

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
July 21, 2008

**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**

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. approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

Operator: Elm Ridge Exploration OGRID #: 149052  
Address: P.O. Box 156; Bloomfield, NM 87413  
Well name: Berry Federal 2  
Well Number: 3004528387 OCD Permit Number: \_\_\_\_\_  
Section H Section 11 Township 25N Range 13W County: San Juan  
Center of Proposed Design: Latitude 36.416393 Longitude -108.181692 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 \_\_\_\_\_ mil  LLDPE  HDPE  PVC  Other \_\_\_\_\_  
 String-Reinforced  
Liner Seams:  Welded  Factory  Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions: L \_\_\_\_\_ x W \_\_\_\_\_ x D \_\_\_\_\_

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  PVC  Other \_\_\_\_\_  
Liner Seams:  Welded  Factory  Other \_\_\_\_\_

4.  
 **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: 90 bbl Type of fluid: Produced water  
Tank Construction material: Fiberglass tank  
 Secondary containment with leak detection  Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
 Visible sidewalls and liner  Visible sidewalls only  Other single walled tank  
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.

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**cing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, 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 4' tall hogwire fencing with pipe railing

**ting:** 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)

**ns:** 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

**ministrative Approvals and Exceptions:**

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

**ase 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 or the Santa Fe Environmental Bureau office for sideration of approval.

Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

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

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

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

**Attached iWATERS database indicates that groundwater may not be greater than 50 feet from the bottom of the BGT.**

Yes  No

hin 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa ; (measured from the ordinary high-water mark).0.

**The nearest watercourse is 1.08 miles east per attached topographic map. The attached visual inspection sheet reflects these findings.**

Yes  No

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

**The attached aerial photograph and visual inspection sheet indicates that none of these locations exist within 1000 feet of the well site.**

Yes  No  
 NA

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

Yes  No  
 NA

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

**The attached iWATERS database search and visual inspection sheet indicates that there are no water wells within 1000 feet of the well site.**

Yes  No

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

**The site is not within incorporated municipal boundaries per the attached topographic map and visual inspection sheet.**

Yes  No

hin 500 feet of a wetland.

**The USFWS data file, WetlandsData.kmz, dated July 2, 2008 was opened using Google Earth. Electronic data was not available. Wetland-type vegetation was not noted during the site visit.**

Yes  No

hin the area overlying a subsurface mine.

**The attached NM EMNRD web map indicates that the well site is not within an area overlying a subsurface mine.**

Yes  No

hin an unstable area.

**The attached topographic map and visual inspection sheet indicates that the well site is not within an unstable area.**

Yes  No

hin a 100-year floodplain.

**The attached FEMA Map indicates that the well site is not within a 100 year flood plain.**

Yes  No

**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 19.15.17.13 NMAC

Previously Approved Design (attach copy of design)    API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

**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
- 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 19.15.17.13 NMAC

Previously Approved Design (attach copy of design)    API Number: \_\_\_\_\_

Previously Approved Operating and Maintenance Plan    API Number: \_\_\_\_\_ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

**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

**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 Burial  
 Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

**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

**Site 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 indentify 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 Number: \_\_\_\_\_

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

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 below)  No

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

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

**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  
 NA

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  
 NA

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  
 NA

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa (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

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; 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

**Site Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, with 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

**erator 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): Ms. Amy Mackey

Title: Administrative Manager

Signature: *Amy Mackey*

Date: 1-23-09

Email address: amackey1@elmridge.net

Telephone: 505-632-3476 Ext. 201

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

**D Representative Signature:** \_\_\_\_\_ **Approval Date:** \_\_\_\_\_

**File:** \_\_\_\_\_ **OCD Permit Number:** \_\_\_\_\_

**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. A 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: \_\_\_\_\_

**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.

**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 one facility was utilized.

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

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

Do you require 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

**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 (required for on-site closure)
- 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

**erator 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: \_\_\_\_\_

Email address: \_\_\_\_\_ Telephone: \_\_\_\_\_

*New Mexico Office of the State Engineer*  
**Point of Diversion Summary**

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**Back**

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

<b>POD Number</b>	<b>Tws</b>	<b>Rng</b>	<b>Sec</b>	<b>q</b>	<b>q</b>	<b>q</b>	<b>Zone</b>	<b>X</b>	<b>Y</b>
RG 38021	25N	13W	17	4					

**Driller Licence:** 738 TAFOYA, CARLOS J.

**Driller Name:** CARLOS J TAFOYA

**Drill Start Date:** 06/04/1982

**Log File Date:** 06/07/1982

**Pump Type:**

**Casing Size:**

**Depth Well:** 63

**Source:** Shallow

**Drill Finish Date:** 06/05/1982

**PCW Received Date:**

**Pipe Discharge Size:**

**Estimated Yield:**

**Depth Water:** 15

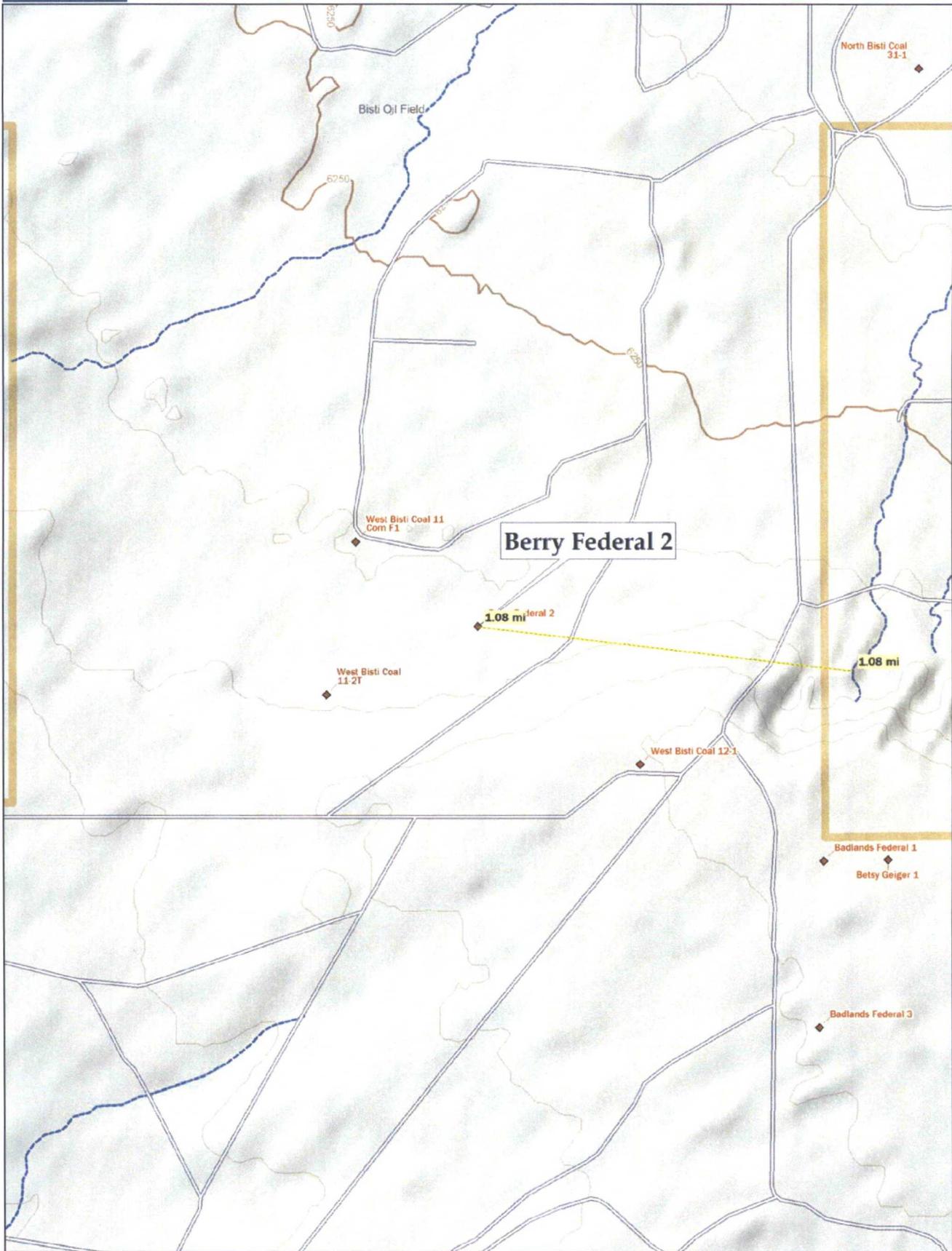
New Mexico Office of the State Engineer  
 POD Reports and Downloads

Township: 25N Range: 13W Sections: 11  
 NAD27 X: Y: Zone: Search Radius:  
 County: Basin: Number: Suffix:  
 Owner Name: (First) (Last)  Non-Domestic  Domestic  All

POD / SURFACE DATA REPORT 09/11/2008

(acre ft per annum) (quarters are 1=SW 2=NE 3=SW 4=SE)  
 DB File Ebr Use Diversion Owner POD Number (quarters are biggest to smallest) X Y are in Feet UTM are in Meters Start Finish Depth Depth (in feet)  
 Source Twp Rng Sec q q q Zone X Y UTM\_Zone Easting Northing Date Date Well Water

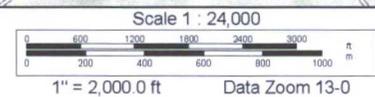
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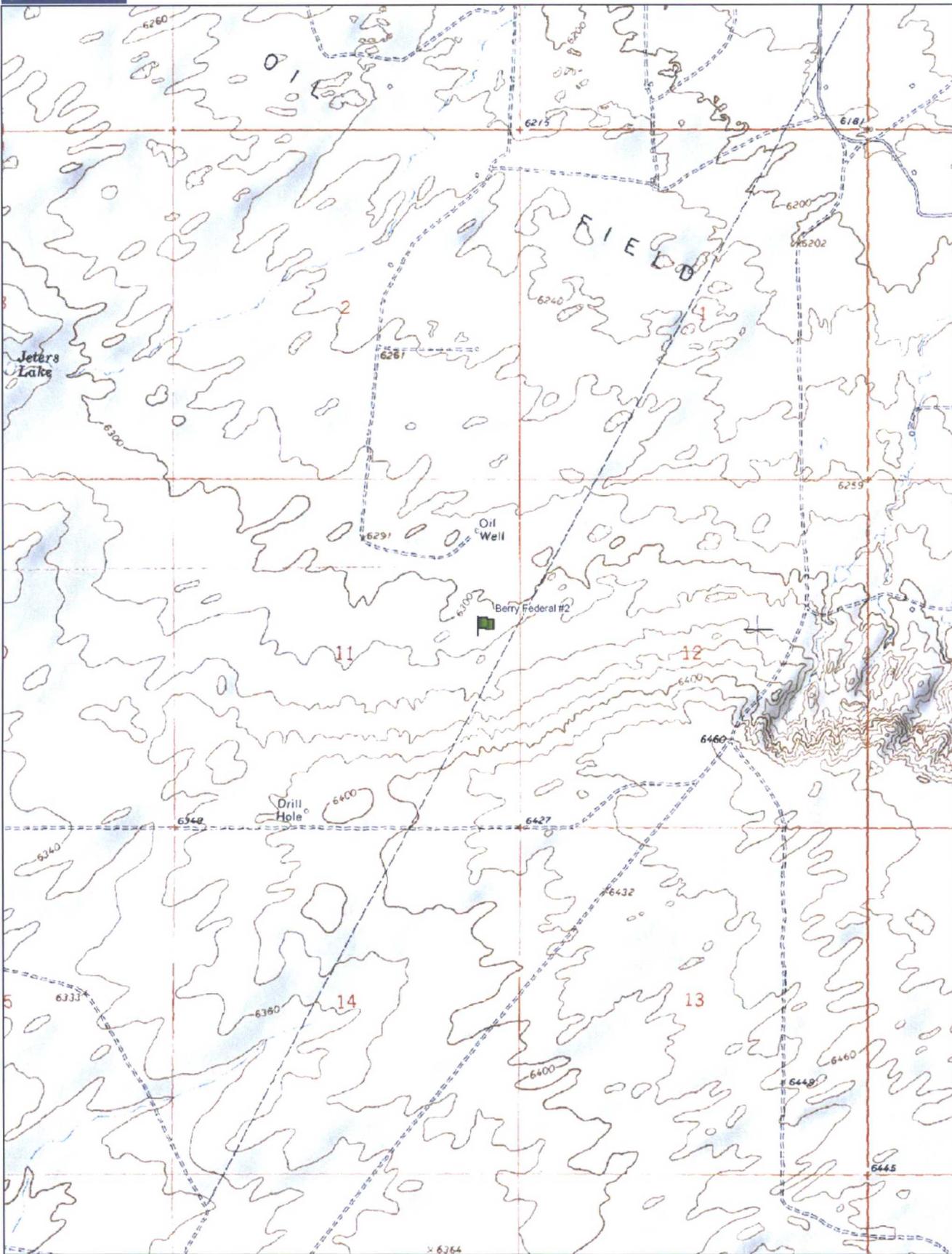


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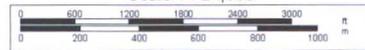
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Scale 1 : 24,000

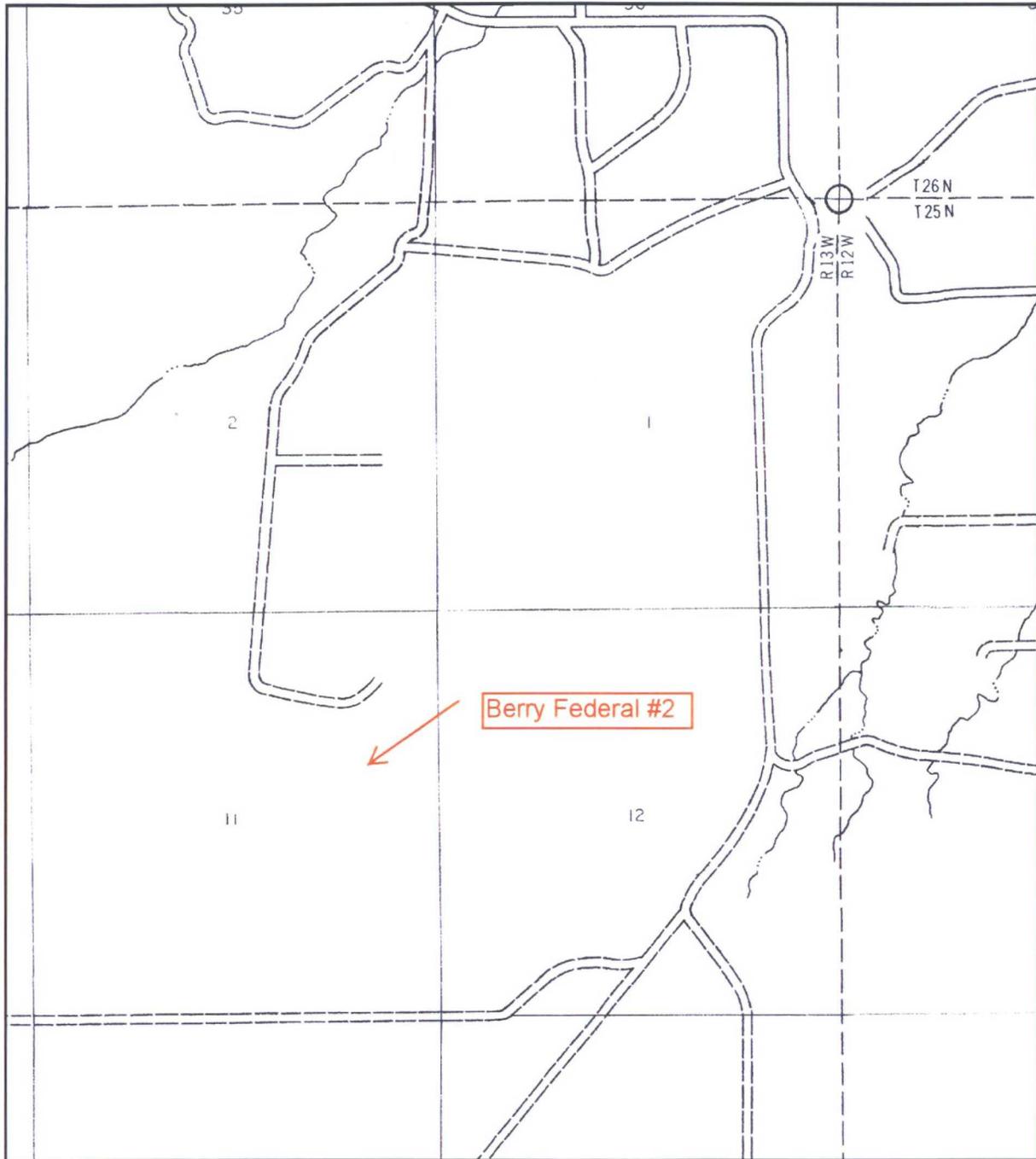


1" = 2,000.0 ft Data Zoom 13-0

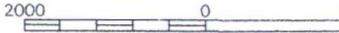
Goal 11 Com F1



Berry Federal 2



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

SAN JUAN COUNTY,  
NEW MEXICO  
UNINCORPORATED AREAS

PANEL 875 OF 1450  
(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

COMMUNITY-PANEL NUMBER  
350064 0875

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)

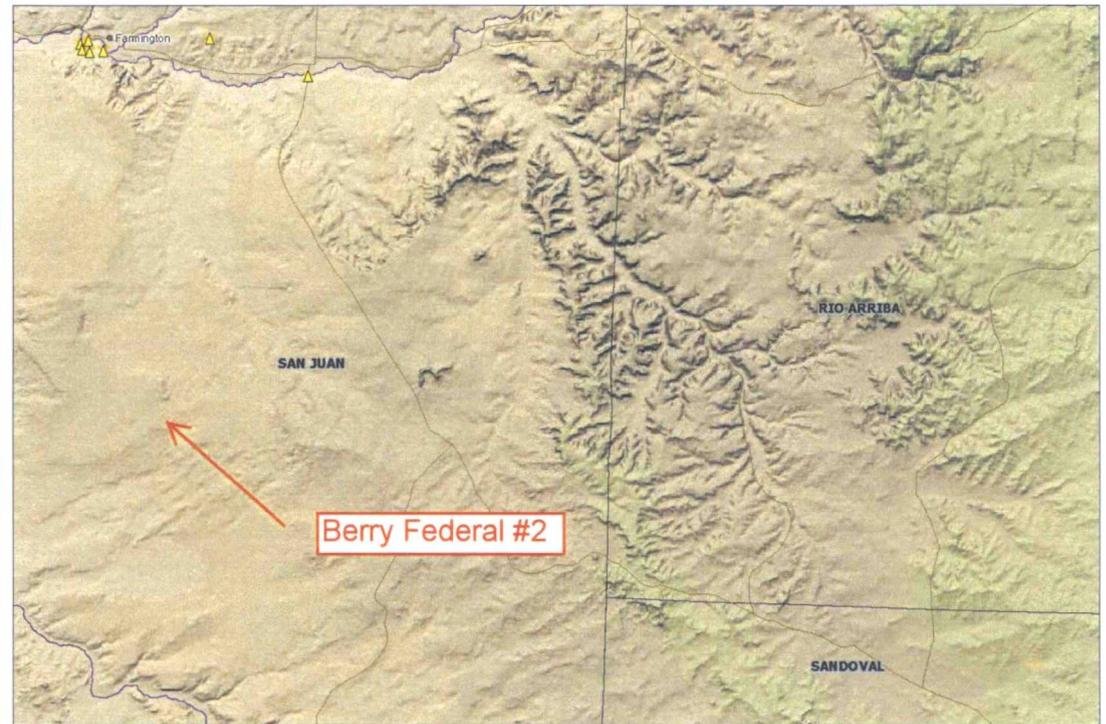
# Elm Ridge Exploration Mine Map

## Mines, Mills & Quarries Commodity Groups

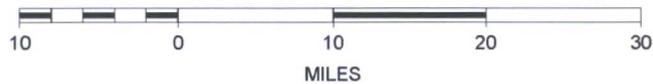
-  Aggregate & Stone Mines
-  Coal Mines
-  Industrial Minerals Mines
-  Industrial Minerals Mills
-  Metal Mines and Mill Concentrate
-  Potash Mines & Refineries
-  Smelters & Refinery Ops.
-  Uranium Mines
-  Uranium Mills

## Mines, Mills & Quarries Status

-  Active Mining
-  Active Mining, Active Reclamation
-  Permanent Closure, Active Reclamation
-  Permanent Closure, Reclaimed Awaiting Bond Release
-  Temporary Suspension



SCALE 1 : 740,905



### Elm Ridge Site Inventory Sheet

- Date: 8-4-08 Initials: JN Time: Started: 12:05PM Ended: 12:30AM
- Well Name & Number: BERRY FEDERAL #2
- API #: 30-045-28387
- Lease #: NMNM-53930A
- Quarter/Quarter: H Section: 11 Township: 25N Range: 13W
- Lat: 36.416393° Long: -108.181692° GPS Point ID: BF 2

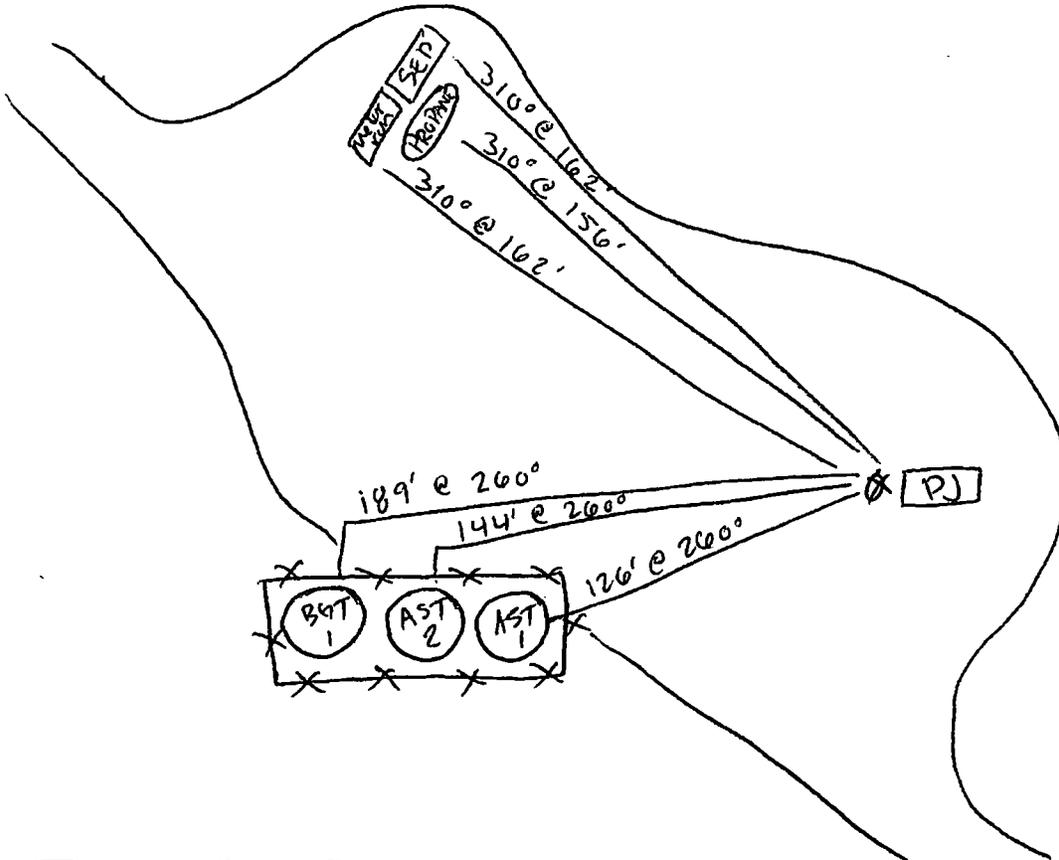
- Pit Tank #1: Manufacturer: NA
- Serial #: NA DOM: NA Size NA bbl
  - o If N/A - Dimensions: Diameter 12' Height 4.5'
- Material: Steel  Galvanized  Fiberglass
- Tank Configuration: Double Wall  Single Wall  (Buried  or Exposed )
- Visible Walls: Y  N  Leak Detection: Y  N
- Contents: Produced Water  Condensate  Recycled Oil  NOT LABEL
- Tank Top Covering: Solid/Cone-top  Netting  (Solid  Fiber )
- Secondary Containment: Yes  No
- Fencing around berm: Yes  No 
  - o Fence Type: Cattle Panel  Field Fence  Barbwire

- Pit Tank #2: Manufacturer: \_\_\_\_\_
- Serial #: \_\_\_\_\_ DOM: \_\_\_\_\_ Size \_\_\_\_\_ bbl
  - o If N/A - Dimensions: Diameter \_\_\_\_\_ Height \_\_\_\_\_
- Material: Steel  Galvanized  Fiberglass
- Tank Configuration: Double Wall  Single Wall  (Buried  or Exposed )
- Visible Walls: Y  N  Leak Detection: Y  N
- Contents: Produced Water  Condensate  Recycled Oil
- Tank Top Covering: Solid/Cone-top  Netting  (Solid  Fiber )
- Secondary Containment: Yes  No
- Fencing around berm: Yes  No 
  - o Fence Type: Cattle Panel  Field Fence  Barbwire

- Above-Ground Tank #1: Manufacturer: DOUBLE T INDUSTRIES
- Serial #: 00356 DOM: 90 Size 300 bbl
  - o If N/A - Dimensions: Diameter 12' Height 15'
- Material: Steel  Galvanized  Fiberglass
- Contents: Produced Water  Condensate  (State # 61-4328) Crude Recycled Oil
- Secondary Containment: Yes  No

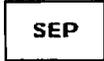
# Well Schematic

NORTH

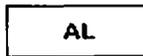


## Schematic Key:

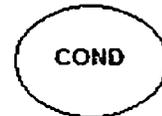
Separator



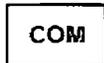
Artificial Lift



Condensate Tank



Compressor



Meter Run



Dehydrator



Well Head



Water Tank



Measure any distance 1000ft or less of the following:

• From wellhead to any continuous flowing or significant water course. NA

• From below-grade tanks to any permanent residence, school, church, hospital, etc. NA

AST Attachment

Berry Federal #2

<ul style="list-style-type: none"> <li>• Above-Ground Tank #1: Manufacturer: <u>DOUBLE T INDUSTRIES</u></li> <li>• Serial #: <u>355</u>      DOM: <u>90</u>      Size <u>300</u> bbl               <ul style="list-style-type: none"> <li>◦ If N/A - Dimensions: Diameter <u>12'</u>      Height <u>15'</u></li> </ul> </li> <li>• Material: Steel <input checked="" type="checkbox"/>      Galvanized _____      Fiberglass _____</li> <li>• Contents: Produced Water _____      Condensate _____ (State # <u>61-4329</u>)  <u>Crude</u>                Recycled Oil <input checked="" type="checkbox"/></li> <li>• Secondary Containment: Yes <input checked="" type="checkbox"/>      No <input checked="" type="checkbox"/></li> </ul>
<ul style="list-style-type: none"> <li>• Above-Ground Tank #1: Manufacturer: _____</li> <li>• Serial #: _____      DOM: _____      Size _____ bbl               <ul style="list-style-type: none"> <li>◦ If N/A - Dimensions: Diameter _____      Height _____</li> </ul> </li> <li>• Material: Steel _____      Galvanized _____      Fiberglass _____</li> <li>• Contents: Produced Water _____      Condensate _____ (State # _____)                Recycled Oil _____</li> <li>• Secondary Containment: Yes _____      No _____</li> </ul>
<ul style="list-style-type: none"> <li>• Above-Ground Tank #1: Manufacturer: _____</li> <li>• Serial #: _____      DOM: _____      Size _____ bbl               <ul style="list-style-type: none"> <li>◦ If N/A - Dimensions: Diameter _____      Height _____</li> </ul> </li> <li>• Material: Steel _____      Galvanized _____      Fiberglass _____</li> <li>• Contents: Produced Water _____      Condensate _____ (State # _____)                Recycled Oil _____</li> <li>• Secondary Containment: Yes _____      No _____</li> </ul>
<ul style="list-style-type: none"> <li>• Above-Ground Tank #1: Manufacturer: _____</li> <li>• Serial #: _____      DOM: _____      Size _____ bbl               <ul style="list-style-type: none"> <li>◦ If N/A - Dimensions: Diameter _____      Height _____</li> </ul> </li> <li>• Material: Steel _____      Galvanized _____      Fiberglass _____</li> <li>• Contents: Produced Water _____      Condensate _____ (State # _____)                Recycled Oil _____</li> <li>• Secondary Containment: Yes _____      No _____</li> </ul>

# **BELOW GRADE TANK (BGT) CLOSURE PLAN**

**SITE NAME:**

**BERRY FEDERAL #2  
UNIT LETTER H, SECTION 11, TOWNSHIP 25N, RANGE 13W  
SAN JUAN COUNTY, NEW MEXICO  
LATITUDE 36.416393 LONGITUDE -108.181692**

**SUBMITTED TO:**

**MR. WAYNE PRICE  
NEW MEXICO OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DRIVE  
SANTA FE, NEW MEXICO 87505  
(505) 476-3490**

**SUBMITTED BY:**

**MS. AMY MACKEY  
ELM RIDGE EXPLORATION  
P.O. BOX 156  
BLOOMFIELD, NEW MEXICO 87413  
(505) 632-3476 EXT. 201**

**JANUARY 2009**

**BELOW GRADE TANK (BGT) CLOSURE PLAN  
ELM RIDGE EXPLORATION  
BERRY FEDERAL #2  
SAN JUAN COUNTY, NEW MEXICO**

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## **INTRODUCTION**

Elm Ridge Exploration would like to submit a closure plan for the below grade tank (BGT) at the Berry Federal #2 well site located in the SE ¼ NE ¼ of Section 11, Township 25N, Range 13W, San Juan County, New Mexico. This closure plan has been prepared in conformance with the closure requirements of 19.15.17.13 NMAC.

## **SCOPE OF CLOSURE ACTIVITIES**

The purpose of this closure plan is to provide the details of activities involved in the closure of the BGT at the Berry Federal #2 well site. The following scope of closure activities has been designed to meet this objective:

- 1) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close all of the BGTs currently in service within the five (5) years allotted. Elm Ridge Exploration does not operate any BGTs which would qualify to be upgraded or retrofitted; as such they will be closing all their current BGTs and replacing them with above ground storage tanks.
- 2) Elm Ridge Exploration will close BGTs deemed to be an imminent danger to fresh water, public health, or the environment by an earlier date that the division requires as specified in Subsection A of 19.15.17.13 NMAC.
- 3) Elm Ridge Exploration will close any BGT which demonstrates a compromise of integrity before the five (5) years allotted by the division per Paragraph (6) of Subsection I of 19.15.17.11 NMAC.
- 4) Elm Ridge Exploration will close any BGT within 60 days of cessation of the BGTs operation per Subsection A of 19.15.17.13 NMAC.
- 5) No less than 72 hours and no greater than one (1) week prior to BGT removal Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the appropriate division district office as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (2) NMAC. Written notification will include the name of the well operator, the well's API number, the well's name and number, and the well's unit letter, section, township, and range.
- 6) No less than 24 hours and no greater than one (1) week prior to beginning BGT closure activities Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the appropriate surface owner, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the surface owner by certified mail, return receipt requested, that the operator plans to close a below-grade tank. The return receipt will be used to ensure that the surface owner has received written notification no less than 24 hours and no greater than one (1) week prior to the beginning of BGT closure activities. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement. Closure activities that will take place on tribal land will have notifications sent by certified mail, return

receipt requested, to the appropriate tribal office. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the Bureau of Land Management (BLM) of closure activities for wells located on federal land per a Sundry Notice, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. All notices will be sent in such a way that the surface owner received notice at least 24 hours prior to the beginning of closure activities.

- 7) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all liquids, and/or sludge, if applicable, prior to closure. Material will be disposed of at Envirotech's Landfarm #2, Permit # NM-01-0011, TNT Environmental Inc. Landfarm, Permit # NM-01-0008, Industrial Ecosystems Inc. (IEI) Landfarm, Permit # NM-01-0010B or Basin Disposal, Permit # NM-01-0005, depending on the consistence of the material removed, as in accordance with 19.15.17.13 Subsection E Paragraph (1) NMAC .
- 8) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all on-site equipment associated with this BGT that is no longer required for some other purpose, as in accordance with 19.15.17.13 Subsection E Paragraphs (3) NMAC.
- 9) If applicable, any liners or leak detection systems removed from a BGT closure will be cleaned off and disposed of at San Juan County Regional Landfill in accordance with Subparagraph (m) of Paragraph (1) of Subsection D of 19.15.9.712 NMAC.
- 10) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will obtain prior approval from the OCD to dispose, recycle, reuse, or reclaim the BGT. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide the OCD with documentation concerning the final disposition of the BGT with the closure report.
- 11) Once the BGT is removed a five (5)-point composite sample will be collected from directly below the tank or below the leak detection system if present. Grab samples will be collected from any area that are wet, discolored, or showing other evidence of a release. All samples being collected will be analyzed for benzene and total BTEX via USEPA Method 8021B, TPH via USEPA Method 418.1, and chlorides via USEPA 300.1, as in accordance with 19.15.17.13 Subsection E Paragraph (4) NMAC.
- 12) Depending on soil sample results the area will be either backfilled or the area will be excavated.
  - a. If soil samples do not exceed the regulatory standards of 0.2 mg/kg benzene, 50 mg/kg BTEX, 100 mg/kg TPH, and 250 mg/kg or background concentration of chlorides, as in accordance with 19.15.17.13 Subsection E Paragraph (4) NMAC.
    - i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (5) of Subsection E of 19.15.17.13 NMAC.
    - ii. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will backfill the excavation or impacted area with non-waste containing, earthen material, in accordance with 19.15.17.13

- Subsection E Paragraph (6) NMAC. A soil cover shall be installed for all backfilled excavations consisting of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater in accordance with Subsections H of 19.15.17.13 NMAC. The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.
- iii. All areas of the well site that are no longer utilized on a day to day basis for the production of oil and/or gas, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will substantially restore, recontour, and re-vegetate the areas, in accordance with 19.15.17.13 Subsections G and I NMAC. The operator shall notify the division when it has re-seed and when it has achieved successful re-vegetation. For re-vegetation methods, please see attached re-vegetation plan.
- b. If soil samples exceed the regulatory standards stated above.
- i. Elm Ridge Exploration will submit a Release Notification by Form C-141 with the appropriate analytical laboratory results to the appropriate division district office, in accordance with 19.15.17.13 Subsection E Paragraph (4) NMAC.
  - ii. In accordance with Paragraph (5) of Subsection E of 19.15.17.13 NMAC, once the operator or the OCD has determined that a release has occurred, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will comply with rule 19.15.3.116 NMAC and 19.15.1.19 NMAC as appropriate.

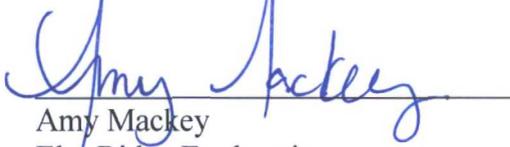
### **REPORTING**

Elm Ridge Exploration will submit a closure report within 60 days following the BGT closure. The closure report will consist of a form C-144 with all supporting data and a form C-141 with all supporting data. The supporting data will include proof of closure notice to the surface owner and the OCD, confirmation sampling analytical results, a site diagram, soil backfilling and cover installation, re-vegetation rates, re-seeding techniques and site reclamation photo documentation if applicable, along with all other information related to the onsite activities.

We appreciate the opportunity to be of service. If you have any questions or require further information, please do not hesitate to contact our office at (505) 632-3476 Ext. 201.

Respectfully Submitted:

**Elm Ridge Exploration**

  
Amy Mackey  
Elm Ridge Exploration

## **Elm Ridge Exploration**

### **Re-Seeding Techniques and Seed Mixture Ratios**

These applied practices by Elm Ridge Exploration will at a minimum comply with the New Mexico Oil Conservation Divisions rule 19.15.17.13, Subsection I NMAC Elm Ridge Exploration has adopted these re-seeding application techniques, ratios, and mixtures as their standard operating procedures.

1. The first growing season after closure of a below grade tank or pit, all areas of the well site not utilized for the production of oil and/or gas on a daily basis will be re-seeded with the specified seed mixture.
2. The seed mixture used will be certified with no primary or secondary noxious weeds in seed mixtures. The seed labels from each bag shall be available for inspection while seed is being sown.
3. The operator shall accomplish seeding by drilling on the contour whenever practical or by other division-approved methods. The operator shall obtain vegetative cover that equals 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) 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. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.
4. Hand seeding with hydro-mulch, excelsior netting, or mulch with netting is required on the cut/fill slopes. Mulch will be spread at a rate of 2,000-3,000 pounds per acre.
5. Compacted areas determined by visual inspection will be ripped to a depth of 12 inches below ground surface and disked to a depth of six (6) inches before seeding. Seeding shall be done with a disk type drill with two (2) boxes for various seed sizes. The drill rows shall be eight (8) to ten (10) inches apart. Seed shall be planted at no less than one-half (1/2) inch deep or more than one (1) inch deep. The seeder shall be followed with a drag, packer, or roller to ensure uniform coverage of the seed and adequate compaction. Drilling shall be done on the contour where possible, but not up and down the slope.
6. Where slopes are too steep for contour drilling a hand seeder shall be used. Seed shall be covered to the depth stated above by whatever means is practical. If the seed is unable to be covered by the means listed above, the prescribed seed mixture amount will be doubled.
7. Elm Ridge Exploration shall repeat seeding or planting until it successfully achieves the required vegetative cover of 70% of the native perennial vegetation cover.

8. Upon abandonment of a well site, if the retention of the access road is not considered necessary for the management and multiple uses of the natural resources, or by the surface owner, it will be ripped a minimum of 12 inches in depth. After ripping, water bars will be installed. All ripped surfaces are to be protected from vehicular travel by construction of a dead end ditch and earthen barricade at the entrance to these ripped areas. Re-seeding of areas affected by the ditch and barriers will be re-seeded if necessary.
9. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will inform the division once successful re-vegetation has occurred.

## **Elm Ridge Exploration**

### **San Juan Basin**

#### **Below Grade Tank Maintenance and Operating Plan**

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of a Below Grade Tank (BGT) on Elm Ridge Exploration locations. This particular location does not meet the siting criteria to operate a BGT, and thus will be closing the BGT within five (5) years, or upon failure of integrity, and replacing it with an above ground storage tank.

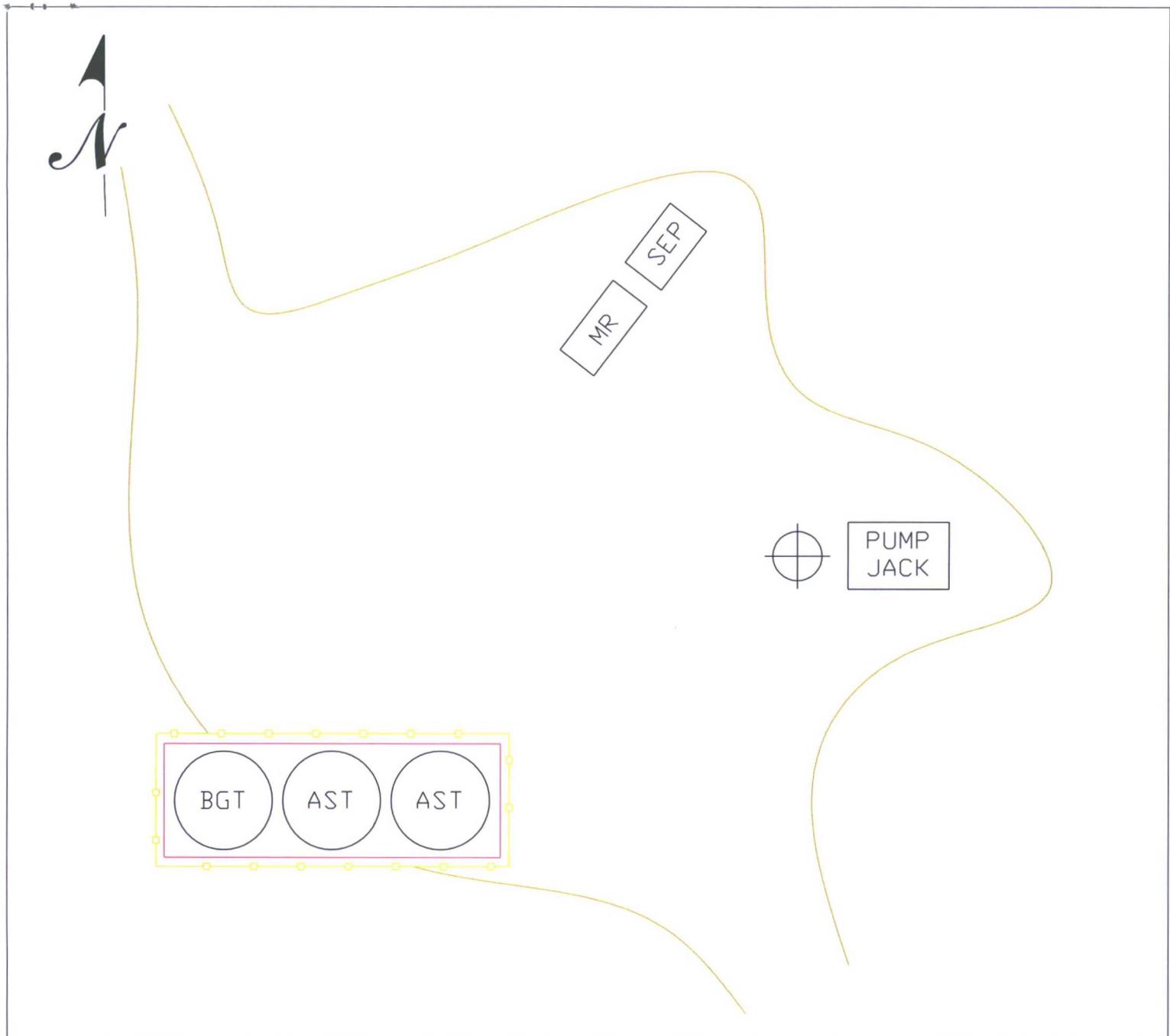
#### **GENERAL PLAN:**

1. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will operate and maintain a BGT to contain liquids and solids to prevent contamination of fresh water and to protect public health and environment. This will be accomplished by performing monthly inspections of the BGT, any liners or leak detection if applicable, netting, secondary containment, fencing and maintaining adequate freeboard.
2. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall not allow a BGT to overflow or allow surface water run-on to enter the BGT. This will be accomplished by a secondary containment consisting of a soil berm around the BGT that will be monitored by monthly inspections. Overflowing will be prevented by maintaining an adequate freeboard of eight (8) inches, maintained by monthly inspections. This process will be performed on the current BGT located at this well site.
3. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall continuously remove any visible or measurable layer of oil from the fluid surface of a BGT in an effort to prevent the accumulation of oil over time.
4. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall inspect the BGT at least once monthly and maintain a written record of each inspection for at least five (5) years. The monthly inspection form to be used by Elm Ridge Exploration is attached to this document.
5. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall maintain adequate freeboard to prevent overtopping of the BGT. The standard freeboard to be maintained by Elm Ridge Exploration is eight (8) inches.
6. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall maintain an expanded metal covering on the BGT.

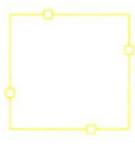
7. Elm Ridge Exploration will not discharge into or store any hazardous wastes into the BGT.
8. If Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, determines that a BGT has developed a leak below the liquid's surface, then Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will notify the appropriate division office within 48 hours of discovering the leak. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall remove all liquids above the damage or leak line within 48 hours in accordance with Subsection A of 19.15.17.12 NMAC. The damaged tank will then be removed, and closure activities will begin in accordance with the submitted closure plan.
9. Elm Ridge Exploration will close any BGT within 60 days of cessation of the BGTs operation per Subsection A of 19.15.17.13 NMAC.
10. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will close the BGT within the NMOCD allotted five (5) years, within 60 days of cessation of operation of the BGT or upon failure of integrity, and put into service an above ground storage tank to meet the needs previously fulfilled by the BGT.

***Figure A, Site Map***

***Figure B, Monthly BGT Inspection Form***



# LEGEND

 4' Tall Hogwire Fencing

 Berm

 Well Head

**SITE MAP**  
**ELM RIDGE EXPLORATION**  
 BERRY FEDERAL #2  
 SEC 11 TWN 25N RGE 13W  
 SAN JUAN COUNTY, NEW MEXICO

SCALE: NTS	FIGURE NO. A	REV
PROJECT NO03056-0135		

REVISIONS			
NO.	DATE	BY	DESCRIPTION
MAP DRWN	JPM	12/4/08	BASE DRWN

ENVIRONMENTAL SCIENTISTS & ENGINEERS  
**ENVIROTECH**

5796 U.S. HIGHWAY 64, FARMINGTON, NM 87410 505-632-0615

# Elm Ridge Exploration, LLC

## Monthly Below Grade Tank Inspection Form

Inspection Performed By: \_\_\_\_\_ Date: \_\_\_\_\_

Well Site Name: \_\_\_\_\_

Unit: \_\_\_\_\_ Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_ County: \_\_\_\_\_

Quarter Footage: \_\_\_\_\_

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

### Below Grade Tank

Construction Material of BGT (circle one): Steel Fiberglass Galvanized Other: \_\_\_\_\_

Tank Capacity (BBLs): \_\_\_\_\_

Status of Tank (circle one): NA poor fair good excellent

Leaks Detected (circle one): Yes No Unknown

Liquid level in tank from the top: \_\_\_\_\_

Recent overflow detected (circle one): Yes No Unknown

BGT Cover present: Yes No NA

Cover Type (circle one): wire mesh steel mesh fibrous netting other: \_\_\_\_\_

Berm Present (circle one): Yes No

### Secondary Containment

Type of secondary containment: \_\_\_\_\_

Status of secondary containment (circle one): NA poor fair good excellent

### Fencing

Fencing Present (circle one): Yes No

Describe Fencing: \_\_\_\_\_

Status of Fencing (circle one): NA poor fair good excellent

\*Maintain this document on record for a minimum of five (5) years from the date performed.

**OCD Aztec District III  
ELM RIDGE Checklist  
Below Grade Tank Closure Plans**

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**19.15.17.9 Permit application**

- Signed C-144 (Page 5 of C-144)
- Site Specific Hydrogeology (Iwaters)

**19.15.17.10 Siting requirements**

- Proximity to watercourses (Topo map)
- Proximity to Permanent Structure (Aerial Map)
- Proximity to Flood Plain Map (Aerial Map)
- Proximity to Subsurface Mines Map (Aerial Map)

**19.15.17.13 Closure Plan**

- Below Grade Tank Closure Plan

**19.15.17.12 Operating and Maintenance Plan**

- Below Grade Tank Operating and Maintenance Plan

**Requirements:** (Application Marked Closure Plan Only)

**Registration Date:** VF (CS) 5/17/18