

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.

1995

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.

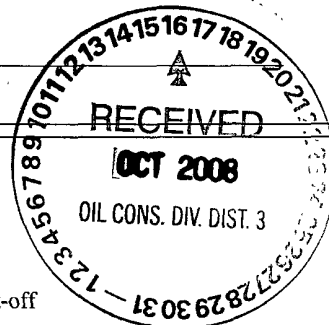
1.
Operator: **ELM RIDGE EXPLORATION COMPANY, LLC** OGRID #: **149052**
Address: **P. O. BOX 156, BLOOMFIELD, NM 87413**
Facility or well name: **MARCUS B #2**
API Number: **30-039-30402** OCD Permit Number: _____
U/L or Qtr/Qtr **G** Section **5** Township **23 N** Range **6 W** County: **RIO ARRIBA**
Center of Proposed Design: Latitude **36.25590° N** Longitude **107.49119° 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: **9,939** bbl Dimensions: L **160'** x W **40'** x D **10'**

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: _____ 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 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 minimum 36" hog wire topped with at least 1 strand of barbed wire = at least 48" high fence

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. *See request for alternate marking on Page 2 of attachment*
- ☐ 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i>) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to permanent pits</i>) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> 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 See 10. on APD Page 9 (Exhibit K)☐ 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): **BRIAN WOOD** Title: **CONSULTANT**

Signature: _____

Date: **10-13-08**

e-mail address: **brian@permitswest.com** Telephone: **(505) 466-8120**

20.

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

OCD Representative Signature: Brampton Roll Approval Date: 11-5-08

Title: EnviroSpec 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: _____

Elm Ridge Exploration Company, LLC
Marcus B 2 temporary pit proposed closure
1735' FNL & 2175' FEL Sec. 5, T. 23 N., R. 6 W.
Rio Arriba County, New Mexico
API #30-039-30402

PAGE 1

Siting Criteria

1. Ground water is $\geq 100'$ below the bottom of the pit. This estimate is based on the Berry water well (Exhibit A) which is ≈ 2 miles southwest in NW 18-23n-6w. Water well probably produces from the San Jose Formation. Pit is in the San Jose Formation. (The 3 other water wells within a 2 miles radius, closest of which is $\approx 8,000'$ northeast in Section 33, do not have depth records.)

6,870' graded ground	$\approx 6,900'$ Berry water well ground elevation
<u>- 10' deep pit</u>	<u>-200' depth to water</u>
6,860' bottom of pit	$\approx 6,700'$ water level elevation
6,860' bottom of pit	
<u>-6,700' water level</u>	
$\approx 160s'$ depth to water	

2. Pit is not within 300' of a continuously flowing watercourse. Pit is not within 200' of any other significant watercourse as defined by OCD. Closest first order tributary of Escrito Canyon is over a half mile downstream (Exhibit B).

3. Pit is not within 300' of any building. Closest buildings are over 2 miles south along US 550 (Exhibits B & C).

4. Pit is not within 1,000' any fresh water well or spring (Exhibits A & B).

5. Pit is not within municipal boundaries or within a municipal fresh water well field (Exhibits A & C).

6. Pit is not within 500' of a wetland (Exhibit D).

7. Pit does not overly a mine (Exhibit E).

8. Pit is not in an unstable area. No evidence of earth movement was found

Elm Ridge Exploration Company, LLC
Marcus B 2 temporary pit proposed closure
1735' FNL & 2175' FEL Sec. 5, T. 23 N., R. 6 W.
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during an October 8, 2008 inspection. Maximum grade is $\approx 11\%$ (Exhibit F)

9. Pit is not within a 100 year flood plain (Exhibit G).

10. C-102 is attached as Exhibit H.

11. Closure notice to surface owner (BLM) is attached as Exhibit I.

Alternative for 19.15.17.13 F. (1) (d)

An alternate interim marking system will be used to allow for safer and more efficient operations. A minimum 4" O. D. steel pipe will be set at least 36" deep at the center of the pit. A threaded collar will be on the top of the pipe. A minimum 12" x 12" steel plate will be welded atop the threaded collar. Top of the plate will be flush with ground level. The standard location information listed will be welded onto the plate, plus a notation that it marks an on site buried temporary pit. Upon plugging the well, the plate will be removed and the pit marked as described in 19.15.17.13 F. (1) (d).

Closure Plan

Elm Ridge will close the pit in accordance with OCD Rules 19.15.17.12. & 13. Post closure documents will be submitted within 60 days of pit closure and will include forms C-105 and C-144, cover details, pit diagram, inspection report, sample results, and a copy of deed notice to the county clerk.

All free standing liquids will be removed before back filling the pit and disposed of at an Elm Ridge disposal well (e. g., Lybrook Yard WDW 1, API 30-039-27533) or at Basin Disposal's evaporation pond (NM-01-005).

The preferred method of closure will be on site in place burial assuming all criteria in 19.15.17.13 (B) are met.

Elm Ridge Exploration Company, LLC
Marcus B 2 temporary pit proposed closure
1735' FNL & 2175' FEL Sec. 5, T. 23 N., R. 6 W.
Rio Arriba County, New Mexico
API #30-039-30402

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The surface owner has been notified (attached).

Closure, including contouring and seeding, will be completed within 6 months of rig off.

After approval of this application, Elm Ridge will notify the OCD verbally or by other means at least 72 hours, but not more than one week, prior to any closure operation. The notice shall include the operator's name and the location to be closed by unit letter, section, township and range, well name & number, and API number.

All liner above the mud level will be cut and removed after stabilization. Removed liner will be disposed of in a licensed disposal facility.

Elm Ridge will stabilize or solidify the contents to a bearing capacity sufficient to support the temporary pit's final cover. Elm Ridge will not mix the contents with soil or other material at a mixing ratio of greater than 3:1, soil or other material to contents.

A 5 point composite sample will be taken of the pit and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). If the criteria are not met, then all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13. (i. e., dig & haul). If dig & haul are required, then disposal facility will be Envirotech (NM01-0011).

<u>Component</u>	<u>Test Method</u>	<u>Limit (mg/Kg)</u>
benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	2,500
GRO/DRO	EPA SW-846 8015M	500
chlorides	EPA 300.1	1,000 or background

Elm Ridge Exploration Company, LLC
Marcus B 2 temporary pit proposed closure
1735' FNL & 2175' FEL Sec. 5, T. 23 N., R. 6 W.
Rio Arriba County, New Mexico
API #30-039-30402

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After completing solidification and testing, the pit area will be back filled with compacted, waste free, earth material. At least 4 feet of cover will be achieved. The cover will include 1 foot of suitable material to establish vegetation at the site, or the background thickness of the topsoil, whichever is greater.

Re-contouring of the location will match the fit, shape, line, form, and texture of the surrounding area. Reshaping will control drainage and prevent ponds and erosion. Natural drainages will be unimpeded. Water bars and/or silt traps will be placed where needed to prevent erosion on a large scale. Final re-contour will have a uniform appearance with smooth surface fitting the natural landscape.

Notice will be sent to the OCD when the reclaimed area is seeded.

Disturbed areas will be seeded the first growing season after the pit is closed. Seed will be drilled on the contour wherever practical or by other OCD approved method. BLM stipulated seed mix will be used. Vegetation cover will equal at least 70% of the native perennial vegetation cover prior to disturbance. Seed mix will include at least 3 native species, including at least 1 grass. Noxious weeds will be excluded. Vegetation cover will be maintained through 2 successive growing seasons. Repeat seeding or planting will be continued until successful vegetation growth occurs.

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 23N Range: 06W Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

POD / SURFACE DATA REPORT 10/11/2008

(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 Nbr	Use	Diversion	Owner	POD Number	Source	Tws	Rng	Sec	q	q	q	Zone	X	Y	UTM_Zone	Easting	Northing	Date	Date	Well	Water							
SJ 00681 10	STK	8	HOMER C. BERRY	SJ 00681 10		23N	06W	32	4	4					13	276572	4006450											
SJ 00681 15	STK	8	HOMER C. BERRY	SJ 00681 15		23N	06W	01	3	1	4				13	282031	4014591											
SJ 00681 26	STK	3	HOMER C. BERRY	SJ 00681 26		23N	06W	07	3	4	4				13	274329	4012748											
SJ 00681 28	STK	3	HOMER C. BERRY	SJ 00681 28		23N	06W	35	2	2	2				13	281484	4007540											
SJ 00681 8	STK	24.195	HOMER C. BERRY	SJ 00681 8		23N	06W	09	4	1	2				13	277886	4013199											
SJ 00681 9	STK	8	HOMER C. BERRY	SJ 00681 9		23N	06W	29	2	1	4				13	276316	4009119											
SJ 01156	IRR	93	H.C. BERRY	SJ 01156		23N	06W	18	1	2	2				13	274330	4012555	04/10/1980	04/20/1980	1500	200							
SJ 01506	SCH	3	BRETHREN NAVAJO MISSION	SJ 01506	Shallow	23N	06W	22	3	1	1				13	278535	4010015		12/31/1948	280								

Record Count: 8

EXHIBIT A

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

Township: Range: Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

WATER COLUMN REPORT 10/11/2008

(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 (in feet) Column
<u>SJ 01156</u>	23N	06W	18	1	2	2				1500	200	1300
<u>SJ 01506</u>	23N	06W	22	3	1	1				280		

Record Count: 2

EXHIBIT A

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 24N Range: 06W Sections: _____

NAD27 X: _____ Y: _____ Zone: _____ Search Radius: _____

County: _____ Basin: _____ Number: _____ Suffix: _____

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

POD / SURFACE DATA REPORT 10/11/2008

DB File Nbr	(acre ft per annum)	Use	Diversion	Owner	POD Number	(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 Date	Finish Date	Depth Well	Depth (in feet) Water
						Source	Tws	Rng	Sec	q	q	q	q	Zone	X				
SJ 00202	OFM	10		BURLINGTON RESOURCES OIL & GAS	SJ 00202	Shallow	24N	06W	11	4	3	13	281366	4022394					
SJ 00681	STK	8		HOMER C. BERRY	SJ 00681 36		24N	06W	11	3	4	13	280965	4022398					
SJ 00681 13	STK	4.839		HOMER C. BERRY	SJ 00681 13		24N	06W	11	1	4	3	13	280886	4023099				
SJ 00681 14	IRR	80		HOMER C. BERRY	SJ 00681 14		24N	06W	24	4	3	13	282864	4019157			127		
SJ 00681 16	STK	24.195		HOMER C. BERRY	SJ 00681 16		24N	06W	07	3	4	4	13	274606	4022441				
SJ 00681 17	STK	8		HOMER C. BERRY	SJ 00681 17		24N	06W	33	4	4	2	13	278397	4016001				
SJ 00681 20	STK	30		HOMER C. BERRY	SJ 00681 20		24N	06W	03	4	2	2	13	280321	4024519				
SJ 00681 21	STK	24.195		HOMER C. BERRY	SJ 00681 21		24N	06W	11	3	4	4	13	280965	4022398				
SJ 00681 22	STK	12.9		HOMER C. BERRY	SJ 00681 22		24N	06W	11	4	4	3	13	281665	4022290				
SJ 00681 23	STK	16.13		HOMER C. BERRY	SJ 00681 23		24N	06W	13	2	2	3	13	283251	4021851				
SJ 00681 25	STK	3		HOMER C. BERRY	SJ 00681 25		24N	06W	13	1	2	2	13	282645	4022075				
SJ 00681 29	IRR	300		HOMER C. BERRY	SJ 00681 29		24N	06W	12	4	3	4	13	283065	4022263				
SJ 00681 3	STK	4.839		HOMER C. BERRY	SJ 00681 3		24N	06W	09	1	1	1	13	277280	4023811				
SJ 00681 30	IRR	420		HOMER C. BERRY	SJ 00681 30		24N	06W	03	2	4	2	13	280338	4024920				
SJ 00681 32	STK	48		HOMER C. BERRY	SJ 00681 32		24N	06W	11	3	4	4	13	280965	4022398				
SJ 00681 34	STK	32		HOMER C. BERRY	SJ 00681 34		24N	06W	13	2	1	1	13	282952	4021964				
SJ 00681 35	IRR	16		HOMER C. BERRY	SJ 00681 35		24N	06W	02	3	3	3	13	280606	4024007				
SJ 00681 36	STK	48		HOMER C. BERRY	SJ 00681 36		24N	06W	11	3	4	4	13	280965	4022398				
SJ 00681 4	STK	9.678		HOMER C. BERRY	SJ 00681 4		24N	06W	18	3	1	3	13	273955	4021213				
SJ 01961	OIL	5		MERRION OIL & GAS CORPORATION	SJ 01961	Shallow	24N	06W	03	4	2	2	13	280222	4024420				
					SJ 01961 EXPL		24N	06W	03	4	2	2	13	280222	4024420				

Record Count: 21

EXHIBIT A

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 24N Range: 07W Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

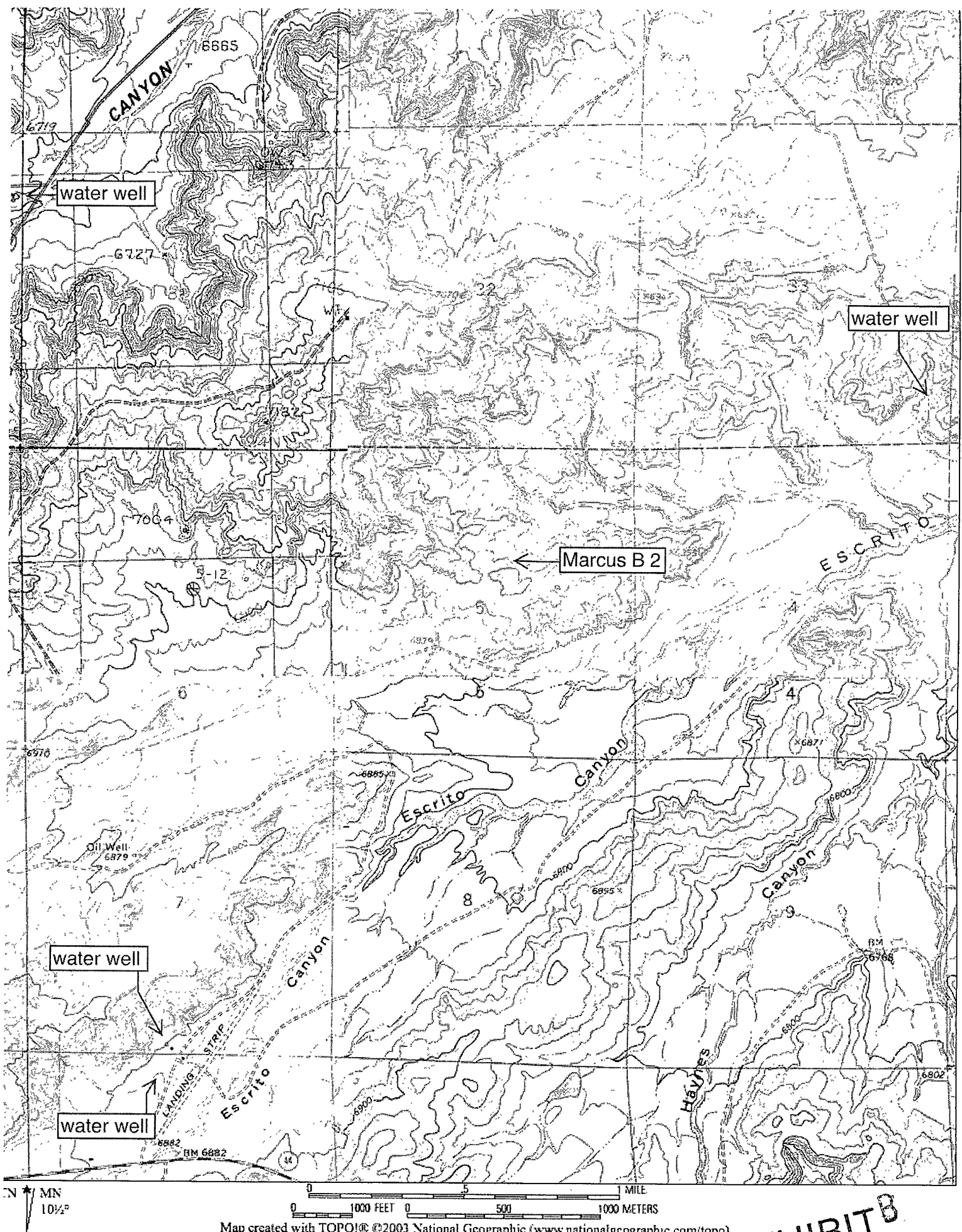
Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic ☒ All

POD / SURFACE DATA REPORT 10/11/2008

DB File Nbr	(acre ft per annum)	Use	Diversion	Owner	POD Number	(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)	
						Source	Tws Rng Sec q q q	Zone X Y	UTM_Zone Easting Northing	Date	Date	Well	Water	
SJ 00681 2	STK	4.839		HOMER C. BERRY	SJ 00681 2		24N 07W 01 3 3 2		13	272654	4024369			
SJ 00681 37	STK		3	HOMER C. BERRY	SJ 00681 37		24N 07W 15 1 1 2		13	269408	4022501		190	
SJ 00681 38	STK		3	HOMER C. BERRY	SJ 00681 38		24N 07W 17 2 4 1		13	267209	4022130			
SJ 00681 39	STK		86	HOMER C. BERRY	SJ 00681 39		24N 07W 18 2 2 4		13	265824	4022392		1825 500	
SJ 00681 5	STK		8	HOMER C. BERRY	SJ 00681 5		24N 07W 22 3 3		13	269307	4019626			
SJ 00681 6	STK		12.9	HOMER C. BERRY	SJ 00681 6		24N 07W 36 2 2		13	273515	4017257			
SJ 00681 7	STK		12.9	HOMER C. BERRY	SJ 00681 7		24N 07W 34 2 3		13	269980	4017085			
SJ 01131	MIN		23	HOMER C. BERRY	SJ 01131	Shallow	24N 07W 19 4 1		13	265313	4020131	04/22/1980	04/30/1980	1700 400
SJ 01335	DOM		3	MARY Y. LARGO	SJ 01335		24N 07W 31 1		13	264672	4017581	02/14/1981	02/20/1981	185

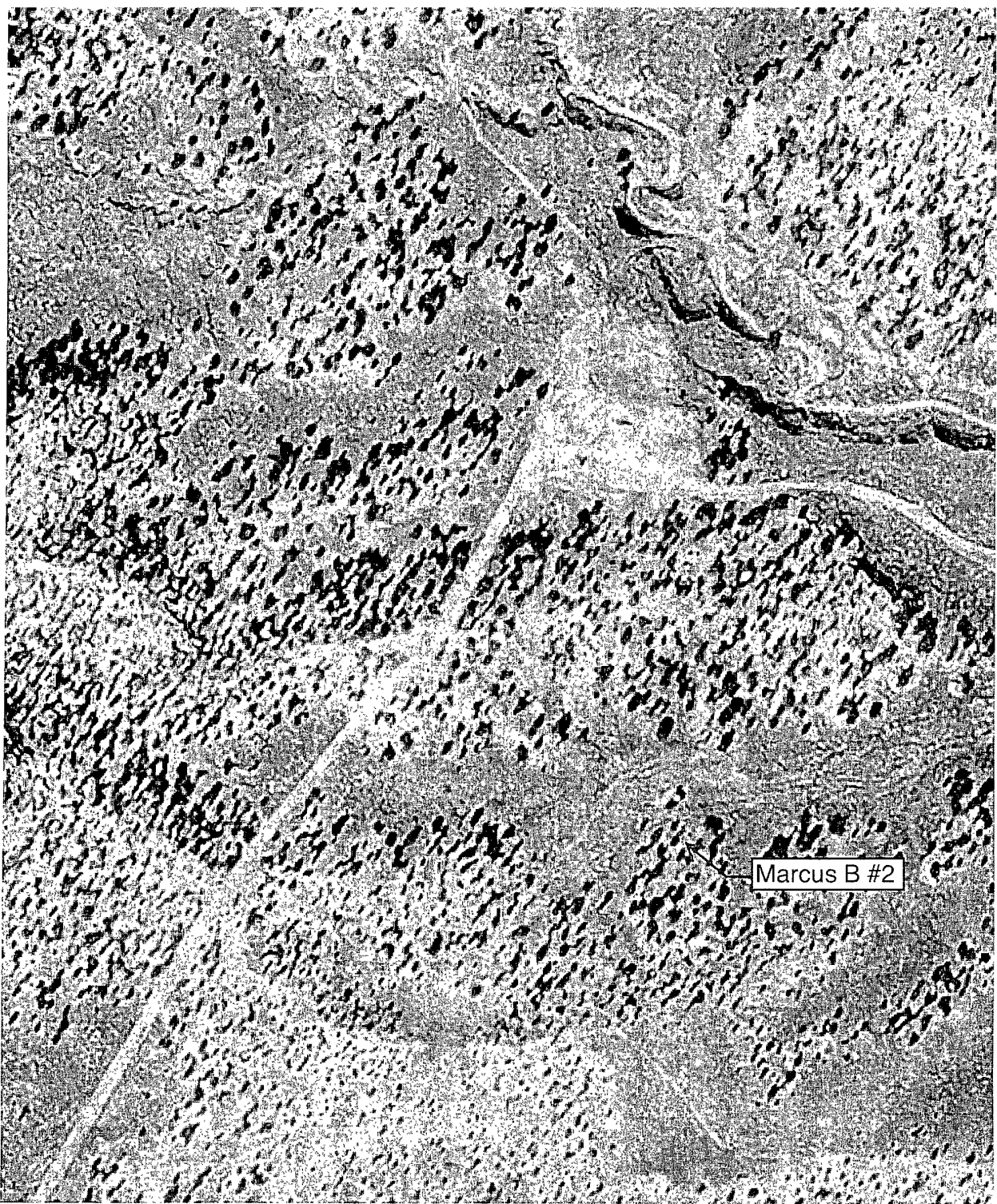
Record Count: 9

EXHIBIT A



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

EXHIBIT B



0 100M

0 100yd

Image courtesy of the U.S. Geological Survey

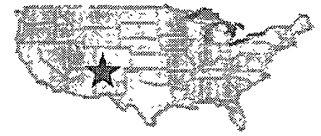
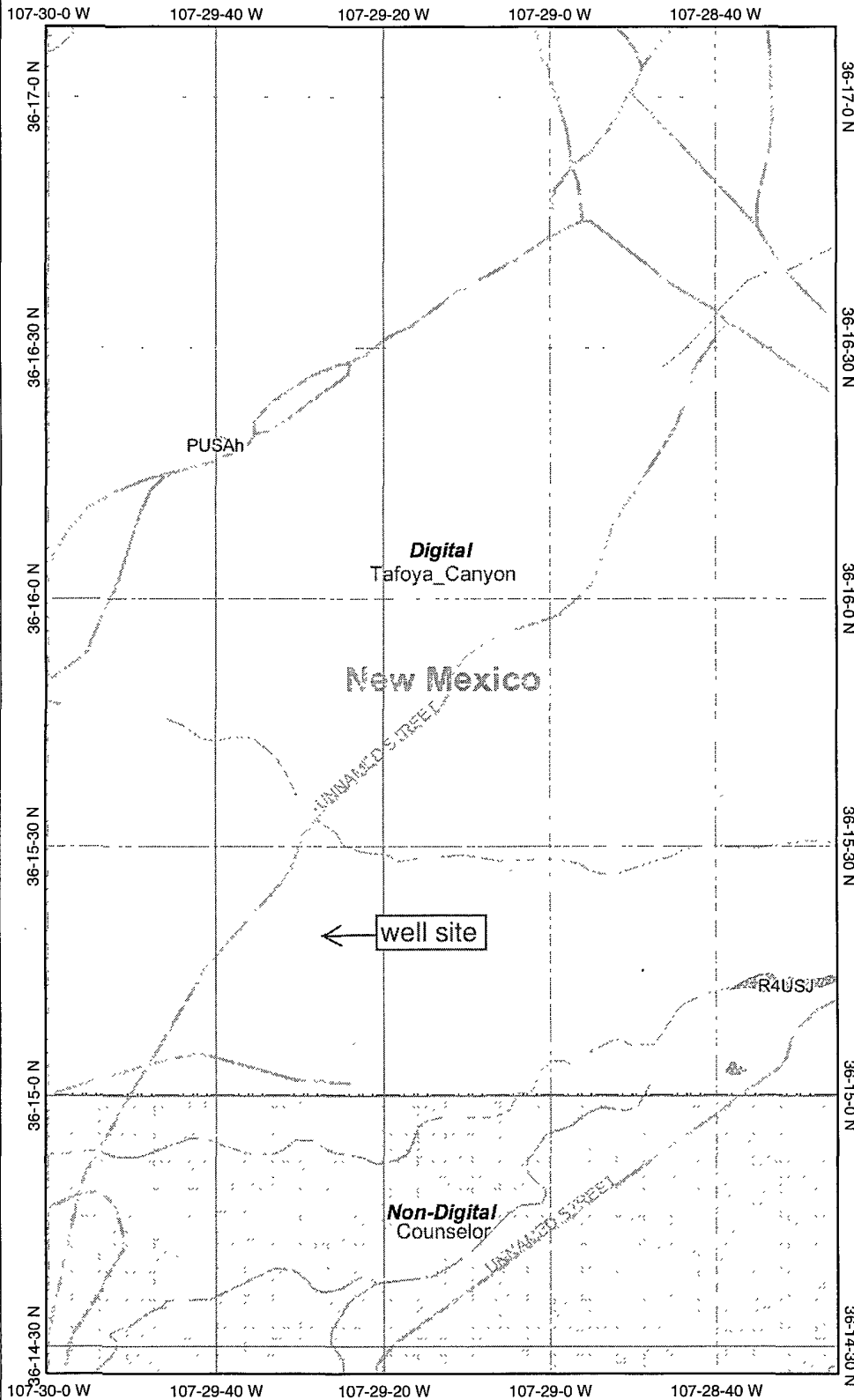
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Privacy Statement

EXHIBIT C

Marcus B #2 wetlands (none)



Legend

- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America

EXHIBIT D



Scale: 1:24,000

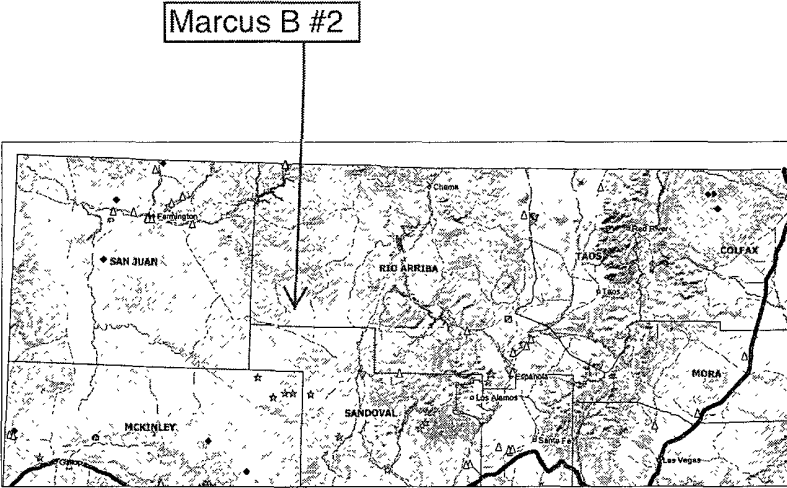
Map center: 36° 15' 48" N, 107° 29' 13" W

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

MMQonline Public Version

Mines, Mills & Quarries Commodity Groups

- △ Aggregate & Stone Mines
- ◆ Coal Mines
- ☆ Industrial Minerals Mines
- ◊ Industrial Minerals Mills
- ▣ Metal Mines and Mill Concentrate
- Potash Mines & Refineries



SCALE 1 : 3,897,606

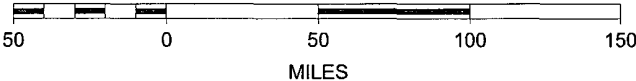
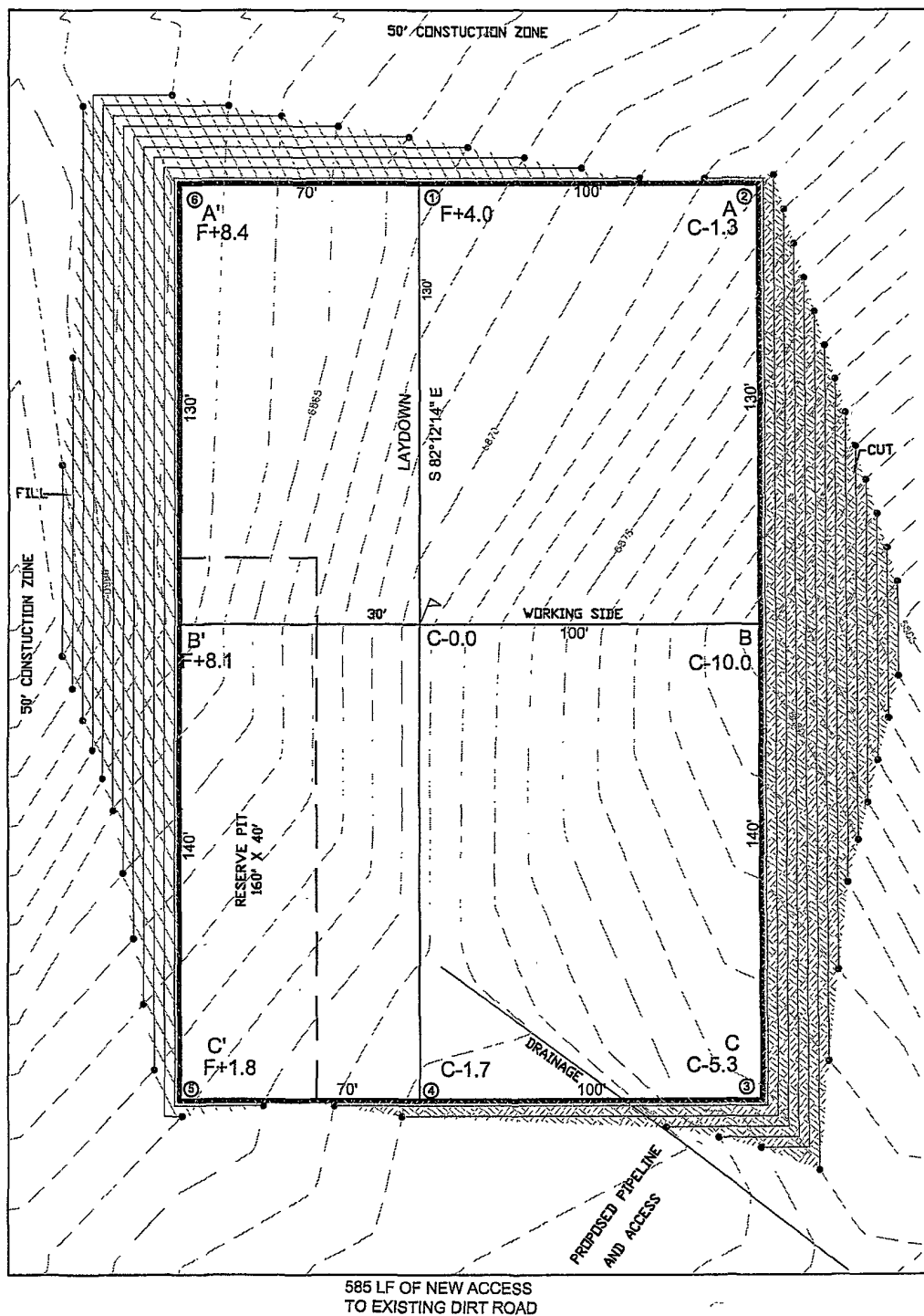
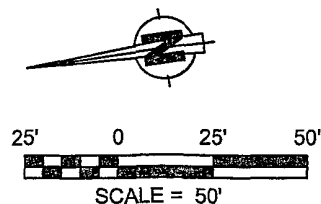


EXHIBIT E

LATITUDE: 36.25587°N
LONGITUDE: 107.49109°W
DATUM: NAD 83

ELM RIDGE EXPLORATION, LLC
MARCUS B #2
1735' FNL & 2175' FEL
LOCATED IN THE SW/4 NE/4 OF SECTION 5,
T23N, R6W, N.M.P.M.,
RIO ARriba COUNTY, NEW MEXICO
GROUND ELEVATION: 6871', NAVD 88
FINISHED PAD ELEVATION: 6870.6', NAVD 88



1 FOOT CONTOUR INTERVAL SHOWN
SCALE: 1" = 50'
JOB No.: ERE016
DATE: 06/14/07

EXHIBIT F



Russell Surveying
1409 W. Aztec Blvd. #2
Aztec, New Mexico 87410
(505) 334-8637

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised October 12, 2005

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

OCT 16 2007

Bureau of Land Management
Farmington Field Office

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30462	² Pool Code 22619	³ Pool Name ESCRITO GALLUP (ASSOCIATED)
⁴ Property Code 36835	⁵ Property Name MARCUS B	⁶ Well Number 2
⁷ OGRID No. 149052	⁸ Operator Name ELM RIDGE EXPLORATION, LLC	⁹ Elevation 6871'

¹⁰ Surface Location

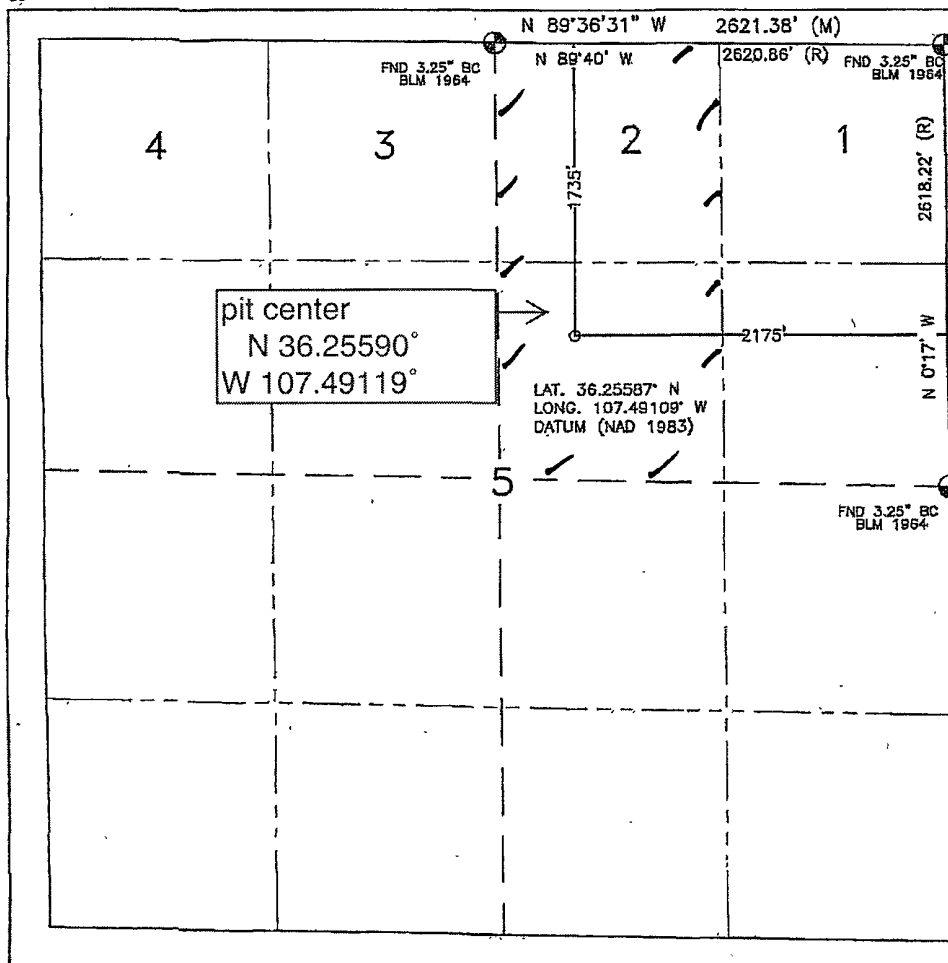
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	5	23N	6W		1735'	NORTH	2175'	EAST	RIO ARRIBA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 80.04			¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner or a compulsory pooling order heretofore entered by the division.

Brian Wood 10-15-07
Signature Date

BRIAN WOOD

Printed Name

¹⁸ SURVEYOR CERTIFICATION

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 belief.

JUNE 6, 2007

Date of Survey

Signature and Seal of Professional Surveyor:

David R. Russell

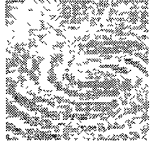


DAVID RUSSELL

Certificate Number 10201

EXHIBIT

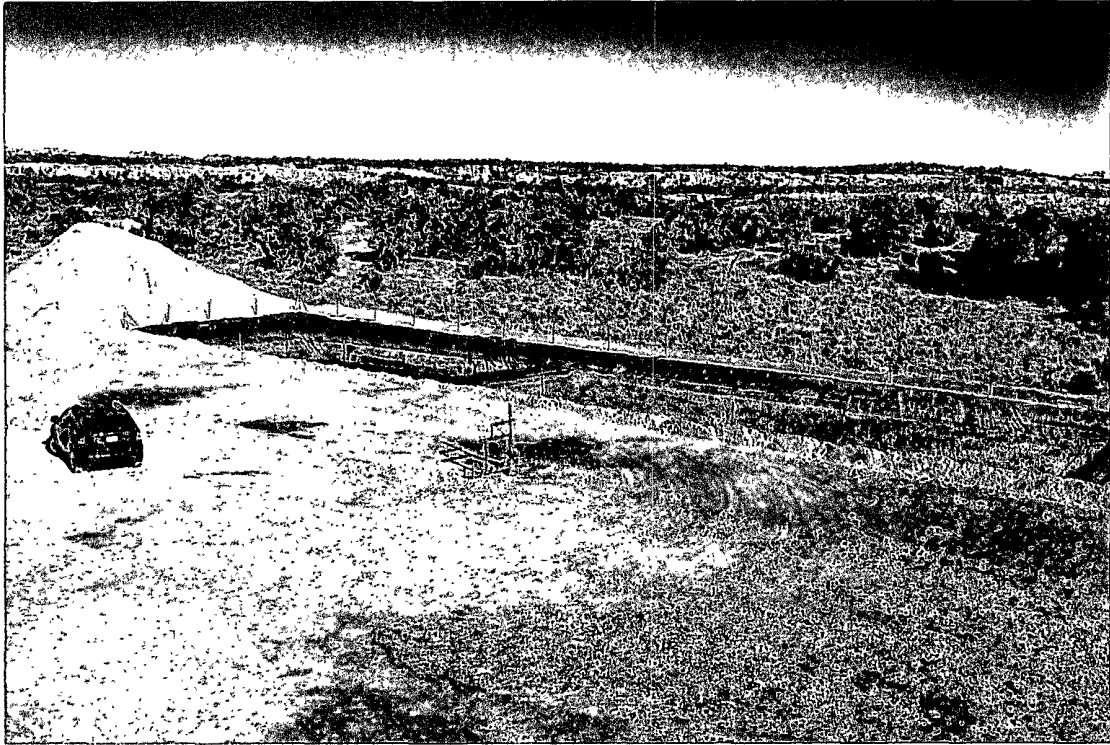
From: brian wood <brian@permitswest.com>
Subject: **Elm Ridge Marcus B 2 on site closure notice**
Date: October 11, 2008 11:52:52 AM MDT
To: BILL LIESS <Bill_Liess@nm.blm.gov>



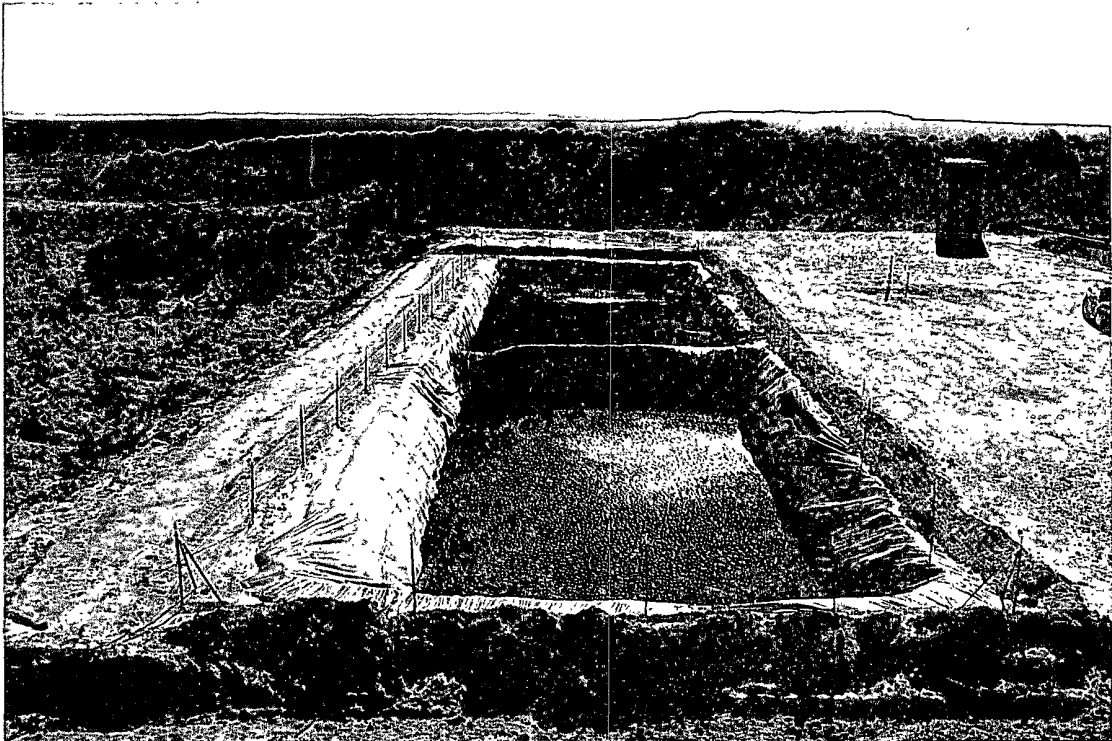
As required by NMOCD pit rule Subsection F of 19.15.17.13 NMAC, I am notifying BLM as surface owner that Elm Ridge plans to close its temporary (reserve) pit using on site closure (burial) in the same pit.
The well is at 1735 FNL & 2175 FEL 5-23n-6w.
The well is on lease NMSF-078362.
API # 30-039-30402
Please call me if you have any questions.

Brian Wood
Permits West, Inc.
37 Verano Loop, Santa Fe, NM 87508
Phone: 505 466-8120
FAX: 505 466-9682

EXHIBIT I



LOOKING NORTHWEST AT MARCUS B #2 PIT



LOOKING EAST AT PIT