

CoDistrict 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.

2470
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.

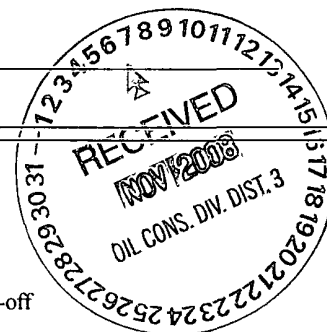
Operator: Elm Ridge Exploration OGRID #: 149052
Address: P.O. Box 156; Bloomfield, NM 87413
Facility or well name: Badlands Federal 1
API Number: 3004525975 OCD Permit Number: Not Applicable
U/L or Qtr/Qtr A Section 13 Township 25N Range 13W County: San Juan
Center of Proposed Design: Latitude 36.406591 Longitude -108.163764 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: 100 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 Secondary containment
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 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' Hogwire Fencing with Pipe Railing

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 or the Santa Fe Environmental Bureau office for consideration of approval.

☐ 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.

The nearest water well is approximately 2 miles to the west, with a depth to groundwater of 80 feet. The BGT is at an elevation approximately 150 feet higher than the groundwater well, suggesting groundwater is at a depth greater than 50 feet.

☐ Yes ☒ No

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) 0.

The nearest watercourse is 2,509.2 ft. north per attached topographic map.

☐ Yes ☒ No

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

The attached aerial illustrates a distance of approximately 1,300 feet to the north-south and 1,900 feet to the east-west from the well site.

☐ Yes ☒ No

☐ NA

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

iWATERS database search and visual inspection indicates no groundwater wells are within 1000 feet of the well 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.

The site is not within incorporated municipal boundaries according to the attached topographical map

☐ Yes ☒ No

Within 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

Within the area overlying a subsurface mine.

The attached NM EMNRD map indicates the well site is not in an area overlying a subsurface mine.

☐ Yes ☒ No

Within an unstable area.

The attached topographical map indicates that the well site is not within an unstable area.

☐ Yes ☒ No

Within a 100-year floodplain.

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

☐ 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 Number: _____ or Permit Number: _____

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
☐ 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 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)

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 H₂S, 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 Burial
☐ 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

16.

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 Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

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 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

17.

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 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

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

18.

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): Ms. Amy Mackey Title: Production Technician
 Signature: [Signature] Date: 11/5/08
 e-mail address: amackey@elmridge.net Telephone: 505-632-3476 x201

20.

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

OCD Representative Signature: [Signature] Approval Date: 3/26/2012
 Title: Compliance Officer 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 (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

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
Point of Diversion Summary**

(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
RG 36707	25N	13W	21	3					

Driller Licence: 738 TAFOYA, CARLOS J.

Driller Name: CARLOS J. TAFOYA

Drill Start Date: 08/13/1981

Log File Date: 07/29/1981

Pump Type:

Casing Size:

Depth Well: 120

Source: Shallow

Drill Finish Date: 08/14/1981

PCW Received Date:

Pipe Discharge Size:

Estimated Yield:

Depth Water: 80

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 25N Range: 13W Sections: 13

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

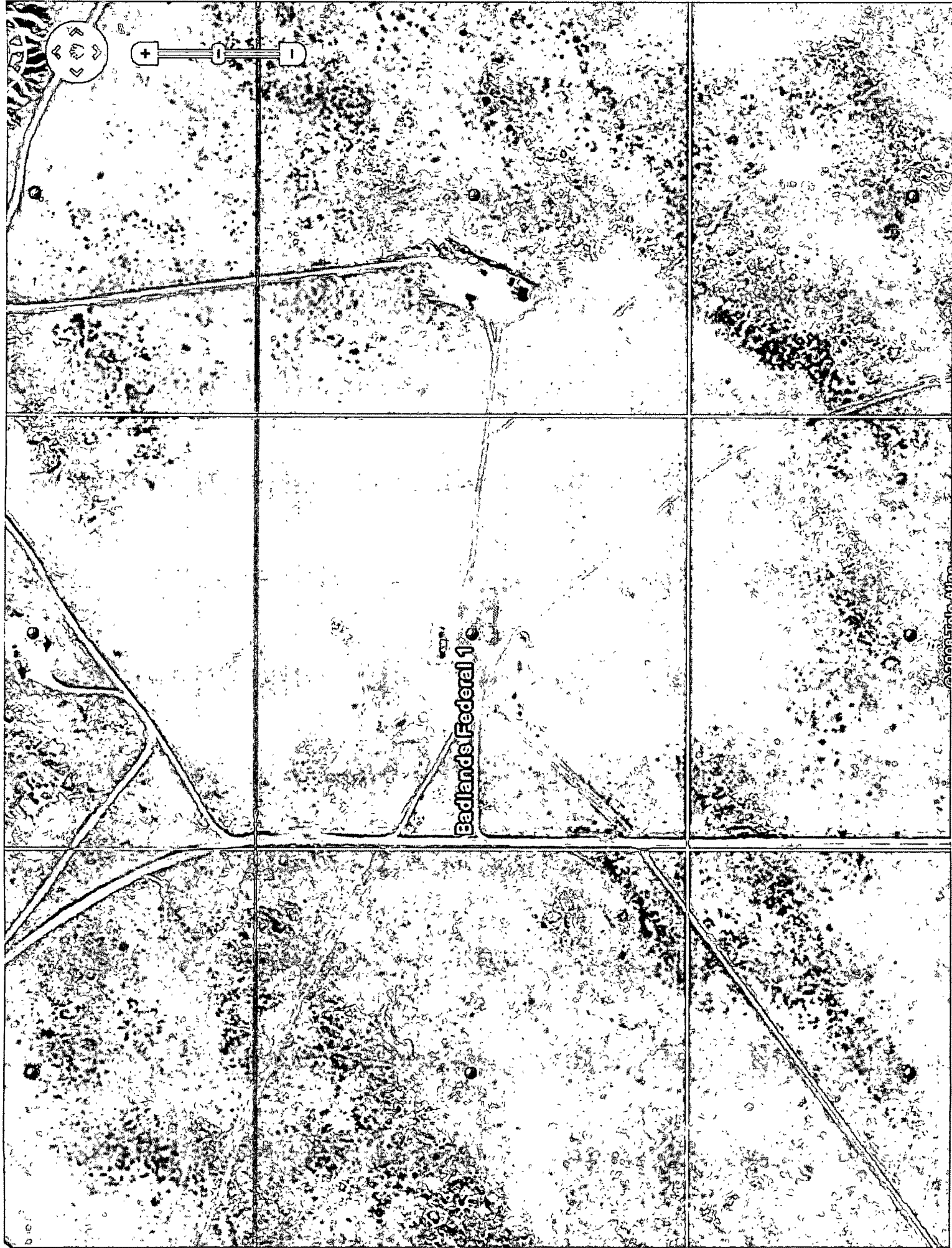
Owner Name: (First) (Last) e Non-Domestic o Domestic • All

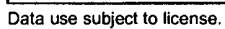
POD / Surface Data Report Avg Depth to Water Report Water Column Report

Clear Form iWATERS Menu Help

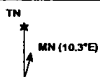
POD / SURFACE DATA REPORT 09/11/2008

(acre ft per annum)						(quarters are 1=NW 2=NE 3=SW 4=SE)																(quarters are biggest to smallest)																X Y are in Feet			UTM are in Meters)			Start	Finish	Depth	Depth	(in feet)	
DB	File	Ubr	Use	Diversion	Owner	POD Number	Source	Tws	Rng	Sec	q	q	q	Zone	X	Y	UTM_Zone	Easting	Northing	Date	Date	Well	Water																										
No Records found, try again																																																	

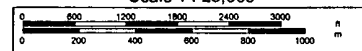




www.delorme.com



Scale 1 : 25,000


$$1'' = 2,083.3 \text{ ft}$$

Data Zoom 13-0

Elm Ridge Exploration Mine Map

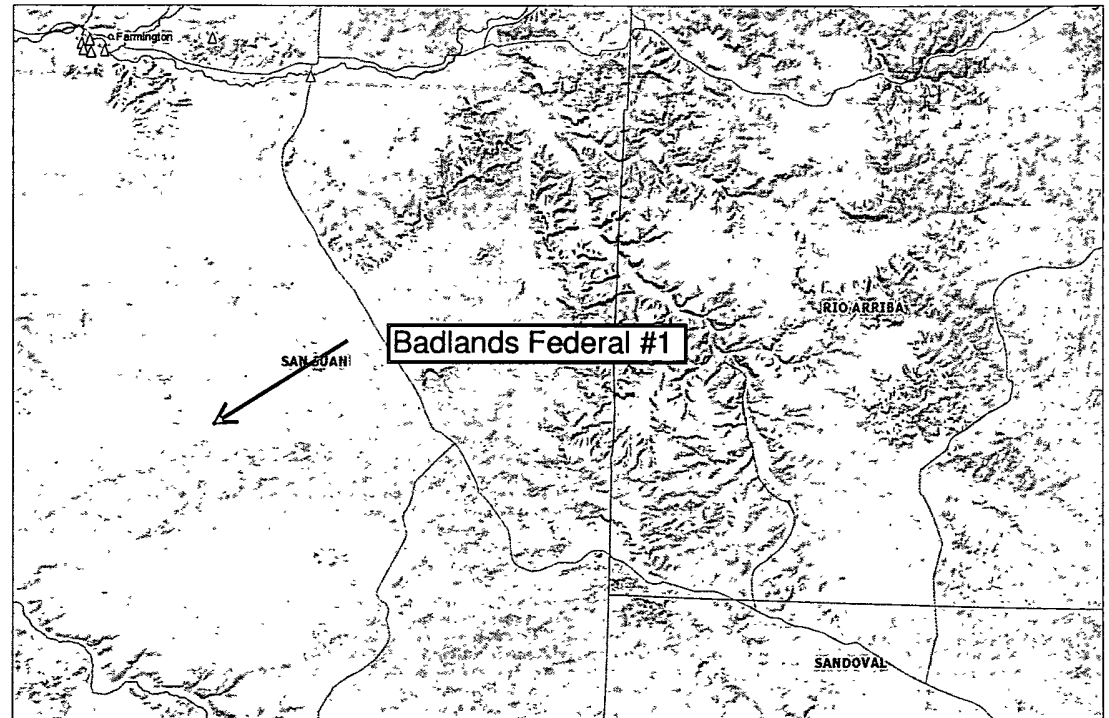
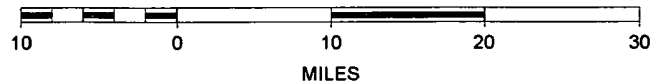
Mines, Mills & Quarries Commodity Groups

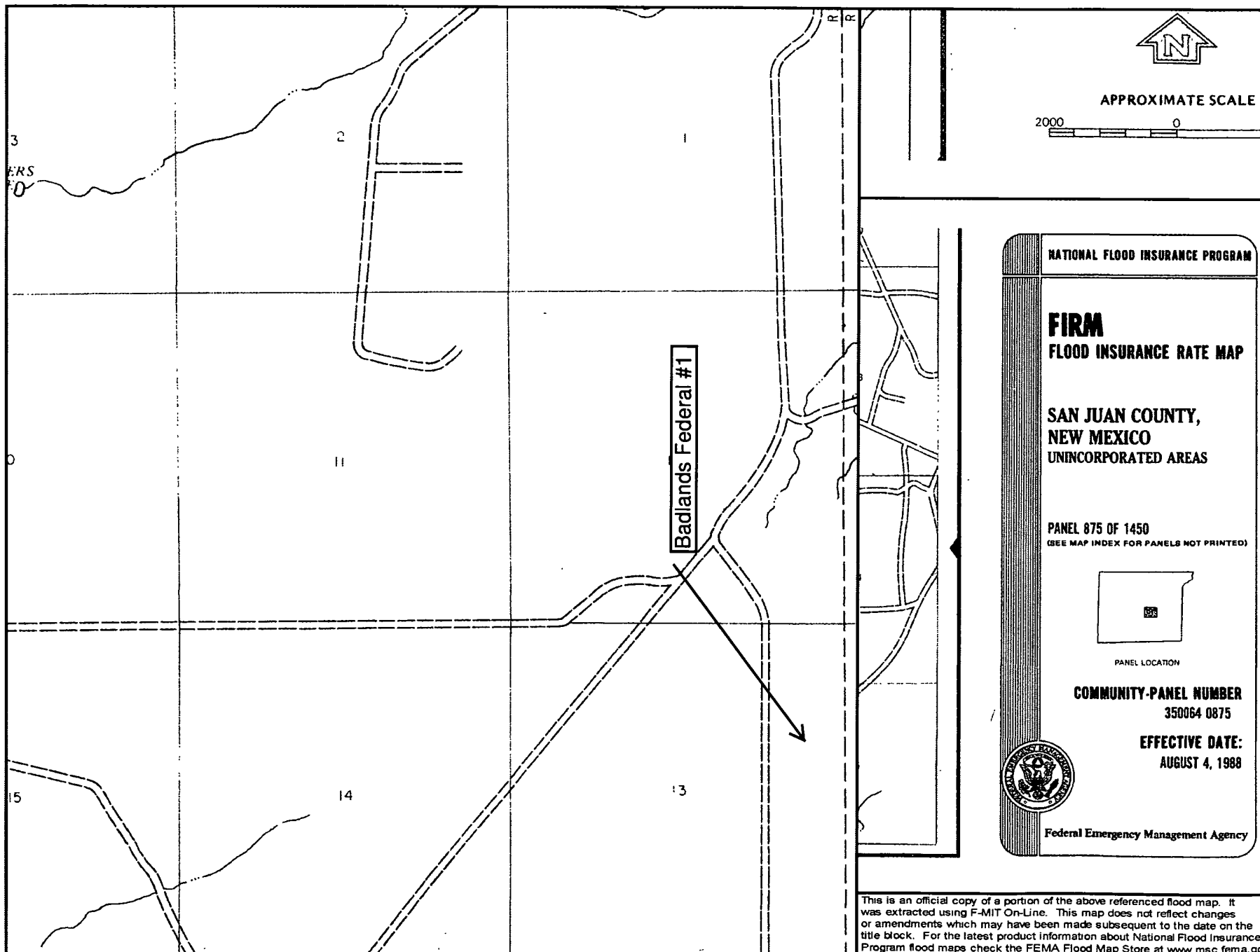
- △ Aggregate & Stone Mines
- ◆ Coal Mines
- ☆ Industrial Minerals Mines
- ▽ Industrial Minerals Mills
- ☒ Metal Mines and Mill Concentrate
- ☐ Potash Mines & Refineries
- ☞ Smelters & Refinery Ops.
- ✦ Uranium Mines
- ⊕ Uranium Mills

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





BELOW GRADE TANK (BGT) CLOSURE PLAN

SITE NAME:

**BADLANDS FEDERAL #1
UNIT LETTER A, SECTION 13, TOWNSHIP 25N, RANGE 13W
SAN JUAN COUNTY, NEW MEXICO
LATITUDE 36.406591 LONGITUDE -108.163764**

SUBMITTED TO:

**MR. WAYNE PRICE
NEW MEXICO OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
SANTA FE, NEW MEXICO 87505
(505) 476-3440**

SUBMITTED BY:

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

OCTOBER 2008

**BELOW GRADE TANK (BGT) CLOSURE PLAN
ELM RIDGE EXPLORATION
BADLANDS FEDERAL #1
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 Badlands Federal #1 well site located in the NW ¼ NW ¼ of Section 13, Township 25N, Range 13W, San Juan County, New Mexico. This closure plan has been prepared in conformance with New Mexico Oil Conservation Division (NMOCD) procedures.

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 Badlands Federal #1 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 shall submit a closure plan to the division's environmental bureau. Upon receipt of this plan the division shall review the current closure plan for adequacy and accordance with 19.15.17.9 Subsection C NMAC and 19.15.17.13 NMAC.
- 2) 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.
- 3) Elm Ridge Exploration or a contractor acting on behalf of Elm Ridge Exploration shall provide written notification to the surface owner no later than 72 hours prior to BGT removal by certified mail. BLM will receive notification per a Sundry Notice, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC.
- 4) 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 or Basin Disposal, depending on the consistence of the material removed, as in accordance with 19.15.17.13 Subsection E Paragraph (1) NMAC.
- 5) Elm Ridge Exploration or a contractor acting on behalf of Elm Ridge Exploration will remove the BGT and all on-site equipment associated with this BGT that cannot or will not be reused on-site, as in accordance with 19.15.17.13 Subsection E Paragraphs (2) and (3) NMAC.
- 6) 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. An additional discrete sample will be collected from any area that is wet, discolored, or showing other evidence of a release. All samples being collected will be analyzed for benzene and total BTEX via USEPA Method 8021, 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.
- 7) Depending on soil sample results the area will be either backfilled or the area will be excavated.
 - a. If soil samples pass the regulatory standards of 0.2 ppm benzene, 50 ppm

BTEX, 100 ppm TPH, and 250 ppm 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 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.
 - ii. Upon decommissioning of the well site Elm Ridge Exploration or a contractor acting on behalf of Elm Ridge Exploration will construct a division-prescribed soil cover, substantially restore, recontour and re-vegetate the site, in accordance with 19.15.17.13 Subsections G, H, and I NMAC. The soil cover for closures where the operator has removed the pit contents or remediated the contaminated soil to the division's satisfaction shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material. The operator shall notify the division when it has been re-seeded and when it has achieved successful re-vegetation.
- b. If soil samples exceed the regulatory standards stated above.
- i. Elm Ridge Exploration will submit a Release Notification by Form C-141 to the appropriate division district office, in accordance with 19.15.17.13 Subsection E Paragraph (4) NMAC.
 - ii. Activities beyond this point will be in accordance with 19.15.3.116 NMAC and 19.15.11.19 NMAC.

REPORTING

Reporting will occur within 60 days following the BGT closure and will consist of a form C-144 with all supporting data, and a form C-141 with all supporting data, if necessary. The supporting data will include analytical results, a site diagram, a copy of the site owner notification, and 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) 632-3475 ext. 201.

Respectfully Submitted:

Elm Ridge Exploration

Ms. Amy Mackey
Elm Ridge Exploration

Elm Ridge Exploration

San Juan Basin

Below Grade Tank Maintenance and Operating Plan

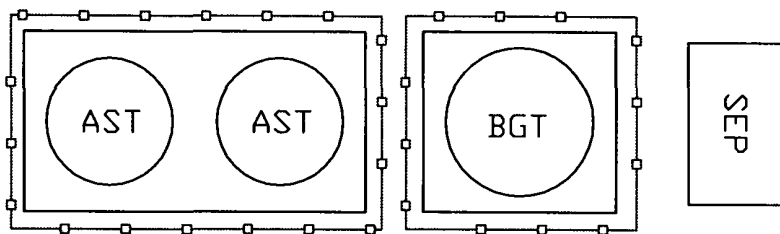
In accordance with Rule 19.15.17 the following information describes the operation and maintenance of a Below Grade Tank (BGT) on Elm Ridge Exploration's locations. This is Elm Ridge Exploration's standard procedure for all BGT's. A separate plan will be submitted for any BGT that Elm Ridge Exploration possesses, which does not conform to this particular plan.

GENERAL PLAN:

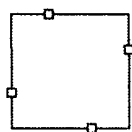
1. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will operate and maintain a BGT to contain liquids and solids to prevent contamination of fresh water and to protect public health and the environment.
2. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall not allow a BGT to overflow or allow surface water run-on to enter the BGT. **Figure A, Site Map** and **Figure B, Design Plan** can be referenced for a visual representation of how this will be accomplished.
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.
5. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall maintain adequate freeboard to prevent overtopping of the BGT.

Figure A, Site Map

Figure B, Design Plan



LEGEND



4' Tall Hogwire Fencing



Berm



Well Head

SITE MAP ELM RIDGE EXPLORATION BADLANDS FEDERAL #1 SEC 13 TWN 25N RGE 13W SAN JUAN COUNTY, NEW MEXICO

SCALE: NTS

PROJECT N003056-0135

FIGURE NO. A

REV

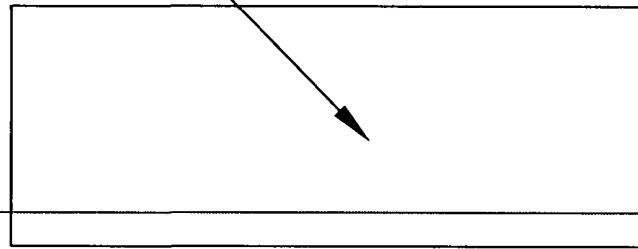
REVISIONS

NO.	DATE	BY	DESCRIPTION
MAP DRWN	JPM	10/27/08	BASE DRWN

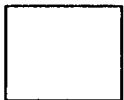
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ENVIROTECH

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

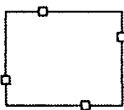
100 BBL
Fiberglass
Tank



LEGEND



Berm



Fence

DESIGN PLAN
ELM RIDGE EXPLORATION
BADLANDS FEDERAL #1
SEC 13 TWN 25N RGE 13W
SAN JUAN COUNTY, NEW MEXICO

SCALE: NTS

PROJECT N003056-0135

FIGURE NO. B

REV

REVISIONS

NO.	DATE	BY	DESCRIPTION
MAP DRWN	JPM	10/27/08	BASE DRWN

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Elm Ridge Exploration

San Juan Basin

Below Grade Tank Design and Construction Plan

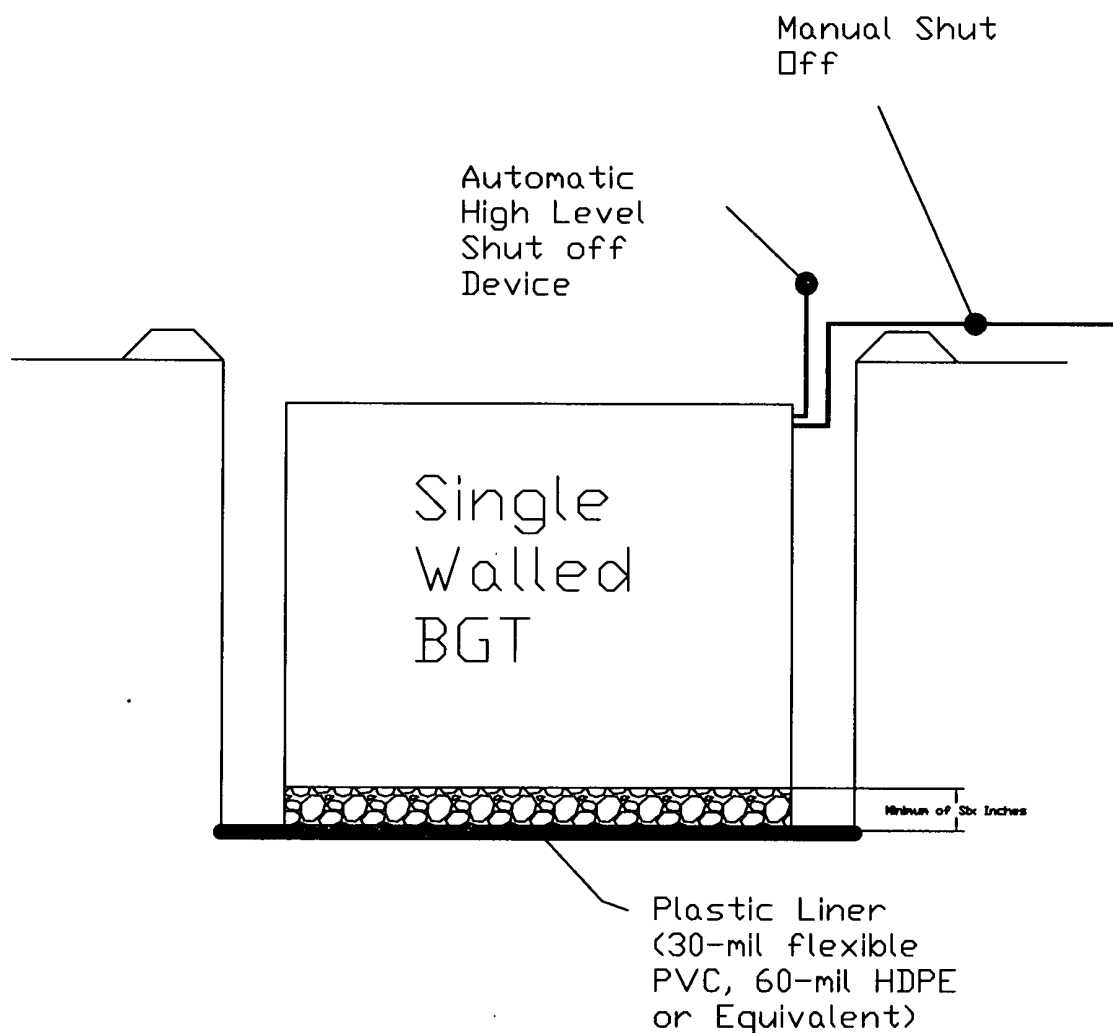
In accordance with Rule 19.15.17 the following information describes the design and construction of below grade tanks (BGTs) on Elm Ridge Exploration locations. This will be Elm Ridge Exploration's standard procedure for all BGTs. A separate plan will be submitted for any BGT which does not conform to this plan.

GENERAL PLAN:

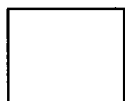
1. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will design and construct a BGT to contain liquids and solids to prevent contamination of fresh water and to protect public health and the environment.
2. Elm Ridge Exploration will use a general location sign posted on location. If no general sign is posted, a separate sign at the location of the BGT will be provided.
3. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall construct fencing around the BGT using a four (4) foot hog wire fencing topped with two (2) strands of barbed wire, or with a pipe top rail. A six (6) foot chain link fence topped with three (3) strands of barbed wire will be used if the well location is within 1000 feet of a permanent residence, school, hospital, institution or a church.
4. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will construct an expanded metal covering on the top of the BGT.
5. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall ensure that a BGT is constructed of materials resistant from damage by sunlight and the BGT's particular contents.
6. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall ensure that the BGT system has a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom.

7. 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.
8. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will construct and use a BGT that does not have double walls. The BGT side walls will be open for visual inspection for leaks. The BGT bottom is elevated a minimum of six inches above the underlying ground surface and the BGT is underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected.
9. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall equip BGTs designed in this manner with a properly operating automatic high level shut-off control device and manual controls to prevent overflow.
10. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will ensure that the geomembrane liner consists of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material that the appropriate division district office approves. The geomembrane liner shall have a hydraulic conductivity no greater than 1×10^{-9} cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 Method 9090A.
11. The general specification for design and construction is attached as ***Figure C, BGT Design and Construction.***

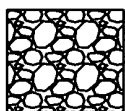
Figure C, BGT Design and Construction



LEGEND



Berm



Gravel

GENERAL BGT DESIGN AND CONSTRUCTION PLAN ELM RIDGE EXPLORATION

SCALE: NTS

PROJECT N003056-0135

FIGURE NO. C

REV

REVISIONS

NO.	DATE	BY	DESCRIPTION
MAP DRWN	JPM	9/11/08	BASE DRWN

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