, SIZE ANT DEPTH  Well EFT IN Well IST IN Well Size Ning  TOBRITING  ATT 64,0  LEFT IN Well EFT IN EAGLE EYPO  ATT	WELL RI			(0	OIL, GAS, OTHER)
WELL (FARM) NO. #3A=2 CO. SERIAL NO.  ELEVATION: 1778 LEASE:  TOWNSHIP: Lafayette COUNTY: McKean DRILLING COMMENCED: 6/16/66 COMPLETED: 7/22/66  PRODUCTION:  ROCK PRESSURE: psig. hrs.  WELL TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)  Hydrafrac  CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)  1½' pipe  104 6'' = 20 bags	COMPANY: Minard Run Oll Company	CASING AND			TYPE, SIZE AND
WELL (FARM) NO. #3A=2 CO. SERIAL NO.  ELEVATION: 1778 LEASE:  TOWNSHIP: Lafayette COUNTY: McKean DRILLING COMMENCED: 6/16/66 COMPLETED: 7/22/66  PRODUCTION:  ROCK PRESSURE: psig. hrs.  WELL TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)  Hydrafrac  CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)  1½ pipe  104 61 = 20 bags	ADDRESS: P. O. Box 18, Bradford Pa.	8"		3313"	Bag type
ELEVATION: 1778 LEASE:  TOWNSHIP: Lafayette COUNTY: McKean DRILLING COMMENCED: 6/16/66 COMPLETED: 7/22/66  PRODUCTION:  ROCK PRESSURE: psig. hrs.  WELL TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)  Hydrafrac  CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)  1½ pipe  1.04 6" ~ 20 bags	X CAA			4111	6½"
TOWNSHIP: Infayette COUNTY: McKean DRILLING COMMENCED: 6/16/66 COMPLETED: 7/22/66  PRODUCTION:  ROCK PRESSURE: psig. hrs.  WELL TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)  Hydrafrac  CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)  1½' pipe  1.04*6'' = 20 bags	WELL (FARM) NO. #3A-2 CO. SERIAL NO.		 		1841'4"
DRILLING COMMENCED: 6/16/66  PRODUCTION:  ROCK PRESSURE:  psig.  hrs.  WELL TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)  Hydrafrac  CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)  1½' pipe  104 6'' = 20 bags	ELEVATION: 1778 LEASE:		····		
ROCK PRESSURE: psig hrs.  WELL TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)  Hydrafrac CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)  1½ pipe  104 6'' = 20 bags	BBULING DULING				
WELL TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)  Hydrafrac  CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)  1½' pipe  1.04 6" = 20 bags	PRODUCTION:			··	PERFORATIONS AT
Hydrafrac  CEMENTING DATA: (Size Pipe, Depth, No. Bags, Date)  1½' pipe  1.04'6'' = 20 bags	ROCK PRESSURE: psig. hrs.				
1½' pipe  1.04'6'' = 20 bags	WELL TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)	· · · · · · · · · · · · · · · · · · ·			
3.04°6° = 20 bags	Hydrafrac	CEMENTIN	G DATA: (Siz	ze Pipe, Deptl	1, No. Bags, Date)
		1½' p	ipe		
RESULTS AFTER TREATMENT: 7/14/66		3.041	6 <sup>11</sup> - 20 h	ags	
	RESULTS AFTER TREATMENT:	7/14	/66		
ROCK PRESSURE AFTER TREATMENT:	ROCK PRESSURE AFTER TREATMENT:	/			

**REMARKS:** 

\* Part of Wt. 3902 and Wt. 2265 of 2,337 acres.

FORMATION	ТОР	воттом	GAS AT	OIL AT	WATER AT (Fresh or Salt Water)	REMARKS
Earth wash Sand Slate & lime shells Slate & sand lime Slate & lime shells Shale Slate	0 5 90 145 215 266 408 416 543 630 640 890 945 1010 1180 1217	5 90 145 215 266 408 416 543 630 640 890 945 1010 1217 1255			REC.	17 1966 SURVEY

FORMATION	ТОР	воттом	GAS AT	OIL AT	WATER AT (Fresh or Salt Water)	REMARKS
Lime shells State & lime shells Sand Slate & lime Slate Sandy lime Slate Sand Slate Slate & lime Lime Slate & lime Slate & lime Slate & lime Slate & lime Slate Sand Slate Sand Slate Sand Slate Slate	1255 1285 1380 1390 1457 1482 1504 1518 1530 1600 1699 1752 1778 1793 1844 1858	1285 1380 1390 1457 1482 1504 1518 1530 1600 1699 1752 1778 1793 1844 1858 1872	m. T.D.		Salt Water)	

AND STANDARD STANDARD CLA growing of the

03/1000

Date August 11, 1966 19

.., Owner

APPROVED MINARD RUN OIL COMPANY

Vice President Tiffor
Production & Engineering

DM -- CG (--)1-57

# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF MINES

41-34-3

083-23516

Oil and Gas Division HARRISBURG

QUADRANGLE: Bradford   71/2'   15'	PERMI	T NOM	<u>(()                                   </u>	McK-3312
MAP REFERENCE: Topo, Project	KIND	OF WELL:	Wate:	(OIL, GAS, OTHER)
WELL RI	ECORD		*	(OIL, GAS, OTHER)
COMPANY: Minard Run Oil Company	SIZE OF CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS: TYPE, SIZE AND DEPTH
ADDRESS: P. O. Box 18 - Bradford, Pa. 1670 WARRANT * see	1 8"		41!	Bag_type_
FARM Flood #3 ~ MS ACRES 150 belwo	6711	<del></del>	401'	6111
WELL (FARM) NO. #3A=3 CO. SERIAL NO.		·		1982 <u>*</u>
ELEVATION: 1922 LEASE:				
TOWNSHIP: Lafayette COUNTY: McKean DRILLING COMMENCED: 7/26/66 COMPLETED: 8/27/66				PERFORATIONS AT
To our parents				}
ROCK PRESSURE: psig. hrs.  WELL TREATMENT: (Shooting, Acidizing, Fracturing, Etc.)				
Hydrafrac	CEMENTIN	G DATA: (Si	ze Pipe, Dep	th, No. Bags, Date)
	_	_		2''
RESULTS AFTER TREATMENT:		/66	-	

REMARKS:

ROCK PRESSURE AFTER TREATMENT:\_

\* Part of Wt. 3903 and Wt. 2265 of 2,337 acres

47. D. 8018

FORMATION	ТОР	воптом	GAS AT	OIL AT	WATER AT (Fresh or Salt Water)	REMARKS
Earth wash Slate Sand Crevice Slate Sand & crevice Slate Sand Slate Sand Slate Sandy lime Lime shells & slate Sand Slate & lime shells Shale Sand Lime Shale	0 5 15 20 25 100 130 155 165 205 215 320 333 395 406 420 435	5 15 20 25 100 130 155 165 205 215 320 333 395 406 420 435 520				RECEIVED  SEPRI 1966  GEOLOGIC SURVEY

FORMATION	ТОР	воттом	GAS AT	OIL AT	WATER AT (Fresh or Salt Water)	REMARKS
Slate Sand & lime Red rock Lime Shale Lime Shale & lime shells Snad Slate & lime shells Shale Slate & lime shells Slate Sandy Slate Sand Slate & lime shells Sand Slate & lime shells Sand Slate & lime shells Sand Slate	520 550 580 600 630 690 700 722 790 805 1260 1308 1345 1495 1519 1556 1641 1662 1933 1986 1997	550 580 690 630 690 702 732 790 805 1260 1338 1345 1495 1556 1662 1674 1933 1986 1997 2012				

	DateSeptember 8, 19_	66
APPROVED	MINARD RUN OIL COMPANY O	wner

Vice President (196)r Production & Engineering



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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS MANAGEMENT

DEP	USE ONLY
Site ID	Client Id
Client Id	Sub Facility Id

### **Well Record**

					WELL I	NFO	RM	ATION							
Well Opera	tor			DEI	P ID#		ν	Vell API#			Well Farm	Name	1	Vell#	
Horizonta	Explorat	tion, LLC		298	3987						Swamp A			3-HF2	
Address		_				LAT		1°52′ 18		MINT 02:	ProjectiNur	nber		Serial #	
	delphia S	t. Suite 010				LONG - 78°41′29″			"		OEI-1/				
City Indiana					Zip Municipa 15701 Lafaye						County Mckean				
Phone			Fax		Email							min. qua	drangle ma		Section
724-349-6			724-349-6								Lewis Run				2
Check the	e approp	riate Submis	ssion:	Original V	Vell Record			Amen	ded Well	Record	<u> </u>				
Well Type	<del></del> +	Gas			& Gas ☐ CE	***************************************			Dispos				ore Condit		
Well Orie			· · · · · · · · · · · · · · · · · · ·	from Vertica	l (Top & Side	views	& D	eviation S	Survey m	ust be at	tached)		L Water/L L 9/GL G		
Drill Meth			ary – Air '	☐ Rotary	Mud	<u>'</u> □	Cable	Tool	' □	]Other	,	200 L		51	
Drilling Star			Surface I	Elev. 2096 ft.			GW	Depth 0 ft	t.			1			
Drilling Cor	nplete 3-1	8-2013	True Ver	tical Depth 21	100 ft.		Dep	th of DFG	W0 ft.			1			
Date Well (	Completed	3-20-2013	Total Me	asured Depth	2103 ft.		DFG	W decide	d by: 0			-			
	-		-		C	EMI	ENT								
Cement re	eturned o	n surface cas	ing?	Yes ☑ No	If No, provide	e depti	n to to	p of ceme	ent and met	hod used	to determi	ue.			<del></del>
		n coal protect	Commercial	Yes □ No	If No, provide	***************************************	*************	······································						□NA	
		n intermediat	•	Yes   No	I			·					······································	.,	
- Official R				Slurry	If No, provide	e aebu	11 10 10	p or derine	int and mei					□ NA	
Casing	String		ss of Cement ead/Tail)	Temp F°	Amount of Cement (sks) (Lead/Tail/Total)				Wt PPG	Yld /ft3 /sk	Gas Migration Controls Used				
Conduct	or	Sand	ed in / N/A	•	1 1			_	What controls were used if (additives/ hardware. Specify type			ised if any cify type and			
Surface		Туре	e1/	35 °	/ /100			(C)18	VA	E D		<b>ab</b> 10),			
Coal Pro	tective		1	۰	/ /		M 6812								
Intermed	liate		1	۰				1		SEP 2	2 2013				
Production	on			٥				1	Envir	onment	al Prote	ection ffice			
			I	•		1		1		+	_				
If additiona attach form				•		To	otal	-				<u> </u>			
-			CASI	NG AND	TUBING								<del></del>		
Hole	Pipe	Wt.	Grade Casing	Thread / Weld –	Amount in			Har	dware - l		/ Packer	/ Centr	alizers		·
Size	Size	#/ft.	/ Tubing Type		Well (ft.)	co	R	T	уре	•	Size		Depth	Date	e Run
12.25	9 5/8	32	J-55	X -	53	US	N		N/A					3.1	4-13
8 7/8	7"	20	J-55	X -	520	US	<u> </u>	<b> </b>	e Shoe		1/7		520		5-13
				-		<del> </del>	<u> </u>	<b> </b> -	ralizers		4/7	4	80-120		15-13
						<del> </del>									
				-				<u> </u>				+			
If any ca	sina is v	velded prov	ide the name(s	s) of the we	ider(s).	.i	<u> </u>	<u>L</u>	<del></del>				<del></del>		
arry oa	g 16 V	. J Ju, piov	are manife				) O D	E AL T	ED A TIC	NNI					
					-BACK/WE			E AL II	EKAIK	אל			-1 0 =		
		Fill Mate	rial & Plugs		Fror	Dep n	oth T		Date		Size		sing & T		1.0#
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	,	LOG O	F FORMAT	IONS	Well AP	#: 37- <u>083-55911-00</u> -0	
(If you	will need more sp	pace than this p	age, please pho	tocopy the bla	ank form before filling it	in.)	
Formation Name	Top	Bottom	Gas at	Oil at	Water at		
or Lithology	(feet)	(feet)	(feet)	(feet)	(fresh / brine; ft.)	Source of Data	
Dirt/Rock	0	30			C	rillers Log	
Shale	30	210				J	

(II you v	nii neea more sp	ace man mis p	age, piease prio	тосору те ваг	ik torm before miling	IL ITI.)
Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Dirt/Rock	0	30	(1000)			Drillers Log
Shale	30	210				21010 2.09
Red Rock	210	240				
Red Rock/Shale	240	270				
Red Rock	270	330				
Red Rock/Shale	330	360				
Sand/Shale	360	390				
Shale	390	480				
Shale/Red Rock	480	540				
Shale	540	1440				***************************************
Sand/Shale	1440	1470				
Shale	1470	1710				
Sand/Shale	1710	1740				
Sand/3 <sup>rd</sup> Bradford	1740	1800				
Shale	1800	1890				THE STATE OF THE S
Sand/Lewis Run	1890	1920	4			· constitution
Shale	1920	2100				
TD	2100					No. of the contract of the con
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						1
			-		-	The state of the s
					***************************************	
			1		***************************************	
		l				

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company			
Name	Name	Name	Name			
Fairmont Supply	R&R Ventures LTD	R&R Ventures LTD	Penn Gold			
Address	Address	Address	Address			
140 Doran Rd	15640 Tionesta Rd.	15640 Tionesta Rd.	7 Main St.			
City – State – Zip	City – State – Zip	City – State – Zip	City – State – Zip			
WARREN PA 16365	PLEASANTVILLE PA 16341	PLEASANTVILLE PA 16341	BRADFORD PA 16701			
Phone	Phone	Phone	Phone			
814-723-3200	814-589-7051	814-589-7051	8143687119			

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller	Well Operator's Signature	DEP USE ONLY				
Name Howard Drilling	Rig 1	Reviewed by:				
Address <b>59 Howard Lane</b>	Hales 9-20-20	Cury 12.26-13				
City – State- Zip MOUNT JEWETT PA 16740	Printed Name / Title: Date: Mark A. Thompson / President 9-19-13	Comments:				
Phone 8147786196						

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# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

DEP USE ONLY									
Site ID	·	Primary Facility ID							
Client ID		Sub Facility	ld						

### **Completion Report**

Well Information													
Well Operator DEP ID# Well API Horizontal Exploration LLC 298987 37 - 083-				Well Farm Nar 11-00-00 Swamp Angel					Wel 3-H				
Horizontal Exploration, LLC Address		29898	57		<b>3-55911-</b> 0 41° 52		7"	NAD	Project Number			Serial#	
665 Philadelphia St. Suite 010				LONG -			29.08" 83		OEİ-1				
City Indiana	State PA		Code 701	Municip Lafayett					County McKean				
	Fax 724-349-691			Email					USGS 7.5 min. quadrangle m Lewis Run		e map Section 2		
Check the appropriate submis	sion:	X  Ori	iginal Co	mpletion	Report								
		, <u>, , , , , , , , , , , , , , , , , , </u>		MULAT		ASE I	LUID						
List Water Ma	nagement f	Plan Sou				Water Management Plan ID					me (Ga	ilons)	
1. N/A			.,										
2.			<b></b>			RECEIVED							
3.			(	warman better better				SFP	2 7 2013				
4.						ļ							
5.							Envi	ronmen	tal Protection Regional Office				
6.										١			
			DEP Bio		Tota	al Gallon	s of Wa	ter Used	Water	r   1	Recycled		
Other Base Fluid(s) Used											Quantity and /UOM		
1.							1						
2.							1						
	Total Quantity all Fluid(s) /												
	STIMULATION/PRODUCTION INFORMATION (WELL)												
Radioactive tracers used?  Specify Tracer			en-Flow (N N/A /	MCF/Day)	/ Date	24 Hr. Shut-in Pressure:/ Date Completion N/A / 3-27-							
Well Products: 🛛 Gas Btu		⊠ Oil Al	PI G	[	☐ Cond	ndensate API G			Other	□G	OR		
	·····		WEL	L SER	VICE	COM	ANIES						
Perforation Company		Fi	rac Cor	mpany					Plug Drill Out/Flo	w Back	Com	pany	
Name S.W. Neilly Corp.			ame loward D	rilling		Name							
Address 350 Minard Run	,		ddress 9 Howard	d Lane		Address							
City – State- Zip Bradford, PA 16701		Ci	ity – State It. Jewet	e – Zip	740	City - State - Zip							
Phone		PI	hone 14-778-6			Phone							
814-362-4443  I do hereby certify to the	best of m	v knou	vledae.	inform	nation	and b	elief tha	t the ii	nformation conta	ined o	n this	Comple-	
tion Report is true and c	orrect. I a	m awai	re that	there a	are sig	nifica	nt pena	lties fo	r submitting fals	e infor	matioi	n, includ-	
ing the possibility of fine		sonme	nt.			·		<del></del>	DED 1105 0111	. 1			
Well Operator's Signat	ure		·						DEP USE ONL	Υ			
000	<b>S</b>					Reviewed by: Date:							
V CO		~ ~ ~	- )~ (	Ze-Ze				(u	ryf	12-	26	-/3	
Printed Name / Title: Mark A.Thompson / President				Da	ate: (	Comments: RECEIVED							

Page 1 of \_\_7\_\_

OCT 03 2013

#### Well API# 37-083-55911-00-00

Stage No.         Perforation Date         Stage Perforated From TMD Ft.         Stage Perforated To TMD Ft.         # of Perforations/Sta           1         3/25/2013         1,187         1           2         3/25/2013         1,190         1           3         3/25/2013         1,252         1           4         3/25/2013         12,850         1           5         3/25/2013         1,763         1,771         4           6         3/25/2013         1,777         1,790         4           7         3/25/2013         1,895         1           8         3/25/2013         1,896         1,899         3	Stray Sand Notched Stray Sand Notched Stray Sand Notched Stray Sand Notched
1     3/25/2013     1,187     1       2     3/25/2013     1,190     1       3     3/25/2013     1,252     1       4     3/25/2013     12,850     1       5     3/25/2013     1,763     1,771     4       6     3/25/2013     1,777     1,790     4       7     3/25/2013     1,805     1	Stray Sand Notched Stray Sand Notched Stray Sand Notched Stray Sand Notched
2     3/25/2013     1,190     1       3     3/25/2013     1,252     1       4     3/25/2013     12,850     1       5     3/25/2013     1,763     1,771     4       6     3/25/2013     1,777     1,790     4       7     3/25/2013     1,805     1	Stray Sand Notched Stray Sand Notched Stray Sand Notched
3     3/25/2013     1,252     1       4     3/25/2013     12,850     1       5     3/25/2013     1,763     1,771     4       6     3/25/2013     1,777     1,790     4       7     3/25/2013     1,805     1	Stray Sand Notched Stray Sand Notched
4     3/25/2013     12,850     1       5     3/25/2013     1,763     1,771     4       6     3/25/2013     1,777     1,790     4       7     3/25/2013     1,805     1	Stray Sand Notched
5     3/25/2013     1,763     1,771     4       6     3/25/2013     1,777     1,790     4       7     3/25/2013     1,805     1	Stray Sand Notched
6     3/25/2013     1,777     1,790     4       7     3/25/2013     1,805     1	Third Bradford Notched
7 3/25/2013 1,805 1	Third Bradford Notched
	Third Bradford Notched
8 3/25/2013 1,896 1,899 3	Bradford Stringer Notched
	Lewis Run Notched
	A144 - A44 - A
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Please insert additional copies of this page if additional rows/s	

### Well API# 37-<u>083</u>-<u>95911</u>-<u>00</u>-<u>00</u>

### STIMULATION FLUID ADDITVES

Note: Information designated as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on the "Confidential Stimulation Fluid Additives" form.

Trade Name	Supplier	Purpose	Ingredients	CAS # of Chemical Component	Max. Compo- nent % Mass in Additive	Chemical Component % Mass used in Total Base Fluid (Pg 1)	Comment
DCF-495	WST, Inc.	Clay Stabilizer	Nonhazardous Components	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Nonionic Surfactants	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Anionic Surfactants	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Water	7732-18-5	0.00%		14 gallons used, 2 gallons per stage
DCF-220	WST, Inc.	Anioic Friction	Distallates (petroleum)	64742-47-8			14 gallons used, 2 gallons per stage
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# Well API# 37-083-95911-00-00

			STIMU	LATION INFORM	ATION / STAGE		
Com	plete a separa	ite record for each s	stimulation stage. (Pl	lease insert additional li	nes for additional stages	or additional pages as a	pplicable).
Stg #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)
1	3/27/201 3	20	1,700	2,300	950	Sand	20/40
2	3/27/201 3	20	1,600	1,250	1,000	Best Sand	20/40
3	3/27/201 3	15	1,800	1,750	1,100	Best Sand	20/40
4	3/27/201 3	20	1,800	1,800	1,100	Best Sand	20/40
5	3/27/201 3	20	2,000	1,100	1,550	Best Sand	20/40
6	3/27/201 3	20	2,800	2,000	1,500	Best Sand	20/40
7	3/27/201 3	18	1,900	2,100	1,450	Best Sand	20/40
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# **COMMONWEALTH OF PENNSYLVANIA** DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

DEP U	SE ONLY
Site ID	Client Id
Client td	Sub Facility id

# Well Record

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Well Operat	or		•	l DE	WELL IN	NFO		Vell AF			A1-0 P	•			
Pecora Er		2			321	37		-5657			Well Farm I	vame		ell#	
Address	iterprises	J			321	LAT 41°52' 24" Project			Evans Project Nun	/ans  103 oject Number   Serial #		***************************************			
42 Parkwa	ıy Lane					LONG - 78°41' 43" NAD 83									
City Bradford		W/MM-Birtartamatorramana ramas na arawa	The state of the s	State Z		Municipality									
Phone			Fax		Email				· · · · · · · · · · · · · · · · · · ·			nin. qua	idrangle map		Section
814-368 <b>-</b> 8			814-368-8	480	rattler7(	@veri	izon.r	et		,	Lewis Run				2
Check the	approp	oriate Submis	ssion:	⊠Original W	/ell Record			Ame	ended Well R	ecord					
Well Type									Wellb	ore Conditio	ning:				
Well Orie	ntation			from Vertica	I (Top & Side	views	& De	viatio	n Survey mu	st be at	tached)	]			
Drill Meth	od(s)	⊠Rot	ary – Air <u></u>	☐ Rotary	– Mud ′		Cable	Tool	' □(	Other	<u>'</u>				
Drilling Star			Surface 8	Elev. 2140 ft.			GW	Depth	70 ft.			1			į
Drilling Con	<del>`</del>			tical Depth 17			Dept	h of D	FGW70 ft.						
Date Well C	completed	9/25/2014		asured Depth				W dec	ided by: 0						<del></del>
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		on coal protec	• =	Yes ☐ No	If No. provide	depti	ı to to	of ce	ment and meth	od used	to determin	ne:		⊠ NA	
Cement re	turned o	n intermediat	e casing?	Yes 🗌 No	If No, provide	depti	n to to	of ce	ment and meth	od used				⊠ NA	
Casing	String		ass of Cement lead/Tail)	Slurry Temp F°	Amount of	Dunt of Cement (sks) (Lead/Tail/Total)			Wt PPG	Yld #t3 /sk		Migra atrols			
Conducte	or		/ sanded in	0 °	/ / 0			0	What contro (additives/ had depth applical	rdware 9	used if any pecify type and				
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Coal Pro	tective	-	1	۰		1 1									
Intermed	ediate / °				1		1						1 A//		
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			CASI	NG AND	TUBING										7. 5 5
Hole	Pipe	Wt.	Grade Casing	Thread / Weld -	Amount in			ł	Hardware - B		/ Packer I/String)	/ Centi	ralizers		
Size	Size	#/ft.	/ Tubing Type	New/ Used	Well (ft.)	co	R		Туре		Size		Depth	D.	ate Run
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12.25	9 5/8	32.3#	2720	T-N	38					(	9 5/8		38	9	/5/2014
8 3/4	6 5/8	23#	1620	T - N	423				de shoe and tralizers 50'	(	6 5/8		423	9	/6/2014
6.25	4.5	17#	1400	T-U <	488				Packer		4.5		488	9/	25/2014
6.25	2.375		1800	T - U	1703			Pt	ım <b>p</b> barrel	2	2.375		1703	9/	25/2014
п any ca	sing is v	weiaea, prov	ide the name(s							****					
* .	•	· .	Maria Languerra	PLUG	-BACK/WE			E AL	TERATIO	N_					2,32
Fill Material & Plugs					Ernik	Dep		$\Box$	Date		01-		asing & Tu	bing	
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#### LOG OF FORMATIONS Well API#: 37-083-56579-\_\_-(If you will need more space than this page, please photocopy the blank form before filling it in.) Formation Name Top Bottom Gas at Oil at Water at or Lithology Source of Data (feet) (feet) (feet) (feet) (fresh / brine; ft.) Dirt/Sand stone ---0 30 driller's loa shale 300 30 shale/red rock 300 390 F 70 red rock 390 450 shale 450 510 shale/red rock 510 540 630 shale 540 shale/Venango sand/shale 630 660 shale 660 930 shale/red rock 930 960 red rock 960 990 shale 990 1320 shale/ Bradford 2<sup>nd</sup> sand 1320 1380 shale 1380 1500 shale/broken sand 1500 1530 shale 1530 1740

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name	Name	Name	Name
Bradford Pipe	Howard Drilling, LLC		Gemini Wireline
Address	Address	Address	Address
230 Chestnut St.	P O BOX N		344 High St
	City - State - Zip MT JEWETT PA 16740	City - State - Zip	City – State – Zip BRADFORD Pa 16701
Phone	Phone	Phone	Phone
814 362-6501	814-778-5820		-8143620230

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been property cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am awere that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

<b>Driller</b>	Well Operator's S	ignature	DEP USE ONLY		
Name Rig Howard Drilling, LLC			Reviewed by:		
Address P O Box N			J. any 1-27-15		
City – State- Zip MT JEWETT PA 16740	Printed Name / Title: Jay J. Pecora / Partner	Date: 9/23/2014	Comments:		
Phone 814-778-5820					



# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

- 1	DEP US					
Site ID		Primary Facility ID				
Client to	)	Sub Facility	ld			

# **Completion Report**

14. 严重的事情,不是一个		1	Service Control	Well	Inform	ation		-			the second	
Well Operator Pecora Enterprises			P ID# 321	Well AF	기# 3-56579~				Well Farm Name Evans		Well # 103	
Address			JZ 1		41° 5		53"	NAD Project Number			Serial #	
42 Parkway Lane	,			LONG	-78°4			83				
City Bradford	State PA		Zip Code 16701	Municipality Lafayette				County McKean				
Phone 814-368-8480	Fax 814-368-848	30		Email ratter7(	@verizon.	. no#			USGS 7.5 min. qua Lewis Run	adrangle map Section		
Check the appropriate submi	ssion:	X	Original Co	ompletio	n Report	<del></del> .	☐ Amend	ed Cor	npletion Report			
List Water Ma	anagement	Plan S	ource(s)						ent Plan ID		e (Gallons)	
1. N/A												
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5.										4 2034		
6.												
			į		iologist w/Date	Tota	al Gallons	of Wa	ter Used	Water	Recycled	
		Oth	er Base F	iuid(s) U	Jsed	Quantity and /UO					y and /UOM	
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2.						er eerlaar <del>veel</del> sedsbed		ent-strawtisterati vi irine	(a perpusy) inches les les les reconstruits de les les les les reconstruits de les les les les les les les les les le	1		
							Total	Quan	ntity all Fluid(s)	1		
The American Section	ST	MUL	ATION/F	RODU	CTION	INF	ORMATI	ON (\	NELL)		1 11-	
Radioactive tracers used? Specify Tracer			Open-Flow (		) / Date	e 24 Hr. Shut-in Pressure:/ Date Completion Date: WE Don't do this / 9/23/2014						
Well Products: Gas Btu	•	⊠ o	I API G	1	☐ Cond	ndensate API G			Other GOR		₹	
	Agricon T		WEL	LSER	VICE	COMI	PANIES					
Perforation Company			Frac Co						Plug Drill Out/Fl	ow Back (	Company	
Name			Name						Name			
S W Neilly Corp, AIR NOTCH Address	ING Comp	any	Howard I	Drilling, L	LC .				Address			
350 Minard Run PO BOx 414			P O BOX									
City – State- Zip Bradford, PA 16701			City – Stat Mt Jewet	e – Zip t. PA 16	740			'	City - State - Zip			
Phone 814-362-4443	***************************************		Phone 814-778-			Phone						
I do hereby certify to the	best of i	ny kn			nation	and b	elief that	the ii	nformation cont	ained on	this Comple-	
tion Report is true and o												
ing the possibility of fine	and imp	risonn	nent.									
Well Operator's Signa	ture			4,8			٠		DEP USE ONL	Υ		
1 1	)				Į F	Review	ed by:				Date:	
Jula				***	4.4	1	Ču	WH	12-3	-14		
Printed Name / Title Jay J. Pecora / Partner				10/9/2		Comme	ents:		V			
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Page 1 of \_\_\_\_\_

OCT 3.5 2014

# Well API# 37-<u>083-56579</u>-\_-

			PERFORATIO	N RECORD	
Stage No.	Perforation Date	Stage Perforated From TMD Ft.	Stage Perforated To TMD Ft.	# of Perforations/Stage	Formation(s)
1	9/22/2014	640	640	1	Venango Sand NOTCHED
2	9/22/2014	644	644	1 .	Venango Sand NOTCHED
3	9/22/2014	1,239	1,239	1	Stray Sand NOTCHED
4	9/22/2014	1,263	1,263	1	Bradford First Sand NOTCHED
5	9/22/2014	1,266	1,266	1	Bradford First Sand NOTCHED
6	9/22/2014	1,270	1,270	1	Bradford First Sand NOTCHED
7	9/22/2014	1,523	1,523	1	Bradford Second Sand NOTCHED
8	9/22/2014	1,546	1,546	1	Bradford Second Sand NOTCHED
				1	
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					BEGEWED
				,	- FILT S & SAIL -
					051 3.5 2014

# Well API# 37-<u>083-56579</u>-\_\_-

# STIMULATION FLUID ADDITVES

Note: Information designated as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on the "Confidential Stimulation Fluid Additives" form.

Note: Information d	esignated as Tra	ade Secret or Confide	ntial proprietary information	lidst be clearly identified a	Max. Compo-	Chemical Component %	ential Stifficiation 1 told Additives 16th.
Trade Name	Supplier	Ригроѕе	Ingredients	CAS # of Chemical Component	nent % Mass in Additive	Mass used in Total Base Fluid (Pg 1)	Comment
DCF-495	WST, Inc.	Clay Stabilizer	Nonhazardous Components	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Nonionic Surfactants	Proprietary	0%		
DCF-495	WST, Inc.	Clay Stabilizer	Anionic Sufractants	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Water	7732-18-5		0.00	11 gallons used
DCF-223	WST, Inc.	Anionic Friction Reducer	Distillates (petroleum) Hydrotreated light	64742-47-8			11 Gallons used
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### Well API# 37-<u>083</u>-<u>56579</u>-\_\_-

,	STIMULATION INFORMATION / STAGE								
Com						s or additional pages as a			
Stg	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)		
1	9/23/201 4	20	1,150	1,730	609	20/40	80 sacks		
2	9/23/201 4	20	1,450	2,350	595	20/40	80 sacks		
3	9/23/201 4	20	1,600	2,350	798	20/40	80 sacks		
4	9/23/201 4	20	1,700	1,180	857	20/40	80 sacks		
5	9/23/201 4	20	1,750	1,220	1,051	20/40	80 sacks		
6	9/23/201 4	20	2,100	2,330	1,096	20/40	80 sacks		
7	9/23/201 4	20	1,900	1,600	876	20/40	80 sacks		
8	9/23/201 4	20	2,000	1,870	1,130	20/40	80 sacks		
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OCT 15 2014

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS MANAGEMENT

pennsylvania

DEPARTMENT OF ENVIRONMENTAL
PROTECTION 2324173

gov	Music	Mounta	to (
	DEP	USE ONLY	
	Site ID	Client I	d
	Client Id	Sub Facili	ty Id

# **Well Record**

				WELL		A ZIAIL	11011					•	
Well Operator			DEI	P ID#		W	ell API#		Well Farm I	Name	ĮV	Veli#	<u> </u>
Pecora Enterprise	es			321	37		56580	<u> </u>	Evans		1	04	
Address					LAT		°52′ 25″	IAD 83	Project Nur	nber	S	Serial #	
42 Parkway Lane City	***************************************					G - 78	°41′ 38″   '					***	***************************************
Bradford		The state of the s		Zip Munici 16701 Lafaye	ette				County McKean				
Phone		Fax	2400	Email						nin. qua	adrangle mar	)	Section
814-368-8480	mulata Carbani	814-368-			7@ver	izon.ne			Lewis Run		<del> </del>		2
Check the appro	<del>i</del>	<del></del>	⊠Original V				Amended Well R			<del></del>			
Well Type	☐ Gas						tion 🔲 Disposal	~~ <del>~~~</del>		Wellb	ore Conditi	oning:	
Well Orientation		al 🗌 Deviated	from Vertica	l (Top & Side	e views	s & Dev	iation Survey mus	st be at	tached)				
Drill Method(s)	⊠Ro	tary – Air '	☐ Rotary	– Mud	, D	Cable <sup>-</sup>	Γool ' □C	Other	,				
Drilling Started 9/10	/2014	Surface	Elev. 2102 ft.			GW D	epth 100 ft.			1			
Drilling Complete 9/	***************************************	True Ve	rtical Depth 22	250 ft.		Depth	of DFGW100 ft.						
Date Well Complete	d 9/29/2014	Total Me	easured Depth	2250 ft.		DFGV	V decided by: 0						
		· · · · · · · · · · · · · · · · · · ·			CEMI	ENT							
Cement returned			Yes 🗌 No	If No, provid	de depti	h to top	of cement and metho	od used	to determin	ne:			
Cement returned	on coal proted	ctive casing?	Yes □ No	If No, provid	de depti	h to top	of cement and metho	od used	to determin	ie:		⊠ NA	
Cement returned	on intermedia	te casing?	Yes 🗌 No	If No, provid	de depti	h to top	of cement and metho	od used	to determin	ne:	······································	⊠ NA	
Casing String		ass of Cement	Slurry Temp F°				i) (Lead/Tail/Total)	Woc	Wt PPG	Yld /ft3 /sk		s Migrati ntrols Us	
Conductor		/ sanded in	0°		/		/		0	0	What controls were used if a (additives/ hardware. Specify type a depth applicable).		used if an
Surface	Туре	1 / Class A	59°		/	!	/ 70	14	15	1		1010 J. c.	The Contract VILLAND
Coal Protective			0		1					,			
Intermediate			•		1								
Production			•	**************************************	1								
If additional strings				· · · · · · · · · · · · · · · · · · ·			/				_		
attach form(s)					10	otal							
		CAS	ING AND	TUBING		·							_:
Hole Pipe		Grade Casing		Amount in			Hardware - Ba	(Total	/String)	/ Cent	ralizers		
Size Size	#/ft.	/ Tubing Type	New/ Usea	Well (ft.)	CO	R	Туре	8	Size	T	Depth	Date	e Run
12.25 9 5/8	32.3#	2720	T - N	52					9 5/8	<u> </u>	E0 7	046	20044
8 3/4 7	23#	1620	T - N	419		ļļ.	Guide shoe and		7 7		52.7 419		0/2014
6.25 4.5	17#	1400	T - U	518			centralizers 50' Packer		4.5	-	518		9/2014
6.25 2.375	4.9#	1800	T - U	1965				2.375	<del> </del>	1965		9/2014	
If any casing is	welded, prov	ide the name(	s) of the we	lder(s):						J			
					ELLE	ORE	ALTERATION	V .			<del></del>	<del></del>	
	Fill Mate	erial & Plugs			Dep	oth	Date	<u> </u>		С	asing & Tu		
				Fro	m	То			Size		Pulled	<u> </u>	Left
	······	MIT 14574-144-1-14-1-14-1-14-14-14-14-14-14-14-1				***************************************			······································				****
	······································		······································			_p	ECENEL	<u> </u>				,	
				1	1	* E		- 1	7 1 2		4		
		· <del></del>	***************************************										

8000-FM-OOGM0004a Rev. 8/2012

34		LOG O	F FORMAT	IONS	Well A	.PI#: 37- <u>083</u> - <u>56580</u>
(If you v	vill need more sp	ace than this p	age, please pho	tocopy the bla	nk form before filling	it in.)
Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Dirt/Sand stone sand/shale	30	30 60				driller's log
shale	60	240			(F 100)	
shale/red rock red rock	240 270	270 390				
shale/red rock	390	420				
shale shale/red rock	420 540	540 570				
shale	570	600				
shale/Venango sand shale	600 630	630 930				
shale/red rock red rock/shale	930 960	960 990				
shale	990	1200				
shale/Bradford first sand shale	1200 1230	1230 1290				
shale/Bradford first sand shale	1290 1320	1320 1770				
shaleBradford third sand Bradford third sand	1770 1800	1800 1830				
shale shale/Lewis Run sand	1830 1920	1920 1950				
shale/Lewis Kuri sarid shale	1950	2250				Picky ED
						- 1 7 22 M
	TAXABA AND AND AND AND AND AND AND AND AND AN				farigi.	20 STOTION 1 STOTION

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name	Name	<del></del>	Logging Company
Bradford Pipe	Howard Drilling, LLC	Name	Name Nabors
Address	Address	Address	Address
230 Chestnut St.	P O BOX N		344 High St
City – State – Zip	City – State – Zip	City – State – Zip	City – State – Zip
BRADFORD Pa 16701	MT JEWETT PA 16740		BRADFORD Pa 16701
Phone	Phone	Phone	Phone
814 362-6501	814-778-5820		-8143620230

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code \$78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller	Well Operator's Sig	nature	DEP USE ONLY
Name Howard Drilling, LLC	Rig		Reviewed by:
Address P O Box N		~	V Curis 11-26-14
City – State- Zip MT JEWETT PA 16740	Printed Name / Title: Jay J. Pecora / Partner	Date: 9/23/2014	Comments:
Phone 814-778-5820	-		·



# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

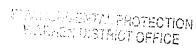
	DEP USE ONLY								
Site ID		Primary Facility ID							
Client ID		Sub Facility	ld						

# **Completion Report**

			Well Infor	nation						
Well Operator Pecora Enterprises		EP ID# 321	Well API # 37 - 083-56580				Well Farm Name Evans		Well # 104	
Address		.521	LAT - 41°		98"	NAD	Project Number		Serial #	
42 Parkway Lane			LONG - 78°	41 <sup>,</sup> 38.	94"	83			<u></u>	
City Sta Bradford PA		Zip Code 16701	Municipality Lafayette				County McKean			
Phone Fax 814-368-8480 814-368	.8480		Email ratler7@verizo	n.nett			USGS 7.5 min. qua	idrangle map	Se	ection
Check the appropriate submission:		Original Co	ompletion Repo		☐ Amend	ed Con	Lewis Run npletion Report			2
			<b>NULATION</b>							
List Water Manageme	ent Plan					nagem	ent Plan ID	Volum	e (Gallons	3)
1. N/A					***************************************		Despute the second			
2.								- ) - <i>//17</i> =		
3.									149	
4.			**************************************		11111111111111111111111111111111111111			d 2347	1	
5.			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					- 4-01 <b>/</b>		
6.							The Arms of the E	i na baya nasa wasa		
			DEP Biologis Review/Date		al Gallons	of Wa	ter Used	Water	Recy	cled
	Otl	ner Base Fl	luid(s) Used	)				Quanti	ty and /UC	- MC
1.								1		
2.								1		_
					Total	Quan	tity all Fluid(s)	1		
			RODUCTIO							
Radioactive tracers used?  Specify Tracer		Open-Flow (I don't do th	MCF/Day) / Date			r. Shut-ir Do <b>n'</b> t d	n Pressure:/ Date o this /		npletion Date 9/26/2014	a:
Well Products: Gas Btu	⊠o	il API G	☐ Con	densate	API G	\[	Other	□GO	R	
		WEL	L SERVICE	COM	PANIES				<del></del>	
Perforation Company		Frac Co	mpany			F	lug Drill Out/Flo	ow Back	Company	<del></del>
Name		Name	rilling, LLC			V	lame			
S W Neilly Corp, AIR NOTCHING Co	mpany	Address				_   A	Address			·//
350 Minard Run PO BOx 414 City – State- Zip		P O BOX City – State					City - State - Zip	H		***************************************
Bradford, PA 16701 Phone	Apin)????*********************************		, PA 16740		and the same of th	F	hone			······································
814-362-4443		814-778-5	5820							
I do hereby certify to the best of	of my kr	owledge,	information	and b	elief that	the in	formation cont	ained on	this Con	nple-
tion Report is true and correct.			there are si	gnifica	nt penait	ies to	r submitting tais	se intorm	ation, ind	ciua-
ing the possibility of fine and in	nprisonr	nent				1	DED LISE ONL	v	<del></del>	
Well Operator's Signature							DEP USE ONL	. [		
( //, /	. /			Review	ed by:	_			Date:	
ALEN CERTIFICACIONAL DE CONTROL PORTE DE CONTROL DE CON	25.303-40-1-53800004	STORES HOSENAVON VI. HES Y	STANSON CONTRACTOR OF STANSON		1.	(un	yr	/J	-3-14	<i></i>
Printed Name / Title: Jay J. Pecora / Partner			Date: 10/9/2014	Comme	ents:	,	<i>J</i>			
	<u></u>	·····						- pr	7.1.117	

Page 1 of \_\_\_\_\_

SCT 15 2014



# Well API# 37-<u>083</u>-<u>56580</u>-\_\_-

			PERFORATIO		
Stage		Stage Perforated From	Stage Perforated To	IN RECORD	
No.	Perforation Date	TMD Ft.	TMD Ft.	# of Perforations/Stage	Formation(s)  Venango Sand
1	9/25/2014	602	602	1	NOTCHED
2	9/25/2014	1,218	1,218	1	Bradford First Sand NOTCHED
3	9/25/2014	1,221	1,221	1	Bradford First Sand NOTCHED
4	9/25/2014	1,224	1,224	1	Bradford First Sand NOTCHED
5	9/25/2014	1,227	1,227	1	Bradford First Sand NOTCHED
6	9/25/2014	1,230	1,230	1	Bradford First Sand NOTCHED
7	9/25/2014	1,233	1,233	1	Bradford First Sand NOTCHED
8	9/25/2014	1,236	1,236	1	Bradford First Sand NOTCHED
9	9/25/2014	1,239	1,239	1	Bradford First sand NOTCHED
10	9/25/2014	1,316	1,316	1	Sugar Run Sand NOTCHED
11	9/25/2014	1,319	1,319	1	Sugar Run Sand NOTCHED
12	9/25/2014	1,500	1,500	1	Bradford Second Sand NOTCHED
13	9/25/2014	1,505	1,505	1	Bradford Second Sand NOTCHED
14	9/25/2014	1,935	1,935	2	Lewis Run Sand NOTCHED
15	9/25/2014	1,937	1,937	2	Lewis Run Sand NOTCHED
				<u> </u>	
					ST-OEWED
					807 2 5 2014

PARTIE ROLLIER PROTECTION

SANTE DISTRICT OFFICE

### Well API# 37-083-56580-\_\_-

### STIMULATION FLUID ADDITVES

Note: Information designated as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on the "Confidential Stimulation Fluid Additives" form.

Trade Name	Supplier	Purpose	Ingredients	CAS # of Chemical Component	Max. Compo- nent % Mass in Additive	Chemical Component % Mass used in Total Base Fluid (Pg 1)	Comment
DCF-495	WST, Inc.	Clay Stabilizer	Nonhazardous Components	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Nonionic Surfactants	Proprietary	0%		
DCF-495	WST, Inc.	Clay Stabilizer	Anionic Sufractants	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Water	7732-18-5		0.00	17 gallons used
DCF-223	WST, Inc.	Anionic Friction Reducer	Distillates (petroleum) Hydrotreated light	64742-47-8			17 Gallons used
	<u> </u>						
	-						
	3						
	<del> </del>		Please insert addition	al copies of this page if a	dditional rows are	needed.	

### Weil API# 37-<u>083</u>-<u>56580</u>-\_\_-

-				ILATION INFORM			
Com	plete a separa	ate record for each				s or additional pages as a	pplicable).
Stg #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)
	9/26/201 4	20	1,450	2,100	960	20/40	65 sacks
	9/26/201 4	20	1,550	1,410	950	20/40	65 sacks
	9/26/201 4	20	1,605	1,631	1,122	20/40	65 sacks
	9/26/201 4	20	1,700	1,180	1,042	20/40	65 sacks
	9/23/201 4	20	1,980	1,367	1,021	20/40	65 sacks
	9/26/201 4	20	2,250	3,500	1,387	20/40	65 sacks
	9/26/201 4	20	2,480	1,600	1,048	20/40	65 sacks
	9/26/201 4	20	2,480	1,850	1,238	20/40	65 sacks
)	9/26/201 4	20	1,950	1,400	1,504	20/40	60 sacks
0	9/26/201 4	20	1,850	1,706	1,246	20/40	60 sacks
1	9/26/201 4	20	2,100	3,934	995	20/40	80 sacks
2	9/26/201 4	20	2,000	1,417	1,250	20/40	80 sacks
13	9/26/201 4	20	2,450	3,550	1,208	20/40	150 sacks
14 15							_
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COMMONWEALTH OF RENDERSON pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

# DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

DEP US	SE ONLY
Site ID	Client Id
Client Id	Sub Facility Id

# Well Record

		100			WELL I	NFO	RM4	ATION		<del></del>			
Well Opera	tor		······································	DE	P ID#			/ell_API#		Well Farm	Name	W	ell#
Peçora Er	nterprises			22	321	37	-083	-56581		Evans		10	05
Address	_					LAT		1°52· 22 <sub>"</sub>	NAD 83	Project Nur	nber		erial #
42 Parkwa	ay Lane		·	************			3 - 7	8°41 <sup>,</sup> 37 <sub>"</sub>					
City Bradford				State 2	Zip Municipa 16701 Lafayet	ality te				County McKean			
Phone	400		Fax		Email	_					min. qua	drangle map	Section
814-368-8		riate Submis	814-368-8		rattler7	@veri				Lewis Run	,		2
				⊠Original V				Amended Well R					<del></del>
Well Type Well Orie		☐ Gas  ☑ Vertica						ction Disposation Survey mu			Wellbo	ore Conditio	oning:
Drill Meth	od(s)	⊠Rota	ary – Air	Rotary			Cable	h*************************************	Other	,	-		
Drilling Star				Elev. 2159 ft.		`		Depth 170 ft.	04101		-		
Drilling Con	nplete 9/18	/2014		tical Depth 22	250 ft.	***		h of DFGW170 ft.					
Date Well (	Completed	10/1/2014	Total Me	asured Depth	2250 ft.			W decided by: 0					
2.16.3	1.4 #141		u Maria	13.1	C	ЕМ	ENT					1 10 14	e e e e e e
		n surface cas	_	Yes 🗌 No	If No, provide	e depti	h to top	o of cement and meth	od used	to determi	ne:		
Cement re	eturned or	n coal protect	tive casing?	Yes 🗌 No	If No, provide	e depti	h to top	o of cement and meth	od used	to determi	ne:		⊠ NA
Cement re	eturned or	n intermediat	e casing?	Yes 🗌 No	If No, provide	e depti	h to top	of cement and meth	od used	to determi	ne:		⊠ NA
Casing	String		ass of Cement	Slurry Temp F°	Amount of	Cem	ent (s)	ks) (Lead/Tail/Total)	WOC	Wt PPG	Yld /m3		Migration
Conduct	or		/ sanded in	0°		1		1		0	0	What contro (additives/ har	ls were used if ar
Surface	- W	Туре	1 / Class A	58 °	***************************************	1	<i>i</i>	/ 70	14	15	1	_ depth applical	ole) Proprieta
Coal Pro	tective		1	۰		1		1	4				
Intermed	liate		1 .	۰	441704	1		1		[[-]	15.7		
Production	on			•				1		:			
If additiona	l strings	<u> </u>		0		1		1			from teni september		
attach form		<u> </u>	212			To	otal			(	ik Pirebiti Zitoraka Important	Augna (m. 1981)	Office
		<del></del>	CASI	NG AND	IUBING								
Hole Size	Pipe Size	Wt. #/ft.	Grade Casing / Tubing Type	Thread / Weld – New/ Used	Amount in Well (ft.)	со	R	Hardware - B	(Tota	/ Packer I/String) Size		alizers Depth	Date Run
P-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1				-			ļļ	r	ļ				
12.25	9 5/8	32.3#	2720	T - N	58			Guide shoe and		9 5/8		58.7	9/16/2014
8 3/4	7	23#	1620	T - N	421	ļ		centralizers 50'		7		421	9/16/2014
6.25	4.5	17#	1400	T-U	514 Packer					4.5		514	9/29/2014
6.25	2.375 sing is w	4.9#	1800 ride the name(s	T - U	2025			Pump barrel	:	2.375		2025	9/29/2014
		eided, prov				LLE	BORI	E ALTERATIO	N :	. 33.1			The state of the s
			rial & Plugs			Dep			T	<del> </del>	C	asing & Tu	bing
		- m mate	mara Fluys		Fron		To	Date		Size		Pulled	
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, •		LOG O	FFORMAT	IONS	Well A	NPI#: <b>37-<u>083</u>-<u>56581</u></b>
	ill need more sp	ace than this p	age, please pho	tocopy the bla	ank form before filling	it in.)
Formation Name or Lithology	Тор	Bottom	Gas at	Oil at	Water at	
Dirt/Sand stone	(feet)	(feet)	(feet)	(feet)	(fresh / brine; ft.)	Source of Data
gravel/shale	30	30 60				driller's log
shale	60	300			F 470	
shale	300	360			F 170	
shale/red rock	300	360	ļ			
red rock	360	420				
red rock/shale	420	420 450				
shale	450	570				
shale/red rock	570	630				-
shale	630	930				
shale/red rock	930	960				
red rock	960	990				
shale	990	1350				
shale/Bradford first sand	1350	1380				
shale	1380	1530				
shale/Bradford second sand	1530	1560				
Bradford second sand/shale	1560	1590				
shale	1590	1830				
shale/Bradford third sand	1830	1860				
Bradford third sand	1860	1890				
Bradford third sand/shale	1890	1920				
shale	1920	1980				
shale/Lewis Run sand	1980	2010				RECEIVED
shale	2010	2250				
						JCT 15 2014
					3	TYPOTHENTAL PROTECT

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

WARREN DISTRICT OFFICE

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name	Name	Name	Name
Bradford Pipe	Howard Drilling, LLC		Nabors
Address	Address	Address	Address
230 Chestnut St.	P O BOX N		344 High St
City - State - Zip	City - State - Zip	City - State - Zip	City - State - Zip
BRADFORD Pa 16701	MT JEWETT PA 16740		BRADFORD Pa 16701
Phone 814 362-6501	Phone 814-778-5820	Phone	Phone -8143620230

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been property cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller	Well Operator's Signature	DEP USE ONLY
Name Rig Howard Drilling, LLC		Reviewed by:
Address P O Box N		15-3-18
City – State- Zip MT JEWETT PA 16740	Printed Name Title: Date: Jay J. Pecora / Partner 9/23/2014	Comments:
Phone 814-778-5820		



Well Operator Pecora Enterprises

# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

2328642

# OFFICE OF OIL AND GAS MANAGEMENT

. :	DEP USE ONLY							
Site ID		Primary Facility ID						
Client ID	1	Sub Facility	ld					

#### **Completion Report Well Information** DEP ID# 22321 Well API# Well Farm Name Well# 37 - 083-56581-Evans 105 LAT - 41° 52 22.12" Project Number NAD Serial #

Address 42 Parkway Lane				B	LAT - 41° .	52 · 22.		NAD 83	Project Number		Serial #	
City Bradford		State PA	Zip Co 1670	ode	Municipality Lafayette	7, 01,			County McKean		L	
Phone	Fax				Email				USGS 7.5 min. quad	Irangle map	5	Section
814-368-8480		-368-8480	1771 0 1 1		ratler7@verizo				Lewis Run			_2_
Check the appropriate sub	missio	on:			pletion Repo			ded Cor	npletion Report			
List Water	Manar	rement Pi			ULATION I	BASE	FLUID Water Ma	manam	ent Plan ID	Volume	(Gallor	<del></del>
1. N/A	- Indiana	, on to the t	an oouro	0(3)			TTULOT INC	magom	one ran is	*Oldin	o (Ganor	
2.												
3.							: .					
4.	ar dish is shelifon an area							: ( ]	2 9 2014			
5.		****										
6.										_		
					DEP Biologis Review/Date		al Gallons	s of Wa	ter Used	Water	Rec	ycled
			Other Ba	se Flui	id(s) Used					Quantit	y and /U	ОМ
1.					·					1		
2.					-					1		
							Total	l Quan	tity all Fluid(s)	1		
		STIM	ULATIO	N/PR	ODUCTIO	N INF	ORMAT	ION (\	VELL)	1 21 1	. 54 % .	
Radioactive tracers used? Specify Tracer	Ò	24	Hr. Open- we don't		CF/Day) / Date				n Pressure:/ Date lo this /		pletion Da 0/1/2014	
Well Products: Gas Btu	l	2	Oil API	G	☐ Cor	densate	API G	[	] Other	☐ GOF	₹	
	1. :		$a^{ab} \beta \gamma \gamma \gamma I$	WELL	SERVICE	COM	PANIES			15.274		e a trade
Perforation Company	taret i				pany		ta, this		Plug Drill Out/Flo	w Back C	ompan	y
Name S W Neilly Corp, AIR NOT	CHING	Compan	y How		lling, LLC				Name			
Address 350 Minard Run PO BOx 41	14		Addr P O	ess BOX N				1	Address			
City - State- Zip Bradford, PA 16701	***************************************	#*************************************	City	- State -				(	City - State - Zip	THE STATE OF THE S		
Phone 814-362-4443			Phor						Phone			
I do hereby certify to t	he be	st of my				and b	elief tha	t the ii	nformation conta	nined on	this Co	mnle-
tion Report is true and	d corr	ect. I an	aware	that th	here are si	gnifica	nt penal	ties fo	r submitting fals	e inform	ation. ii	nclud-
ing the possibility of fir	ne an	d impris	onment.			•	•				<b>,</b>	
Well Operator's Sign	ature	)	11.50	* •		100			DEP USE ONL	Y	1.50	
7 1					1	Review	ed by:				Date:	
1 1	سكرا	. /				ζ <del></del>		$\mathcal{C}$				
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Printed Name / Title:					Date:	Comme	ents:	j- 100			•	

Jay J. Pecora / Partner 10/17/2014

Page 1 of \_\_\_\_\_

RECEIVED

OCT 22 2014

# Well API# 37-<u>083-56581-\_\_-</u>-\_\_

F				ION RECORD	the state of the s
Stage No.	Perforation Date	Stage Perforated From TMD Ft.	Stage Perforated To TMD Ft.	# of Perforations/Stage	Formation(s)
1	9/30/2014	1,279	1,279	1	Bradford First Sand NOTCHED
2	9/30/2014	1,282	1,282	1	Bradford First Sand NOTCHED
3	9/30/2014	1,285	1,285	1	Bradford First Sand NOTCHED
4	9/30/2014	1,288	1,288	1	Bradford First Sand NOTCHED
5	9/30/2014	1,295	1,295	1	Bradford First Sand NOTCHED
6	9/30/2014	1,299	1,299	1	Bradford First Sand NOTCHED
7	9/30/2014	1,375	1,375	1	Sugar Run Sand NOTCHED
8	9/30/2014	1,378	1,378	1	Sugar Run Sand NOTCHED
9	9/30/2014	1,381	1,381	1	Sugar Run sand NOTCHED
10	9/30/2014	1,564	1,564	1	Bradford Second Sand NOTCHED
11	9/30/2014	1,567	1,567	1	Bradford Second Sand NOTCHED
12	9/30/2014	1,998	1,998	1	Lewis Run Sand NOTCHED
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### 8000-FM-OOGM0004b Rev. 5/2012

### Well API# 37-083-56581-\_\_-

# STIMULATION FLUID ADDITVES

Note: Information designated as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on the "Confidential Stimulation Fluid Additives" form. Chemical Component % Max. Compo-Ingredients Mass used in Total Base nent % Mass CAS # of Chemical Comment Fluid (Pg 1) in Additive Component Purpose Supplier : Trade Name Nonhazardous Com-Proprietary Clay Stabilizer WST, Inc. DCF-495 ponents Proprietary 0% Nonionic Surfactants Clay Stabilizer DCF-495 WST, Inc. Proprietary **Anionic Sufractants** Clay Stabilizer WST, Inc. DCF-495 18 gallons used 0.00 7732-18-5 Clay Stabilizer Water WST, Inc. DCF-495 Anionic Distillates 12 Gallons used 64742-47-8 (petroleum) WST, Inc. Friction DCF-223 Hydrotreated light Reducer

Please insert additional copies of this page if additional rows are needed.

Well API# 37-083-56581-\_\_-

			STIMU	LATION INFORM	ATION / STAGE		
Com	plete a separa	ite record for each s	timulation stage. (Pl	ease insert additional li	nes for additional stage	s or additional pages as a	pplicable).
Stg #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)
ı	10/1/201 4	20	1,500	1,750	950	20/40	75 sacks
2	10/1/201 4	20	1,500	1,400	980	20/40	75 sacks
3	10/1/201 4	20	1,600	1,000	975	20/40	75 sacks
4	10/1/201 4	20	1,700	1,500	1,000	20/40	75 sacks
5	10/1/201 4	20	2,000	2,270	1,100	20/40	80 sacks
6	10/1/201 4	20	2,250	1,800	970	20/40	75 sacks
7	10/1/201 4	20	1,900	2,500	1,075	20/40	80 sacks
8	10/1/201 4	20	2,000	1,500	1,100	20/40	80 sacks
9	10/1/201 4	20	2,300	1,700	1,150	20/40	80 sacks
10	10/1/201 4	20	1,950	1,535	1,150	20/40	60 sacks
11	10/1/201 4	20	1,900	1,500	1,125	20/40	60 sacks
12	10/1/201 4	20	2,300	2,429	1,400	20/40	100 sacks
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MUSI HOWA'SIT Unit Model Co. 8/2012 For assistance in accessing this log, contact R3\_UIC\_Mailbox@epagowlfv/ d



# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

	DEP	USE ONLY	
Si	ite ID	Client lo	•
Cli	ent Id	Sub Facilit	y ld

2328640

# **Well Record**

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Well Operat Pecora En					P ID#		37		Well AF 3-5658			Well Farm	wame		Weil#	
Address	terprises				321		LAT		41°52'			Evans Project Nu	mhor		106 Serial #	homistarramina and a second
42 Parkwa	y Lane				-				78°41′		NAD 83	. 19,000,110			Juli 2011	
City Bradford				State 2	Zip N 16701 L	lunicipal afayett	lity e					County McKean			·A	
Phone			Fax	<u>L </u>		mail				<del></del>		USGS 7.5	min. qua	idrangle ma	ар	Section
814-368-8	480		814-368-84	480	ra	attler7@	②veri	zon.	.net			Lewis Run				2
Check the	appropi	riate Submis	sion:	⊠Original V	Vell Rec	cord		ĺ	Ame	ended Well F	Record					
Well Type		☐ Gas	⊠ Oil 🗌 Comb	ination Oil	& Gas	□ СВ	м 🗆	] Inj	ection	☐ Disposa	ıl 🗆 S	Storage	Wellb	ore Cond	itioning:	
Well Orie	ntation	✓ Vertica	I ☐ Deviated	from Vertica	al (Top 8	& Side v	views	& C	Deviatio	n Survey mi	ust be a	ttached)				
Drill Meth	od(s)	⊠Rota	ary – Air ′	☐ Rotary	Mud	,		Cabl	le Tool	, C	Other	<u>'</u>				
Drilling Star	ted 9/19/20	014	Surface E	lev. 2178 ft.				G۷	V Depth	85 ft.			]			
Drilling Con	<u> </u>			ical Depth 2				De	pth of D	FGW85 ft.			_			
Date Well C	ompleted	10/7/2014		sured Depth	2130 ft.			DF	GW dec	ided by: 0						
Arrena (1977)					· · · · · ·	С	EME	ΞNΊ	Γ 📜					(1.55) (1.55)		on <mark>a top</mark> a
		n surface cas	-	Yes ⊠ No	If No.	provide	depth	ı to t	op of ce	ment and met	hod used	to determ	ne: 157	7' Cemer	nt top be	and log
			tive casing?		If No.	provide	depth	to t	op of ce	ment and met	hod used	to determi	ne:		⊠ NA	<u> </u>
Cement re	turned or	n intermediat	e casing?	Yes 🔲 No	lf No.	provide	depti	to t	op of ce	ment and met	hod used	to determ		· · · · ·	<b>⊠</b> N/	<u> </u>
Casing	String		iss of Cement ead/Tall)	Slurry Temp F°	Amo	unt of (	Ceme	ent (	(sks) (Lea	ad/Tall/Total)	WOC	Wt PPG	Yid #t3 /sk		Gas Migi Controls	
Conducto	or		/ sanded in	0 °			1		1			0	0	(additives)	hardware.	used if ar Specify type ar
Surface		Туре	1 / Class A	55 °			/	,	/ 5	55	14	15	1			
Coal Pro	tective		1	٠			1 1						1 2 1			
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133			CASI	NG AND	TUBI	NG	'n.				150,50	3 × 32 ×	2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Hole Size	Pipe Size	Wt. #/ft.	Grade Casing / Tubing Type			unt in i (ft.)	со	R		-lardware - l		s / Packer al/String) Size		ralizers Depth		ate Run
12.25	9 5/8	32.3#	2720	T - N	5	55				**************************************		9 5/8		55	9	/19/2014
8 3/4	6 5/8	23#	1620	T - N	4	56				de shoe and tralizers 50'		6 5/8		456	9	/19/2014
6.25	4.5	17#	1400	T-U	19	940	2			Packer		4.5		1940	1	0/7/2014
6.25	2.375	4.9#	1800	T-U		100			Pi	ump barrel		2.375		2100		0/7/2014
If any ca			ide the name(													
				PLUC	B-BAC	K/WE			RE AL	TERATIO	N			e com		
		Fill Mate	erial & Plugs		-	Fron	Dep		То	Date	1	Siz		asing & Pull		1 -44
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000-FM-OOGM0004a Rev. 8/2012	For assistance	in accessing t	nis log, contact	R3_UIC_Mai	ibox@epa.gov	
		LOG O	F FORMAT	TIONS	Well A	PI#: <b>37-<u>083-56582</u>-</b> _
(If you w	vill need more sp	ace than this p	age, please pho	tocopy the bla	nk form before filling	it in.)
Formation Name						
	Тор	Bottom	Gas at	Oil at	Water at	O
or Lithology Dirt/Sand stone	(feet)	(feet) 30	(feet)	(feet)	(fresh / brine; ft.)	Source of Data
shale	30	60		]		driller's log
shale/sand /shale	60	90			F 85	
shale	90	120			1 03	
shale/sand/shale	120	150				
shale	150	300	ŀ			
shale/red rock	300	330				
red rock	330	480				
shale	480	540				
shale/red rock	540	570				
red rock/shale	570	600				
shale	600	930				
shale/ red rock	930	960				
red rock	960	990				
shale	990	1350	İ			
shale/Bradford first sand	1350	1380				
shale	1380	1860				
shale/Bradford third sand	1860	1890				
Bradford third sand/shale	1890	1920	-			
shale	1920	1980				
shale/Lewis Run sand	1980	2010				
shale	2010	2130				
	1	1	1	1		į.

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES	(Provide the name.	address	and telephone number	of all well service	ce companies invol	ved )

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name	Name	Name	Name
Bradford Pipe	Howard Drilling, LLC		Gemini Wireline
Address	Address	Address	Address
230 Chestnut St.	P O BOX N		344 High St
City – State – Zip	City - State - Zip	City - State - Zip	City - State - Zip
BRADFORD Pa 16701	MT JEWETT PA 16740		BRADFORD Pa 16701
Phone	Phone	Phone	Phone
814 362-6501	814-778-5820		-8143620230

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is atteched to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code \$78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller	Well Operator's Sign	ature		DEP USE ON	LY
Name Howard Drilling, LLC	Rig		de la companya de la	Reviewed by	
Address P O Box N	J. Ve		1 6 6	um 1	15-15-14
City – State- Zip MT JEWETT PA 16740	Printed Name / Title: Jay J. Pecora / Partner	Date: 9/23/2014		Comments:	<u> </u>
Phone 814-778-5820				-	



# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

	DEP USE ONLY							
Site 1D		Primary Facility ID						
Client ID	)	Sub Facility	ld .					

# **Completion Report**

				v 1, 11	Well	Inform	ation		y'+ +	14.1.		
Well Operator				EP ID#	Well Al	PI#	· · · · · · · · · · · · · · · · · · ·		Well Farm Name		Well#	
Pecora Enterprises Address	·	·····		2321		3-56582- 41° 52	2 · 17.62"	NAD	Evans Project Number		106 Serial#	
42 Parkway Lane							1 33.88"	83			Ochar II	
City Bradford		State PA		Zip Code 16701	Municip Lafaye				County McKean			
Phone 814-368-8480		Fax 814-368-848	0		Email ratier7	@verizon.	USGS 7.5 min. q I.nett Lewis Run			drangle map	Section 2	
Check the appr	Check the appropriate submission:   Original Completion F							led Cor	npletion Report			
,				STI	MULAT	TION B	ASE FLUID			4.		
	List Water Ma	nagement	Plan s	Source(s)	•		Water Ma	nagem	ent Plan ID	Volume	(Gallons)	
1. N/A		• "						i				
2.					: :							
3.												
4.						÷){	1 26 2014					
5.						TOTAL PORT OF THE PROPERTY OF						
6.							-1 1-17					
						lologist w/Date	Total Gallons	of Wa	ter Used	Water	Recycled	
			Oth	ner Base F	luid(s) U	Jsed	•			Quantity and /UOM		
1.										1		
2.										1		
							Tota	Quan	tity all Fluid(s)	1		
	1. 1. 1	STI	MUL	ATION/F	PRODU	ICTION	INFORMAT					
Radioactive to Specify Tracer	acers used?			Open-Flow ( don't do ti		) / Date	24 Hr. Shut-in Pressure:/ Date WE Don't do this /				pletion Date: 0/7/2014	
Well Products:	☐ Gas Btu		⊠ 0	il API G		☐ Cond	ensate API G	[	Other	GOR		
	hydrafys), gei		, :5	WEL	LL SER	<b>VICE</b>	COMPANIES			il selection de		
Perforation C	ompany		Ta .	Frac Co	mpany	.** : •		I	Plug Drill Out/Fi	ow Back C	ompany	
Name S W Neilly Cor	p, AIR NOTCHI	NG Compa	เกษ	Name Howard [			,	1	Name			
Address 350 Minard Rur	PO BOx 414			Address P O BOX				1	Address			
City - State- Zip Bradford, PA 1				City – Stat Mt Jewet	te – Zip	740	City - State - Zip					
Phone 814-362-4443			e trensmetêke hadis	Phone 814-778-	5820	**************************************	Phone					
	certify to the	best of m	ny kr			nation a	and belief that	the in	nformation cont	ained on t	his Comple-	
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	ibility of fine		sonr			_		_				
Well Operat	tor's Signati	ure	1. 1. 11		5 9		\$5.7°		DEP USE ONL	Υ		
l		) .	_	-		F	leviewed by:				Date:	
	المحدا						7	UW		12-15	-14	
Printed Name / Jay J. Pecora /				ven militadi (1966) ( n. 11 m. milita	D 10/17/2		comments:	()	The state of the s	·· · · · · · · · · · · · · · · · · · ·		
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Page 1 of \_\_\_\_\_

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OCT 22 2014

# Well API# 37-<u>083-56582-\_\_-</u>-\_\_

	PERFORATION RECORD									
Stage No.		Stage Perforated From TMD Ft.	Stage Perforated To TMD Ft.	* 40 4 5 40						
No. 1	Perforation Date 10/1/2014	2,006	2,006	# of Perforations/Stage	Formation(s) Lewis Run Sand					
ı	10/1/2014	2,000	2,000	2	NOTCHED					
2	10/1/2014	2,008	2,008	2	Lewis Run Sand					
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#### Well API# 37-083-56582-\_\_-

STIMULATION FLUID ADDITVES Note: Information designated as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on the "Confidential Stimulation Fluid Additives" form. Chemical Component % Max. Compo-CAS # of Chemical . nent % Mass Mass used in Total Base in Additive Fluid (Pg 1) Comment : Ingredients Component Supplier Purpose Trade Name Nonhazardous Com-Proprietary Clay Stabilizer DCF-495 WST, Inc. ponents 0% WST, Inc. Clay Stabilizer Nonionic Surfactants Proprietary DCF-495 Proprietary WST, Inc. Clay Stabilizer Anionic Sufractants DCF-495 5 gallons used 0.00 Clay Stabilizer Water 7732-18-5 DCF-495 WST, Inc. Distillates Anionic 3 Gallons used (petroleum) 64742-47-8 WST, Inc. Friction DCF-223 Hydrotreated light Reducer Please insert additional copies of this page if additional rows are needed.

### Well API# 37-083-56582-\_\_-

### STIMULATION INFORMATION / STAGE Complete a separate record for each stimulation stage. (Please insert additional lines for additional stages or additional pages as applicable). Ave Treatment Pressure (PSI) Stimulation Ave Pump Rate Proppant Mesh Size(s) Max Breakdown # Date (BPM) ISIP (PSI) Proppant Type Pressure (PSI) 10/7/201 1,921 1,728 2,468 20/40 150 sacks 23

Page	of
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# pennsylvania DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

DEP USE ONLY								
Site ID	Client Id							
Client Id	Sub Facility Id							

2328639

# **Well Record**

						ELL IN	<b>IFOF</b>	RMATIC	N		· .			<del></del>			
Well Operato			· ·	- 1	P ID#			Well A			Well F	arm N	lame	,	Well#	<u> </u>	
Pecora Ent	terprises			22	321			083-565			Evan				107	ita Washington and a second	
Address 42 Parkwa	y Lane		na mangan na manganann na hiji ana garagay (3) nagab bib 1,800kh 1984 a anna na a	y defends des en a como				41°52 <u>′</u> - 78°41		NAO 83	Projec		nber	rishbon paga p	Serial #	fritti area	
City Bradford					Zip 16701	Municipal Lafayett			The second second by the secon		Count McKe	an					
Phone	400		Fax	400		Email							nin. qua	drangle ma	3p/	Section	
814-368-84 Check the		riate Submis	814-368-84	480 ⊠Original V	Mall D	rattier7@	<u>y</u> veriz		ended Well	Docord	Lewis	KUN		-		2	
	<del>'''</del>																
Well Type			☑ Oil ☐ Comb					h			***	**************************************	Wellbo	ore Condi	tioning:		
Well Orier		∨ Vertical     ✓ Vertical			*************	.h.Hh.m				***************************************	ttache	ed)	-				
Drill Metho				Rotary	– Muc	<u>'</u>		able Too	**********	Other		, -	_				
Drilling Start Drilling Com				lev. 2217 ft.	180 #			GW Depth	80 ft. FGW80 ft.				-				
Date Well C		72014		asured Depth		· · · · · · · · · · · · · · · · · · ·		<del></del>	cided by: 0				-				
			TOTAL ITIES	astred Deptil	2.501		EME	1	olded by, e				<del></del>			<del> </del>	
Comort ro	turned c	n surface cas	ing2 [T											N O		<u> </u>	
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			ive casing?					· · · · · · · · · · · · · · · · · · ·	ement and me		·				⊠ NA		
Cement re	turnea or	n intermediate	e casing?	Yes 🔲 No	lf N	lo, provide	depth	to top of c	ement and me					<del></del>	⊠ N/		
Casing	String		ss of Cement	Slurry Temp F°	Am	ount of	Ceme	ent (sks) (L	ad/Tail/Total)	WOC		Wt PPG	Yld m3	0	ias Migr ontrols	Used	
Conducto	or		/ sanded in	0 °	************	- Arts-man	1	/	** )**********************************			0	What controls were used if ar (additives/ hardware. Specify type and depth applicable).				
Surface		Туре	1 / Class A	58°					75	14		15	1				
Coal Prot	tective			•			/										
Intermedi	iate			•			1	1									
Production	on			0			1	1									
If additional	etringe		<u> </u>	°				1									
attach form		<u> </u>					То	otal		<del></del>			-	<u> </u>			
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Hole	Pipe	Wt.	Grade Casing	Thread / Weld ~		ount in			Hardware	-	al/Str		/ Cent	ralizers			
Size	Size	#/ft.	/ Tubing Type	New/ Used	1 W	ell (ft.)	со	R	Туре		Size		1	Depth	_   _ [	Date Run	
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0 3/4	0 3/6	23#	1020	1 - N		453	-		ntralizers 50		6 5/8		-	453	-   - 9	9/24/2014	
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			F FORMAT			PI#: 37- <u>083</u> - <u>56583</u>
(If you wi	ll need more sp	ace than this p	age, please pho	tocopy the blai	nk form before filling	it in.)
Formation Name						
or Lithology	Top	Bottom	Gas at	Oil at	Water at	Source of Data
or Lithology Dirt/Sand stone	(feet)	(feet) 30	(feet)	(feet)	(fresh / brine; ft.)	Source of Data
shale/shale	30	60				armer's log
shale	60	120			F 80	
shale/sandstone	120	150			1 00	:
shale	150	180				
shale/sandstone	180	210				
shale	210	360				
shale/red rock	360	390				
redrock/shale/red rock	390	420	,			
red rock	420	510				
red rock/shale	510	540	ļ			
shale	540	600	=			
shale/ red rock	600	630				
red rock/shale	630	660				
red rock/shale	660	690				
shale	690	1290				
shale/Bradford First sand	1290	1320		1		]
shale	1320	1380				
shale/stray sand	1380	1410				
shale	1410	1890				
shale/bradford Third sand	1890	1920				
Bradford Third sand	1920	1950			77.5	DEVED
shale	1950	2040	1		• "	The transfer of the state of th
shale/Lewis Run sand	2040	2070				
shale	2070	2160			1	Tac 2014
						TOURSTON
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If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name	Name	Name	Name
Bradford Pipe	Howard Drilling, LLC		Gemini Wireline
Address	Address	Address	Address
230 Chestnut St.	P O BOX N		344 High St
City – State – Zip	City - State - Zip	City - State - Zip	City - State - Zip
BRADFORD Pa 16701	MT JEWETT PA 16740		BRADFORD Pa 16701
Phone	Phone	Phone	Phone
814 362-6501	814-778-5820		-8143620230

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 end any conditions contained in the permit for this well. In addition, I do hereby certify thet any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller		Well Operator's S	ignature		DEP USE ONLY	
Name Howard Drilling, LLC	Rig	10			Reviewed by:	
Address P O Box N				Ü	Cury 12-15	-14
City – State- Zip MT JEWETT PA 16740		Printed Name / Title: Jay J. Pecora / Partner	Date: 10/20/2014		Comments:	
Phone 814-778-5820						



# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

	DEP USE ONLY							
Site ID		Primary Facility ID						
Client ID		Sub Facility	ld					

# **Completion Report**

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Well Operator			P ID#	Well API#				Well Farm Name		Well#		
Pecora Enterprises Address		22.	321	37 - 083-56 LAT - 41			NAD	Evans Project Number		107 Serial#		
42 Parkway Lane				LONG - 78			83	i roject warnoci		Oction 17		
City Bradford	State PA		Zip Code 16701	Municipality County Lafayette McKean						-		
	ax 314-368-8480	·		Email ratler7@ve	rizon r	no#		USGS 7.5 min. qua	drangle map	Section		
Check the appropriate submis			Original Co	ompletion Re			d Cor	Lewis Run npletion Report		2		
Officer the appropriate Submits						ASE FLUID	u Coi	Inpletion Nepolt		1 112 1 24		
List Water Mar				iio E/t/iio			agem	ent Plan ID		(Gallons)		
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6.												
				DEP Biolo Review/D		Total Gallons	of Wa	ter Used	Water	Recycled		
		Oth	er Base F	luid(s) Used	<u> </u>				Quantit	y and /UOM		
1.									1			
2.									1			
						Total (	Quan	tity all Fluid(s)	1			
	STI	VIUL.	ATION/P	RODUCT	ION	INFORMATIO	ON (V	VELL)	tata t			
Radioactive tracers used? Specify Tracer	2		Open-Flow ( don't do th	MCF/Day) / D nis /	ate			n Pressure:/ Date o this /		pletion Date: /10/2014		
Well Products: Gas Btu		⊠ Oi	API G		Conde	ensate API G		Other	□GOR			
		. /	· WEL	L SERVI	CE C	OMPANIES	a de la dela de		#: 11	i Ajstriji		
Perforation Company				mpany				Plug Drill Out/Flo	ow Back C	ompany		
Name S W Neilly Corp, AIR NOTCHII	NG Compa	nv	Name Howard F	Orilling, LLC			1	Name				
Address 350 Minard Run PO BOx 414	10 Oompu		Address		Address				\$			
City - State- Zip			P O BOX City – State	e – Zip						**************************************		
Bradford, PA 16701 Phone			Mt Jewett Phone	t, PA 16740		handstada thesian and a second and a second and a second and a second and a second and a second and a second a		Phone				
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Well Operator's Signatu				the Alam 1			( .a/25	DEP USE ONL	<b>V</b> - 1 - 1			
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Printed Name / Title:				Date:	c	omments:	يمر	~/)——/~				
Jay J. Pecora / Partner				12/5/2014								
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**ENVIRONMENTAL PROTECTION** WARREN DISTRICT OFFICE

# Well API# 37-<u>083-56583-\_\_--</u>\_\_\_

			PERFORATION	RECORD (	
Stage No.	Perforation Date	Stage Perforated From TMD Ft. 1,337	Stage Perforated To TMD Ft.	# of Perforations/Stage	l
1	11/7/2014	1 337	1,337	1	Formation(s) Bradford First sand notched
		1,340	1,340	1	Bradford First sand notched
2	11/7/2014	1,040	1,040	1	Bradford First sand notched
3	11/7/2014	1,343	1,343		Bradford Third aand notehod
4	11/7/2014	1,917	1,917	1	Bradford Third sand notched
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#### 8000-FM-OOGM0004b Rev. 5/2012

#### Well API# 37-083-56583-\_\_-

# STIMULATION FLUID ADDITVES

Note: Information designated as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on the "Confidential Stimulation Fluid Additives" form. Chemical Component % Max. Compo-Ingredients Mass used in Total Base CAS # of Chemical nent % Mass Comment in Ádditive Fluid (Pg 1) · Component Purpose \* Supplier Trade Name Nonhazardous Com-Proprietary Clay Stabilizer WST, Inc. DCF-495 ponents 0% Nonionic Surfactants Proprietary Clay Stabilizer WST, Inc. DCF-495 Proprietary Anionic Sufractants Clay Stabilizer WST, Inc. DCF-495 6 gallons used 0.00 7732-18-5 Water Clay Stabilizer WST. Inc. DCF-495 Distillates Anionic 6 Gallons used 64742-47-8 (petroleum) Friction WST, Inc. DCF-223 Hydrotreated light Reducer Please insert additional copies of this page if additional rows are needed.

Well API# 37-<u>083-56583-\_\_--</u>\_\_\_

	STIMULATION INFORMATION / STAGE									
Con	plete a separa	te record for each s	timulation stage. (Pl		nes for additional stage	s or additional pages as a				
Stg #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)			
1	11/10/20 14	20	1,500	1,700	857	20/40	80 sacks			
2	11/10/20 14	20	1,500	1,700	850	20/40	80 sacks			
3	11/10/20 14	20	1,800	1,600	1,100	20/40	80 sacks			
4	11/10/20 14	10	1,450	2,750	1,075	20/40	50 sacks			
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DEPARTMENT OF ENVIRONMENTAL PROTECTION

# 8600-FM-OOGM0004a Rev. 8/2012 For assistance in accessing this log, contact R3\_UIC\_Mailbox@epagevol.com

#### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

DEP US	SE ONLY
Site ID	Client Id
Client Id	Sub Facility Id

# Well Record

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	Gas  Vertica  Rot  14  12/2014  11  On surface case on coal protection intermedial  Type/Cla (I)  Wt. #/ft.  32.3#  23#  welded, prov	Fax 814-368-8 priate Submission:  Gas Oil Comb Vertical Deviated Non Surface I True Vertical Total Me  Type/Class of Cement (Lead/Tall) / sanded in  Type 1 / Class A / / / / / CAS  Wt. Grade Casing #/ft. / Tubing Type  32.3# 2720 23# 1620  welded, provide the name(	State PA 1    Fax   814-368-8480     Pax   14   90     Pax   15     Pax   14   90     Pax   90   90   90     Pax   90   90   90     Pax   90   90   90	State   Zip   Municipe   PA   16701   Lafaye   Email   State   22321   37	DEP ID#   27-203-21   37-083   37-083   1-AT   34   DEP ID#   22321   37-083-5658   1AT   41*52*   1CNG - 78*41*   16*701   1afayette   1afa		DEP   D#   2321		State   22321   37-083-56584 -   Evans   Evans   LAT   41*52 10-   LONG - 78*41*35-   NAD 83   Project Nur   LONG - 78*41*35-   NAD 83   LONG - 78*41*35-   NAD 95   NAD		Section   Part   DEP IDS   Type 1/Class of Common   Sturry   Fam   Project Number   Serial #   LAT   41*52* 10   NAD 83   Country   McKean   Fax   Market   McKean			
*	LOG OF FORMATIONS Well API#: 37- <u>083-56584</u>													
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(If you wi	ill need more sp	ace than this p	age, please pho	tocopy the bla	ank form before filling	it in.)								
Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data								
Dirt/Sand stone	0	30	(100)	\\.\\.		driller's log								
shale	30	90			/									
shale/sandstone	90	120			√F 80 /									
sandstone/shale	120	150												
shale	150	300												
shale/red rock	300	330												
red rock	330	480												
shale	480	570												
shale/red rock	570	600			•	i								
red rock	600	630												
red rock/shale	630	660												
shale/red rock	540	600												
red rock	600	630												
red rock/shale	630	660												
shale	660	1350												
shale/Bradford First sand	1350	1380												
shale	1380	1560												
shale/Bradford Second sand	1560	1590												
shale	1590	1860												
shale/Bradford Third sand	1860	1890												
Bradford Third sand	1890	1920												
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						PROTECTION #3 OFFICE								

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name	Name	Name	Name
Bradford Pipe	Howard Drilling, LLC		Gemini Wireline
Address	Address	Address	Address
230 Chestnut St.	P O BOX N		344 High St
City – State – Zip	City – State – Zip	City - State - Zip	City – State – Zip
BRADFORD Pa 16701	MT JEWETT PA 16740		BRADFORD Pa 16701
Phone	Phone	Phone	Phone
814 362-6501	814-778-5820		-8143620230

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller	Well Operator's S	ignature	DEP USE ONLY				
Name Howard Drilling, LLC	Rig F		Reviewed by:				
Address P O Box N	1	<u> </u>	Curry 15.15-14				
City – State- Zip MT JEWETT PA 16740	Printed Name / Title: Jay J. Pecora / Partner	Date: 10/20/2014	Comments:				
Phone 814-778-5820							



# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Completion Report** 

2328638

# OFFICE OF OIL AND GAS MANAGEMENT

	DEP US	E ONLY				
Site ID		Primary Facility ID				
Client ID	)	Sub Facilit	y ld			

			** (). 		ell Inform	ation	10.0	1			100
Well Operator			DEP ID# 22321		ell API # - 083-56584-				Well Farm Name Evans		Well # 108
Pecora Enterprises Address			22021		LAT - 41° 52′ 10.42″ NAD			Project Number		Serial #	
42 Parkway Lane				LC	LONG - 78° 41′ 35.88″ 83						
City Bradford		State PA	Zip Cod 16701		unicipality fayette				County McKean		
Phone Fax Email ratler7@ve				nail tler7@verizon.ı	nett			USGS 7.5 min. quad Lewis Run	drangle map	Section 2	
Check the appropriate subm	nissio	n:		al Compl	letion Report				npletion Report		
			S	TIMUL	ATION B						
List Water N	lanag	ement Pla	an Source	(s)		Water	r Ma	nagem	ent Plan ID	Volume	(Gallons)
1. N/A											
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			Other Ba	se Fluid	(s) Used					Quantit	y and /UOM
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2.						ı					
						Т	ota	l Quar	ntity all Fluid(s)	1	
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Radioactive tracers used?[ Specify Tracer	7	24	Hr. Open-F we don't	low (MCF do this /	/Day) / Date	e 24 Hr. Shut-in Pressure:/ Date WE Don't do this /			Completion Date: 11/14/2014		
Well Products: Gas Btu		Σ	Oil API (	}	☐ Condensate API G			☐ Other	□ GO	२	
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350 Minard Run PO BOx 414 City – State- Zip	4		City -	State – Z	<u>Zip</u>			Marrie and American Company of the C			
Bradford, PA 16701 Phone			Mt Jo		A 16740	Phone					
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Printed Name / Title:						Comments:			7	104 /	• • •
Jay J. Pecora / Partner				1:	2/5/2014						
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DEC 12 2014

**ENVIRONMENTAL PROTECTION** WARREN DISTRICT OFFICE

DEC 0 9 2014

Environmental Erotection North and Regional Office

# Weli API# 37-<u>083</u>-<u>56584-\_\_-</u>-\_\_

	PERFORATION RECORD								
Stage No.	Perforation Date		Stage Perforated To TMD Ft. 1,310	# of Perforations/Stage	Formation(s)				
1	11/14/2014	TMD Ft.	1,310	1	Bradford First sand notched				
2	11/14/2014	1,313	1,313	1	Bradford First sand notched				
3	11/14/2014	1,316	1,316	1	Bradford First sand notched				
4	11/14/2014	1,319	1,319	1	Bradford First sand notched				
5	11/14/2014	1,329	1,329	1	Bradford First sand notched				
6	11/14/2014	1,950	1,950	1	Bradford Third sand notched				
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#### 8000-FM-OOGM0004b Rev. 5/2012

#### Well API# 37-083-56584-\_\_-

#### STIMULATION FLUID ADDITVES

Note: Information designated as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on the "Confidential Stimulation Fluid Additives" form.

Note: Information d	esignated as Tra	Purpose	Ingredients	CAS # of Chemical Component	Max. Compo- nent % Mass in Additive	Chemical Component % Mass used in Total Base Fluid (Pg 1)	Comment
DCF-495	WST, Inc.	Clay Stabilizer	Nonhazardous Components	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Nonionic Surfactants	Proprietary	0%		
DCF-495	WST, Inc.	Clay Stabilizer	Anionic Sufractants	Proprietary			O. Harawand
DCF-495	WST, Inc.	Clay Stabilizer	Water	7732-18-5		0.00	6 gallons used
DCF-223 WST, Inc. Anionic Friction Reducer		Distillates (petroleum) Hydrotreated light	64742-47-8			8 Gallons used	
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#### Well API# 37-<u>083-56584-\_\_-</u>

			STIMU	LATION INFORM	ATION / STAGE		
Com	iplete a separa	te record for each s	timulation stage. (Pl	ease insert additional lir	nes for additional stages	or additional pages as a	pplicable).
Stg #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)
1	11/14/20 14	20	1,800	1,750	1,100	20/40	80 sacks
2	11/14/20 14	20	1,800	1,660	1,225	20/40	80 sacks
3	11/14/20 14	20	1,950	2,200	1,200	20/40	80 sacks
4	11/14/20 14	20	2,150	1,250	1,250	20/40	80 sacks
5	11/14/20 14	20	2,300	2,200	1,180	20/40	80 sacks
6	11/14/20 14	20	2,000	3,220	1,400	20/40	60 sacks
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### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

Site ID Client Id

Client Id Sub Facility Id

Music Mountain

2324/69

#### **Well Record**

				<del></del>	WELL I	NFO	RMA	TION							
Well Opera	tor			DEF	PID#	· · · · ·		ell API#		Wel	l Farm I	Name	V	Vell#	
Pecora Er	nterprises			223	321	37	<b>7-</b> 083-	56585		Eva	ans		1	09	
Address			77			LAT	4	1°52′ 8″	NAD O	Proj	ect Nur	nber	S	erial #	
42 Parkwa	ay Lane					LON	G - 78	3°41′ 40″	MAD 83	1					
City Bradford					ip Municip	ality				Cou					
Phone	···		Fax	I PA II	6701 Lafaye	ue				1	Kean	min guadrangle man			
814-368-8	M80		814-368-8	480	Email rattler7	(A)	izon ne	<b>^</b>				5 min. quadrangle map Section			
		riate Submis		⊶oo ⊠Original W		@vei		Amended We	II Record		ns IXuII	- Cr			2
Well Type		·	☑ Oil ☐ Coml			RM F					200	Mellh	ore Conditi	onina:	· · · · · · · · · · · · · · · · · · ·
Well Orie		☑ Vertical	***************************************		***************************************	*************		viation Survey				- VOID	ore Conditi	oning.	
Drill Meth	od(s)	⊠Rota	ıry – Air '	☐ Rotary -			Cable		Other		· · · · · · · · · · · · · · · · · · ·				
Drilling Sta	ted 10/3/1	4	Surface I	Elev. 2176 ft.	***************************************	· · · · · · · · · · · · · · · · · · ·	GW E	Pepth 205 ft.							Ì
Drilling Cor	nplete 10/9	9/2014	True Ver	tical Depth 24	90 ft.		Depth	of DFGW205 ft.							
Date Well (	Completed		Total Me	asured Depth	2490 ft.		DFGV	V decided by: 0							
					(	EMI	ENT								
Cement re	eturned o	n surface cas	ing?	Yes 🗌 No	If No, provid	e dept	h to top	of cement and m	ethod use	ed to d	determi	ne:			
Cement re	eturned o	n coal protect	ive casing?	Yes 🗌 No	If No, provid	e dept	h to top	of cement and m	ethod use	d to	determi	ne:		⊠ NA	
Cement re	eturned o	n intermediate	e casing?	Yes 🗌 No	If No, provid	e dept	h to top	of cement and m	ethod use	d to	determi	ne:	,	⊠ NA	
Casing	Turn (Class of Company Sigrry				Amount of	Cem	ent (sk	s) (Lead/Tail/Total)	woc	2	Wt PPG	Yld /ft3 /sk		s Migra	
Conduct	or		/ sanded in	0°		1		1			0	What controls were use (additives/ hardware, Specif			used if any
Surface	urface Type 1 / Class A 55 °		**************************************		/	/ 87	14	I	15	1	_depth applica	ble).	1176 H 45 1		
Coal Pro	tective		1	0		1	has	1							
Intermed	liate		1	•	1 1						************************				
Producti	on		1	•	1 1										
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If additiona attach form						To	otal						<u> </u>		
			CASI	NG AND	TUBING	,									
Hole Size	Pipe Size	Wt. #/ft.	Grade Casing / Tubing Type	Thread / Weld – New/ Used	Amount in Weil (ft.)	co	R	Hardware Type			tring)		ralizers Depth	Da	te Run
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12.25	9 5/8	32.3#	2720	T - N	52					9 5	/8		52.4	10	/6/2014
8 3/4	6 5/8	23#	1620	T - N	455	-		Guide shoe a centralizers 5		6 5	/8		455	10	/6/2014
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If any ca	sing is v	velded, prov	ide the name(		<del></del>										
				PLUG	-BACK/W			ALTERAT	ION						
Fill Material & Plugs					Fro	De	pth To	Dat	te		Size		asing & Tu		Loft
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8000-FM-OOGM0004a Rev. 8/2012

3000-FM-OOGM0004a Rev. 8/2012	LOG OF FORMATIONS Well API#: 37- <u>083-56585-</u> -											
(If you will	l need more sp	ace than this pa	age, piease pho	tocopy the biai	nk form before filling	<u>к in.)</u>						
Formation Name	Ton	Bottom	Gas at	Oil at	Water at							
or Lithology	Top (feet)	(feet)	(feet)	(feet)	(fresh / brine; ft.)	Source of Data						
Dirt/Sand stone	0	30		, , , , , , , , , , , , , , , , , , ,		driller's log						
shale	30	300			F 205							
shale/red rock	300	330										
red rock	330	450	98	10 mm m m m m m m m m m m m m m m m m m								
shale	450	540	******									
shale/red rock	540	570				11 12 12 12 12 12 12 12 12 12 12 12 12 1						
red rock	570	660	a vertaine									
shale	660	1050										
shale/red rock	1050	1080	-									
shale	1080	1380										
shale/Bradford Second sand	1380	1410			***							
shale	1410	1860										
shale/Bradford Third sand	1860	1890										
Bradford Third sand	1890	1920										
Bradford Third sand/shale/stray	1920	1950										
shale/Bradford First sand	1950	2010 2040										
shale/Lewis Run sand	2010	2490										
shale	2040	2490										
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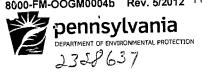
If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name	Name	Name	<sub>Name</sub>
Bradford Pipe	Howard Drilling, LLC		Keystone Wireline
Address	Address	Address	Address
230 Chestnut St.	P O BOX N		344 High St
City – State – Zip	City – State – Zip	City - State - Zip	City – State – Zip
BRADFORD Pa 16701	MT JEWETT PA 16740		BRADFORD Pa 16701
Phone	Phone	Phone	Phone
814 362-6501	814-778-5820		-8143620230

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller	Well Operator's S	ignature	DEP USE ONLY
Name Howard Drilling, LLC	Rig	Co and	Reviewed by:
Address P O Box N	7745	- PARCINERY	1 Cuny 10-30-14
City – State- Zip MT JEWETT PA 16740	Printed Name / Title: Jay J. Pecora / Partner	Date: 10/26/2014	Comments:
Phone 814-778-5820			



## COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

DEP USE ONLY									
Site ID		Primary Facility ID							
Client ID		Sub Facility	ld						

#### **Completion Report**

				Well Inform	nation					107-11-4	
Well Operator			P ID#	Well API#				Well Farm Name Evans		Well #	
Pecora Enterprises Address		223	121	37 - 083-56585- LAT - 41° 5		)"	NAD	Project Number		Serial	#
42 Parkway Lane				LONG - 78° 4	11' 40.	37″	83	0			
City Bradford	State PA		Zip Code 16701	Municipality Lafayette				County McKean			0 1:
Phone	Fax 814-368-8480			Email ratler7@verizor	n.nett			USGS 7.5 min. quad Lewis Run	rangle map		Section 2
314-368-8480		<b>⋈</b>	Original Co	ompletion Repor		Amen	ded Con	pletion Report			
Check the appropriate submi	ssion:	_ <u> </u>	STIN	NULATION E				<u> </u>			
List Water Ma	nagement P	lan S		IIO EATION I	7.0.	Water M	anagem	ent Plan ID	Volume	(Gall	ons)
1. N/A							******				
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6.				DEP Biologis Review/Date		al Gallor	ns of Wa	ter Used	Water	R	ecycled
		Oth	er Base F	luid(s) Used	L				Quanti	y and	/UOM
1.			ici Baco .	(0)					1		
2.						***************************************	***************************************		1		
2.						Tota	al Quar	ntity all Fluid(s)	ī		
	STIM	ALII.	ATION/F	PRODUCTIO	N INF	ORMA	TION (	WELL)			
Radioactive tracers used?		24 Hr.		(MCF/Day) / Date		24	Hr. Shut- E Don't o	in Pressure:/ Date		npletion	
Specify Tracer  Well Products: ☐ Gas Btu			il API G		ndensat	API G		Other	□GO	R	
VVeil 1 Toddets.				LL SERVICE	COM	PANIE	<u> </u>				
n-ftian Company			Frac Co					Plug Drill Out/Flo	ow Back	Comp	any
Perforation Company Name			Name					Name	·		
S W Neilly Corp, AIR NOTC Address		ny	Address	Drilling, LLC				Address		*************	
350 Minard Run PO BOx 414 City – State- Zip	•		P O BOX	te – Zip				City - State - Zip			
Bradford, PA 16701 Phone		***************************************	Mt Jewe Phone	tt, PA 16740				Phone	**************************************	narramanian etteri berse	
			914 778	-5820						41-1-	Cample
I do hereby certify to the tion Report is true and	e best of m	ny kr	nowledge ware tha	e, information at there are s	n and l ianifica	pelief th ant pena	at the l alties fo	intormation cont or submitting fal	ainea on se inforn	tnıs natior	compie , includ
ing the possibility of fine	e and impri	soni	ment.								
Well Operator's Signa								DEP USE ONL	Υ		- 1
1		DA	nem	ier	Revie	ved by:	- Cu	D 0. I	12-15	Date	: /
Printed Name /Title: Jay J. Pecora / Partner		e de la constante de la consta	decrease - comments	Date: 12/5/2014	Comn	nents:	Ca		<u> </u>		
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DEC 18 284

ENVIRONMENTAL PROTECTION WARREN DISTRICT OFFICE

DEC 0 9 2014

#### Well API# 37-<u>083</u>-<u>56585</u>-\_\_-

-	PERFORATION RECORD											
Stage		Stage Perforated From	Stage Perforated To TMD Ft.		Formation(a)							
No.	Perforation Date	Stage Perforated From TMD Ft.	TMD Ft.	# of Perforations/Stage	Formation(s)  Bradford First sand notched							
1	11/18/2014	1,302	1,302	1	Bradford First sand notched							
2	11/14/2014	1,305	1,305	1	Bradford First sand notched							
3	11/14/2014	1,309	1,309	1	Bradford First sand notched							
4	11/14/2014	1,312	1,312	1	Sugar Run sand notched							
5	11/14/2014	1,404	1,404	1	Bradford Third sand notched							
6	11/14/2014	1,884	1,884	1	Bradford Third sand notched							
7	11/14/2014	1,941	1,941	1	Bradiora Tilia Sana notonea							
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#### Well API# 37-083-56585-\_\_-

#### STIMULATION FLUID ADDITVES

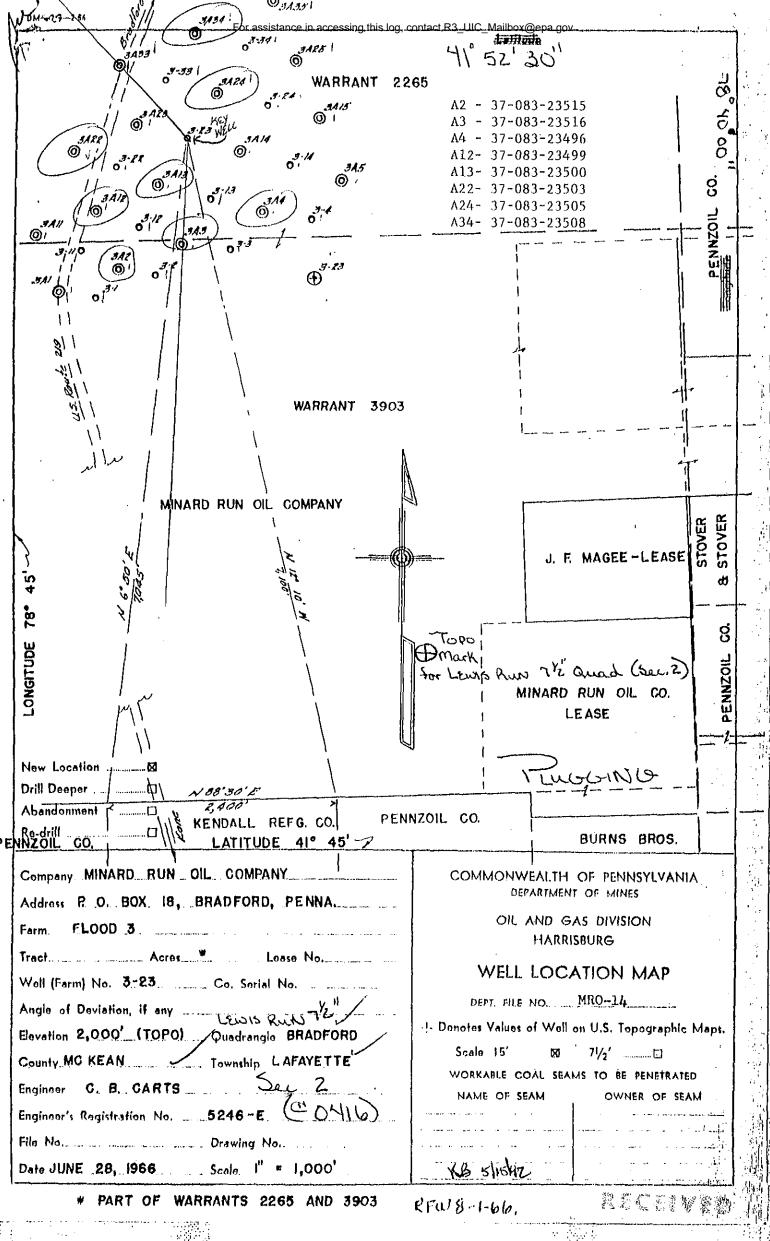
Note: Information designated as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on the "Confidential Stimulation Fluid Additives" form.

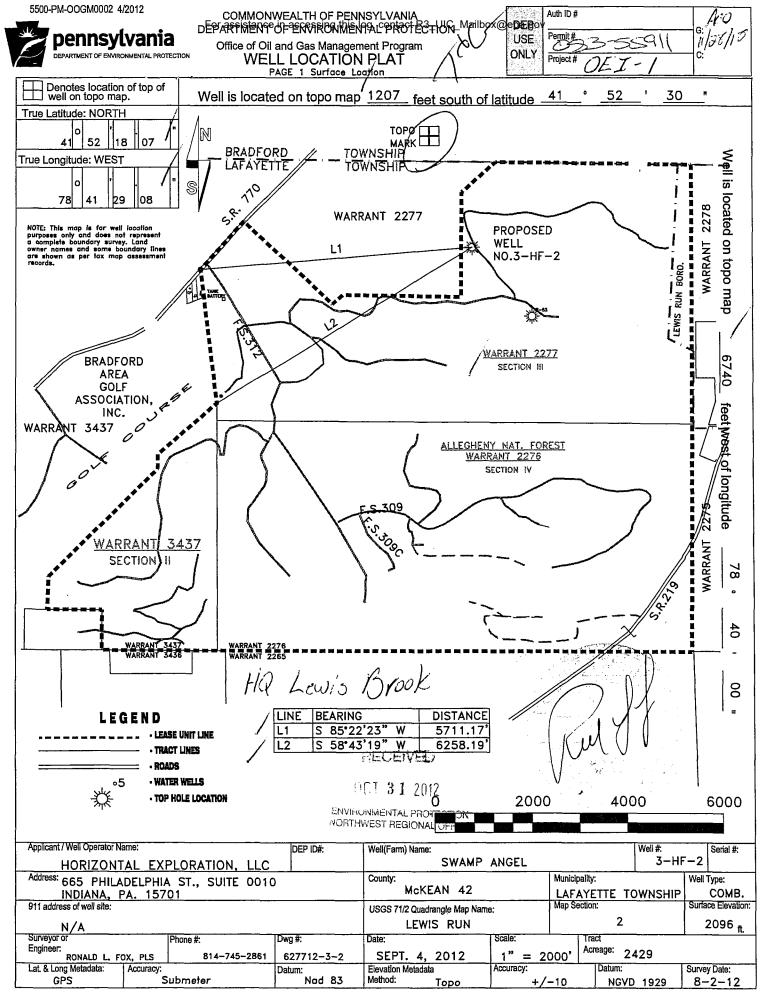
Trade Name	Supplier	Purpose	Ingredients	CAS # of Chemical Component	Max. Compo- nent % Mass in Additive	Chemical Component % Mass used in Total Base Fluid (Pg 1)	Comment
DCF-495	WST, Inc.	Clay Stabilizer	Nonhazardous Components	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Nonionic Surfactants	Proprietary	0%		
DCF-495	WST, Inc.	Clay Stabilizer	Anionic Sufractants	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Water	7732-18-5		0.00	15 gallons used
DCF-223	WST, Inc.	Anionic Friction Reducer	Distillates (petroleum) Hydrotreated light	64742-47-8			7 Gallons used
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Well API# 37-<u>083-56585-\_\_-</u>-\_\_

				LATION INFORM			
Con	nplete a separa	te record for each s	stimulation stage. (PI	ease insert additional li	nes for additional stage	s or additional pages as a	pplicable).
Stg #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)
1	11/19/20 14	20	1,300	2,175	925	20/40	75 sacks
2	11/19/20 14	20	1,550	1,500	1,390	20/40	75 sacks
3	11/19/20 14	20	1,550	1,375	919	20/40	75 sacks
4	11/19/20 14	20	1,800	1,425	1,230	20/40	75 sacks
5	11/19/20 14	20	1,650	1,850	1,180	20/40	80 sacks
6	11/19/20 14	20	1,400	2,350	1,202	20/40	50 sacks
7	11/19/20	20	2,200	3,425	1,540	20/40	100 sacks
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#### **Location Plats**





#### For assistance in act as in this DC Add to the TM ailbox @epa.gov

Page 2 Notifications

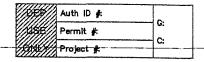
Applicant / Well Operator Name:	DEP ID#	t:	Well(Farm) Name:		Well #:	T	Serial #:
HORIZONTAL EXPLORATION, LLC			SWAMP ANGEL		3-HF-	-2	Anticipated Total
Surface Landowner / Lessor		Angle &	Course of Deviation (Drilling):	Anticipated To Depth Feet (T	rue Vertical VD):		Anticipated Total Measured Depth Feet (TMD):
ALLEGHENY NATIONAL FOREST			VERTICAL		2300		2300
Target Formation(s):		Deepest	Formation to be penetrated:	Number of		Total fo	ootage to be
3RD BRADFORD, LEWIS RUN			LEWIS RUN	laterals:		drilled	all laterals:
	34.3 September	300,300		1			0
Surface Owner/Water Purveyor w/Water Supply within 1000/3000'			Latitude Longitude of	water Supply			
NONE			NON	JF			
NONE			1101	<del></del>			
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Municipality, where the well will be drilled.		<b>)</b>	Municipality: where	the well will be	drilled.		
adjacent to the well, or within 3000 feet			adjacent to the wel				
PRADEORD TWO MOKEAN COLINTY							case sa
BRADFORD TWP., McKEAN COUNTY		<del> </del>					
LAFAYETTE TWP., McKEAN COUNTY		ļ					
KEATING TWP., McKEAN COUNTY							
HAMLIN TWP., McKEAN COUNTY			Coal re	lated parties			
LEWIS RUN BOROUGH McKEAN COUNTY			NO WOR	KABLE C	OAL		
HAMILTON TWP., McKEAN COUNTY							
		<b> </b>					
WETMORE TWP., McKEAN COUNTY							
CORYDON TWP., McKEAN COUNTY	<u>-</u>	-					
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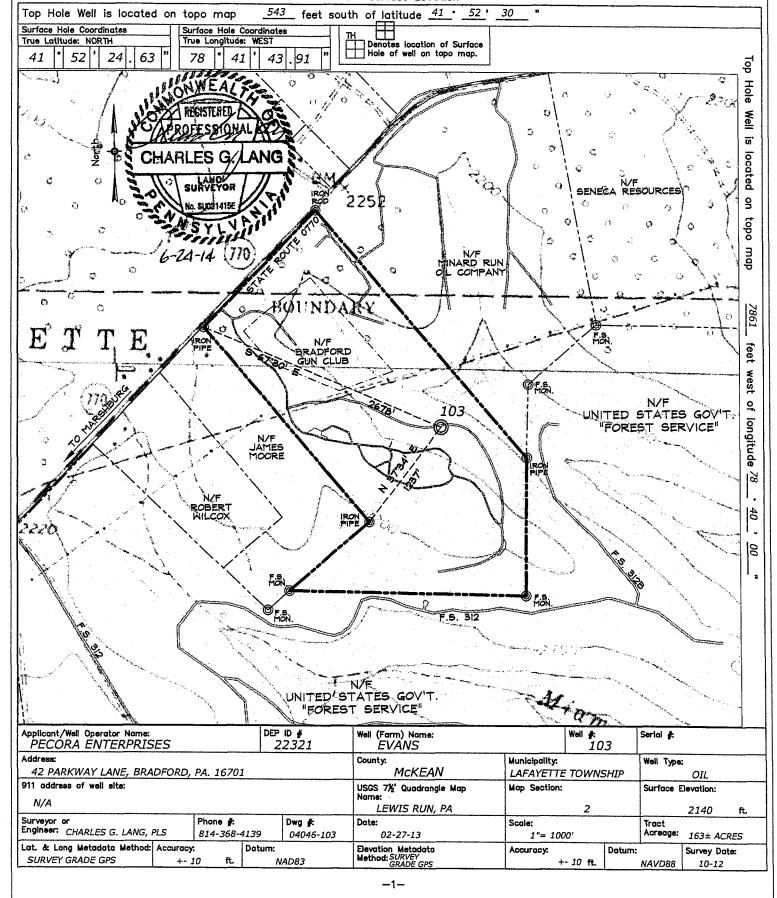
pennsylvania

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DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

#### WELL LOCATION PLAT





Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

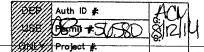
PECORA ENTERPRISES	DEP ID# 22321		Well (Farm) Name EVANS	Well # 103	Serial #
Surface Landowner / Lessor:		Angli	& Course of Deviation (Drilling		ical Anticipated Total
BRADFORD GUN CLUB Target Formation(s):			NONE	Depth Feet (TVD): 2140	Measured Depti Feet (TMD): 2140
BRADFORD GROUP SANDSTONES		Deep	est Formation to be penetrated: LEWIS RUN	Number of T laterals: 0 d	otal footage to be rilled all laterals: 0
Surface Owner/Water Purveyor w/Water Supply within	1000'/3000'			of Water Supply	
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Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet			Municipality: where the adjacent to the well,	e well will be drilled or within 3000 feet	
LAFAYETTE TOWNSHIP					
LEWIS RUN BOROUGH					
KEATING TOWNSHIP					
HAMLIN TOWNSHIP			Coal relate	l parties	
WETMORE TOWNSHIP					
HAMILTON TOWNSHIP					
CORYDON TOWNSHIP					
BRADFORD TOWNSHIP					

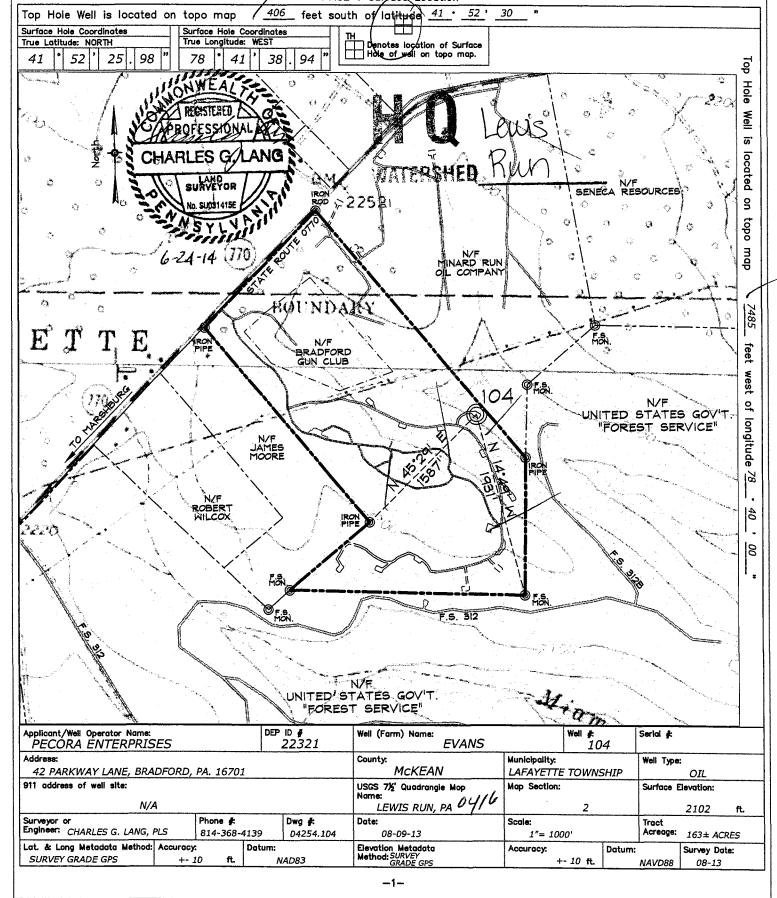
pennsylvania

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DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

#### WELL LOCATION PLAT





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DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name PECORA ENTERPRISES	DEP ID# 22321	Well (Farm) Name EVANS	Well # 104	Serial #
Surface Landowner / Lessor: BRADFORD GUN CLUB	<del>'</del>	Angle & Course of Deviation (Drilling): NONE	Anticipated True Vertic Depth Feet (TVD): 2410 2250	Measured Depth Feet (TMD):
Target Formation(s): BRADFORD GROUP SANDSTONES		Deepest Formation to be penetrated: LEWIS RUN	Number of To	otal footage to be rilled all laterals: 0
Surface Owner/Water Purveyor w/Water Supply within 10	000'/3000'	Latitude Longitude	of Water Supply	
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Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet		Municipality: where the adjacent to the well, o	well will be drilled	,
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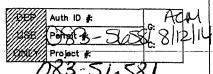
pennsylvania

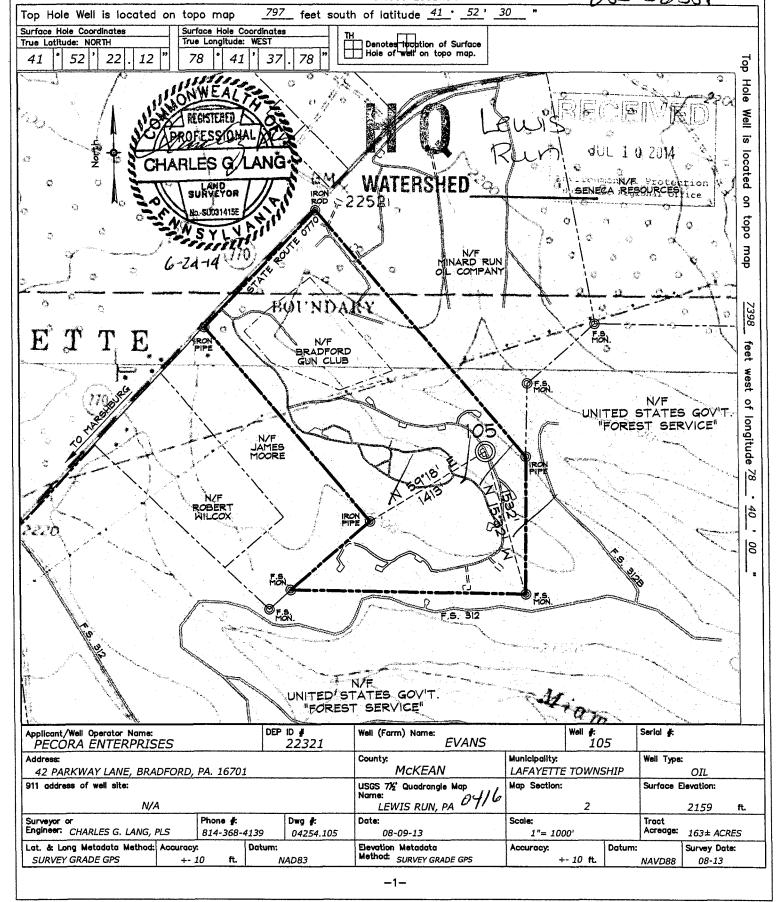
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DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF OIL AND GAS MANAGEMENT

#### WELL LOCATION PLAT





Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

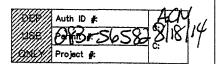
Surface and owner / Leason: BRADFORD GUN CLUB READFORD GROUP SANDSTONES  Surface Owner/Water Purveyor wfWater Supply within 1000/3000*  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LAFAYETTE TOWNSHIP  LEWIS RUN SCRUN  Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LAFAYETTE TOWNSHIP  LEWIS RUN BOROUGH  KEATING TOWNSHIP  HAMILITON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  BRADFORD TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP	Applicant / Well Operator Name PECORA ENTERPRISES	DEP ID# 22321	Well (Farm) Name EVANS	Well # 105	Serial #
BRADFORD GUN CLUB  NONE  Despet Formation to be penetrated.  LEWIS RUN  Latitude Longitude of Water Supply  Formation to be penetrated.  LEWIS RUN  Latitude Longitude of Water Supply  Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LEAFAYETTE TOWNSHIP  LEWIS RUN BROUGH  Municipality: where the well, or within 3000 feet  LEAFAYETTE TOWNSHIP  HAMILITON TOWNSHIP  CORYDON TOWNSHIP	Surface Landowner / Lessor:				al Anticipated Tota
BRADFORD GROUP SANDSTONES  Lettitude Longitude of Water Supply  Lutitude Longitude of Water Supply  Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LEAFAYETTE TOWNSHIP  LEWIS RUN BOROUGH  KEATING TOWNSHIP  HAMLIN TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP			NONE	Depth Feet (TVD):	Measured Depth Feet (TMD):
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Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LAFAYETTE TOWNSHIP  LEWIS RUN BOROUGH  KEATING TOWNSHIP  HAMLIN TOWNSHIP  WETMORE TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP					
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KEATING TOWNSHIP  HAMLIN TOWNSHIP  WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	LAFAYETTE TOWNSHIP				
HAMLIN TOWNSHIP  WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	LEWIS RUN BOROUGH				
WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	KEATING TOWNSHIP				
WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	HAMLIN TOWNSHIP		Coal related	l parties	
CORYDON TOWNSHIP	WETMORE TOWNSHIP				
	HAMILTON TOWNSHIP				
BRADFORD TOWNSHIP /	CORYDON TOWNSHIP				
	BRADFORD TOWNSHIP	· · · · · · · · · · · · · · · · · · ·			

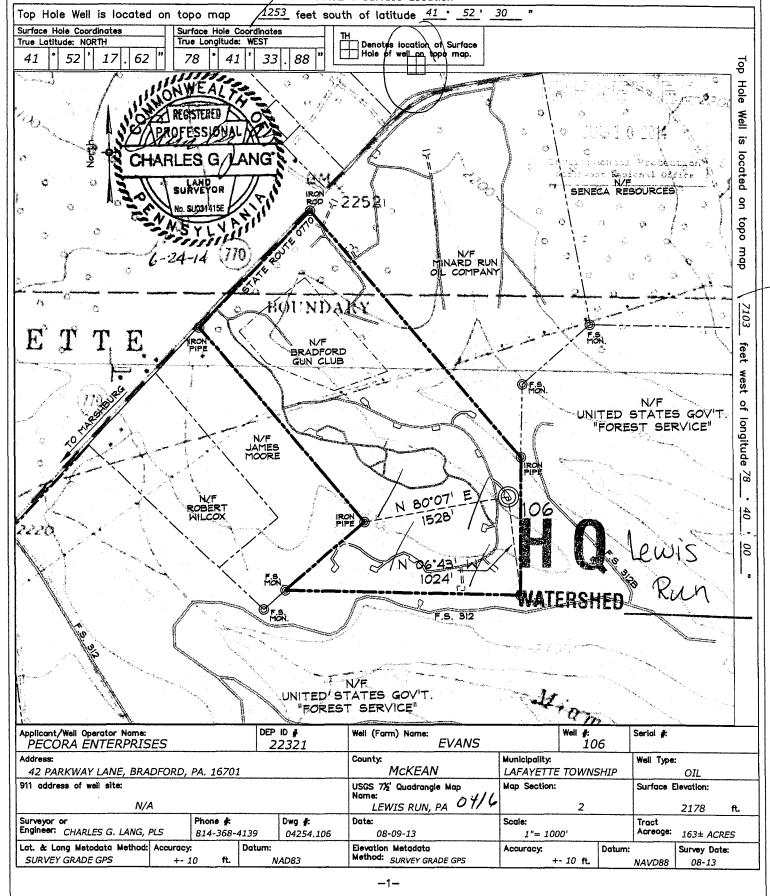
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DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

#### WELL LOCATION PLAT





#### Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

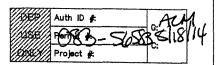
PECORA ENTERPRISES	DEP ID# 22321	Well (Farm) Name  / EVANS	Well # 106	Serial #
Surface Landowner / Lessor:		Angle & Course of Deviation (Drilling):	Anticipated True Vertic	al Anticipated Total
BRADFORD GUN CLUB	/	NONE	Depth Feet (TVD): 2186-2250	Measured Depth Feet (TMD):
Target Formation(s):		Deepest Formation to be penetrated:	Number of To	tal footage to be
BRADFORD GROUP SANDSTONES		LEWIS RUN	laterals: 0 dri	illed all laterals: 0
Surface Owner/Water Purveyor w/Water Supply within	1000'/3000'	Latitude Longitude	of Water Supply	
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Municipality: where the well will be drilled,		Municipality: where the		
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LAFAYETTE TOWNSHIP				
LEWIS RUN BOROUGH				
KEATING TOWNSHIP				
HAMLIN TOWNSHIP		Coal related	d parties	
WETMORE TOWNSHIP			·	· · · · · · · · · · · · · · · · · · ·
HAMILTON TOWNSHIP		VI		
CORYDON TOWNSHIP ,				
BRADFORD TOWNSHIP			<del></del>	

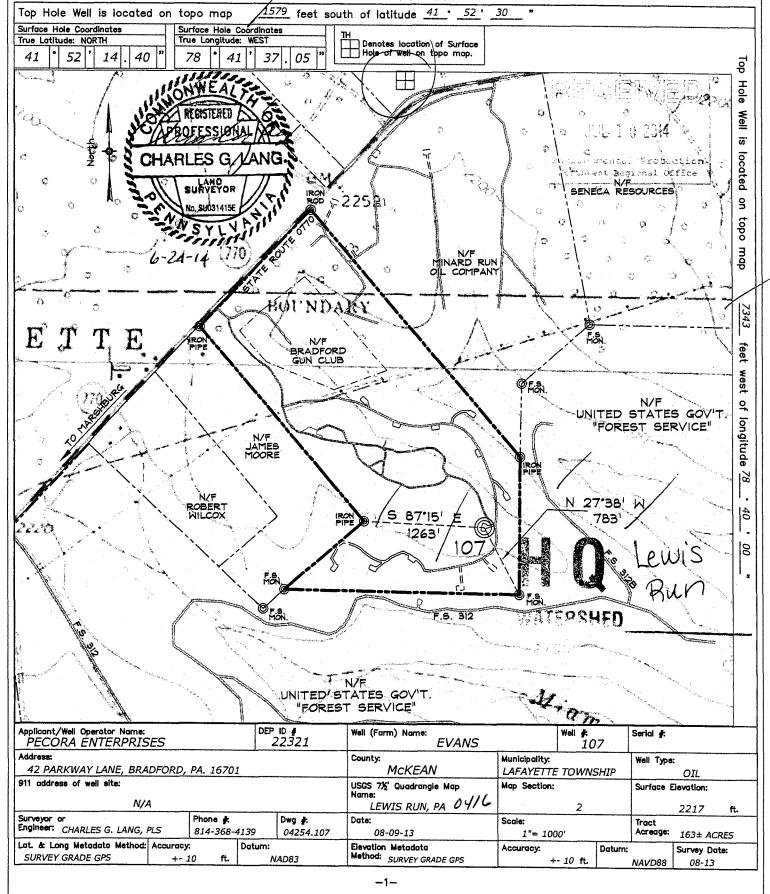
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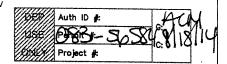
Applicant / Well Operator Name PECORA ENTERPRISES	DEP ID# 22321	Well (Farm) Name EVANS	Well # 107	Serial #
Surface Landowner / Lessor:	L	Angle & Course of Deviation (Drilling):	Anticipated True Vertic	al Anticipated Total
BRADFORD GUN CLUB		NONE	Depth Feet (TVD): 2225	Measured Depth Feet (TMD): 2225 225
Target Formation(s): BRADFORD GROUP SANDSTONES		Deepest Formation to be penetrated: LEWIS RUN	Number of To	tal footage to be lied all laterals; 0
Surface Owner/Water Purveyor w/Water Supply within 10	000'/3000'	Latitude Longitude	of Water Supply	
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Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet		Municipality: where the adjacent to the well, o	well will be drilled, or within 3000 feet	
LAFAYETTE TOWNSHIP				
LEWIS RUN BOROUGH				
KEATING TOWNSHIP				
HAMLIN TOWNSHIP		Coal related	parties	
WETMORE TOWNSHIP /				
HAMILTON TOWNSHIP /				
CORYDON TOWNSHIP //				
BRADFORD TOWNSHIP /				

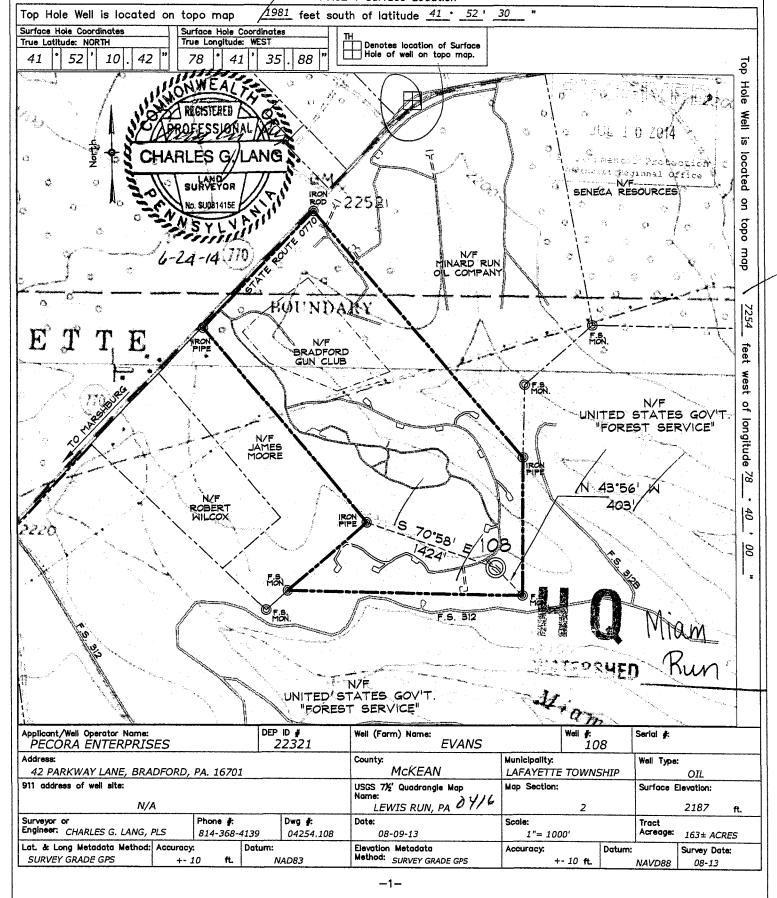
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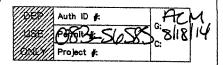
BRADFORD GUN CLUB    NONE	PECORA ENTERPRISES	DEP ID# 22321		Well (Farm) Name EVANS	Well # 108	Serial #
BRADFORD GUN CLUB  NONE  Page Formation (s):  BRADFORD GROUP SANDSTONES  BRADFORD GROUP SANDSTONES  Burface Owner/Water Purveyor w/Water Supply within 1000/3000'  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LEAFAYETTE TOWNSHIP  LEWIS RUN BOROUGH  KEATING TOWNSHIP  HAMILITON TOWNSHIP  CORYDON TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP	Surface Landowner / Lessor:			Angle & Course of Deviation (Drilling):	Anticipated True Vertic	al Anticipated Tota
BRADFORD GROUP SANDSTONES  Surface Owner/Water Purveyor w/Water Supply within 1000/3000*  Lafitude Longitude of Water Supply  Lafitude Longitude of Water Supply  Lafitude Longitude of Water Supply  Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LEAFAYETTE TOWNSHIP  LEWIS RUN BOROUGH  KEATING TOWNSHIP  Coal related parties  Corydon TownsHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP				J	Depth Feet (TVD):	Measured Depth Feet (TMD):
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Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LAFAYETTE TOWNSHIP  LEWIS RUN BOROUGH  KEATING TOWNSHIP  HAMLIN TOWNSHIP  WETMORE TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  Coal related parties						<del></del>
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HAMLIN TOWNSHIP  WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	LEWIS RUN BOROUGH					
WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	KEATING TOWNSHIP					
WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	HAMLIN TOWNSHIP			Coal related	parties	
CORYDON TOWNSHIP	WETMORE TOWNSHIP				•	
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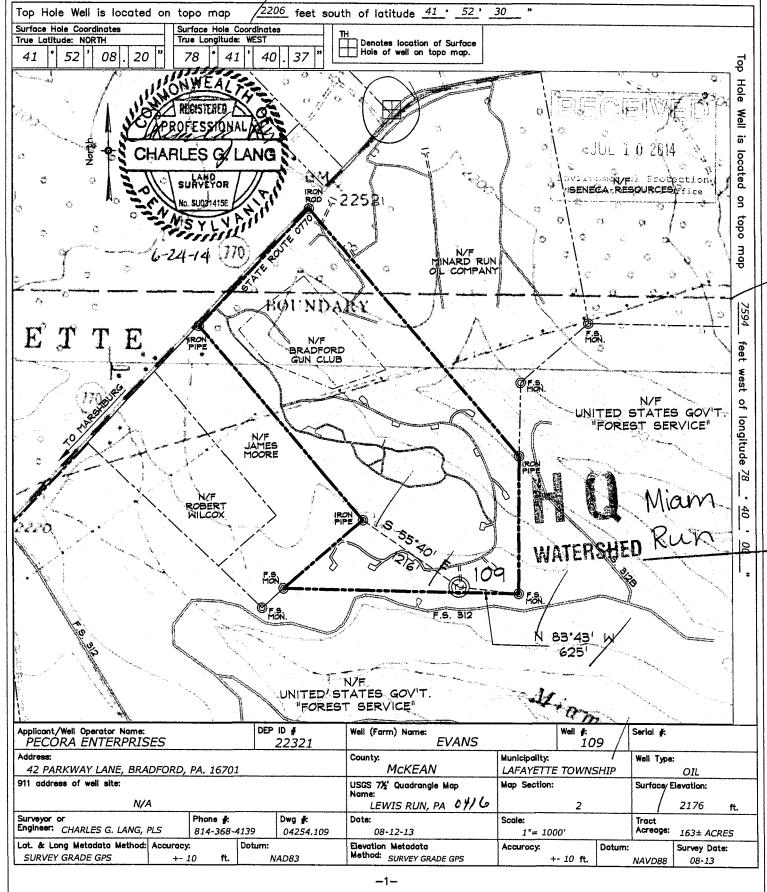
pennsylvania

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DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

#### WELL LOCATION PLAT





#### Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Surface Landowner / Lesser  BRADFORD GUN CLUB  Tray Formation to be percented.  NONE  Surface Owner/Water Purveyor w/Wester Supply within 1000/3000'  Lettinde Longitude of Water Supply  Lettinde Longitude of Water Supply  Lettinde Longitude of Water Supply  Lettinde Longitude of Water Supply  Lettinde Longitude of Water Supply  Municipality: where the wall will be drilled, adjacent to the well, or within 3000 feet  Letting Township  Letting Township  Letting Township  Letting Township  Letting Township  Letting Township  Coal related parties  Professor  Angle & Course of Doviction (Online): Professor  NONE  NONE  NONE  NONE  Professor  NONE  Professor  NONE  Professor  Prof	Applicant / Well Operator Name PECORA ENTERPRISES	DEP ID# 22321	Well (Farm) Name EVANS	Well # 109	Serial #
BRADFORD GUN CLUB  NONE  Poper Formation(s)  Page Formation to be prentrated.  LEWIS RUN Begins  Page Formation to be prentrated.  LEWIS RUN Begins  Page Formation to be prentrated.  Page Formation to be prentrated.  Page Formation to be prontrated.  LEWIS RUN Begins  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontrated.  Page Formation to be prontly to the page Formation to the page Formation to the page Formation to the page Formation to the page Formation to the page Formation to the page Formation to the page Formation to the pag		<u>L </u>		1	I Matiniana Tatal
BRADFORD GROUP SANDSTONES  LetVIS RUN  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Latitude Longitude of Water Supply  Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LAFAYETTE TOWNSHIP  LEWIS RUN BOROUGH  KEATING TOWNSHIP  HAMILITON TOWNSHIP  COAI related parties  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP				Depth Feet (TVD):	Measured Depth Feet (TMD):
Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LAFAYETTE TOWNSHIP  KEATING TOWNSHIP  HAMLIN TOWNSHIP  WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP					al footage to be
Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet  LAFAYETTE TOWNSHIP  LEWIS RUN BOROUGH  KEATING TOWNSHIP  HAMLIN TOWNSHIP  WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP	Surface Owner/Water Purveyor w/Water Supply within 10	000'/3000'	Latitude Longitude	of Water Supply	
adjacent to the well, or within 3000 feet  LAFAYETTE TOWNSHIP  LEWIS RUN BOROUGH  KEATING TOWNSHIP  HAMLIN TOWNSHIP  WETMORE TOWNSHIP  CORYDON TOWNSHIP  CORYDON TOWNSHIP  Adjacent to the well, or within 3000 feet  adjacent to the well, or within 3000 feet  adjacent to the well, or within 3000 feet  adjacent to the well, or within 3000 feet  adjacent to the well, or within 3000 feet  adjacent to the well, or within 3000 feet				or trace ouppry	
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LEWIS RUN BOROUGH  KEATING TOWNSHIP  HAMLIN TOWNSHIP  WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	adjacent to the well, or within 3000 feet		adjacent to the well,	or within 3000 feet	
KEATING TOWNSHIP  HAMILIN TOWNSHIP  WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	LAFAYETTE TOWNSHIP				
HAMLIN TOWNSHIP  WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	LEWIS RUN BOROUGH				
WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	KEATING TOWNSHIP				
WETMORE TOWNSHIP  HAMILTON TOWNSHIP  CORYDON TOWNSHIP	HAMLIN TOWNSHIP		Coal related	l parties	
CORYDON TOWNSHIP	WETMORE TOWNSHIP				
	HAMILTON TOWNSHIP				
BRADFORD TOWNSHIP	CORYDON TOWNSHIP				
	BRADFORD TOWNSHIP				

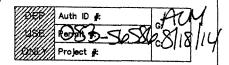
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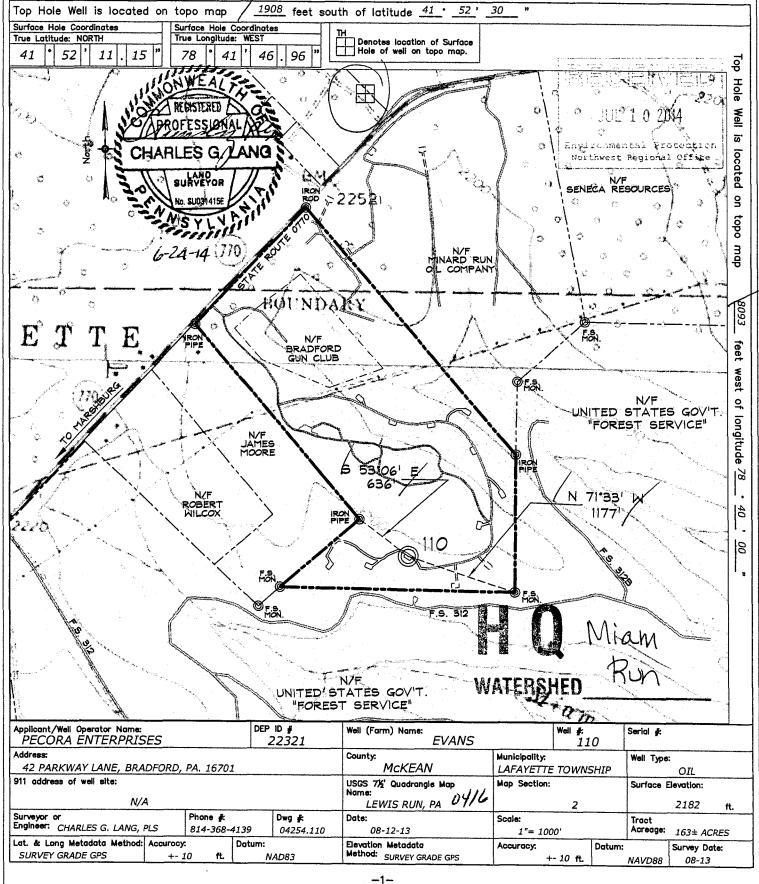
pennsylvania

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DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

#### WELL LOCATION PLAT





Page 2 Notifications
DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is **1-866-255-5158**.

Applicant / Well Operator Name PECORA ENTERPRISES	DEP ID# 22321	Well (Farm) Name EVANS	Well # 110	Serial #
Surface Landowner / Lessor:		Angle & Course of Deviation (Drilling):	Anticipated True Vertical	Anticipated Total
BRADFORD GUN CLUB		NONE	Depth Feet (TVD): <del>2190</del> 2250	Anticipated Total Measured Depth Feet (TMD):
Target Formation(s): BRADFORD GROUP SANDSTONES			Number of Tota drille	footage to be d all laterals: 0
Surface Owner/Water Purveyor w/Water Supply within	1000'/3000'	Latitude Longitude	of Water Supply	
		Laurado Lorigitade	or water Suppry	
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			<del></del>	
			· · · · · · · · · · · · · · · · · · ·	
	······································			
	<del></del>			
Municipality: where the well will be drilled,				
adjacent to the well, or within 3000 feet		Municipality: where the adjacent to the well, o	well will be drilled, r within 3000 feet	]
LAFAYETTE TOWNSHIP				
LEWIS RUN BOROUGH				
KEATING TOWNSHIP				
HAMLIN TOWNSHIP		Coal related	parties	
WETMORE TOWNSHIP				
HAMILTON TOWNSHIP	<del></del>			
CORYDON TOWNSHIP	····			
BRADFORD TOWNSHIP				

### **Plugging Certificates**

# COMMONWEALTH OF PENNSYLVANIA For DEPARTMENT OF TENVIRONMENTAL HESOGRESV BUREAU OF OIL AND GAS MANAGEMENT

DER Off	ice Use Only
Code	
Oli & Gas in:	Spector My
Date Approv	ed 27/1/58
INV	EXA

#### CERTIFICATE OF WELL PLUGGING

	Inta	ke		avis	Rus
Coal Operator Owner Lessee		d Run Oil C	Type of Wellompany	itt	<u></u>
Address		10 =	Operator Na		
	P.O. 1	Box 18, Bra		A 16701	
Coal Operator Owner Lessee			Address		
Address	<del></del>	<u> </u>			
Coal Operator Owner Lessae	Lafa	<u>yette</u>	Municipalit		
	McKea	ın			
Address	<del></del>		County		<del></del>
COMPLETE ABOVE SECTION IF APPLICABLE		83-23515		MRO-14	
		gistration Numbe			Project Number
	Floo	d-3 Warrant	2265 Farm Name		<del></del>
	· 3A2		Callit Mallit	,	
	Well Num	ber	<del></del>		Serial Number
We, the undersigned representatives of the Well Opwell, and that the work was started	19.	_96_, and the	t the well	was plugg	ged as follows:
			Cá	asing and	Tubing
FILLING MATERIAL AND PLUGS	FROM	TO	SIZE	PULLED	LEFT
Total depth Packer  Packer  Total depth	<del></del>	2011	8" 6½"	<del></del>	41'
Cement on packer	1981	1981 1950	13"	1296'	401' 685'
Rag Packer		1238			
Cement on packer	1238	1138			
Plug in 2" Larkin packer	1238	1138	D	( 0 - 1 0 -	
Cement on packer NORTHWEST REGIONAL OFFICE	874	874	Depti	n of Coal Sea	m(s), If Any
Plug in 2"	874	774	<del> </del>		
Cement	471	371	<del> </del>	<del></del>	
Gravel & dirt	371	25			
Cement	- 125	0		Description o	f Manument
HRS BECFIA					<del></del>
9.1.40	007		2"	pipe mar	cker
NO CONTRACTOR OF THE PROPERTY	98	0.06	ļ		
PA GEOLOGICAL S	Division	<del></del>	3		
certify that the work of plugging and filling said well	was complet	ed on the _2	5th day of	Jan.	, 19 <u>_96</u>
and that the above information is true and accurate.	**				
Minard Run Oil Company 2-16-96	Ew.	Chrysh			Luck
	ate E.W.	Aharrah (C	ualified Partic	<sub>ipant)</sub> Supe	rintendent
	71.	1	. i	$P_{\cdot \cdot \cdot}$	i i. t
	<u>~-/. W</u>	<u>. Jülêneye</u> Fesenmyer (C	Unlified Partic	ipantl Prog	dent
	F.W.	resenmyer (		Paricia L L G 2	TOFILE

One copy of this certificate to be mailed to each coal operator, lessee, or owner, if any, and one to the Bureau of Oil and Gas Management, upon completion of plugging.

Conditions: Yes [ (See Attached) No [

# For assistance in **GOMMONWEALTH OF PENNSYLVARIA** a.gov DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT

### Proposed Alternate Method of Casing, Plugging, Venting or Equipping

Minard Run Oil Company	37-083-23515
Well Operator	Permit/Registration Number
P.O. Box 18	Flood-3 Warrant 2265
Address	Farm Name
Bradford, PA 16701	3A-2 Project No. MRO-14
	Well Number Serial Number
814-362-3531	Lafayette Twp.
Telephone Number	Municipality
	МсКевп
	County
Describe in reasonable detail using writt deviate from standard method, 2. Ways in	en description and diagram: 1. Ways in which proposed method which proposed method will provide equivalent or greater protections of the Oil and Gos Act and regulations adopted pursuant these
reason being the lack o	igs are not placed above formations laying d. sand and the Bradford lst. sand. One of information on these sands. Also there the area, plugged long ago, where these plated by cement.
Bradford 1st. sand and Bradford 3rd. sand. The	t. cement plug above the Bradford lst. sand. event upward movement of fluids from the other formations laying between it and the lese formations have been open in the s allowing a mixture of fluids and pressure. tion of the hole will prevent any migration/ [] is on back.)  AUG 31 1998
APPROVED: (Bureau Representative)  Date:	PA GEOLOGICAL SURVEY Oil & Gas Geology Division  (Well Owner or Operator)  Erederick W. Fesenmyer, President  (Print or Type Name and Title)
Conditions: Yes (See Attached) No	
APPROVED: (Coal Owner or Operator)	Attach proof of Coal Operator Notification
Date:	3%A

# For assistance COMMONWEALTHTOF PENNSYLVANIA 90V DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT

Acorrec	TER FARM
NAME	9/6/96 (BM)

#### CERTIFICATE OF WELL PLUGGING

DER Office Use Only						
Code						
Oil & Gas Inspector ZPL						
Date Approved 24/Jul94						
INV	EXA					

	Intake	2					
Coal Operator Owner Lessee			Type of We	<del></del>			
Coal Derator Downer Lessee	Minard Run Oil Company						
Address	Operator Name P.O. Box 18, Bradford, PA 16701						
Coal Operator Owner Lessee			Address				
Coal Coporator in Owner in Leaser				·			
Address	Lafay	ette Twp.	1. 1	2 199	6		
Coal Operator Owner Lessee	McKea	n	Municipalit	_	FOFFICE		
Addrass			County-	es stations	101		
COMPLETE ABOVE SECTION IF APPLICABLE	37-08	3-23516	1417/7	ACIN D. M	14		
LEWIS RUN	Permit/Reg	gistration Number		F	Project Number		
206'5 410571	Flood	1-3 WACCAS					
7000' W 780 (5)			Farm Name	a			
7000' W 78040. (5) *Elevation: 2040'	- 3A-3 Well Numl	h			Serial Number		
We, the undersigned representatives of the Well Op	erator certify	that we parti-	cipated in t	the plugging o	of the above		
well, and that the work was started	<u>7.                                    </u>	$\frac{95}{}$ , and tha	t the well	was plugged	l as follows:		
			C	asing and Tul	bing		
CHARLO MATERIAL AND DILLOG	FROM	T0	SIZE	_	LEFT		
FILLING MATERIAL AND PLUGS	FROM	TO 2011	8"	PULLED	41'		
Total depth		1981	61"		401		
Packer Cement on packer	1981	1950	1 1 1 1 1 1	1200'	781		
Gel & cement	1375	1275					
Cement plug 1½"		1390					
Cement plug	1390	1290					
Cement	448	348	Dept	h of Coal Seam(s	s), If Any		
Gravel & dirt	348	10					
Cement	10	0					
and the second of the second o							
1 ( 1 ) ( 1 ) ( 1 ) ( 1 ) ( 1 ) ( 1 ) ( 1 ) ( 1 ) ( 1 ) ( 1 )							
	1.50 m	+CF11/FO	·	Description of M	lonument		
Marin Control							
P. 17 (2 m. m.)	AH	1 2 1996	2" pi	ipe marker			
taguroを用する。 According							
पुरु वह नामहोत्सी होई से प्रियमिक प्राप्त करने	ZINGE, CAR	sara nessu	CES	·			
	#Qairiyi.	T RESIDNAL Q	eics				
I certify that the work of plugging and filling said well and that the above information is true and accurate.  Minard Run Oil CompanySFP 1 0 1996 1/19/9  (Well Operator)	was complete	ed on the	<u>Uth</u> day of	La	_, 19 <u>95</u>		
(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ate E.W. A	harrah (O	ualified Partic	ipant) Superi	ntenaent		
PA GEOLOGICAL SURVEY Oil & Gas Geology Division	9.W	. Jeseumi		Presi	dent_		
- · · · · · · · · · · · · · · · · · · ·	alified Participant) President						

One copy of this certificate to be mailed to each coal operator, lessee, or owner, if any, and one to the Bureau of Oil and Gas Management, upon completion of plugging.



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DIVISION OF OIL AND GAS Room 1205 Kossman Building 100 Forbes Avenue Pittsburgh, Pennsylvania 15222

	Lewis Run
.gov 107-	40575-1
003	PNCP
	Office Use Only

(2) CERTIFICATE OF PLUGGING WELL

TYPE OF WELL \_Oil

		Diaboud E	Horzog		
Cosi Operator or Owner		MIGHATU E	3. Herzog Name of Well Or	perator	
		235 So. K	cndall Ave	., Bradf	ord, Pa.
Address	<del></del>		Address		
			Nov. 17	19	86
Coal Operator or Owner			Date	<del></del>	
		Lafayette			Township
Address					
		McKean			County
Coel Operator or Owner					
	Farm	USFS	(Wt 2277)	···	,
Address					
COMPLETE ABOVE SECTION IF APPLICABLE	Well	(Farm) No.	VE-9	Serial N	o
DIVISION REPRESENTATIVE SUPERVISING		COAL R	EPRESENTATI	VE OBSERV	NG
We the section to see the second section of the second second			d le the niverin	a of the abov	hae Haw a
We, the undersigned representatives of the well operate at the work was startedOct. 3	or certify that \ 19_86a	we participated nd that the w	a in the blugged ell was plugged	as follows:	e wen, and
		T	1	Casing and	I Tubing
FILLING MATERIAL AND PLUGS	FROM	to	SIZE	PULLED	LEFT
Wooden bridge, 10 gals 3A, 45' pea	1110111	<del> </del>	2 3/8"	18941	None
gravel and 5 sacks cement	1700'	16351	<u> </u>	1023	INOME
			6 5/8"	None	3781
Wooden bridge, 10 gals 3A, 45' pea gravel and 5 sacks cement	1100'	1035!	811	None	351
- Krayur anu / Baura Cumem					
Wooden bridge, 10 gala 3A, 45' pea	45.01	2051	Depth	of Coal Seam,	If Any
gravel and 5 sacks cement	450!	3851			
	l		1		
Gement bags for bridge, 50† 3A and					
	50'	-0-	Descr	lption of Monu	ment
Gement bags for bridge, 50 <sup>†</sup> 3A and	50'	-0-	Descr None	iption of Monu	ment
Gement bags for bridge, 50 <sup>†</sup> 3A and	50'	0	<del></del>	iption of Monu	ment
Gement bags for bridge, 50† 3A and	501	-0-	<del></del>	lption of Monu	ment

DICTI

### **APPENDIX B**

### All Information on Well 106

Music Hourdain Unit Appeal (D), For assistance in accessing this log, contact R3\_UIC\_Mailbox@epagow(U) A



## COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

1	DEP USE ONLY								
	Site ID	Client lo	i						
	Client Id	Sub Facilit	y ld						

2328640

#### **Well Record**

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44-11-0			<u> </u>		WELL	NFO									<u> </u>
Well Operat					1D#	27		Vell Al 3-5651			Well Farm	Name		Well#	
Pecora En Address	terprises			223	321						Evans	**************************************		106	
42 Parkwa	y Lane			·				11°52 <sup>,</sup> 78°41 <sup>,</sup>		AD 83	Project Nur	noer		Serial #	
City Bradford					ip Municipa 6701 Lafayet						County McKean				
Phone			Fax	· · · · · · · · · · · · · · · · · · ·	Email						USGS 7.5	min. qua	drangle ma	ip	Section
814-368-8	480		814-368-8	480	rattler7	@veri	zon.ı	net			Lewis Run				2
Check the	approp	riate Submis	sion:	⊠Original W	ell Record			_ Am	ended Well Re	cord					
Well Type			☑ Oil ☐ Comb					-				Wellb	ore Condi	tioning:	
Well Orie	ntation	✓ Vertica	I ☐ Deviated	from Vertica	l (Top & Side	views	& D	eviatio	on Survey mus	t be a	ttached)	_]			
Drill Meth	od(s)	⊠Rota	ary – Air '	☐ Rotary -	- Mud	' 🗆	Cable	e Tool	, 🗆	Other	<u>,                                     </u>	1			
Drilling Star	ted 9/19/20	014	Surface E	lev. 2178 ft.			GW	Depth	85 ft.	***************************************	***************************************	1			
Drilling Con	plete 9/23	/2014	True Verl	ical Depth 21	30 ft.		Dep	th of D	FGW85 ft.						
Date Well C	ompleted	10/7/2014	Total Mea	sured Depth	2130 ft.		DFC	GW dec	cided by: 0		· · · · · · · · · · · · · · · · · · ·	1			
Same of the same			and the second		11 July 10	EME	ENT						in state of	1.35 %	than De
		n surface cas	sing?	Yes 🛭 No	If No. provid	e depti	h to to	p of ce	ement and metho	od use	d to determi	ne: 157	7' Cemen	t top bo	nd log
Cement re	turned o	n coal protec	tive casing?	Yes 🗌 No	If No, provid	e depti	h to to	p of ce	ement and metho	d use	d to determi	ne:		⊠ NA	<u> </u>
Cement re	eturned or	n intermediat	e casing?	Yes 🔲 No	If No, provid	e depti	h to to	op of ce	ement and metho	od use	d to determi	ne:		⊠ NA	\
Casing	String		ass of Cement	Siurry Temp F°	Amount of	Cem	ent (s	sks) (Le	ad/Tall/Total)	Woc	Wt PPG	Yid #t3 /sk		as Migr ontrols	
Conducto	or	1 "	/ sanded in	0 °		1		1			0	0	What con	rols were	used if an Specify type an
Surface		Туре	1 / Class A	55 °			1	/ (	55	14	15	1	depth appli	cable)	aduration,
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Hole Size	Pipe Size	Wt. #/ft.	Grade Casing / Tubing Type		Amount in Weli (ft.)	СО	R		Hardware - B		s / Packer al/String) Size				)-4- D
	<u> </u>	477144	, resing type		******	55					JIE G	1	Depth	-   -	ate Run
12.25	9 5/8	32.3#	2720	T - N	55						9 5/8		55	9	/19/2014
8 3/4	6 5/8	23#	1620	T - N	456			Gui cer	ide shoe and ntralizers 50'	***********	6 5/8		456	9	/19/2014
6.25	4.5	17#	1400	T-U	1940	12			Packer		4.5	1940		1	0/7/2014
6.25	2.375	4.9#	1800	T-U	2100				2.375		2100 10/7/2014		0/7/2014		
If any ca	sing is w	velded, prov	vide the name(			=1 1 '5	205	)E'A	TCDATIO	<u> </u>			, 8,		
-	<u> </u>	They had the S		PLUG	-BACK/W			(E A	LTERATIO	N I	<u> </u>		Yooin- 9 T	rula I	<u>150 (1999)</u>
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										 <del>0 ( 1</del> 0	<del>222</del>	N14			
										انان	W LJ L	UIL	]	-	

-FM-OOGM0004a Rev. 8/2012	For assistance	in accessing t	his log, contact	R3_UIC_Mai	lbox@epa.gov	
. **		LOG O	F FORMAT	IONS	Well A	NPI#: <b>37-<u>083-56582-</u></b>
(If you v	vill need more sp	ace than this pa	age, please pho	tocopy the bla	nk form before filling	it in.)
Formation Name	T	D-#	0	011 -4	Motoret	
or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Dirt/Sand stone	0	30	) /	X =/	(11111111111111111111111111111111111111	driller's log
shale	30	60				
shale/sand /shale	60	90			F 85	
shale	90	120				
shale/sand/shale	120	150				
shale	150	300				
shale/red rock	300	330				
red rock	330	480				
shale	480	540				
shale/red rock	540	570				
red rock/shale	570	600				
shale	600	930				
shale/ red rock	930	960				
red rock	960	990				
shale	990	1350				
shale/Bradford first sand	1350	1380				
shale	1380	1860				
shale/Bradford third sand	1860	1890				
Bradford third sand/shale	1890	1920	-			
shale	1920	1980				
shale/Lewis Run sand	1980	2010				
shale	2010	2130				
					·	

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name	Name	Name	Name
Bradford Pipe	Howard Drilling, LLC		Gemini Wireline
Address	Address	Address	Address
230 Chestnut St.	P O BOX N		344 High St
City – State – Zip	City - State - Zip	City - State - Zip	City - State - Zip
BRADFORD Pa 16701	MT JEWETT PA 16740		BRADFORD Pa 16701
Phone	Phone	Phone	Phone
814 362-6501	814-778-5820		-8143620230

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is atteched to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller	Well Operator's Signature	DEP USE ONLY
Name Howard Drilling, LLC	Rig	Reviewed by:
Address P O Box N	) Ve	6 Curr 12-15-14
City – State- Zip MT JEWETT PA 16740	Printed Name / Title: Date: Jay J. Pecora / Partner 9/23/2014	Comments:
Phone 814-778-5820		



## COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

	DEP US	E ONLY	
Site 1D		Primary Fa	cility ID
Client ID	)	Sub Facility	ld .

#### **Completion Report**

				v 1, 11	Well	Inform	ation		y' + +	14.1.	
Well Operator				EP ID#	Well Al	PI#	· · · · · · · · · · · · · · · · · · ·		Well Farm Name		Well#
Pecora Enterprises Address	·	·····		2321		3-56582- 41° 52	2 · 17.62"	NAD	Evans Project Number		106 Serial#
42 Parkway Lane							1 33.88"	83			Ochar II
City Bradford		State PA		Zip Code 16701	Municip Lafaye				County McKean		
Phone 814-368-8480		Fax 814-368-848	0		Email ratier7	@verizon.	drangle map	Section 2			
Check the appr	opriate submis	sion:	$\boxtimes$	Original C	ompletio	n Report	☐ Amend	led Cor	Lewis Run npletion Report		
,				STI	MULAT	TION B	ASE FLUID			4.	
	List Water Ma	nagement	Plan s	Source(s)	•		Water Ma	nagem	ent Plan ID	Volume	(Gallons)
1. N/A		• "						i			
2.					: :						
3.								:			
4.						÷){	1 26 2014				ļ
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						lologist w/Date	Total Gallons	of Wa	ter Used	Water	Recycled
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1.											
2.										1	
							Tota	Quan	tity all Fluid(s)	1	
	1. 1. 1	STI	MUL	ATION/F	PRODU	ICTION	INFORMAT				
Radioactive to Specify Tracer	acers used?			Open-Flow ( don't do ti		) / Date			n Pressure:/ Date to this /		pletion Date: 0/7/2014
Well Products:	☐ Gas Btu		⊠ 0	il API G		☐ Cond	ensate API G	[	Other	☐ GOF	₹
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Perforation C	ompany		Ta .	Frac Co	mpany	.** : •		1	Plug Drill Out/Flo	ow Back C	ompany
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Address 350 Minard Rur	PO BOx 414			Address P O BOX				1	Address		
City - State- Zip Bradford, PA 1				City – Stat Mt Jewet	te - Zip	740		(	City - State - Zip		
Phone 814-362-4443			e trensmetêke hadis	Phone 814-778-	5820	**************************************	**************************************	1	Phone		
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	ibility of fine		sonr			_		_			
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Printed Name / Jay J. Pecora /				ven militadi (1966) ( n. 11 m. milita	D 10/17/2		comments:	()	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	·· · · · · · · · · · · · · · · · · · ·	
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Page 1 of \_\_\_\_\_

RECEIVED

OCT 22 2014

#### Well API# 37-<u>083-56582-\_\_-</u>-\_\_

			PERFORATION	ON RECORD	
Stage No.		Stage Perforated From TMD Ft.	Stage Perforated To TMD Ft.	* 40 4 5 40	
No. 1	Perforation Date 10/1/2014	2,006	2,006	# of Perforations/Stage	Formation(s) Lewis Run Sand
ı	10/1/2014	2,000	2,000	2	NOTCHED
2	10/1/2014	2,008	2,008	2	Lewis Run Sand
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#### Well API# 37-<u>083-56582</u>-\_\_-

Note: Information	designated as Tr	ade Secret or Confide	ential proprietary information (	must be clearly identified a	s such and shouk	be submitted on the "Confid	ential Stimulation Fluid Additives" form
Trade Name	Supplier	Purpose	Ingredients	CAS # of Chemical Component	Max. Compo- nent % Mass in Additive	Chemical Component % Mass used in Total Base Fluid (Pg 1)	Comment
DCF-495	WST, Inc.	Clay Stabilizer	Nonhazardous Components	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Nonionic Surfactants	Proprietary	0%		
DCF-495	WST, Inc.	Clay Stabilizer	Anionic Sufractants	Proprietary			
DCF-495	WST, Inc.	Clay Stabilizer	Water	7732-18-5		0.00	5 gallons used
DCF-223	WST, Inc.	Anionic Friction Reducer	Distillates (petroleum) Hydrotreated light	64742-47-8			3 Gallons used
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#### Well API# 37-083-56582-\_\_-

#### STIMULATION INFORMATION / STAGE Complete a separate record for each stimulation stage. (Please insert additional lines for additional stages or additional pages as applicable). Ave Treatment Pressure (PSI) Stimulation Ave Pump Rate Proppant Mesh Size(s) Max Breakdown # Date (BPM) ISIP (PSI) Proppant Type Pressure (PSI) 10/7/201 1,921 1,728 2,468 20/40 150 sacks 23

Page	of
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8000-PM-OOGM0002 4/2012

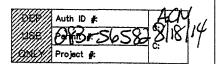
pennsylvania

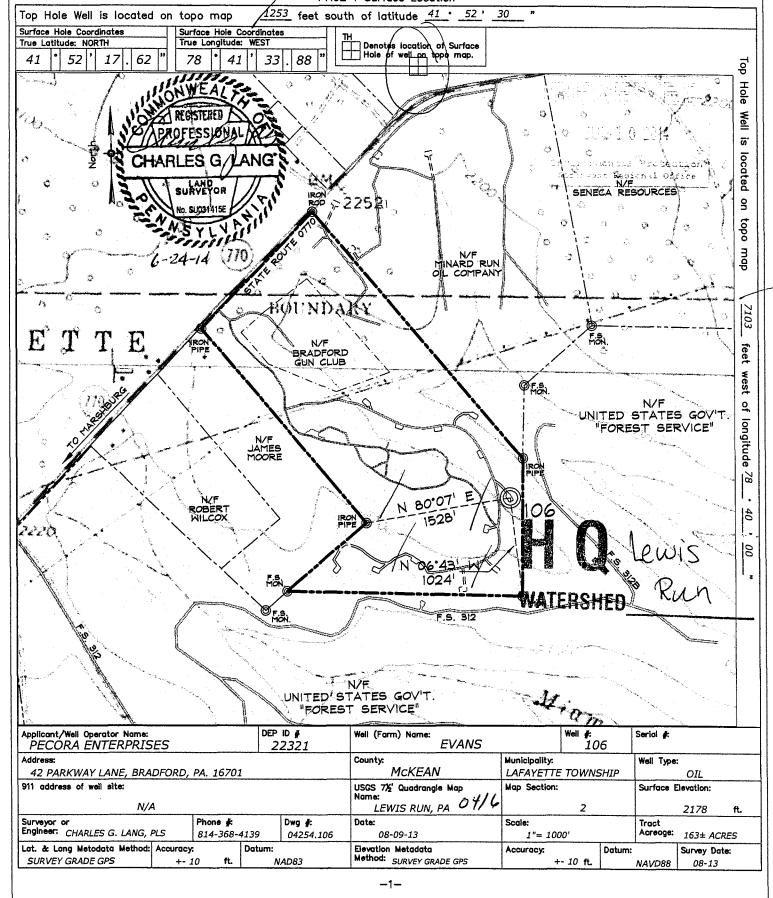
For assistance in accessing this log, contact R3\_UIC\_Mailbox@epa.gov COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

#### WELL LOCATION PLAT

PAGE 1 Surface Location

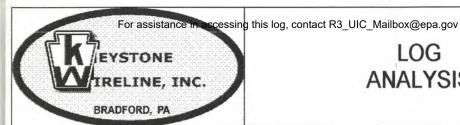




#### Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is **1-866-255-5158**.

Applicant / Well Operator Name PECORA ENTERPRISES	DEP ID# 22321	Well (Farm) Name  EVANS	Well # 106	Serial #
Surface Landowner / Lessor:			Anticipated True Vertic	al Anticipated Total
BRADFORD GUN CLUB	/		Depth Feet (TVD): 2186 2250	Measured Depth Feet (TMD):
Target Formation(s):		Deepest Formation to be penetrated:	Number of To	tal footage to be
BRADFORD GROUP SANDSTONES		LEWIS RUN	taterais: 0 dri	lled all laterals: 0
Surface Owner/Water Purveyor w/Water Supply within 10	000'/3000'	Latitude Longitude	of Water Supply	
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	······································			
Municipality: where the well will be drilled,	<u></u>	Municipality: where the	undi will be delled	
adjacent to the well, or within 3000 feet	_	adjacent to the well, o		,
LAFAYETTE TOWNSHIP				
LEWIS RUN BOROUGH				
KEATING TOWNSHIP				· · · · · · · · · · · · · · · · · · ·
HAMLIN TOWNSHIP		Coal related	parties	
WETMORE TOWNSHIP				<del></del>
HAMILTON TOWNSHIP				
CORYDON TOWNSHIP				
BRADFORD TOWNSHIP				



### LOG **ANALYSIS**

Company PECORA ENTERPRISES

Well

**EVANS 106** 

Field

PECORA ENTERPRISES

Company

EVANS 106 EVANS MCKEAN

Sounty

**FVANS** 

County MCKEAN

State

Location:

API#: 37-083-56582-00-00

Other Services

LEWIS RUN QUAD. LAT.-41-52-17.62

LONG -78-41-33.88

TWP: LAFAYETTE

Elevation 2178'

PA

Permanent Datum

GROUND LEVEL Log Measured From TOP OF 7" COLL. 0.7' ABVE P.D.

K.B. D.F. G.L. 2178'

Elevation

Drilling Measured From TOP OF 7" CASING COLLAR

9-28-2014 Date Run Number ONE 2135 6' Depth Driller TRUCK DEPTHS Depth Logger 2135.6 Bottom Logged Interval **MAST 151** 2130.6 Top Log Interval 0, Casing Driller 7" @ 455' Casing Logger 7" @ 455' Bit Size 6.25" Type Fluid in Hole WATER/OIL @ 1870 Density / Viscosity N/A pH / Fluid Loss N/A N/A Source of Sample 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 14:30 Maximum Recorded Temperature 72 DEG F Equipment Number 155 BRADFORD PA Location Recorded By MR. C. BURNS Witnessed By MR. PECORA

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shalk produce in the case of the control of the case of the control of the case of the control of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of

#### Comments

# 2.68 G/CC MATRIX DENSITY 1.0 G/CC FLUID DENSITY LOGGED OFF OF KEYSTONE MAST UNIT 151 CREW: ADAMS/CARPENTER THANK YOU FOR USING KEYSTONE WIRELINE!!

Database File:

pecora enterprise evans 106.db

PB

Dataset Pathname: Presentation Format: 106/run1/\_ohint1\_

ajaxlist

VSH

Dataset Creation: Charted by: Thu Sep 25 16:08:00 2014 Depth in Feet scaled 1:75

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		NEU (pu)		DPOR		RT		sw		SOIL
000	00	7.0	2.09	3,33	2.00	49.0	0.97	100	- 0 -	U
669	46	6.5	2.55	7.96	2.68	52.3	4.27	100	0	0
670	18	5.1	2.50	10.80	2.68	59.6	8.85	46	23	31
671	14	4.7	2.48	11.72	2.68	65.9	10.03	39	32	29
672	29	4.3	2.51	10.24	2.68	77.2	7.26	50	21	30
673	14	3.4	2.51	9.93	2.68	92.0	8.55	39	37	25
674	1	2.9	2.54	8.07	2.68	92.3	7.96	41	37	21
675	8	3.9	2.53	8.99	2.68	93.1	8.28	40	32	29
676	9	5.9	2.54	8.59	2.68	87.5	7.81	43	14	43
677	23	8.4	2.61	4.04	2.68	65.6	0.00	100	0	0
679	97	117	2.68	0.23	2.68	40.4	0.00	100	0	
	VSH		PB		PMA	100.00	PHIE		SGAS	
		NEU (pu)		DPOR		RT		sw		SOIL

PMA

PHIE

SGAS

Database File: Dataset Pathname:

pecora enterprise evans 106.db

ajaxlist

Presentation Format: Dataset Creation: Charted by:

Thu Sep 25 16:08:00 2014 Depth in Feet scaled 1:75

	VSH		PB		PMA		PHIE		SGAS	
		NEU (pu)		DPOR		RT		sw		SOIL
1290	49	0, 1	2.00	0.13	2.00	49.4	3.10	100	U	
1291	58	7.6	2.56	7.26	2.68	49.6	3.08	100	0	0
1292	36	7.3	2.50	10.74	2.68	52.7	6.92	63	0	37
1293	13	6.6	2.45	13.48	2.68	52.3	11.79	37	28	35
1294	25	6.7	2.47	12.22	2.68	50.1	9.16	49	14	38
1295	56	6.2	2.48	11.72	2.68	52.5	5.20	84	0	16
1296	23	5.6	2.43	14.93	2.68	53.8	11.55	37	32	31
1297	18	5.3	2.44	14.57	2.68	53.0	11.90	36	35	29
1298	31	5.9	2.46	13.10	2.68	55.6	8.99	47	18	35
1299	18	5.6	2.44	14.55	2.68	59.6	11.87	35	35	31
1300	15	4.8	2.42	15.31	2.68	60.1	12.99	31	43	25
1301	14	5.2	2.43	14.75	2.68	59.9	12.67	32	40	28
1302	16	5.8	2.48	11.71	2.68	60.7	9.88	41	24	28 35
1303	22	6.5	2.52	9.79	2.68	60.5	7.64	53	7	40
1304	21	7.0	2.54	8.20	2.68	58.4	6.52	63	Ó	37
1305	28	7.2	2.58	5.89	2.68	55.8	4.24	100	Ö	0
1306	45	6.8	2.57	6.53	2.68	55.6	3.59	100	Õ	Ö
1307	34	5.7	2.56	7.17	2.68	60.3	4.73	86	Ö	14
1308	16	4.8	2.51	9.94	2.68	61.6	8.36	48	22	30
1309	23	5.0	2.49	11.07	2.68	63.3	8.53	47	22	32
1310	26	5.4	2.48	12.06	2.68	71.1	8.95	42	23	35
1311	19	5.9	2.47	12.59	2.68	66.2	10.13	38	25	32 35 36
1312	39	7.1	2.53	8.67	2.68	59.5	5.30	77	0	23
1313	47	7.6	2.55	7.72	2.68	58.3	4.10	100	Ö	0
1314	43	7.3	2.57	6.67	2.68	55.2	3.78	100	o	0
1314		7.3	2.57	3.46	2.00	55.2	3.76	100	0	0
	VSH		PB		PMA	1	PHIE		SGAS	
		NEU (pu)		DPOR		RT		sw		SOIL

Database File:

pecora enterprise evans 106.db

Dataset Pathname: Presentation Format: 106/run1/\_ohint1\_

ajaxlist

Dataset Creation: Charted by:

Thu Sep 25 16:08:00 2014 Depth in Feet scaled 1:75

	VSH		PB		PMA		PHIE		SGAS	
		NEU (pu)		DPOR		RT		sw		SOIL
1307	40	7.4	2.01	0.40	2.00	49.0	3.43	100	U	O
1388	41	7.0	2.57	6.32	2.68	55.4	3.70	100	0	0
1389	20	6.5	2.53	8.77	2.68	65.2	7.03	56	4	41
1390	14	6.3	2.55	7.56	2.68	69.1	6.52	58	1	40
1391	19	7.4	2.52	9.25	2.68	73.8	7.52	49	1	
1392	35	7.4	2.54	8,60	2.68	80.8	5.57	63	0	50 37
1393	22	7.5	2.52	9.42	2.68	86.3	7.38	46	0	54
1394	22	7.5	2.54	8.62	2.68	80.8	6.74	52	0	48
1395	51	7.9	2.56	7.06	2.68	72.3	3.49	100	0	0
1396	69	8.5	2.61	4.02	2.68	69.6	0.00	100	0	0
1207	55	0.1	264	2.50	268	63 /	0.00	100	0	
	VSH		PB		PMA		PHIE		SGAS	
		NEU (pu)		DPOR		RT		SW		SOIL

Database File: Dataset Pathname: Presentation Format: Dataset Creation: Charted by:	106/run1/ ajaxlist Thu Sep	nterprise eva /_ohint1_ <sup>For as</sup> 25 16:08:00 : Feet scaled 1	ssistance in 2014	b n accessing th	is log, conta	ct R3_UIC_Mailbo	x@epa.gov			
	VSH		РВ		РМА		PHIE		SGAS	
		NEU (pu)		DPOR		RT		sw		SOIL
1700	41	7.0	2.00	0.21	2.00	33.U	4.55	100	U	U
1701	19	6.5	2.57	6.65	2.68	39.8	5.37	93	0	7
1702	8	6.5	2.51	10.30	2.68	50.4	9.45	47	16	36
1703	12	7.4	2.51	10.14	2.68	55.5	8.96	47	9	43
1704	26	8.9	2.60	4.51	2.68	49.3	0.00	100	0	0
1705	99	10.2	2 68	0.20	268	42.6	0.00	100		n
	VSH		PB		PMA	A AYES	PHIE		SGAS	
		NEU (pu)		DPOR		RT		sw		SOIL

Database File: Dataset Pathname:

pecora enterprise evans 106.db 106/run1/\_ohint1\_For assistance in accessing this log, contact R3\_UIC\_Mailbox@epa.gov

ajaxlist

Dataset Creation: Charted by:

Presentation Format:

Thu Sep 25 16:08:00 2014 Depth in Feet scaled 1:75

	VSH		PB		PMA		PHIE		SGAS	
		NEU (pu)		DPOR		RT		sw		SOI
1070	- 00	0.5	2.01	0.02	2.00	00.0	2.00	100	U	- 0
1871	43	7.9	2.46	13.39	2.68	59.8	7.63	54	0	46
1872	12	7.8	2.36	19.07	2.68	59.0	16.80	25	41	35
1873	10	7.7	2.37	18.67	2.68	61.5	16.81	24	41	35
1874	14	7.9	2.37	18.75	2.68	64.8	16.17	24	39	37
1875	14	7.9	2.39	17.34	2.68	60.5	14.99	27	34	39
1876	16	8.2	2.40	16.59	2.68	54.8	13.86	31	28	41
1877	15	8.7	2.36	19.29	2.68	48.7	16.46	28	34	38
1878	14	9.1	2.35	19.59	2.68	42.4	16.91	29	33	38
1879	17	8.8	2.37	18.50	2.68	36.6	15.39	34	28	38
1880	8	8.8	2.33	20.75	2.68	29.5	19.19	30	38	32
1881	4	8.7	2.32	21.16	2.68	29.8	20.35	28	41	31
1882	5		2.32	20.85	2.68	31.2	19.84	29	41	31
	4	8.5								30
1883		8.7	2.34	20.17	2.68	22.5	19.33	34	36	30
1884	4	8.4	2.35	19.69	2.68	22.5	18.89	35	36	29
1885	4	8.4	2.37	18.33	2.68	19.9	17.63	40	31	29
1886	5	8.3	2.43	15.16	2.68	22.8	14.47	46	23	31
1887	8	8.0	2.43	15.15	2.68	26.6	13.94	44	24	32
1888	13	8.2	2,36	18.82	2.68	27.3	16.45	37	32	32
1889	13	8.7	2.37	18.66	2.68	27.4	16.30	37	29	34
1890	13	9.0	2.35	19.68	2.68	24.9	17.04	37	30	33
1891	13	9.4	2.36	19.13	2.68	23.0	16.73	39	26	34
1892	10	9.2	2.37	18.70	2.68	23,2	16.75	39	28	33
1893	15	9.2	2.38	17.65	2.68	24.1	15.09	43	22	35
1894	24	9.5	2.44	14.08	2.68	26.1	10.69	58	5	37
1895	18	10.0	2.42	15,60	2.68	29.0	12.80	46	12	42
1896	13	9.8	2.37	18.24	2.68	31.5	15.86	36	25	40
1897	19	9.7	2.37	18.55	2.68	33.7	15.01	36	22	4
1898	21	9.6	2.37	18.75	2.68	35.9	14.80	36	23	42
1899	19	9.4	2.36	18.79	2.68	38.1	15.15	34	25	4
1900	15	9.7	2.36	19.09	2.68	34.6	16.14	33	27	40
1901	18	10.0	2.36	18.85	2.68	29.5	15.45	38	22	40
1902	25	9.9	2.41	16.26	2.68	29.1	12.23	48	10	42
1903	20	9.7	2.54	8.12	2.68	29.2	6.47	90	0	10
1903	41	9.6	2.64	2.44	2.68	26.5	0.00	100	Ö	0
	60		2.64				0.00	100	0	0
1905	55	11.1	2.64	2.44	2.68	27.7	0.00	100	0	0
TEN III	VSH	4.2.3	PB		PMA	That sai	PHIE	1-300	SGAS	
		NEU (pu)		DPOR		RT		sw		so

Database File: Dataset Pathname: Presentation Format: Dataset Creation: Charted by:	106/run1, ajaxlist Thu Sep	nterprise eva /_dfqir#\$ <u>s</u> F30ana 25 16:08:00 : Feet scaled 1	ssistances 2014		nindag, pleatsa	ct&& <u>a</u> dfC <u>RM</u> aille	o <b>∧@⊯lbax;@e</b> pa.gov			
	VSH		PB		РМА		PHIE		SGAS	
1		NEU (pu)		DPOR		RT		sw		SOIL
2002	19	11.7	2:07	0.00	2.00	19.0	0.00	100	0	U
2003	68	11.2	2.59	5.41	2.68	22.0	1.73	100	0	0
2004	37	9.3	2.46	12.96	2.68	25.7	8.14	77	0	23
2005	12	8.0	2.32	21.18	2.68	31.5	18.73	30	40	30
2006	8	7.6	2.32	21.55	2.68	41.7	19.80	25	47	29
2007	6 8	7.9	2.32	21.15	2.68	56.1	19.95	21	48	31
2008	8	8.0	2.34	19.94	2.68	64.0	18.36	22	44	34
2009	11	9.0	2.44	14.38	2.68	55.9	12.75	33	20	47
2010	30	10.4	2.55	7.84	2.68	40.9	5.52	90	0	10
2011	56	12.3	2.64	2.52	2.68	32.3	0.00	100	0	0
2012	69	14.4	2.67	0.64	2.68	26.3	0.00	100	0	0
2013	67	121	2.60	0.34	2.69	21.9	0.00	100		
	VSH		PB		PMA		PHIE		SGAS	
		NEU (pu)		DPOR		RT		sw		SOIL

## Log Variables

Database: C:\Warrior\Data\pecora enterprise evans 106.db Datas Eprassistance is in a potential of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contro

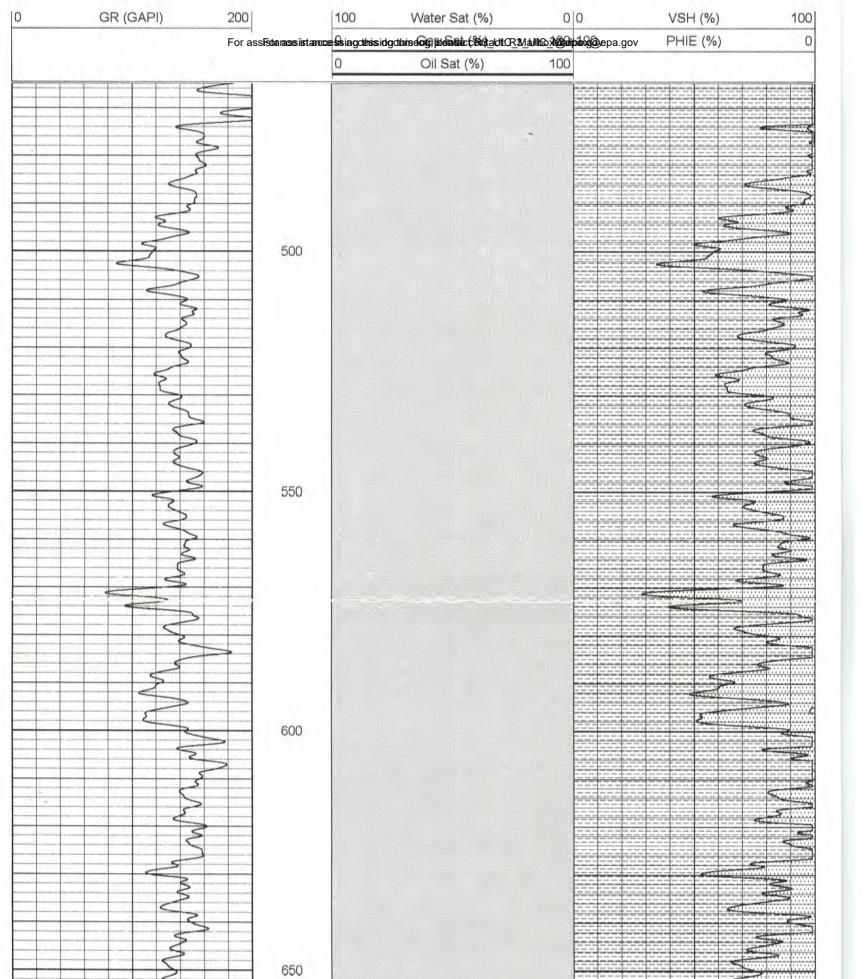
#### Top - Bottom

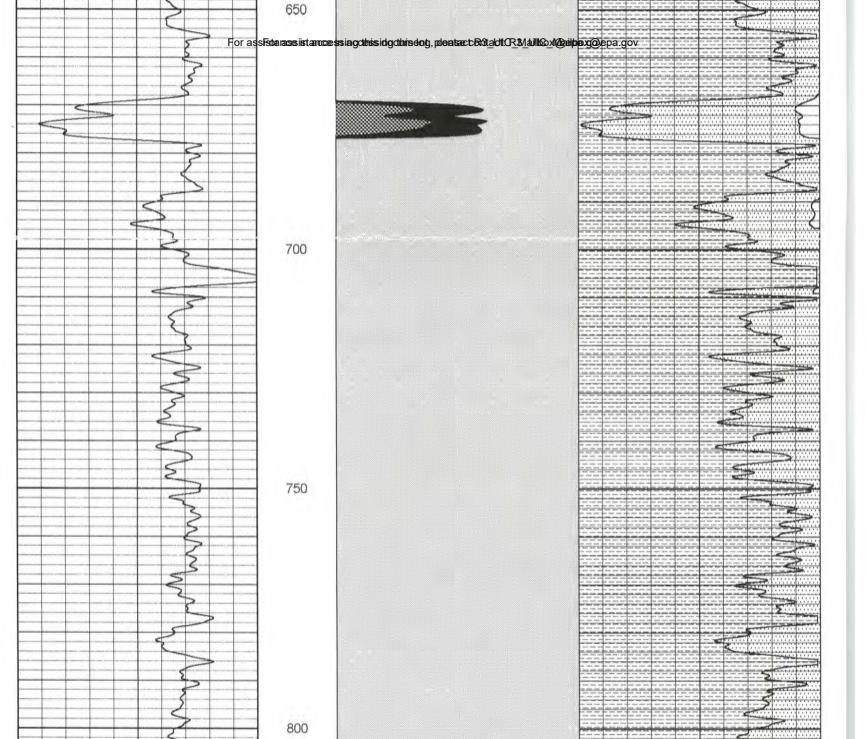
Α	М	Rw Ohm-m	GRCLEAN GAPI	GRSHALE GAPI	RSH Ohm-m	MATRXDEN g/cc	FLUIDDEN g/cc
1	2	0.1	15	155	25	2.68	1
SATEXP	TempGrad DegF/ft	PresGrad psi/ft	DrainArea	GasRecov %	OilRecov %		
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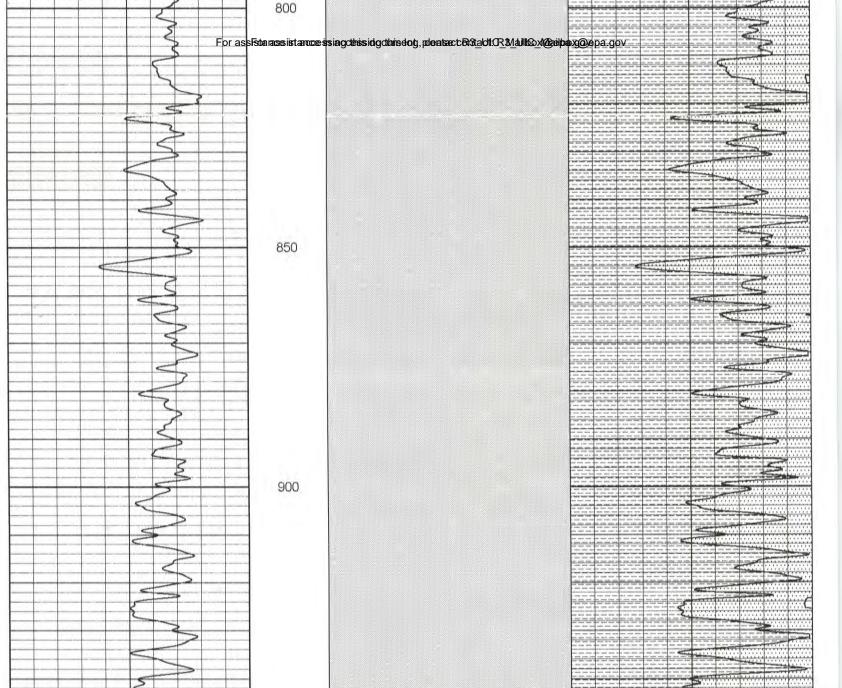
Database File: pecora enterprise evans 106.db Dataset Pathname: 106/run1/ ohint1

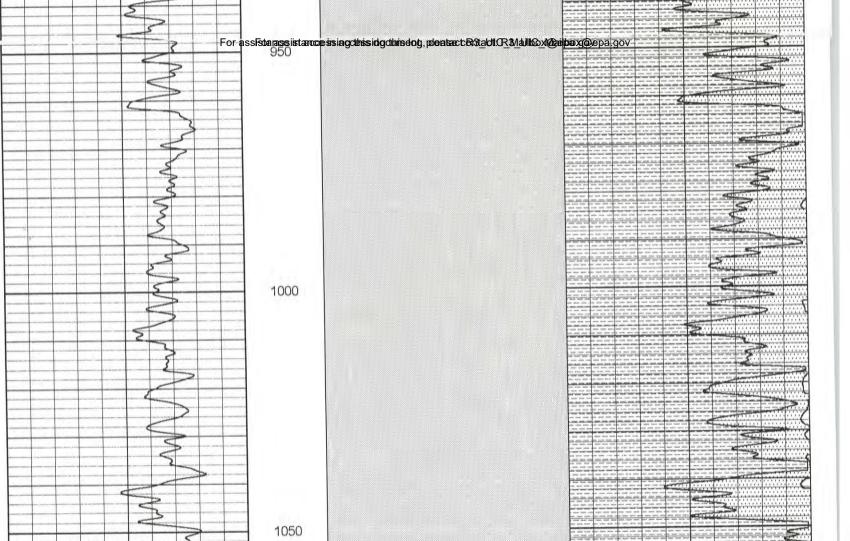
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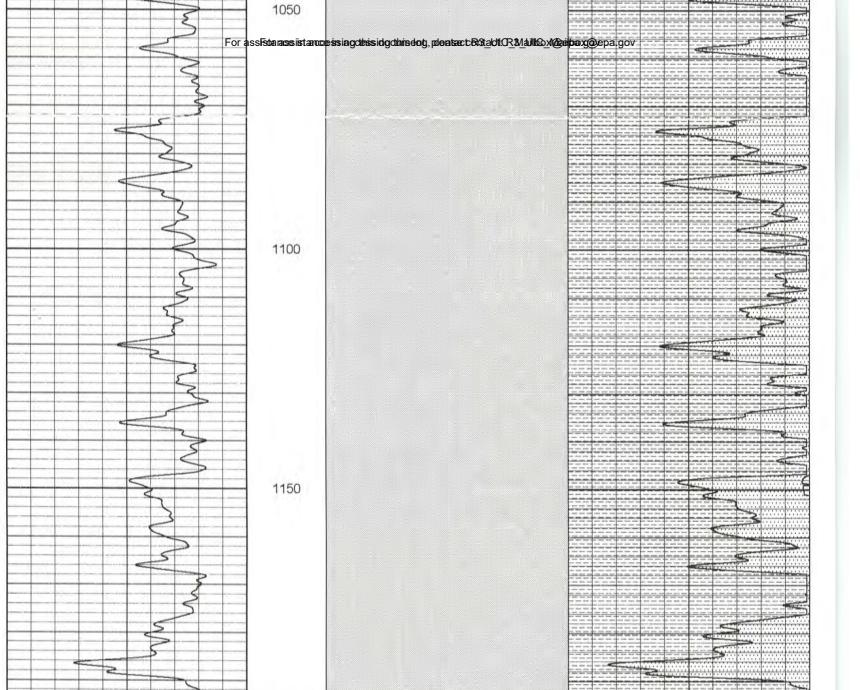
Presentation Format: Thu Sep 25 16:08:00 2014 Dataset Creation: Depth in Feet scaled 1:240 Charted by:

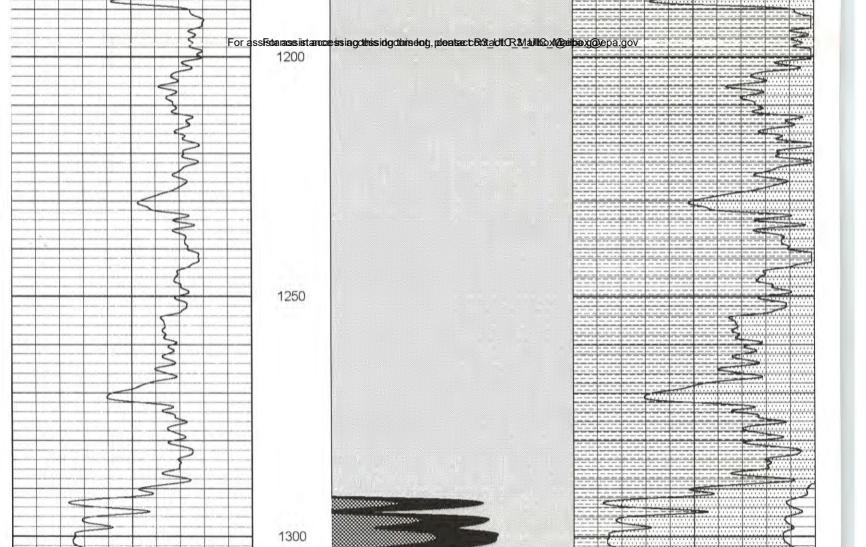


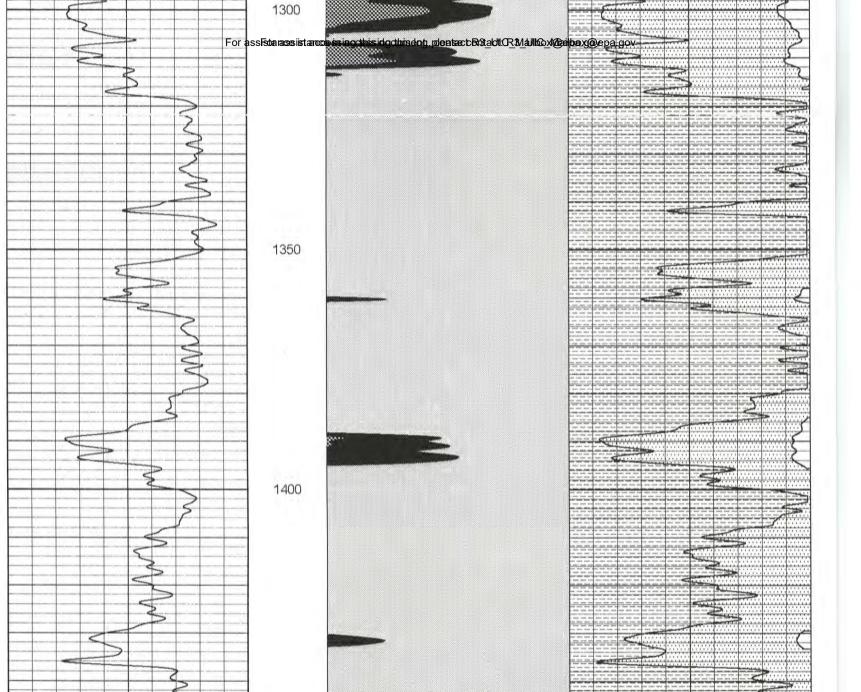


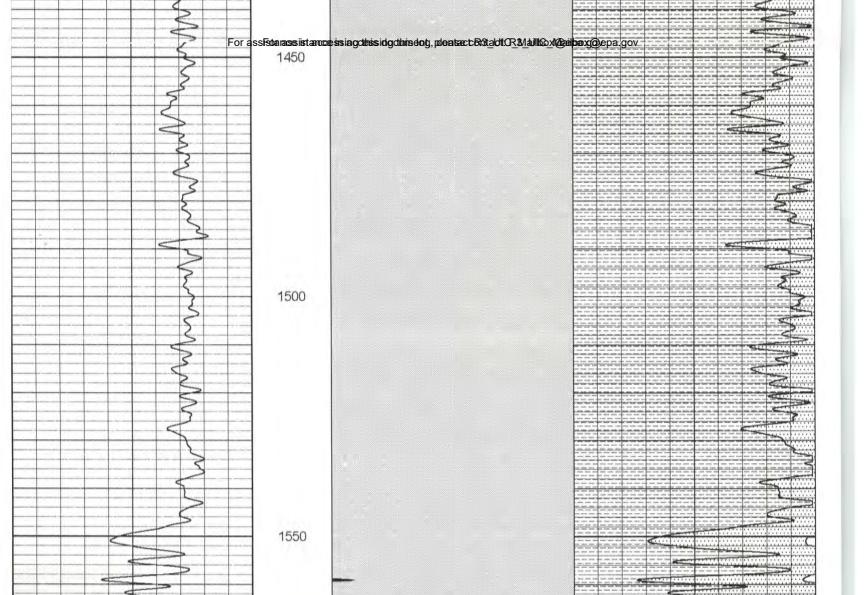


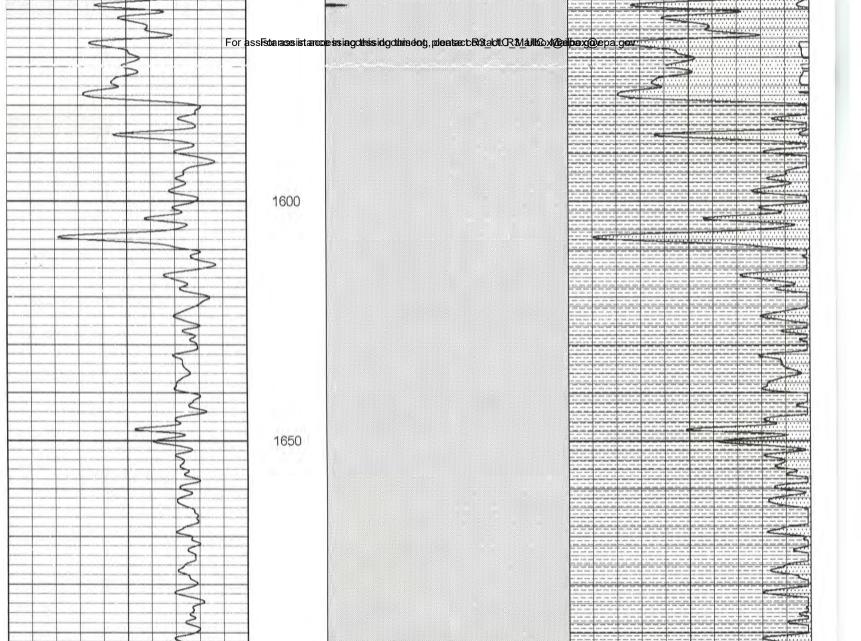


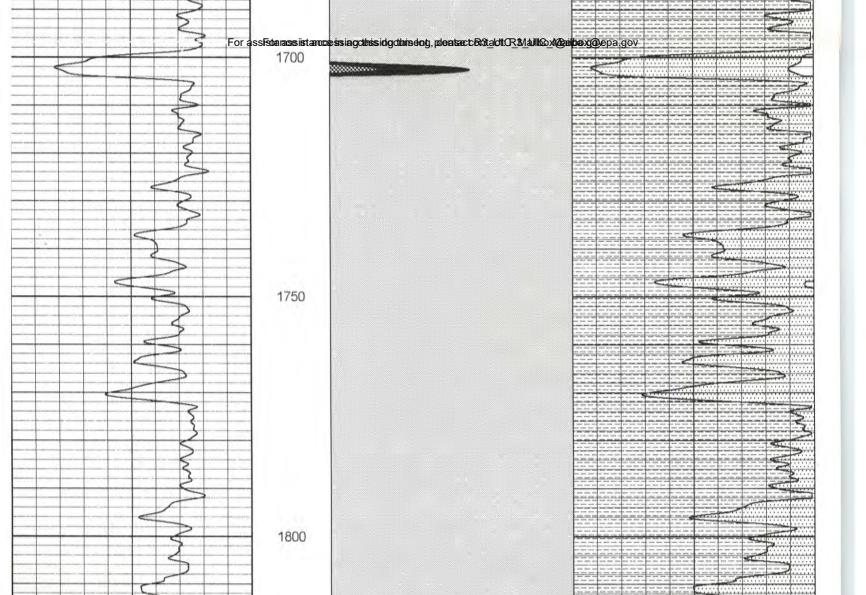


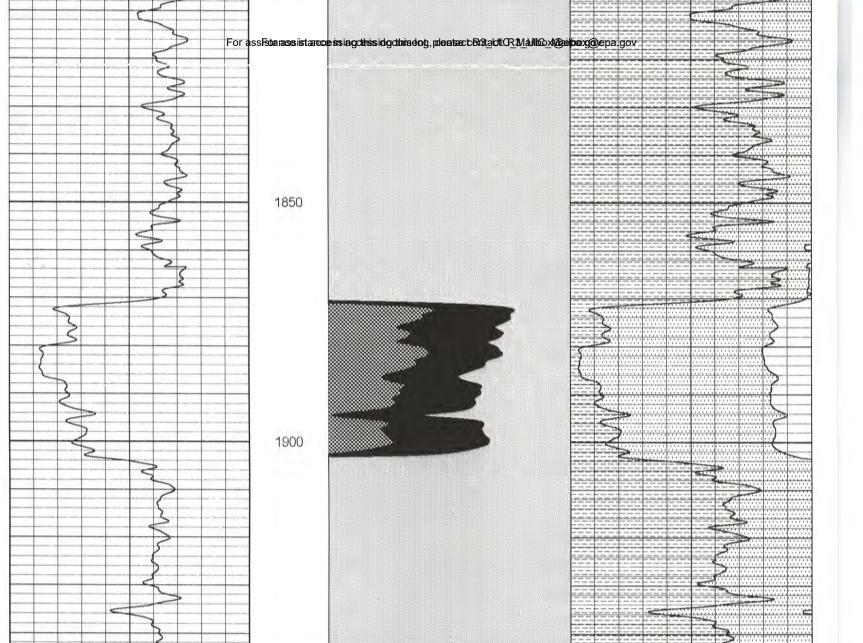


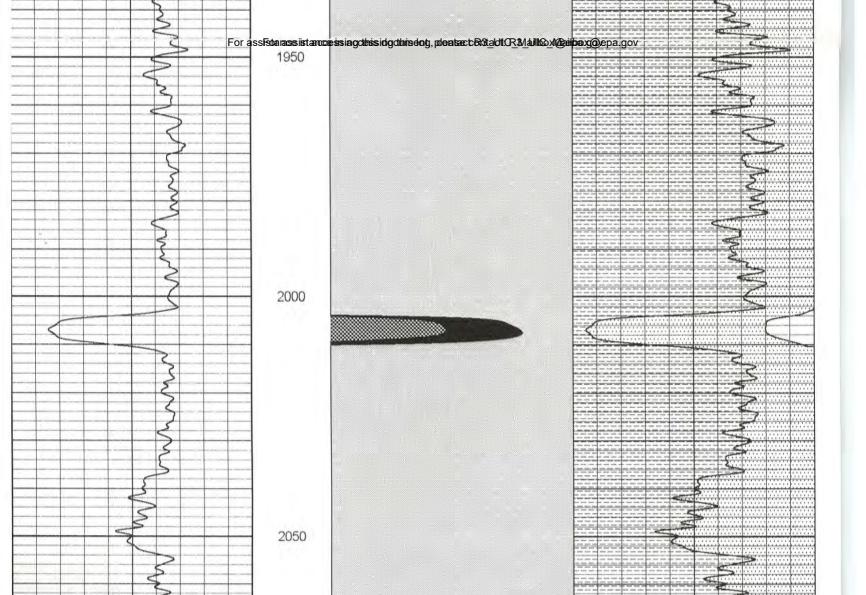


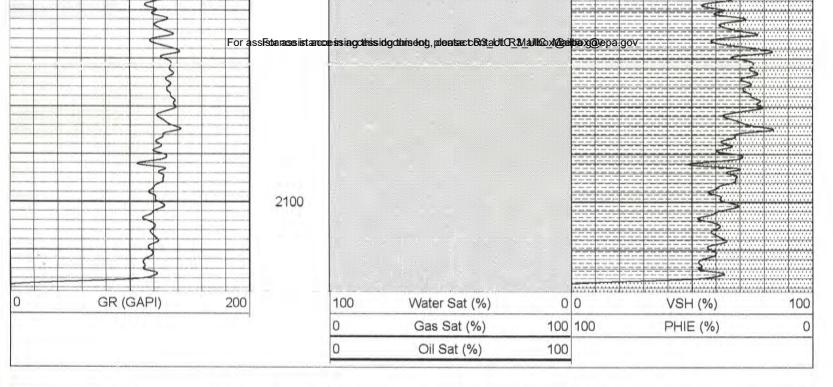














Company PECORA ENTERPRISES

Well EVANS 106

Field EVANS

County MCKEAN

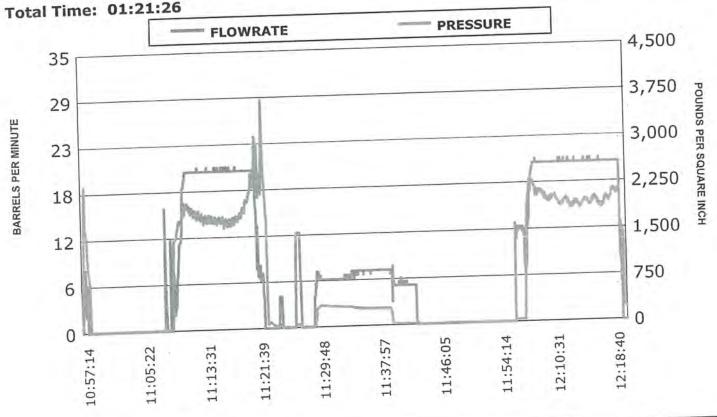
State PA

epa.gov liquid Frac Gel Used Date 10-7-14 20 2468 1921 1728 Shut in Pressure PSE Treat Avg Pressure PSI Rate BPM Pressure PSI Breakdown Frac Treatment Witnessed By Frac Treatment Prepared By Date of Frac Treatment Lease Clay Control HOWARD DRILLING, LLC Gallon/ 1000 Fracture Treatment Plan 2010/ Soap 20x40 Sand 1500 Dad with the britishe cons Amt of 16,049 150 SKS Well# Amt of Trmt. Fluid Gallons Precord Enterplize Treatment Interval Packer Set At Ft. Notch At Ft. Remarks 300€ 9000 of istomer name\_ Jug back to Stage # Stage # Stage # stage # age # tage # ge #

Total Volume: 0 18000 Total Sand: 0 150

Well # 106 End Time: 10/07/14 12:18:40 Start Time: 10/07/14 10:57:14

Total Time: 01:21:26



COMMENT TIMESTAMP

Original Data File: ftp://10.0.0.156//Batch/w106\_1/log14100700.csv

PDF Report File:

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