UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION IX (EPA)
UNDERGROUND INJECTION CONTROL (UIC) PROGRAM

DRAFT PERMIT

Class IIR Water Injection Well

Permit No.NN208000001

Well Name: Aneth Unit H-434

San Juan County, Utah

Navajo Nation

API No. 4303716230

Issued to:

Resolute Natural Resources Company

1675 Broadway, Suite 1950

Denver, Colorado 80202

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PART I. AUTHORIZATION TO OPERATE AND INJECT

Pursuant to the Underground Injection Control Regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 145, 146, 147, and 148,

Resolute Natural Resources Company
1675 Broadway, Suite 1950
Denver, Colorado 80202

is hereby authorized to convert and operate a Class IIR multilateral water/carbon dioxide (CO_2) injection well, to be known as the Aneth Unit H-434. The surface location of the well is located in the SE/4 SE/4 of Section 34, T40S, R24E, at thirty-seven (37) degrees, fifteen (15) minutes, thirty seven and two-tenths (37.2) seconds latitude and one-hundred-nine (109) degrees, fifteen (15) minutes, thirty five and six-tenths (35.6) seconds longitude, in San Juan County, Utah. The well consists of a vertical wellbore and two lateral bore holes, one oriented 2,600 feet westward and the other oriented 3,300 eastward of the surface location.

Injection shall be for the purpose of injection of CO_2 and produced water from the Desert Creek and Ismay members of the Paradox Formation into the Paradox formation for purposes of enhanced oil recovery, in accordance with conditions set forth herein. The source of the produced water is from current and future wells operated by the Permittee in the Aneth Unit. The current source of the CO_2 is the Kinder Morgan McElmo Dome CO_2 Field, located approximately 25 miles northeast of the H-434 well.

All conditions set forth herein refer to Title 40 Parts 124, 144, 145, 146, 147, and 148 of the Code of Federal Regulations and are regulations that are in effect on the date that this permit becomes effective.

This permit consists of a total of seventeen (17) pages plus Appendices, as listed in the Table of Contents. Further, it is based upon representations made by the Permittee and on other information contained in the administrative record. It is the responsibility of the Permittee to read and understand all provisions of this permit.

This permit and the authorization to inject are issued for a period of twenty (20) years unless terminated under the conditions set forth in Part III, Section B of this permit. The permit will expire upon delegation of primary enforcement responsibility for the UIC Class II Program to an appropriate agency of the Navajo Nation, unless that agency has the appropriate authority and chooses to adopt and enforce this permit as a Tribal permit. The permit shall be reviewed by EPA every five (5) years.

Issued this _____ day of _____

This permit shall become effective _____

_____
Alexis Strauss
Director, Water Division

PART II. SPECIFIC PERMIT CONDITIONS

A. WELL CONSTRUCTION

1. Casing and Cementing. The construction details submitted with the permit application are incorporated into this permit as APPENDIX C (Well Schematic), and shall be binding on the Permittee. The well is cased and cemented to prevent the movement of fluids in the casing wellbore annulus, from the long string casing shoe at 5702 feet to 3897 feet and from the intermediate casing shoe at 1598 feet to the surface. The surface casing is set at 37 feet and cemented to surface. The casing shall be maintained throughout the operating life of the well. Advanced notice of casing and cementing remedial operations will be given to the Director[1] so that an EPA representative may be present to monitor those operations.

2. Formation Logging and Testing. Advance notice of logging and testing operations shall be given to the Director, so that an EPA representative may be present to witness/monitor those operations.

3. Monitoring Devices. The operator shall install and maintain in good operating condition:

   (a) A tap on the discharge line between the injection pump and the wellhead for the purpose of obtaining representative samples of the injection fluids;

   (b) Two (2) one-half (½) inch FIP (female) fittings, isolated by plug or globe valves, and positioned to provide for either

      (i) the permanent attachment of one-half (½) inch MIP (male) gauges, or

      (ii) the attachments for equivalent "quick-disconnect" gauges at the wellhead on the injection tubing and on the tubing/casing annulus

   (c) The gauges used shall be of a design to provide

      (i) a full pressure range of 100 percent greater than the anticipated operating pressure, and

      (ii) a certified deviation accuracy of five (5) percent or less throughout the operating pressure range;

   (d) A flow meter with measured cumulative volumes that are certified for a deviation accuracy of five (5) percent or less throughout the range of injection rates allowed by the permit.

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[1] All required reports and notices are to be submitted to the Ground Water Office Manager, U.S. Environmental Protection Agency Region IX, with the associated address shown in part II.D.4

4. Proposed Changes and Workovers. The Permittee shall give advance notice to the Director, as soon as possible, of any planned physical alterations or additions to the permitted injection well. Any changes in the well construction will require prior approval of the Director and a permit modification under the requirements of 40 CFR Part 144.39.

In addition, the Permittee shall provide all records of well completions, workovers, logging, or other subsequent test data, including required mechanical integrity testing, to the Director within thirty (30) days of completion of the activity. Appendix B contains samples of the appropriate reporting forms. Demonstration of mechanical integrity shall be performed within thirty (30) days of completion of workovers or alterations and prior to resuming injection activities in accordance with Part II, Section C.1.(a) of this permit.

B. CORRECTIVE ACTION

No immediate corrective action will be required on the other wells within the area of review (AOR) since those wells were constructed or plugged and abandoned in accordance with provisions of UIC regulations at 40 CFR §§146.10(a) and 146.22 and are protective of USDWs penetrated by those wellbores in accordance with provisions at 40 CFR §§144.55 and 146.7. One oil well (Aneth Unit G-334) will require remedial cementing at the base of the USDW during any future workover operations that include casing leak repair or when the well is plugged and abandoned, because the intermediate casing depth (1171 feet) and cement placement (calculated TOC @ 3839 feet) in the casing/wellbore annulus may be insufficient to prevent fluid movement into the USDW at 1548 feet.

C. WELL OPERATION

1. Mechanical Integrity.

(a) Method for Demonstrating Mechanical Integrity.

(i) All injection wells must have and maintain mechanical integrity consistent with 40 CFR §146.8. The Permittee must show that there are no significant leaks in the casing and tubing and that there is no significant fluid movement into any Underground Sources of Drinking Water (USDWs, per 40 CFR §144.3) through vertical channels adjacent to the injection wellbore or into the casing/wellbore annulus.

(ii) The Permittee will demonstrate that no significant leaks exist by means of a shut-in annular pressure test. The casing/tubing annulus must hold a pressure equal to the maximum allowable injection pressure (2900 psig) for a period of thirty (30) minutes with no more than a five (5) percent change in pressure and a differential of at least three hundred (300) psig pressure must be maintained between the tubing and casing/tubing annulus for the duration of the test. The test pressure may be reduced to 1,000 psig (minimum) but in that case, the frequency of testing will be reduced from five (5) to three (3) years and the tubing/casing annulus pressure must be monitored and recorded on a weekly basis. In addition, the bradenhead

valve will be opened and fluid pressure and content shall be monitored and recorded before and during the annular pressure test.

(iii) The Permittee has fulfilled the requirements listed in 40 CFR §146.8 for demonstrating the absence of fluid movement into an underground source of drinking water (USDW) through vertical channels adjacent to the injection wellbore. The Permittee submitted casing and cementing records that adequately demonstrate the isolation of the injection intervals from USDWs penetrated by the wellbore.

(b) Prohibition without Demonstration. Injection into this well may continue after the effective date of this permit only if:

(i) the well has passed a mechanical integrity test (MIT) in accordance with Part II Section C.1.(a) of this permit and

(ii) the Permittee has received written notice from the Director that the MIT demonstration is satisfactory.

The Permittee shall notify the Director of intent to demonstrate mechanical integrity at least thirty (30) days prior to an official test, unless shorter notice is approved by the Director.

(c) Subsequent Mechanical Integrity Demonstrations

(i) A demonstration of mechanical integrity in accordance with provisions of EPA REGION IX MECHANICAL INTEGRITY TEST (MIT) PART I: REQUIREMENTS FOR INTERNAL TEST, a copy of which is contained in Appendix D attached hereto, shall be conducted at least once every five (5) years during the life of the well, or every three (3) years if the well is tested at less than the maximum allowable injection pressure. Mechanical integrity shall also be demonstrated within thirty (30) days of the time that a workover is conducted or the seal is broken at the wellhead assembly, the construction of the well is modified, or when a loss of mechanical integrity becomes evident during operation.

(ii) It shall be the Permittee's responsibility to arrange and conduct the mechanical integrity demonstrations. The Permittee shall notify the Director of intent to demonstrate mechanical integrity at least thirty (30) days in advance of the demonstration, or a shorter time if approved by the Director. A subsequent notification must be given to the Navajo Nation UIC office at least seventy-two (72) hours in advance of the MIT in order to arrange for a representative to witness the MIT. Results of the test shall be submitted to the Director as soon as possible, but not later than sixty (60) days after the demonstration.

(iii) In addition to any demonstration made under paragraph (i) above, the Director may require a demonstration of mechanical integrity at any time during the permitted life of the well.

(d) Loss of Mechanical Integrity. The Permittee shall notify the Director, in accordance with Part III, Section E, paragraph 10 of this permit, under any of the following circumstances:

(i) the well fails to demonstrate mechanical integrity during a test, or

(ii) a loss of mechanical integrity becomes evident during operation, or

(iii) a significant change in the annulus or injection pressure occurs during normal operating conditions.

Furthermore, in the event of (i), (ii), or (iii), injection activities shall be terminated immediately and operation shall not be resumed until the Permittee has taken necessary actions to restore mechanical integrity to the well and the Director gives approval to recommence injection

2. Injection Interval(s). Injection shall be permitted for the Lower Honaker Trail and Paradox Formations in the gross subsurface interval of 5400 to 5684 feet, based on a review of the wireline log formation tops and depth to the uppermost open-hole window in the casing. Enlarging or changing the injection interval outside of that interval is considered a major permit modification and will require public notice and the Director's approval. Any alteration of the injection interval and other rework operations must be properly reported (EPA Form 7520-12, see Appendix B) and the well must demonstrate mechanical integrity before injection is resumed.

3. Injection Pressure Limitation(s). The injection pressure shall not exceed a surface (wellhead) injection pressure determined from a calculation of maximum allowable injection pressure equal to 1.0 psi/foot multiplied by the actual depth to the top of the injection interval less the hydrostatic pressure of the injection fluid at that depth. The maximum allowable injection pressure may be increased only if a valid step-rate test has been conducted and approved by the EPA. Appendix D contains acceptable step-rate reference materials. The step-rate test will be evaluated and a maximum allowable injection pressure will be determined by EPA, the results of which will be incorporated into this permit as the maximum allowable injection pressure. This will be considered a minor permit modification and will not be open for further public comment. **The initial maximum allowable injection pressure is set at 2900 psig**, based on a depth of 5400 feet to the top of the injection interval and a hydrostatic pressure of 2490 psig (0.461 psi/ft. gradient) at that depth.

4. Injection Volume (Rate) Limitation. The maximum and average daily injection rate of produced water and CO_2 is limited to the rate at which the maximum allowable injection pressure is not exceeded, as established in Part II.C.3 above.

5. Injection Fluid Limitation.

(a) The Permittee shall not inject any hazardous wastes as defined by the Resource Conservation and Recovery Act (RCRA, see 40 CFR §261) at any time during the operation of the facility.

(b) The well shall be used only for the injection of CO_2 and water produced in association with the Paradox formation oil production in the Aneth Unit, and produced only from wells owned and operated by the Permittee.

(c) Fluids to be injected other than those described in paragraph (b) above shall be limited to occasional minor amounts of well treatment fluids such as dilute acids and corrosion inhibiting fluids. Injection of any fluids other than those described in paragraph (b) above shall be reported to the Director within thirty (30) days.

D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS

1. Injection Well Monitoring Program. Samples and measurements shall be representative of the monitored activity. The Permittee shall utilize the applicable analytical methods described in Table I of 40 CFR §136.3 or, in certain circumstances, other methods that have been approved by the EPA Administrator. Monitoring shall consist of:

(a) Annually, or whenever there is a change in injection fluids, the following analyses of injection fluids shall be performed:

(i) Total Dissolved Solids;

(ii) Major ions;

(iii) pH;

(iv) Specific Conductance;

(v) Specific Gravity: and

(vi) Viscosity.

(b) Annually, measurement of static reservoir pressure; and

(c) Weekly, observations of injection pressure, annulus pressure, flow rate and cumulative volume. Written records of these weekly observations shall be made at least monthly.

2. Monitoring Information. Records of any monitoring activity required under this permit shall include:

   (a) Date, exact place, and the time of sampling or field measurements;

   (b) Name of individual(s) who performed sampling or measurements;

   (c) Exact sampling method(s) used;

   (d) Date(s) the laboratory analyses were performed;

   (e) Name of individual(s) who performed the analyses;

   (f) Types of analyses; and

   (g) Results of analyses.

3. Recordkeeping.

   The Permittee shall retain the following records and shall have them available at all times for examination at the lease facility:

   (a) Information on the nature and composition of all injected fluids until three (3) years after the plugging and abandonment has been carried out in accordance with the Plugging and Abandonment Plan shown in Appendix A,

   (b) All monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit, for a period of at least five (5) years from the date of the sample, measurement or report throughout the operating life of the well,

   (c) Monthly records of weekly observation records as required in Part II, Section D.1(c),

   (d) Records and results of MITs or any other tests required by the Director, and

   (e) Any well workover records.

   The Permittee shall continue to retain such records, including those corresponding to the retention periods specified in paragraphs (a) and (b), unless it delivers the records to the Director or obtains written approval from the Director to discard the records.

4. Reporting.

   Annually, the Permittee shall submit a report to the Director summarizing the results of the monitoring required by Part II, Sections A.2, D.1 and 2 of this permit. The results of annual measurement of static reservoir pressure and monthly records of flow rates, volumes, pressures, and injected fluid, and any major changes in the characteristics or sources of injected fluid shall be included in the Annual Report. The first Annual Report shall cover the period from the effective date of the permit through December 31, 2008

and shall be submitted by January 31, 2009. Subsequently, the Annual Report shall cover the period of January 1 through December 31, and shall be submitted by January 31 of the following year. Appendix B contains Form 7520-11, which may be copied and used to submit the annual summary of monitoring.

Monitoring reports and all other reports required by this permit shall be submitted to the following address:

U.S. Environmental Protection Agency, Region IX
Ground Water Office Manager (Mail Code WTR-9)
75 Hawthorne Street
San Francisco, CA 94105-3901

Copies of all reports shall also be provided to the following:

Underground Injection Control Program
Navajo Nation EPA
P.O. Box 1999
Shiprock, NM 87420

E. PLUGGING AND ABANDONMENT

1. Notice of Plugging and Abandonment. The Permittee shall notify the Director forty-five (45) days before further conversion, workover, or abandonment of the well. The Director may require that the plugging and abandonment be witnessed by an EPA representative.

2. Plugging and Abandonment Plan. The Permittee shall plug and abandon the well as provided in the Plugging and Abandonment Plan and Schematic diagram in Appendix A. The EPA reserves the right to change the manner in which the well will be plugged if the well is modified during its permitted life or if the well is not made consistent with EPA requirements for construction and mechanical integrity. The Director may ask the Permittee to estimate and to update the estimated plugging cost periodically. Such estimates shall be based upon costs, which a third party would incur to plug the well according to the plan.

3. Cessation of Injection Activities. After a cessation of operations of two (2) years, the Permittee shall plug and abandon the well in accordance with the Plugging and Abandonment Plan, unless it:

   (a) has provided notice to the Director;

   (b) has demonstrated that the well will be used in the future, and

   (c) has described actions or procedures, satisfactory to the Director that will be taken to ensure that the well will not endanger underground sources of drinking water during the period of temporary abandonment.

4. Plugging and Abandonment Report. Within sixty (60) days after plugging the well, the Permittee shall submit a report on Form 7520-14 (Appendix B), or an equivalent form, to the Director. The report shall be certified as accurate by the person who performed the plugging operation and the report shall consist of either:

   (a) a statement that the well was plugged in accordance with the plan, or

   (b) where actual plugging differed from the plan, a statement specifying the different procedures followed.

F. FINANCIAL RESPONSIBILITY

1. Demonstration of Financial Responsibility.

   The Permittee is required to maintain financial responsibility and resources to close, plug, and abandon the injection well as provided in the plugging and abandonment plan and in accordance with 40 CFR §144.52(a)(7). The Permittee shall not substitute an alternative demonstration of financial responsibility from that which the Director has approved, unless the Permittee has previously submitted evidence of that alternative demonstration to the Director and the Director has notified the Permittee in writing that the alternative demonstration is acceptable.

   (a) **Plugging and abandonment costs for the subject well must be covered by an approved financial instrument, to be provided prior to issuance of the final permit. The beneficiary of said financial instrument shall be the U.S. Environmental Protection Agency.**

   (b) The financial responsibility mechanism shall be reviewed and updated periodically, upon request of the Director. The Permittee may be required to change to an alternate method of demonstrating financial responsibility, such as an irrevocable standby letter of credit or trust fund which names EPA as the beneficiary. Any such change must be approved in writing by the Director prior to the change.

2. Insolvency of Financial Institution.

   The Permittee must submit an alternate instrument of financial responsibility acceptable to the Director within sixty (60) days after either of the following events occurs:

   (a) The trustee financial institution issuing the financial instrument files for bankruptcy; or

   (b) The authority of the trustee institution to act as trustee, or the authority of the institution issuing the financial instrument, is suspended or revoked.

   Failure to submit an acceptable financial demonstration will result in the termination of this permit pursuant to 40 CFR §144.40(a)(1).

3. Insolvency of Owner or Operator.

An owner or operator must notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under U.S. Code Title 11 (Bankruptcy), naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor of a corporate guarantee must make such a notification if he/she is named as debtor, as required under the terms of the guarantee.

PART III. GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The Permittee is allowed to engage in underground injection in accordance with the conditions of this permit. The Permittee, as authorized by this permit, shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR §142 or otherwise adversely affect the health of persons.

Any underground injection activity not authorized in this permit or otherwise authorized by permit or rule is prohibited. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations.

B. PERMIT ACTIONS

1. Modification, Revocation and Re-issuance, or Termination.

The Director may, for cause or upon request from the Permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR Sections 124.5, 144.12, 144.39, and 144.40. The permit is also subject to minor modifications for cause as specified in 40 CFR §144.41. The filing of a request for a permit modification, revocation and re-issuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

2. Transfers

This permit may only be transferred after notice is provided to the Director and the Permittee complies with the requirements of 40 CFR §144.38. The Director may require modification or revocation and re-issuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the SDWA.

C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the remainder of this permit shall not be affected.

D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and 40 CFR §144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

1. The name and address of the Permittee, or

2. Information, which deals with the existence, absence, or level of contaminants in drinking water.

E. GENERAL DUTIES AND REQUIREMENTS

1. Duty to Comply. The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and re-issuance, or modification. Such noncompliance may also be grounds for enforcement action under the Resource Conservation and Recovery Act (RCRA).

2. Penalties for Violations of Permit Conditions. Any person who violates a permit requirement is subject to civil penalties, fines, and other enforcement action under the SDWA and may be subject to such actions pursuant to RCRA. Any person who willfully violates permit conditions may be subject to criminal prosecution.

3. Need to Halt or Reduce Activity not a Defense. It shall not be a defense, for a Permittee in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate. The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

5. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit.

6. Duty to Provide Information. The Permittee shall furnish the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine

compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

7. Inspection and Entry. The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

   (a) enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;

   (b) have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

   (c) inspect at reasonable times any facilities, equipment (including monitoring and control equipment) practices, or operations regulated or required under this permit; and

   (d) sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

8. Records of the Permit Application. The Permittee shall maintain records of all data required to complete the permit application and any supplemental information submitted for a period of five (5) years from the effective date of this permit. This period may be extended by request of the Director at any time.

9. Signatory Requirements. All reports or other information requested by the Director shall be signed and certified by a responsible corporate officer or duly authorized representative according to 40 CFR §144.32.

10. Reporting of Noncompliance.

   (a) Anticipated Noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

   (b) Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than thirty (30) days following each schedule date.

(c) Twenty-four Hour Reporting.

(i) The Permittee shall report to the Director any noncompliance, which may endanger health or the environment. Information shall be provided within twenty-four (24) hours from the time the Permittee becomes aware of the circumstances by telephoning the EPA project officer. The following information shall be included in the verbal report:

(A) Any monitoring or other information, which indicates that any contaminant may cause endangerment to an underground source of drinking water.

(B) Any noncompliance with a permit condition or malfunction of the injection system, which may cause fluid migration into or between underground sources of drinking water.

(ii) A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of non compliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

(d) Other Noncompliance. The Permittee shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted. The reports shall contain the information listed in Part II, Section D.1 and 2 of this permit.

(e) Other Information. Where the Permittee becomes aware that it failed to submit all relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall submit such facts or information within two (2) weeks of the time such information becomes known.

APPENDIX A - Plugging and Abandonment Plan (s)

OMB No. 2040-0042 Approval Expires 4/30/07

EPA

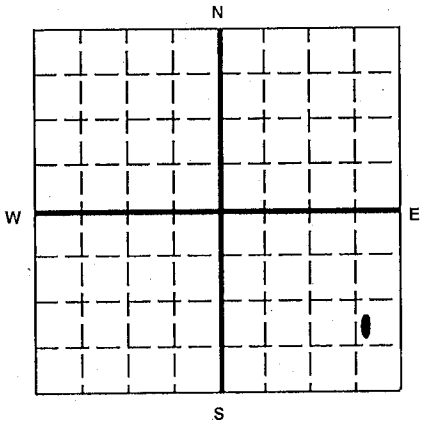
United States Environmental Protection Agency
Washington, DC 20460

PLUGGING AND ABANDONMENT PLAN

Name and Address of Facility
Resolute Aneth, LLC
4.5 Miles North, PO Box 800, Montezuma Creek, UT 84534

Name and Address of Owner/Operator
Resolute Natural Resources Company
1675 Broadway, Suite 1950, Denver, CO 80202

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	San Juan	

Surface Location Description
1/4 of ne 1/4 of se 1/4 of se 1/4 of Section 34 Township 40S Range 24E

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

Surface Location 700 ft. frm (N/S) S Line of quarter section
and 500 ft. from (E/W) E Line of quarter section.

TYPE OF AUTHORIZATION
- [x] Individual Permit
- [ ] Area Permit
- [ ] Rule

Number of Wells 1

Lease Name Aneth Unit

WELL ACTIVITY
- [ ] CLASS I
- [x] CLASS II
  - [ ] Brine Disposal
  - [x] Enhanced Recovery
  - [ ] Hydrocarbon Storage
- [ ] CLASS III

Well Number H-434

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT (LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
13 3/8	68		37	
8 5/8	36		1598	
5 1/2	14 & 15.5		5702	

METHOD OF EMPLACEMENT OF CEMENT PLUGS
- [x] The Balance Method
- [ ] The Dump Bailer Method
- [ ] The Two-Plug Method
- [ ] Other

CEMENTING TO PLUG AND ABANDON DATA:	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inche	4 3/4 OH	4 3/4 OH	5 1/2	5 1/2	8 5/8		
Depth to Bottom of Tubing or Drill Pipe (ft	5585	5500	4780	1643	100		
Sacks of Cement To Be Used (each plug)							
Slurry Volume To Be Pumped (cu. ft.)	12.31	12.31	30.52	15.26	33.4		
Calculated Top of Plug (ft.)	5485	5400	4580	1543	Surface		
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)	15.6	15.6	15.6	15.6	15.6		
Type Cement or Other Material (Class III)	A	A	A	A	A		

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (if any)

From	To	From	To
5485'	8110' Lateral 1 Open Hole		
5400'	8876' Lateral 2 Open Hole		
5548'	5562' Perf'd		
5649'	5664' Perf'd		

Estimated Cost to Plug Wells
Estimated P&A cost is $52,000. See attached P&A schematic for additional information

Certification

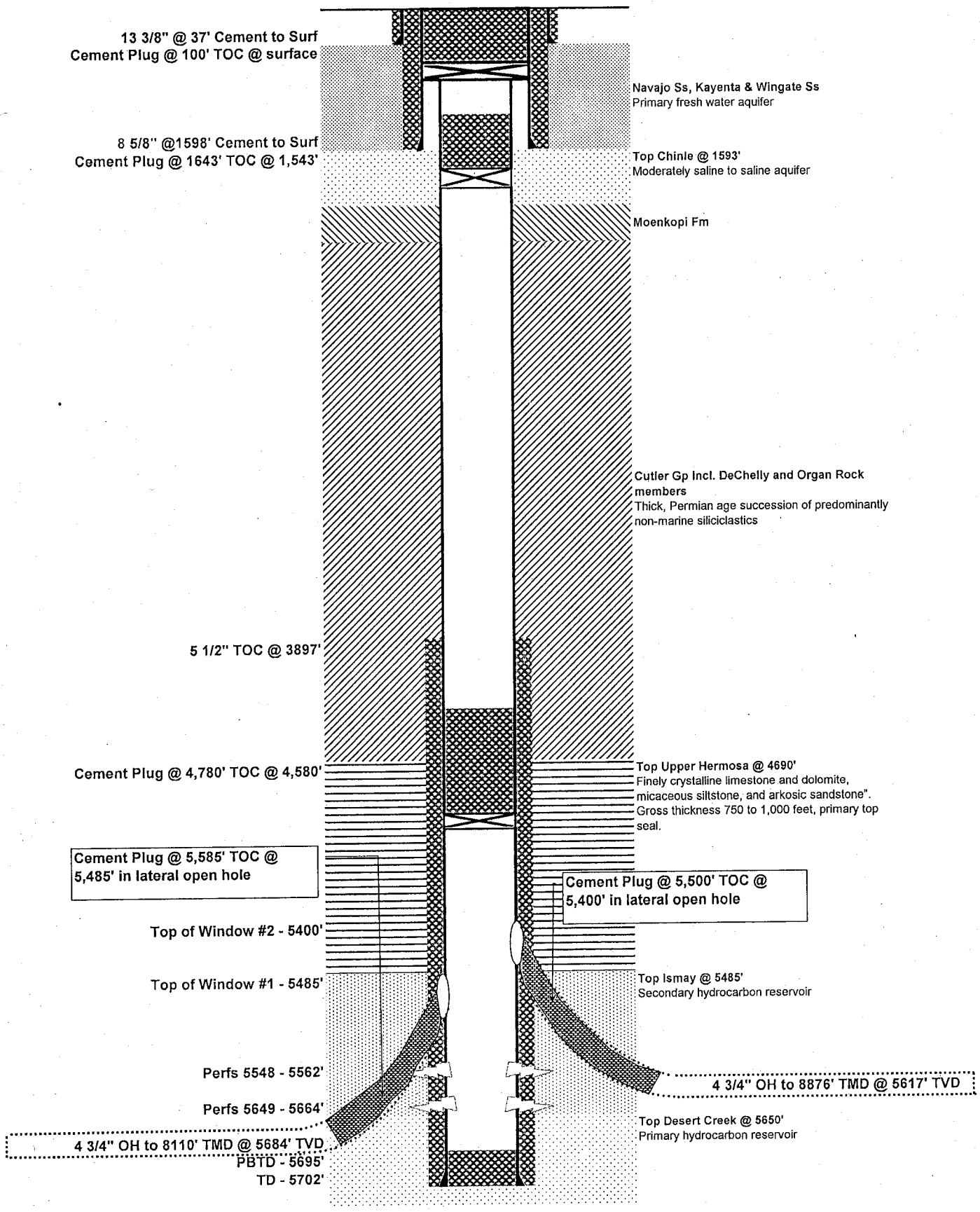
I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate,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

Name and Official Title *(Please type or print)*	Signature	Date Signed
Dwight Mallory, Regulatory Coordinator		10/15/07

Aneth Unit H-434
700' FSL and 500' FEL
Sec 34-T40S-R24E
San Juan County, Utah

API 43-037-16230

Proposed Abandonment Schematic



APPENDIX B - Reporting Forms and Instructions

1. EPA Form 7520 -7:APPLICATION TO TRANSFER PERMIT
2. EPA Form 7520-10:WELL COMPLETION REPORT
3. EPA Form 7520-11:ANNUAL WELL MONITORING REPORT
4. EPA Form 7520-12:WELL REWORK RECORD
5. EPA Form 7520-14:PLUGGING AND ABANDONMENT PLAN

OMB No. 2040-0042 Approval Expires 4/30/07

EPA

United States Environmental Protection Agency
Washington, DC 20460

Application To Transfer Permit

Name and Address of Existing Permittee	Name and Address of Surface Owner

Locate Well and Outline Unit on Section Plat - 640 Acres

N

W E

S

State	County	Permit Number

Surface Location Description

____ 1/4 of ____ 1/4 of ____ 1/4 of ____ 1/4 of Section ____ Township ____ Range ____

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

Surface Location ____ ft. frm (N/S) ____ Line of quarter section and ____ ft. from (E/W) ____ Line of quarter section.

Well Activity	Well Status	Type of Permit
____ Class I	____ Operating	____ Individual
____ Class II	____ Modification/Conversion	____ Area
____ Brine Disposal	____ Proposed	Number of Wells ____
____ Enhanced Recovery		
____ Hydrocarbon Storage		
____ Class III		
____ Other		

Lease Number ____ Well Number ____

Name(s) and Address(es) of New Owner(s)	Name and Address of New Operator

Attach to this application a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability betweend them.

The new permittee must show evidence of financial responsibility by the submission of a surety bond, or other adequate assurance, such as financial statements or other materials acceptable to the Director.

Certification

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

Name and Official Title *(Please type or print)*	Signature	Date Signed

PAPERWORK REDUCTION ACT

The public reporting and record keeping burden for this collection of information is estimated to average 5 hours per response. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

Well Class and Type Code

Class I	Wells used to inject waste below the deepest underground source of drinking water.
Type "I"	Nonhazardous industrial disposal well
"M"	Nonhazardous municipal disposal well
"W"	Hazardous waste disposal well injecting below USDWs
"X"	Other Class I wells (not included in Type "I," "M," or "W")
Class II	Oil and gas production and storage related injection wells.
Type "D"	Produced fluid disposal well
"R"	Enhanced recovery well
"H"	Hydrocarbon storage well (excluding natural gas)
"X"	Other Class II wells (not included in Type "D," "R," or "H")
Class III	Special process injection wells.
Type "G"	Solution mining well
"S"	Sulfur mining well by Frasch process
"U"	Uranium mining well
"X"	Other Class III wells (not included in Type "G," "S," or "U")
Other Classes	Wells not included in classes above. Class V wells which may be permitted under § 144.12 Wells not currently classified as Class I, II, III, or V

OMB No. 2040-0042 Approval Expires 4/30/07

United States Environmental Protection Agency
Washington, DC 20460

COMPLETION REPORT FOR BRINE DISPOSAL, HYDROCARBON STORAGE, OR ENHANCED RECOVERY

Name and Address of Existing Permittee	Name and Address of Surface Owner

Locate Well and Outline Unit on Section Plat - 640 Acres

N
W E
S

State	County	Permit Number

Surface Location Description

____ 1/4 of ____ 1/4 of ____ 1/4 of ____ 1/4 of Section ____ Township ____ Range ____

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

Surface Location ____ ft. frm (N/S) ____ Line of quarter section
and ____ ft. from (E/W) ____ Line of quarter section.

WELL ACTIVITY
- ☐ Brine Disposal
- ☐ Enhanced Recovery
- ☐ Hydrocarbon Storage

TYPE OF PERMIT
- ☐ Individual
- ☐ Area

Number of Wells ____

Estimated Fracture Pressure of Injection Zone

Anticipated Daily Injection Volume (Bbls)		Injection Interval	
Average	Maximum	Feet	to Feet

Anticipated Daily Injection Pressure (PSI)		Depth to Bottom of Lowermost Freshwater Formation (Feet)
Average	Maximum	

Type of Injection Fluid *(Check the appropriate block(s))*

☐ Salt Water ☐ Brackish Water ☐ Fresh Water
☐ Liquid Hydrocarbon ☐ Other

Lease Name	Well Number

Name of Injection Zone

Date Drilling Began	Date Well Completed

Permeability of Injection Zone

Date Drilling Completed

Porosity of Injection Zone

CASING AND TUBING			CEMENT		HOLE	
OD Size	Wt/Ft - Grade - New or Used	Depth	Sacks	Class	Depth	Bit Diameter

INJECTION ZONE STIMULATION		WIRE LINE LOGS, LIST EACH TYPE	
Interval Treated	Materials and Amount Used	Log Types	Logged Intervals

Complete Attachments A -- E listed on the reverse.

Certification

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

Name and Official Title *(Please type or print)*	Signature	Date Signed

ATTACHMENTS

A. Present a schematic or other appropriate drawing of the surface and subsurface construction details of the well as built.

B. Describe the method and results of mechanical integrity testing.

C. Present the results of that portion of those logs, test, and cores which specifically relate to (1) underground sources of drinking water and the confining zone(s) and (2) the injection and adjacent formations.

D. Present the status of corrective action on defective wells in the area of review.

E. Provide to EPA, with the completion report, one final print of all geophysical logs run.

PAPERWORK REDUCTION ACT

The public reporting and record keeping burden for this collection of information is estimated to average 4 hours per well. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

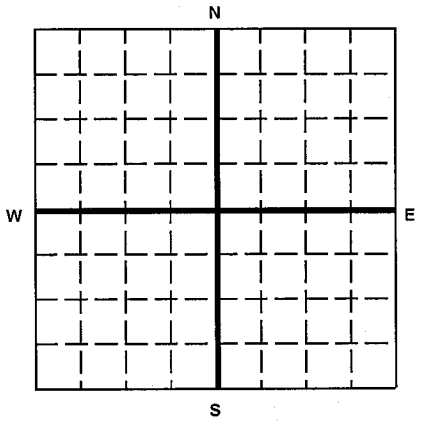
OMB No. 2040-0042 Approval Expires 4/30/07

United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee	Name and Address of Surface Owner

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number

Surface Location Description

____ 1/4 of ____ 1/4 of ____ 1/4 of ____ 1/4 of Section ____ Township ____ Range ____

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

Surface Location ____ ft. frm (N/S) ____ Line of quarter section and ____ ft. from (E/W) ____ Line of quarter section.

WELL ACTIVITY	TYPE OF PERMIT
☐ Brine Disposal	☐ Individual
☐ Enhanced Recovery	☐ Area
☐ Hydrocarbon Storage	Number of Wells ____

Lease Name _____ Well Number _____

	INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG

Certification

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

Name and Official Title *(Please type or print)*	Signature	Date Signed

PAPERWORK REDUCTION ACT

The public reporting and record keeping burden for this collection of information is estimated to average 25 hours annually for operators of Class I wells and 5 hours annually for operators of Class II wells. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

OMB No. 2040-0042 Approval Expires 4/30/07

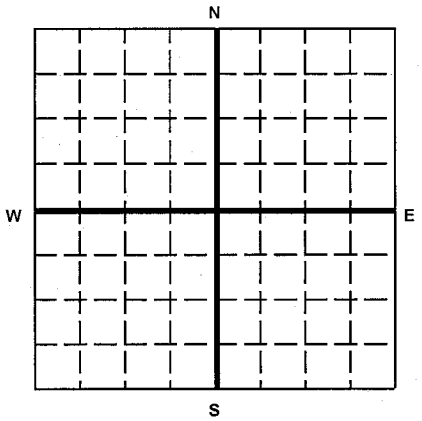
EPA

United States Environmental Protection Agency
Washington, DC 20460

WELL REWORK RECORD

Name and Address of Permittee	Name and Address of Contractor

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number

Surface Location Description

____ 1/4 of ____ 1/4 of ____ 1/4 of ____ 1/4 of Section ____ Township ____ Range ____

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

Surface Location ____ ft. frm (N/S) ____ Line of quarter section and ____ ft. from (E/W) ____ Line of quarter section.

WELL ACTIVITY	Total Depth Before Rework	TYPE OF PERMIT
☐ Brine Disposal		☐ Individual
☐ Enhanced Recovery	Total Depth After Rework	☐ Area
☐ Hydrocarbon Storage		Number of Wells ____
	Date Rework Commenced	
Lease Name		Well Number
	Date Rework Completed	

WELL CASING RECORD -- BEFORE REWORK

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

WELL CASING RECORD -- AFTER REWORK *(Indicate Additions and Changes Only)*

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

DESCRIBE REWORK OPERATIONS IN DETAIL USE ADDITIONAL SHEETS IF NECESSARY	WIRE LINE LOGS, LIST EACH TYPE	
	Log Types	Logged Intervals

Certification

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

Name and Official Title *(Please type or print)*	Signature	Date Signed

PAPERWORK REDUCTION ACT

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OMB No. 2040-0042 Approval Expires 4/30/07

United States Environmental Protection Agency
Washington, DC 20460

PLUGGING AND ABANDONMENT PLAN

Name and Address of Facility	Name and Address of Owner/Operator

Locate Well and Outline Unit on Section Plat - 640 Acres

N
W E
S

State	County	Permit Number

Surface Location Description

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

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

Surface Location ___ ft. frm (N/S) ___ Line of quarter section and ___ ft. from (E/W) ___ Line of quarter section.

TYPE OF AUTHORIZATION

- ☐ Individual Permit
- ☐ Area Permit
- ☐ Rule

Number of Wells ___

WELL ACTIVITY

- ☐ CLASS I
- ☐ CLASS II
  - ☐ Brine Disposal
  - ☐ Enhanced Recovery
  - ☐ Hydrocarbon Storage
- ☐ CLASS III

Lease Name ___ Well Number ___

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT (LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- ☐ The Balance Method
- ☐ The Dump Bailer Method
- ☐ The Two-Plug Method
- ☐ Other

CEMENTING TO PLUG AND ABANDON DATA:	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inche							
Depth to Bottom of Tubing or Drill Pipe (ft							
Sacks of Cement To Be Used (each plug)							
Slurry Volume To Be Pumped (cu. ft.)							
Calculated Top of Plug (ft.)							
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)							
Type Cement or Other Material (Class III)							

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (if any)

From	To	From	To

Estimated Cost to Plug Wells

Certification

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

Name and Official Title *(Please type or print)*	Signature	Date Signed

Paperwork Reduction Act Notice

The public reporting and record keeping burden for this collection of information is estimated to average 19.5 hours annually for operators of Class I wells, 6 hours annually for operators of Class II wells, and 8 hours annually for operators of Class III wells. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

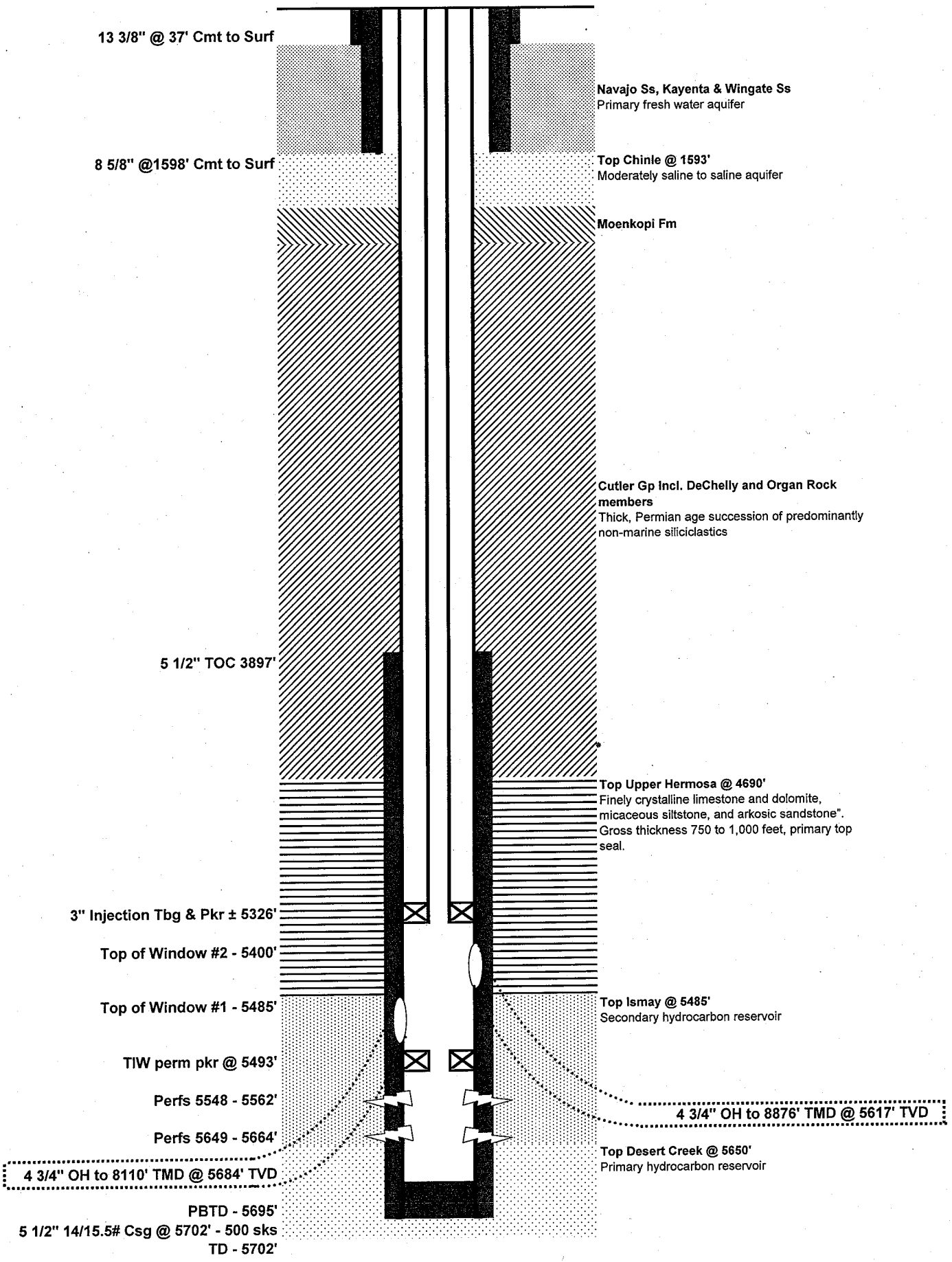
Please send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Office of Environmental Information, Collection Strategies Division, U.S. Environmental Protection Agency (2822), Ariel Rios Building, 1200 Pennsylvania Ave., NW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, Attention: Desk Officer for EPA. Please include the EPA ICR number and OMB control number in any correspondence.

APPENDIX C – Wellbore Schematic(s)

Aneth Unit H-434
700' FSL and 500' FEL
Sec 34-T40S-R24E
San Juan County, Utah

API 43-037-16230

Proposed Injection Schematic



8/29/2007

APPENDIX D – Reference Materials

1. MECHANICAL INTEGRITY TEST (MIT) PART I: REQUIREMENTS FOR INTERNAL TEST

2. REGION 9 STEP RATE TEST POLICY reference Society of Petroleum Engineers (SPE) Paper #16798, Systematic Design and Analysis of Step-Rate Tests to Determine Formation Parting Pressure

U.S.E.P.A. REGION IX
MECHANICAL INTEGRITY TEST (MIT)
PART I: REQUIREMENTS FOR INTERNAL TEST

The U. S. Environmental Protection Agency (EPA) Region 9 requirements described below are effective as of May 1, 1992. For further reference, consult 40 CFR §146.8(b). Part I MIT may be demonstrated by one of two methods:

METHOD A

1) An annular pressure demonstration is performed at the system's maximum water injection pressure (pressure must be at least 300 psig).
2) The system's wells are tested at least once every five years or whenever packer reseating is needed. A test ensuing from packer reseating will be regarded as an official MIT demonstration.
3) Casing annuli and injections are monitored **monthly** and the results are included in the annual report to the director.

METHOD B

1) Test pressure is to be 1000 psig (it is not necessary to test to maximum water injection pressure).
2) Water injection pressure tests are conducted at least once every three years or whenever packer reseating is needed (see Method A (2)).
3) Casing annuli and injection pressure are monitored **weekly** and the results are included in the annual report to the director.

In applying either Method A or Method B, the operator must adhere to the following EPA specifications:

- All tests must last at least 30 minutes, during which time the pressure should not increase or decrease by more than 5%.
- A minimum differential pressure of 300 psig between tubing and tubing-casing annulus is to be maintained throughout the MIT.
- The EPA will consider alternative test parameters and frequencies when requested in writing. Requirements might be less stringent, for example, where there are no Underground Sources of Drinking Water (USDWs).
- The 30 days minimum notification period specified in federal regulations may be shortened by the EPA Regional Administrator. MIT information will be accepted as valid **only** if EPA has been given at least 14 days notice to make arrangements to witness the MIT.
- If a well fails the MIT, the well is to be shut in immediately and steps for remediation taken as soon as possible. The operator will still be bound to report any noncompliance as required in 40 CFR §144.28(b).
- Remediation may consist of squeeze cementing holes in the casing, running a liner inside the casing, or setting tandem packers to isolate a hole in the casing when it is not practical to squeeze the hole and the hole poses no danger to any USDWs. These and other alternatives will be considered on a case-by-case basis.
- If mechanical integrity is not achieved within the specified time period, the EPA may undertake an enforcement action. Time extensions to achieve compliance are permissible, but they must be justified and requested in writing.