

State of New Mexico  
Energy Minerals and Natural Resources

Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application

- Type of action: ☒ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☐ Modification to an existing permit  
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

**Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request**

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

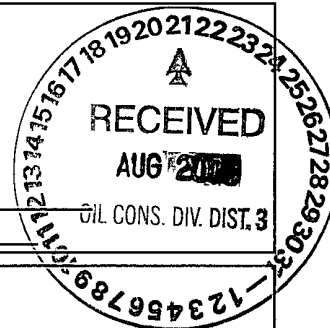
1  
Operator: Burlington Resources Oil & Gas Company, LP OGRID#: 14538  
Address: PO Box 4289, Farmington, NM 87499  
Facility or well name: Patterson #3  
API Number: 30-045-20654 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr: N(SSEW) Section: 2 Township: 31N Range: 12W County: San Juan  
Center of Proposed Design: Latitude: 36.923220' N Longitude: 108.067980' W NAD: ☒ 1927 ☐ 1983  
Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2  
☒ **Pit:** Subsection F or G of 19.15.17.11 NMAC  
Temporary: ☐ Drilling ☒ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A  
☒ Lined ☐ Unlined Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☐ String-Reinforced  
Liner Seams: ☒ Welded ☒ Factory ☐ Other \_\_\_\_\_ Volume: 7000 bbl Dimensions L 120' x W 55' x D 12'

3  
☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other \_\_\_\_\_  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVD ☐ Other \_\_\_\_\_  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_

4  
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_  
Tank Construction material: \_\_\_\_\_  
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other \_\_\_\_\_  
Liner Type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

5  
☐ **Alternative Method:**  
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.



6

**Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pit, temporary pits, and below-grade tanks*)

- ☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)
- ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
- ☒ Alternate. Please specify Please see Design Plan

7

**Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

- ☐ Screen ☐ Netting ☐ Other \_\_\_\_\_
- ☐ Monthly inspections (*If netting or screening is not physically feasible*)

8

**Signs:** Subsection C of 19.15.17.11 NMAC

- ☐ 12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
- ☒ Signed in compliance with 19.15.3.103 NMAC

9

**Administrative Approvals and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance

*Please check a box if one or more of the following is requested, if not leave blank:*

- ☒ Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for consideration of approval.  
(Distance from pit to watercourse)
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10

**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

*Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau Office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above grade-tanks associated with a closed-loop system.*

**Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.**

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☒ No

**Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).**

- Topographic map; Visual inspection (certification) of the proposed site

☒ Yes ☐ No

**Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.**

(Applies to temporary, emergency, or cavitation pits and below-grade tanks)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☒ No

☐ NA

**Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.**

(Applied to permanent pits)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

☒ NA

**Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.**

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site.

☐ Yes ☒ No

**Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended**

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☒ No

**Within 500 feet of a wetland.**

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

**Within the area overlying a subsurface mine.**

- Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division

☐ Yes ☒ No

**Within an unstable area.**

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☒ No

**Within a 100-year floodplain**

- FEMA map

☐ Yes ☒ No

11

**Temporary Pits, Emergency Pits and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC  
☒ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC  
☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☒ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  
☐ Previously Approved Design (attach copy of design) API \_\_\_\_\_ or Permit \_\_\_\_\_

12

**Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC

*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  
☐ Previously Approved Design (attach copy of design) API \_\_\_\_\_  
☐ Previously Approved Operating and Maintenance Plan API \_\_\_\_\_

13

**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC

*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Climatological Factors Assessment  
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Dike Protection and Structural Integrity Design: based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Quality Control/Quality Assurance Construction and Installation Plan  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan  
☐ Emergency Response Plan  
☐ Oil Field Waste Stream Characterization  
☐ Monitoring and Inspection Plan  
☐ Erosion Control Plan  
☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14

**Proposed Closure:** 19.15.17.13 NMAC

*Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.*

- Type: ☐ Drilling ☒ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System  
☐ Alternative  
 Proposed Closure Method: ☐ Waste Excavation and Removal  
☐ Waste Removal (Closed-loop systems only)  
☒ On-site Closure Method (only for temporary pits and closed-loop systems)  
☒ In-place Burial ☐ On-site Trench  
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15

**Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)  
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)

*Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.*

Disposal Facility Name. \_\_\_\_\_ Disposal Facility Permit #: \_\_\_\_\_

Disposal Facility Name. \_\_\_\_\_ Disposal Facility Permit #: \_\_\_\_\_

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please provide the information) ☐ No

*Required for impacted areas which will not be used for future service and operations*

☐ Soil Backfill and Cover Design Specification - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

**Siting Criteria (Regarding on-site closure methods only:** 19.15.17.10 NMAC

*Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.*

Ground water is less than 50 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search, USGS Data obtained from nearby wells

☐ Yes ☒ No

☐ N/A

Ground water is between 50 and 100 feet below the bottom of the buried waste

- NM Office of the State Engineer - iWATERS database search, USGS Data obtained from nearby wells

☒ Yes ☐ No

☐ N/A

Ground water is more than 100 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS Data obtained from nearby wells

☐ Yes ☒ No

☐ N/A

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☒ Yes ☐ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; satellite image

☐ Yes ☒ No

☐ Yes ☒ No

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of the initial application.

- NM Office of the State Engineer - iWATERS database, Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality. Written approval obtained from the municipality

Within 500 feet of a wetland

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources, USGS; NM Geological Society, Topographic map

☐ Yes ☒ No

Within a 100-year floodplain

- FEMA map

☐ Yes ☒ No

**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☒ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC

☐ Construction/Design Plan of Temporary Pit (for in place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC

☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC

☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☒ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)

☒ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC

☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19

**Operator Application Certification:**

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Crystal Tafoya Title: Regulatory Technician  
 Signature: *Crystal Tafoya* Date: 8/19/08  
 e-mail address: crystal.tafoya@conocoplPhillip.com Telephone: 505-326-9837

20

**OCD Approval:** ☒ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: *Bob Pull* Approval Date: 8-26-08

Title: Enviro/Spec OCD Permit Number: \_\_\_\_\_

21

**Closure Report (required within 60 days of closure completion):** Subsection K of 19 15 17 13 NMAC

*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

☐ Closure Completion Date: \_\_\_\_\_

22

**Closure Method:**

- ☐ Waste Excavation and Removal ☐ On-site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)  
☐ If different from approved plan, please explain.

23

**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

*Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.*

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

- ☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*

- ☐ Site Reclamation (Photo Documentation)  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique

24

**Closure Report Attachment Checklist:** *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Proof of Closure Notice (surface owner and division)  
☐ Proof of Deed Notice (required for on-site closure)  
☐ Plot Plan (for on-site closures and temporary pits)  
☐ Confirmation Sampling Analytical Results (if applicable)  
☐ Waste Material Sampling Analytical Results (if applicable)  
☐ Disposal Facility Name and Permit Number  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique  
☐ Site Reclamation (Photo Documentation)

On-site Closure Location Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_ NAD ☐ 1927 ☐ 1983

25

**Operator Closure Certification:**

*I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan*

Name (Print) \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

**New Mexico Office of the State Engineer  
POD Reports and Downloads**

Township: 31N Range: 12W Sections: 1,2,3,10,11,12

NAD27 X: Y: Zone: ☐ Search Radius:

County: ☐ Basin: ☐ Number:  Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic  
☒ All

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

iWATERS Menu

Help

**WATER COLUMN REPORT 08/01/2008**

(quarters are 1=NW 2=NE 3=SW 4=SE)  
 (quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column
<u>SJ 03488</u>	31N	12W	01	3	3	2				150		
<u>SJ 03738 POD1</u>	31N	12W	01	4	1	3				115	50	6
<u>SJ 02034</u>	31N	12W	01	4	3					85	55	3
<u>SJ 03134</u>	31N	12W	01	4	3	2				80	20	6
<u>SJ 03022</u>	31N	12W	01	4	3	2				490	250	24
<u>SJ 01660</u>	31N	12W	01	4	3	3				320	275	4
<u>SJ 01649</u>	31N	12W	01	4	3	4				220	161	5
<u>SJ 03660</u>	31N	12W	01	4	3	4				70	42	2
<u>SJ 02099</u>	31N	12W	01	4	4					95		

Record Count: 9

**New Mexico Office of the State Engineer  
POD Reports and Downloads**

Township: 32N Range: 12W Sections: 34,35,36

NAD27 X: Y: Zone: ☐ Search Radius: |

County: ☐ Basin: ☐ Number: Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic  
☒ All

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

iWATERS Menu

Help

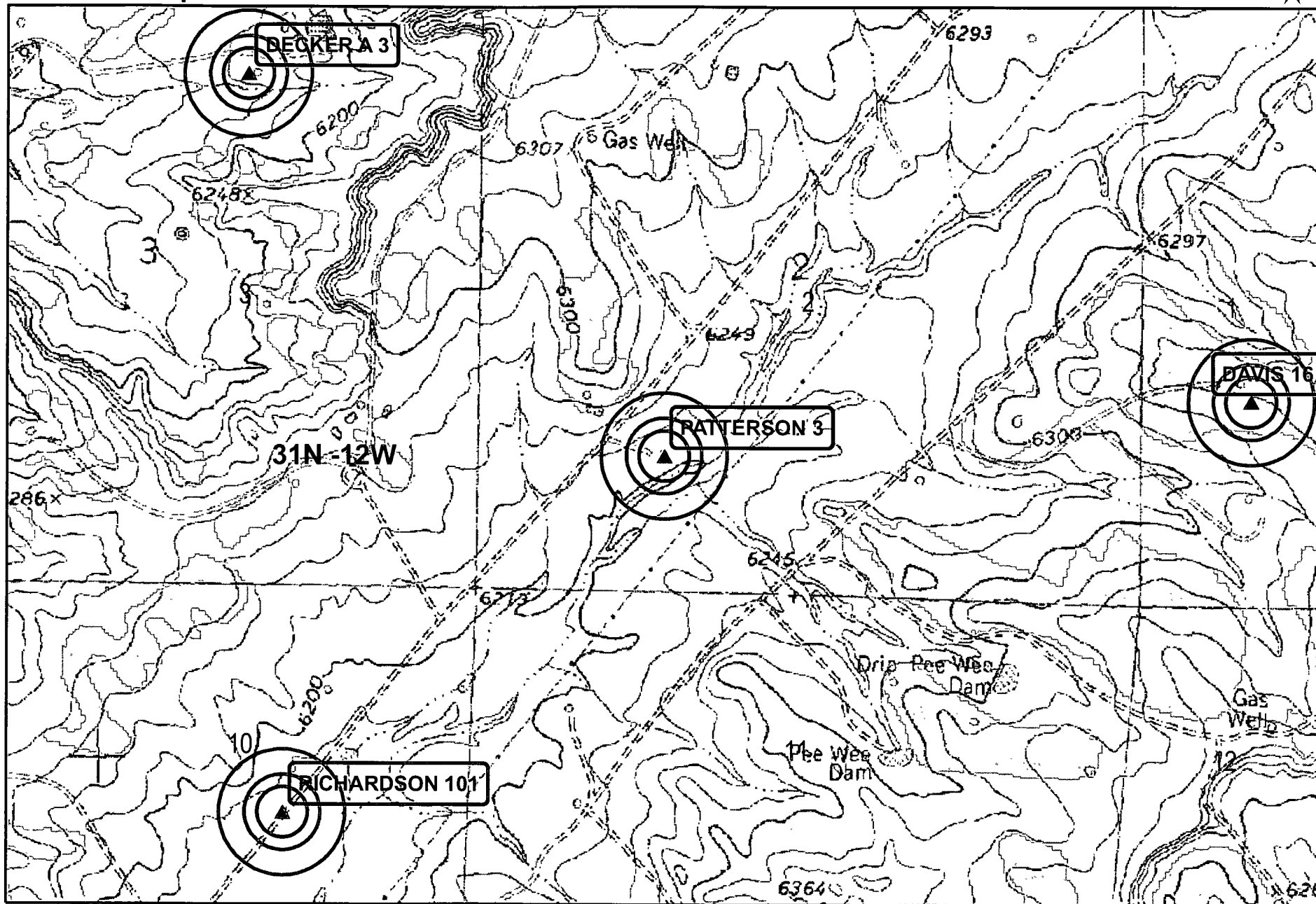
**WATER COLUMN REPORT 08/01/2008**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column
SJ 01106	32N	12W	35	3	4					180	115	6

Record Count: 1



Wetlands data acquired from U.S. Fish  
and Wildlife  
<http://wetlandswms.er.usgs.gov>

**Ground Water**

- ⊕ iWaters
- + COP

**Buffers**

- 200ft
- 300ft
- 500ft
- Wetlands

0 800 1,600 Feet  
1:12,000

NAD\_1983\_StatePlane\_  
NMWest\_FIPS\_3003  
7/08



30-045-11069

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS  
NORTHWESTERN NEW MEXICO

Operator Meridian Oil Inc. Location: Unit E Sec. 2 Twp 31 Rng 12

Name of Well/Wells or Pipeline Serviced \_\_\_\_\_

PATTERSON B Com #1

Elevation \_\_\_\_\_ Completion Date 5-5-93 Total Depth 412' Land Type P

Casing Strings, Sizes, Types & Depths 4 1/2" SET 99' OF 8" PVC CASING

NO GAS, WATER, OR BOULDERS WERE ENCOUNTERED DURING CASING.

If Casing Strings are cemented, show amounts & types used Cemented

WITH 20 SACKS.

If Cement or Bentonite Plugs have been placed, show depths & amounts used

None

Depths & thickness of water zones with description of water: Fresh, Clear,

Salty, Sulphur, Etc. Moist at 175' More water at 180' - Fresh

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 412'

6105 lb - Ashbury

Depths anodes placed: 1. 395, 375, 365, 355, 340, 330, 315, 290, 260, 250, 240, 230, 215, 200, 190

Depths vent pipes placed: From Surface to 412'

Vent pipe perforations: From 156' to 412'

Remarks: No gas encountered during drilling

RECEIVED

JAN 31 1994

OIL CON. DIV.

DIST. 3

If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included.

Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.  
If Federal or Indian, add Lease Number.

NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

NOTICE OF INTENTION TO DRILL OR RECOMPLETE

Notice must be given to the District Office of the Oil Conservation Commission and approval obtained before drilling or recompletion begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in **QUINTUPLICATE**. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission.

Dallas, Texas  
(Place)

March 5, 1954  
(Date)

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Gentlemen:

You are hereby notified that it is our intention to commence the (Drilling) (Recompletion) of a well to be known as

Southern Union Gas Company  
(Company or Operator)

W. S. Patterson  
(Lease)

Well No. 2

in 8  
(Unit)

The well is

located 1690 feet from the North line and 990 feet from the

West

line of Section 2, T. 11N, R. 18W, NMPM.

(GIVE LOCATION FROM SECTION LINE)

Blanco

Pool,

San Juan

County

If State Land the Oil and Gas Lease is No. B-11625 - Committined - see

If patented land the owner is below

Address

We propose to drill well with drilling equipment as follows: Rotary tools to top of  
pay. Pay zone using natural gas method.

The status of plugging bond is State Wide

Drilling Contractor

We intend to complete this well in the Point Lookout

formation at an approximate depth of 3050-5400 feet

CASING PROGRAM

We propose to use the following strings of Casing and to cement them as indicated:

Size of Hole	Size of Casing	Weight per Foot	New or Second Hand	Depth	Sacks Cement
<u>8-3/4" reamed to 13-3/4"</u>	<u>9-5/8"</u>	<u>40</u>	<u>New</u>	<u>250</u>	<u>To surface</u>
<u>8-3/4"</u>	<u>7"</u>	<u>20#</u>	<u>"</u>	<u>5050</u>	<u>250</u>

If changes in the above plans become advisable we will notify you immediately.

ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

Well will be shot with about 1200 Quarts of nitro from 5100' to 5400'.

Committined Unit: 1/4 Sec. 2, T-11-N, R-18-W; SW 1/4 - Mary Wing - 883  
NE 1/4 - State B-11625-11 - 542; SE 1/4 - State B11625 - Beaver Lodge Oil Corp.;  
SW 1/4 - State B-11625 - Bay Petroleum Corp.

Approved  
Except as follows:

3-8-54

SOUTHERN UNION GAS COMPANY

By

A. M. Wichterich

Position

Engineer  
Send Communications regarding well to

Name

Southern Union Gas Co

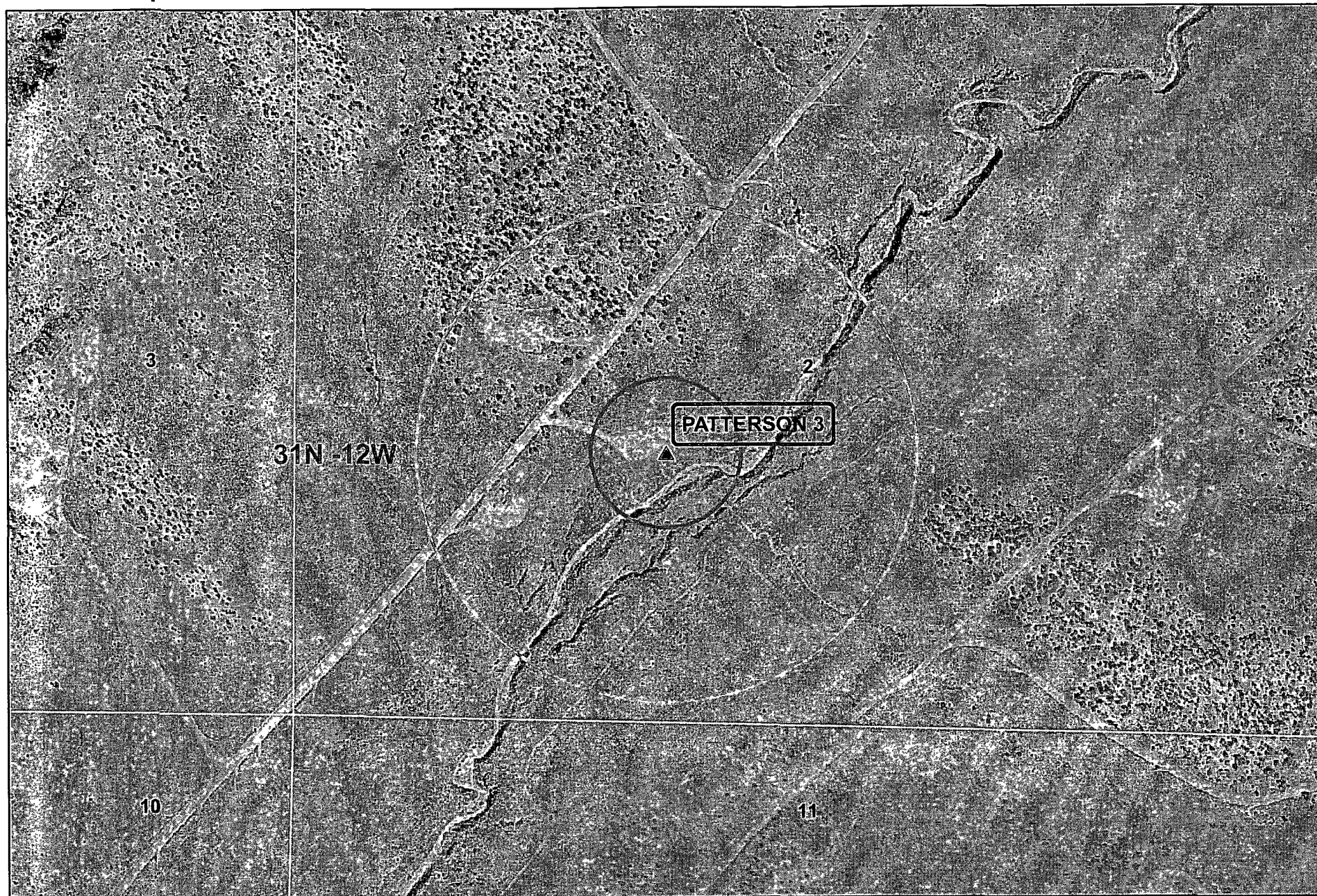
Address

East Bldg., Dallas 1, Texas

OIL CONSERVATION COMMISSION

By

Title PETROLEUM ENGINEER DIST. NO. 3



Data Source  
Aerial flown locally Sedgewick in 2005.

1000ft

300ft

0 500 1,000  
Feet  
1:6,000

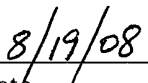
NAD\_1983\_SP\_  
NM West\_FIPS\_3003  
7/08

The **Patterson #3** is located near a possible watercourse as indicated on the aerial map.

Due to this a field inspection was performed on **August 13th, 2008** and the distance from the edge of the pit to the edge of the wash was determined to be 195'.

I hereby certify the above statement is true and accurate to the best of my ability.

  
Regulatory Technician

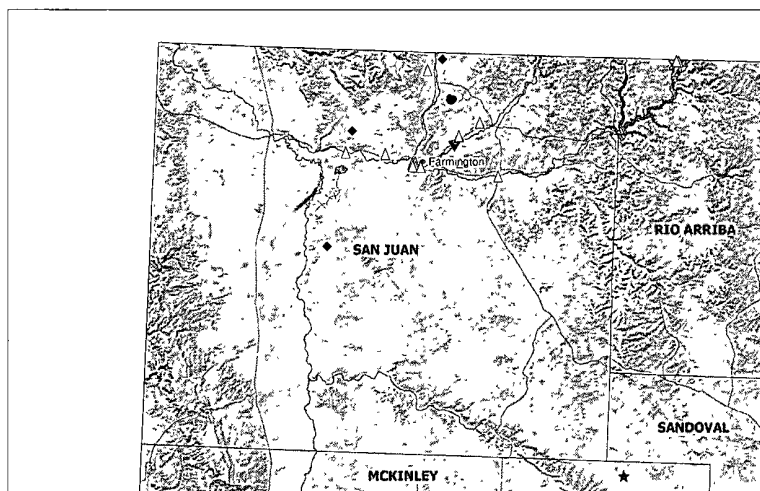
  
Date

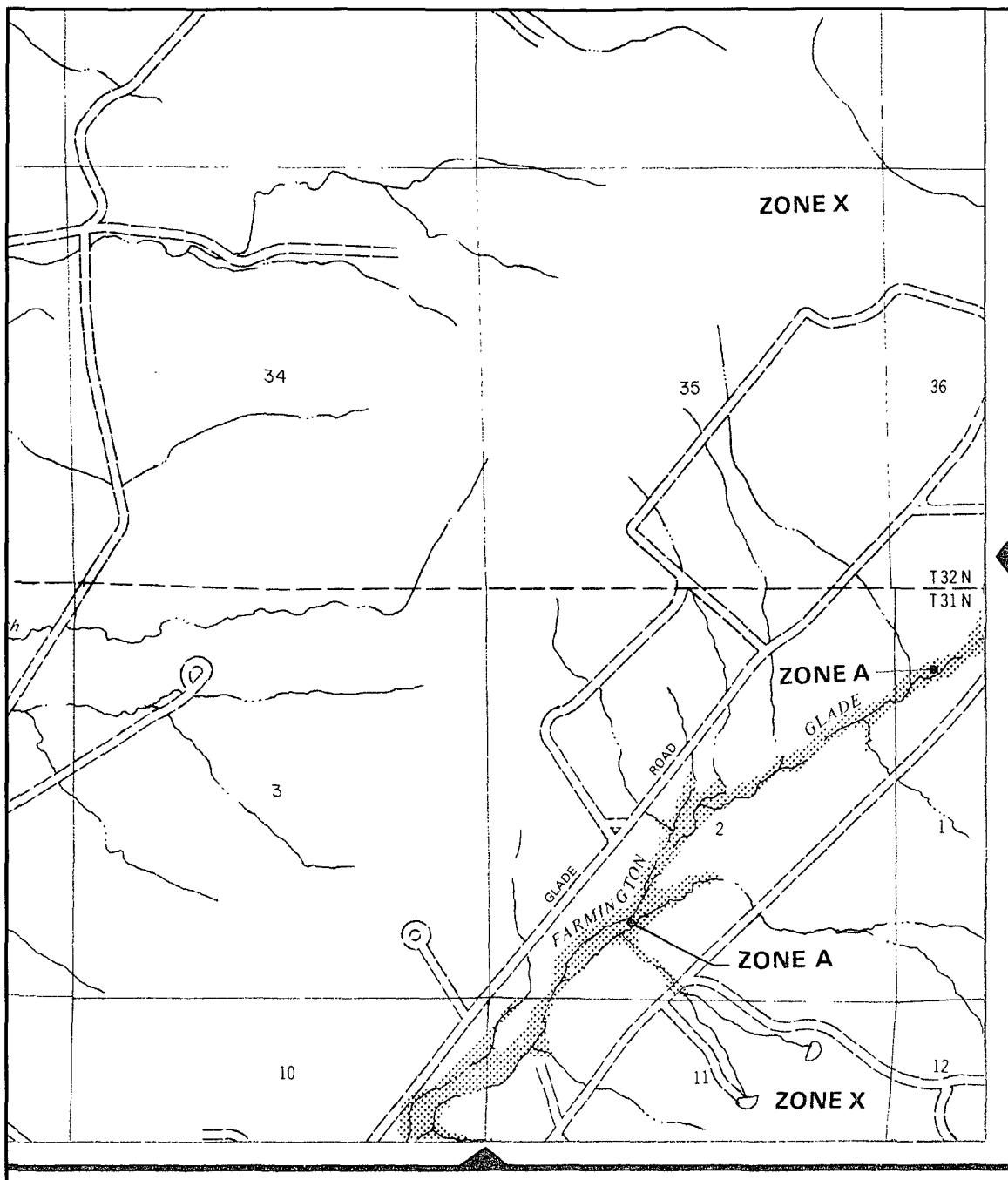
# Patterson #3 Mines, Mills and Quarries Web Map

## Mines, Mills & Quarries Commodity Groups

-  **Aggregate & Stone Mines**
-  **Coal Mines**
-  **Industrial Minerals Mines**
-  **Industrial Minerals Mills**
-  **Metal Mines and Mill Concentrate**
-  **Potash Mines & Refineries**
-  **Smelters & Refinery Ops.**
-  **Uranium Mines**
-  **Uranium Mills**

SCALE 1 : 2,017,964





APPROXIMATE SCALE

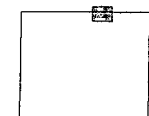
2000 0 2000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

# **FIRM** FLOOD INSURANCE RATE MAP

**SAN JUAN COUNTY,  
NEW MEXICO  
UNINCORPORATED AREAS**

**PANEL 125 OF 1450**  
(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

**COMMUNITY-PANEL NUMBER**  
350064 0125 B

**EFFECTIVE DATE:**  
AUGUST 4, 1988



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

## ***Hydrogeological Report for Patterson #3***

### **Regional Geological context:**

The Nacimiento Formation is of Paleocene age (Baltz, 1967, p. 35). It crops out in a broad band inside the southern and western margins of the central basin and in a narrow band along the west face of the Nacimiento Uplift. The Nacimiento is a nonresistant unit and typically erodes to low, rounded hills or forms badland topography.

The Nacimiento Formation occurs in approximately only the southern two-thirds of the San Juan Basin where it conformably overlies and intertongues with the Ojo Alamo Sandstone (Fassett, 1974, p. 229). The Nacimiento Formation grades laterally into the main part of the Animas Formation (Fassett and Hinds, 1971, p. 34); thus, in this area, the two formations occupy the same stratigraphic interval.

Strata of the Nacimiento Formation were deposited in lakebeds in the central basin area with lesser deposition in stream channels (Brimhall, 1973, p. 201). In general, the Nacimiento consists of drab, interbedded black and gray shale with discontinuous, white, medium- to very coarse grained arkosic sandstone (Stone et al., 1983, p.30). Stone et al. indicated that the formation may contain more sandstone than commonly reported because some investigators assume the slope-forming strata in the unit area shales, whereas in many places the strata actually are poorly consolidated sandstones. Total thickness of the Nacimiento Formation ranges from about 500 to 1,300 feet. The unit generally thickens from the basin margins toward the basin center (Steven et al., 1974). The sandstone deposits within the Nacimiento Formation are much thinner than the total thickness of the formation because their environment of deposition was localized stream channels (Brimhall, 1973, p. 201). The thickness of the combined San Jose, Animas, and Nacimiento Formations ranges from 500 to more than 3,500 feet.

### **Hydraulic Properties:**

**Reported well yields for** 53 wells completed in either the Animas or Nacimiento Formations range from 2 to 90 gallons per minute and the median yield is 7.5 gallons per minute. The primary use of water from Nacimiento and Animas Formations is domestic and livestock supplies. There are no known aquifer tests for the Animas or Nacimiento Formations, but specific capacities reported for six wells range from 0.24 to 2.30 gallons per minute per foot of drawdown (Levings et al., 1990).

The Animas and Nacimiento Formations are in many ways hydrologically similar to the San Jose Formation because sands in both units produce approximately the same quantities of water. However, the greater percentage of fine materials in the Animas and Nacimiento Formations may restrict downward vertical leakage to the Ojo Alamo Sandstone or Kirtland Shale. The poorly cemented fine material is highly erodible, forms a badland terrain, and supports only spotty vegetation. These conditions are more conducive to runoff than retention of precipitation.

### **References:**

Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous rocks, east-central San Juan Basin, New Mexico: USGS Professional Paper

552, 101 p.

Brimhall, R.M., 1973, Ground-water hydrology of Tertiary rocks of the San Juan Basin, New Mexico, in Fassett, J.E., ed., Cretaceous and Tertiary rocks of the Southern Colorado Plateau: Four Corners Geological Society Memoir, p. 197-207.

Fassett, J.E., 1974, Cretaceous and Tertiary rocks of the eastern San Juan Basin, New Mexico and Colorado, in Guidebook of Ghost Ranch, central-northern New Mexico: New Mexico Geological Society, 25th Field Conference, p. 225-230.

Fassett, J.E., and Hinds, J.S., 1971, Geology and fuel resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado: USGS Professional Paper 676, 76 p.

Levings, G.W., Craig, S.d., Dam, W.L., Kernodle, J.M., and Thorn, C.R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah: USGS Hydrologic Investigations Atlas HA-720-A, 2 sheets.

Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and water resources of San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 6.





**ConocoPhillips Company**  
GRFS / PTRRC – San Juan Business Unit  
Mary Kay Cornwall  
3401 East 30<sup>th</sup> Street  
Farmington, NM 87402  
Telephone: (505) 326-9597  
Facsimile: (505) 324-6136

August 19, 2008

**VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED**  
**7110-6605-9590-0026-1293**

Ande H. Peterson  
285 West Morrison Ct.  
Grand Junction, CO 81503

Re: Patterson #3  
SW Section 2, T31N, R12W  
San Juan County, New Mexico

Dear Mr. Peterson:

Pursuant to Paragraph 1 (b) of Subsection F of 19.15.17.13 NMAC, an operator shall provide the surface owner notification of the operator's proposal to close a temporary pit on-site in compliance with the on-site closure methods specified in the same Subsection of the NMAC. In compliance of this requirement, please consider this notification of ConocoPhillips' intent to close the temporary pit on the above referenced location.

If you have any questions, please contact Maxwell Blair @ (505)599-4021.

Sincerely,

*Mary Kay Cornwall*

Mary Kay Cornwall  
Staff Associate, PTRRC

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

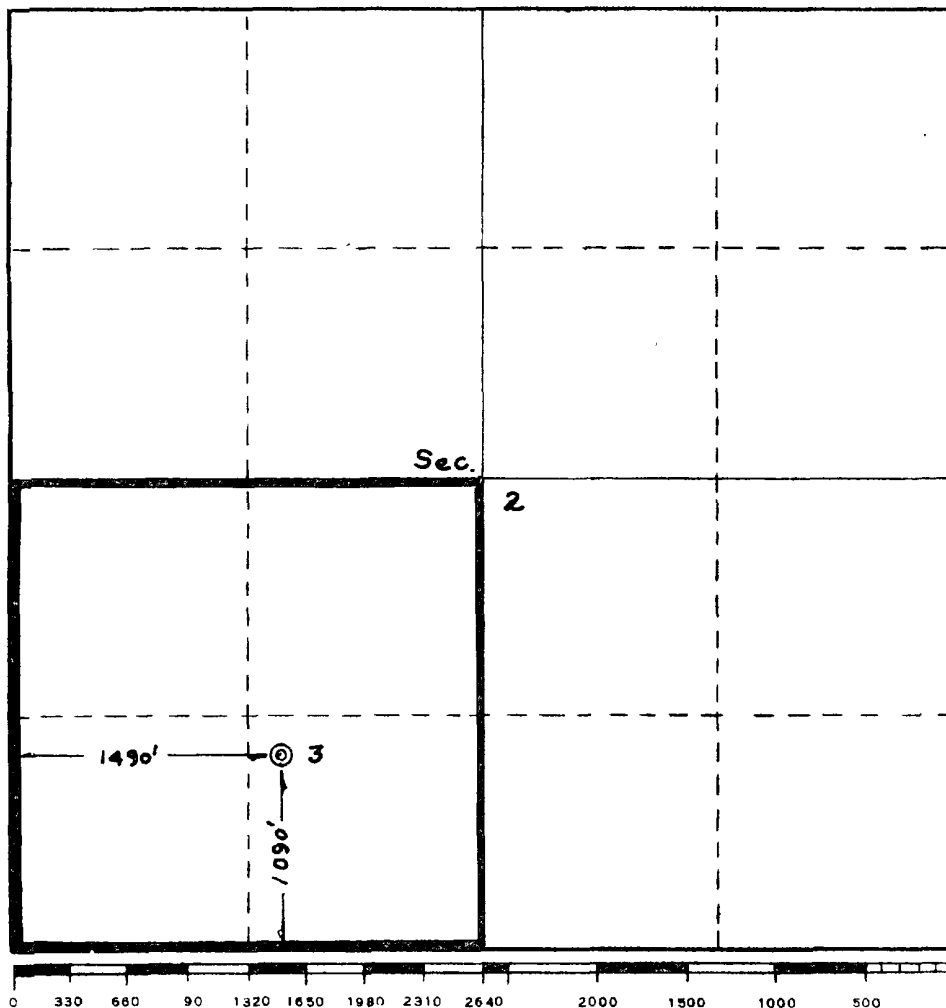
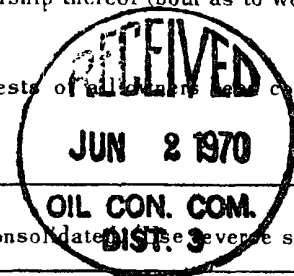
Operator <b>Aztec Oil &amp; Gas Company</b>			Lease <b>Patterson</b>		Well No. <b>3</b>
Unit Letter <b>N</b>	Section <b>2</b>	Township <b>31N</b>	Range <b>12W</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>1090</b> feet from the <b>South</b> line and <b>1490</b> feet from the <b>West</b> line					
Ground Level Elev. <b>6219</b>	Producing Formation <b>Pictured Cliffs</b>		Pool <b>Undesignated</b>		Dedicated Acreage: <b>160</b> Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners consolidated by communitization, unitization, force-pooling, etc?

☐ Yes    ☐ No    If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission. \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



**CERTIFICATION**

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

**ORIGINAL SIGNED BY JOE C. SALMON**

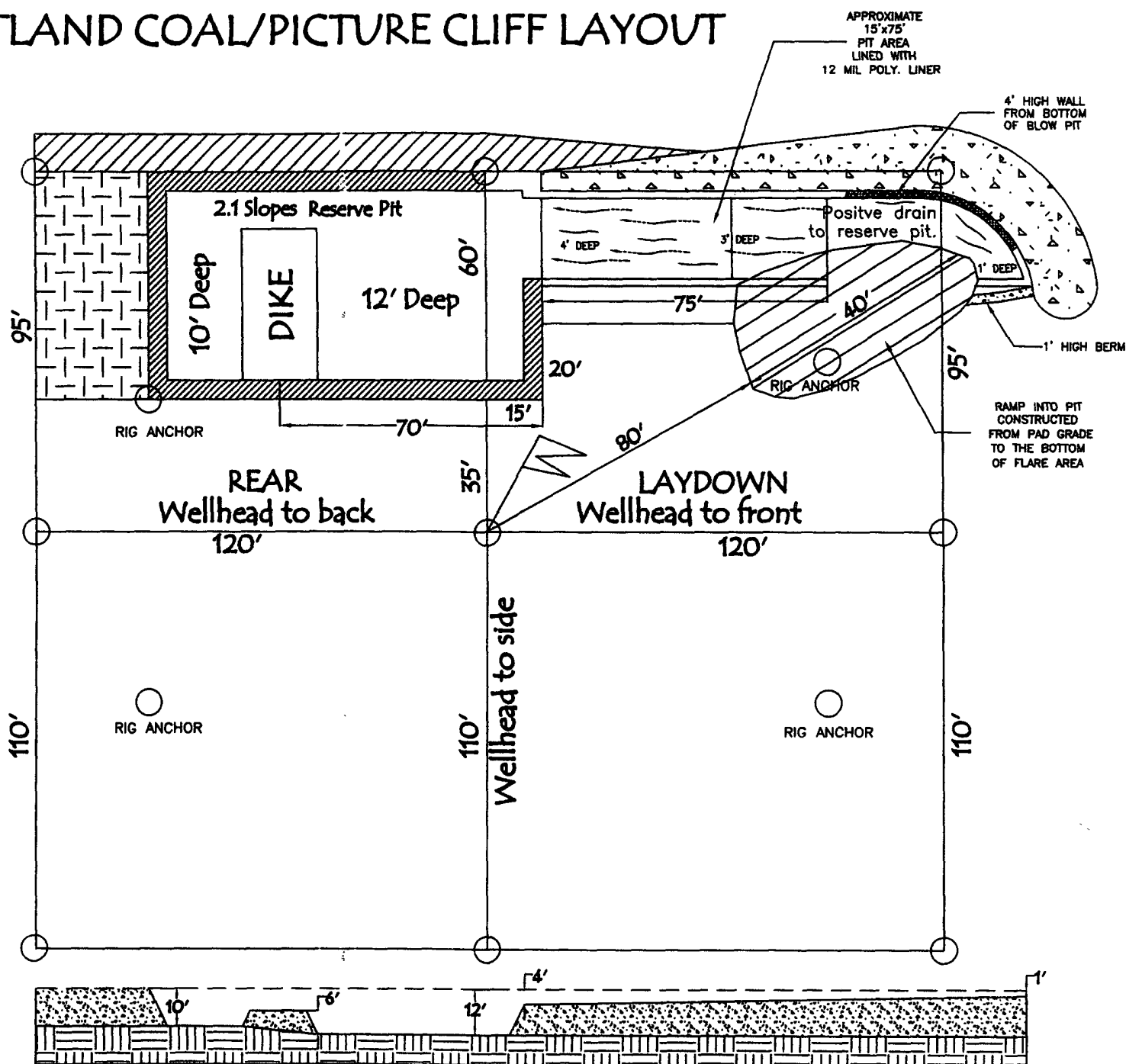
Name
<i>Joe C. Salmon</i>
Position
<i>District Superintendent</i>
Company
<i>Aztec Oil &amp; Gas Company</i>
Date
<i>May 28, 1970</i>

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
<i>May 27, 1970</i>
Registered Professional Engineer in Oil & Gas Surveying
<i>3958</i>
<i>Ind. B. R. Jr.</i>
Certificate No.
<i>3958</i>

# FRUITLAND COAL/PICTURE CLIFF LAYOUT

50'  
CONSTRUCTION ZONE



PIT CROSS SECTION

**Burlington Resources Oil & Gas Company, LP**  
**San Juan Basin**  
**Pit Design and Construction Plan**

In accordance with Rule 19.15.17 the following information describes the design and construction of temporary pits on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

**General Plan:**

1. BR will design and construct a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
2. Prior to constructing the pit, topsoil will be stockpiled in the construction zone for later use in restoration.
3. BR will post a well sign, not less than 12" by 24", on the well site prior to construction of the temporary pit. The sign will list the operator on record as the operator; the location of the well site by unit letter, section, township range; and emergency telephone numbers.
4. BR shall construct all new fences utilizing 48" steel mesh field-fence (hogwire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Temporary pits will be fenced at all times excluding drilling or workover operations, when the front side of the fence will be temporarily removed for operational purposes.
5. BR shall construct the temporary pit so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to prevent liner failure.
6. BR shall construct the pit so that the slopes are no steeper than two horizontal feet to 1 vertical foot.
7. Pit walls will be walked down by a crawler type tractor following construction
8. All temporary pits will be lined with a 20-mil, string reinforced, LLDPE liner, complying with EPA SW-846 method 9090A requirements.
9. Geotextile will be installed beneath the liner when rocks, debris, sharp edges or irregularities cannot be avoided.
10. All liners will be anchored in the bottom of a compacted earth-filled trench at least 18 inches deep.
11. BR will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used whenever possible. BR will ensure all field seams are welded by qualified personnel. Field seams will be overlapped four to six inches and will be oriented parallel to the line of maximum slope. BR will minimize the number of field seams in corners and irregularly shaped areas.
12. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
13. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases.
14. The volume of the pit shall not exceed 10 acre-feet, including freeboard.
15. Temporary blow pits will be constructed to allow gravity flow to discharge into lined drill pit.
16. The lower half of the blow pit (nearest lined pit) will be lined with the same 20 mil liner. The upper half of the blow pit will remain unlined as allowed in Rule 19.15.17.11 F.11.
17. BR will not allow freestanding liquids to remain on the unlined portion of a temporary blow pit.

**Burlington Resources Oil & Gas Company, LP**  
**San Juan Basin**  
**Maintenance and Operating Plan**

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of temporary pits on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

**General Plan:**

1. BR will operate and maintain a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
2. BR will conserve drilling fluids by transferring liquids to pits ahead of the rigs whenever possible. All other drilling fluids will be disposed at Basin Disposal Inc., permit # NM-01-005.
3. BR will not discharge or store any hazardous waste in any temporary pit.
4. If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then BR shall notify the Aztec Division office by phone or email within 48 hours of the discovery and repair the damage or replace the liner.
5. If a leak develops below the liquid's level, BR shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner. BR shall notify the Aztec Division office by phone or email within 48 hours of the discovery for leaks less than 25 barrels BR shall notify the Aztec Division office as required pursuant to Subsection B of 19.15.3.116 NMAC shall be reported within twenty-four (24) hours of discovery of leaks greater than 25 barrels. In addition, immediate verbal notification pursuant to Subsection B, Paragraph (1), and Subparagraph (d) of 19.15.3.116 NMAC shall be reported to the division's Environmental Bureau Chief.
6. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
7. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases.
8. BR shall immediately remove any visible layer of oil from the surface of the temporary pit after cessation of a drilling or workover operation. Oil absorbent booms will be utilized to contain and remove oil from the pit's surface. An oil absorbent boom will stored on-site until closure of pit.
9. Only fluids generated during the workover process may be discharged into a temporary pit.
10. BR will maintain the temporary pit free of miscellaneous solid waste or debris.
11. During workover operations, BR will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged in the IADC reports. BR will file this log with the Aztec Division office upon closure of the pit.
12. After workover operations, BR will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored at BR's office electronically and will be filed with the Aztec Division office upon closure of the pit.
13. BR shall maintain at least two feet of freeboard for a temporary pit.
14. BR shall remove all free liquids from a temporary pit within 30 days from the date the operator releases the drilling rig.
15. BR shall remove all free liquids from a cavitation pit within 48 hours after completing cavitation. BR may request additional time to remove liquids from the Aztec Division office if it is not feasible to remove liquids within 48 hours.

# **Burlington Resources Oil & Gas Company, LP**

## **San Juan Basin**

### **Closure Plan**

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of temporary pits on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of pit closure. Closure report will be filed on C-144 and incorporate the following:

- Details on Capping and Covering, where applicable.
- Plot Plan (Pit Diagram)
- Inspection Reports
- Sampling Results
- C-105
- Copy of Deed Notice will be filed with County Clerk

#### **General Plan:**

1. All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves.
2. The preferred method of closure for all temporary pits will be on-site burial, assuming that all the criteria listed in sub-section (B) of 19.15.17.13 are met.
3. The surface owner shall be notified of BR's closing of the temporary pit as per the approved closure plan using certified mail, return receipt requested.
4. Within 6 months of the Rig Off status occurring BR will ensure that temporary pits are closed, re-contoured, and reseeded.
5. Notice of Closure will be given to the Aztec Division office between 72 hours and one week of closure via email, or verbally. The notification of closure will include the following:
  - i. Operator's name
  - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.
6. Liner of temporary pit shall be removed above "mud level" after stabilization. Removal of liner will consist of manually or mechanically cutting liner at mud level and removing all remaining liner. Care will be taken to remove "All" of the liner i.e., edges of liner entrenched or buried. All excessive liner will be disposed of at a licensed disposal facility.
7. Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.
8. A five point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e., Dig and haul.

<b>Components</b>	<b>Tests Method</b>	<b>Limit (mg/Kg)</b>
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	500
Chlorides	EPA 300.1	1000/500

9. A five point composite sample will be taken from the cavitation pit pursuant to 19.15.17.13(B)(1)(b)(i) in order to assure there has not been any type of release.

Components	Tests Method	Limit (mg/Kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	500
Chlorides	EPA 300.1	500

10. Upon completion of solidification and testing standards being passed, the pit area will be backfilled with compacted, non-waste containing, earthen material. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater. If standard testing fails BR will dig and haul all contents pursuant to 19.15.17.13.i.a. After doing such, confirmation sampling will be conducted to ensure a release has not occurred.
11. During the stabilization process if the liner is ripped by equipment the Aztec OCD office will be notified within 48 hours and the liner will be repaired if possible. If the liner can not be repaired then all contents will be excavated and removed.
12. Dig and Haul Material will be transported to the Envirotech Land Farm located 16 miles south of Bloomfield on Angel Peak Road, CR 7175. Permit # NM010011
13. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
14. Notification will be sent to OCD when the reclaimed area is seeded.
15. BR shall seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

Type	Variety or Cultivator	PLS/A
Western wheatgrass	Arriba	3.0
Indian ricegrass	Paloma or Rimrock	3.0
Slender wheatgrass	San Luis	2.0
Crested wheatgrass	Hy-crest	3.0
Bottlebrush Squirreltail	Unknown	2.0
Four-wing Saltbrush	Delar	.25

**Species shall be planted in pounds of pure live seed per acre:**

**Present Pure Live Seed (PLS) = Purity X Germination/100**

**Two lots of seed can be compared on the basis of PLS as follows:**

Source No. One (poor quality)

Purity 50 percent

Germination 40 percent

Percent PLS 20 percent

**5 lb. bulk seed required to make**

**1 lb. PLS**

Source No. two (better quality)

Purity 80 percent

Germination 63 percent

Percent PLS 50 percent

**2 lb. bulk seed required to make**

**1 lb. PLS**

16. The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will be flush with the ground to allow access of the active well pad and for safety concerns. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the operator's information at the time of all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.