<u>District I</u> 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 Fc, NM 87505

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

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

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and

provide a copy to the appropriate NMOCD District Office.

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

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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 COMPANY, LLC OGRID #: 149052
Address: P. O. BOX 156, BLOOMFIELD, NM 87413
Facility or well name: BERRY 4
API Number: 30-045-33917 OCD Permit Number:
U/L or Qtr/Qtr NWSE Section 11 Township 25 N Range 13 W County: SAN JUAN
Center of Proposed Design. Latitude <u>36.407993° N</u> Longitude <u>108.170802° W</u> NAD: □1927 ⊠ 1983
Surface Owner:
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 Scams: Welded Factory Other Volume: 9.939 bbl Dimensions: L 160' x W 40' x D 10'
☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other
Liner Seams: Welded Factory Other
4.
Below-grade tank: Subsection 1 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: Thicknessmil
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.

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, hinstitution 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	hospital,							
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								
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 italicized requests for alternate slopes on Page 3 of attachment Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.								
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 accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the approoffice or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry above-grade tanks associated with a closed-loop system.								
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ⊠ No							
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other 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. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☒ No ☐ NA							
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (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. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☑ No							
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ⊠ No							
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No							
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes 🏻 No							
 Within an unstable area. Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map 	☐ Yes ⊠ No							
Within a 100-year floodplain FEMA map	☐ Yes 🏻 No							

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 19.15.17.12 NMAC ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC											
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)											
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 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 ₂ 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 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 G of 19.15.17.13 NMAC											

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground S Instructions: Please indentify the facility or facilities for the disposal of liquids, difacilities are required.											
	Disposal Facility Permit Number:										
	Disposal Facility Permit Number:										
Will any of the proposed closed-loop system operations and associated activities occ ☐ Yes (If yes, please provide the information below) ☐ No	ur on or in areas that will not be used for future serv	rice and operations?									
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 I Site Reclamation Plan - based upon the appropriate requirements of Subsection	requirements of Subsection H of 19.15.17.13 NMAC of 19.15.17.13 NMAC	2									
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 sign lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	ificant watercourse or lakebed, sinkhole, or playa	☐ Yes ☒ No									
Within 300 feet from a permanent residence, school, hospital, institution, or church i Visual inspection (certification) of the proposed site; Aerial photo; Satellite		☐ Yes ⊠ No									
Within 500 horizontal feet of a private, domestic fresh water well or spring that less watering purposes, or within 1000 horizontal feet of any other fresh water well or sp NM Office of the State Engineer - iWATERS database; Visual inspection (c	ring, in existence at the time of initial application.	☐ Yes ☐ No									
Within incorporated municipal boundaries or within a defined municipal fresh water adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approva	•	☐ 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 a	and Mineral Division	☐ Yes ⊠ No									
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology Society; Topographic map	& Mineral Resources; USGS; NM Geological	☐ Yes ⊠ No									
Within a 100-year floodplain FEMA map		☐ Yes ⊠ No									
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC 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 19.15.17.13 NMAC Protocols and Procedures - based upon the appropriate requirements of 9.15.17.13 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											

Form C-144 Oil Conservation Division Page 4 of 5

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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: <u>8-24-08</u>											
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: Bd. bell Approval Date: 9-18-08	_										
Title: 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. 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 indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more the two facilities were utilized.	han										
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 <i>will not</i> 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 checkmark 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 Sceding Technique Site Reclamation (Photo Documentation)	·k										
On-site Closure Location: Latitude Longitude NAD: 1927 1983											
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:	_										

Siting Criteria

1. Ground water is >50' below the bottom of the pit. This estimate is based on the Brown water well which is >2 miles northwest in 34-26n-13w and which had a proposed depth of 300'. Closest actual water depth reported is the U. S. Department of Interior (USDI) well which is 6 miles east in 1-25n-12w. Water depth is 210' in the 403' deep USDI well. The USDI well probably produces from the Ojo Alamo sandstone. Pit will be in the Nacimiento Formation. Office of the State Engineer records for the 4 closest townships are attached as Exhibit A.

6,352' graded ground - 10' deep pit 6,342' bottom of pit

6,281' USDI water well ground elevation

-210' depth to water

6.071' water level elevation

6,342' bottom of pit <u>- 6,071' water level</u> ≈271' 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 the West Fork of Gallegos Canyon is over a mile downstream (Exhibit B).
- 3. Pit is not within 300' of any building. Closest buildings are over 1 mile east at an Elm Ridge storage yard in 7-25n-12w. (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 & B).
- 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 during a July 22, 2008 inspection. Maximum grade is \approx 5%. All of pit will be in cut (Exhibits F & G).
- 9. Pit is not within a 100 year flood plain (Exhibit H).
- 10. C-102 is attached as Exhibit I.
- 11. Closure notice (item 10 on PAGE 8 of APD) to surface owner (Navajo Nation approval also attached) is attached as Exhibit J.

Hydrogeology

Surface formation is the Nacimiento. According to Stone et al in <u>Hydrogeology and water resources of San Juan Basin, New Mexico</u>, the Nacimiento is mainly a mudstone. There are also medium to coarse grained sandstone layers in the Nacimiento. Transmissivities of 100 feet² per day can be found in the coarser continuous sandstones. Water in the more extensive sandstones has a specific conductance of 1,500 μ mhos. Specific conductance is >2,000 μ mhos in the finer grained sandstones.

The Nacimiento is above the Ojo Alamo sandstone. The Ojo Alamo top was found to be at 6,265' in the West Bisti Coal 12 1T well which is 5,420' east. That well is at 955 FSL & 1700 FEL in 12-25n-13w. (Ojo Alamo top was not reported on any of the Completion Reports for wells in Section 11.) If the top of the Ojo Alamo is at the same elevation in the Berry 4, then it would be \approx 77' below the bottom of the pit (6,342' - 6,265' = 77').

Alternative for 19.15.17.11 D. (3)

Elm Ridge is proposing an alternate fence. Sheep graze in the project area and hog wire has been found to be more effective than just barbed wire.



The operator will fence the pit with a minimum 48" high fence. Fence will consist of minimum 36" woven wire (hog wire) topped with at least 1 strand of barbed wire.

Alternative for 19.15.17.11 F. (2)

Elm Ridge is proposing alternate (vertical) slopes for the 160' long sides of the pit. Alternate is requested to minimize well site footprint. This allows a smaller rig to be used. Rig must be close to the deep part of the pit since the pump is on the rig itself. Elm Ridge will install extra liner to allow for some slack and avoid stress and strain. Elm Ridge will also install two rope ladders - one on each of the 160' long sides.

Alternative for 19.15.17.13 F. (1) (d)

If the well goes into production, then 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 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).

Executed this 24th day of August, 2008.

Brian Wood, Consultant

Permits West, Inc.



37 Verano Loop, Santa Fe, NM 87508 (505) 466-8120 FAX: (505) 466-9682 Cellular: (505) 699-2276

The operator's field representative is:

Terry Lindeman Elm Ridge Exploration Company, LLC P. O. Box 156 Bloomfield, NM 87413 (505) 632-3476

NMOCD Rules

19.15.17.11 DESIGN AND CONSTRUCTION SPECIFICATIONS:

- A. General specifications. An operator shall design and construct a pit, closed-loop system, below-grade tank or sump to contain liquids and solids and prevent contamination of fresh water and protect public health and the environment.
- B. Stockpiling of topsoil. Prior to constructing a pit or closed-looped system, except a pit constructed in an emergency, the operator shall strip and stockpile the topsoil for use as the final cover or fill at the time of closure.
- C. Signs. The operator shall post an upright sign not less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the pit, closed-loop system or below-grade tank, unless the pit, closed-loop system or below-grade tank is located on a site where there is an existing well, signed in compliance with 19.15.3.103 NMAC, that is operated by the same operator. The operator shall post the sign in a manner and location such that a person can easily read the legend. The sign shall provide the following information: the operator's name; the location of the site by quarter-quarter or unit letter, section, township and range; and emergency telephone numbers.

D. Fencing.

(1) The operator shall fence or enclose a pit or below-grade tank in a manner that prevents unauthorized access and shall maintain the fences in good repair. Fences are not required if there is an adequate surrounding perimeter fence that prevents unauthorized access to the well site or facility, including the pit or below-grade tank. During drilling or work over operations, the operator is not required to fence the edge of the pit adjacent to the drilling or work over rig.



- (2) The operator shall fence or enclose a pit or below-grade tank located within 1000-feet of a permanent residence, school, hospital, institution or church with a chain-link security fence, at least six feet in height with at least two strands of barbed wire at the top. The operator shall ensure that-all-gates associated with the fence are closed and locked when responsible personnel are not on site. During drilling or work over operations, the operator is not required to fence the edge of the temporary pit adjacent to the drilling or work over rig.
- (3) The operator shall fence any other pit or below-grade tank to exclude livestock with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level.—The appropriate division district office may approve an alternative to this requirement if the operator demonstrates that an alternative provides equivalent or better protection. The appropriate division district office may impose additional fencing requirements for protection of wildlife in particular areas.

The operator will fence the pit with a minimum 48" high fence. Fence will consist of minimum 36" woven wire (hog wire) topped with at least 1 strand of barbed wire.

- E. Netting. The operator shall ensure that a permanent pit or a permanent open top tank is-screened, netted or otherwise rendered non-hazardous to wildlife, including migratory birds. Where netting or screening is not feasible, the operator shall on a monthly basis inspect for, and within 30 days of discovery, report discovery of dead migratory birds or other wildlife to the appropriate wildlife agency and to the appropriate division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.
- F. Temporary pits. The operator shall design and construct a temporary pit in accordance with the following requirements.
- (1) The operator shall design and construct a temporary pit to ensure the confinement of liquids to prevent unauthorized releases.
- slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. The operator shall construct a temporary pit so that the slopes are no steeper than two horizontal feet to one vertical foot (2H:1V). The short (40' wide) side slopes will be no steeper than two horizontal feet to one vertical foot (2H:1V). The long (160' wide) side slopes will be vertical. The appropriate division district office may approve an alternative to the slope requirement if the operator demonstrates that it can construct and operate the temporary pit in a safe manner to prevent contamination of fresh water and protect public health and the environment.
- (3) The operator shall design and construct a temporary pit with a geomembrane liner. The geomembrane liner shall consist of 20-mil string reinforced LLDPE or equivalent liner.



material that the appropriate division district office approves. 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.

- (4) The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory welded seams where possible. Prior to field seaming, the operator shall overlap liners four to six inches and orient seams parallel to the line of maximum slope, *i.e.*, oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. Qualified personnel shall perform field seaming. The operator shall weld field liner seams.
 - (5) Construction shall avoid excessive stress-strain on the liner.
- (6) Geotextile is required under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity.
- (7) The operator shall anchor the edges of all liners in the bottom of a compacted earth-filled trench. The anchor trench shall be at least 18 inches deep.
- (8) The operator shall ensure that the liner is protected from any fluid force or mechanical damage at any point of discharge into or suction from the lined temporary pit by using an ≈ 8 " O. D. PVC pipe at a ≈ 45 ° angle.
- (9) The operator shall design and construct a temporary pit to prevent run-on of surface water. A berm, ditch, proper sloping or other diversion shall surround a temporary pit to prevent run-on of surface water. During drilling operations, the edge of the temporary pit adjacent to the drilling or work over rig is not required to have run-on protection if the operator is using the temporary pit to collect liquids escaping from the drilling or work over rig and run-on will not result in a breach of the temporary pit.
- (10) The volume of a temporary pit shall not exceed 10 acre-feet, including freeboard.
- (11) The part of a temporary pit used to vent or flare gas during a drilling or work over operation that is designed to allow liquids to drain to a separate temporary pit does not require a liner, unless the appropriate division district office requires an alternative design in order to protect surface water, ground water and the environment. The operator shall not allow



freestanding liquids to remain on the unlined portion of a temporary pit used to vent or flare gas.

19.15.17.12 OPERATIONAL REQUIREMENTS:

- A. General specifications. An operator shall maintain and operate a pit, closed-loop system, below-grade tank or sump in accordance with the following requirements.
- (1) The operator shall operate and maintain a pit, closed-loop system, below-grade tank or sump to contain liquids and solids and maintain the integrity of the liner, liner system or secondary containment system, prevent contamination of fresh water and protect public health and the environment.
- (2) The operator shall recycle, reuse or reclaim or dispose of all drilling fluids in a manner, approved by division rules, that prevents the contamination of fresh water and protects public health and the environment. *Operator will haul such fluids to the Basin Disposal* (NM-01-005) evaporation pond (3-29n-11w).
- (3) The operator shall not discharge into or store any hazardous waste in a pit, closed-loop system, below-grade tank or sump.
- (4) If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then the operator shall notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the liner.
- (5) If a pit, below-grade tank, closed-loop system or sump develops a leak, or if any penetration of the pit liner, below-grade tank, closed-loop system or sump occurs below the liquid's surface, then the operator shall remove all liquid above the damage or leak line within 48 hours, notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the pit liner, below-grade tank, closed-loop system or sump.
- (6) The injection or withdrawal of liquids from a pit shall be accomplished through a header, diverter or other hardware that prevents damage to the liner by erosion, fluid jets or impact from installation and removal of hoses or pipes.
- (7) The operator shall operate and install a pit, below-grade tank or sump to prevent the collection of surface water run-on.
- (8) The operator shall install, or maintain on site, an oil absorbent boom or other device to contain and remove oil from a pit's surface.



- **B.** Temporary pits. An operator shall maintain and operate a temporary pit in accordance with the following additional requirements.
- (1) Only fluids used or generated during the drilling or work over process may be discharged into a temporary pit. The operator shall maintain a temporary pit free of miscellaneous solid waste or debris. The operator shall use a tank made of steel or other material, which the appropriate division district office approves, to contain hydrocarbon-based drilling fluids. Immediately after cessation of a drilling or work over operation, the operator shall remove any visible or measurable layer of oil from the surface of a drilling or work over pit.
 - (2) The operator shall maintain at least 2 feet of freeboard for a temporary pit.
- daily while the drilling or work over rig is on-site. Thereafter, the operator shall inspect the temporary pit weekly so long as liquids remain in the temporary pit. The operator shall maintain a log of such inspections and make the log available for the appropriate division district office's review upon request. The operator shall file a copy of the log with the appropriate division district office when the operator closes the temporary pit.
- (4) The operator shall remove all free liquids from a temporary pit within 30 days from the date that the operator releases the drilling or work over rig. The operator shall note the date of the drilling or work over rig's release on form C-105 or C-103 upon well or work over completion. The appropriate division district office may grant an extension of up to three months.
- (5) The operator shall remove any liquids from the temporary pit used for cavitation within 48 hours after completing cavitation. The operator may request and receive additional time to remove the liquids from the temporary pit used for cavitation if the operator demonstrates to the appropriate division district office's satisfaction that it is not feasible to access the location with 48 hours.

19.15.17.13 CLOSURE REQUIREMENTS:

A. Time requirements for closure. An operator shall close a pit, closed-loop system or below-grade tank within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the



environment.

- (1) An operator shall-cease discharging into an existing unlined permanent pit that ispermitted by or registered with the division within two years after June 16, 2008. An operator shall close an existing unlined permanent pit that is permitted by or registered with the division within three-years after June 16, 2008.
- (2)—An operator shall-cease-discharging into an existing, lined or unlined, permanent pit-that-is not permitted by or registered with the division on or by June 16, 2008. An operator shall close-an existing, lined or unlined, permanent pit that is not permitted by or registered with the division within-six months after June 16, 2008.
- (3) An operator shall close an existing unlined temporary pit within three months after-June 16, 2008.
- (4) An operator shall close an existing below-grade tank-that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.
- (5)——An-operator shall-close any-other-permitted-permanent pit within 60 days of cessation of operation of the permanent pit in accordance with a closure plan that the environmental bureau in the division's Santa Fe office approves.
- (6) An operator shall close any other permitted temporary pit within six months from the date that the operator releases the drilling or work over rig. The appropriate division district office may grant an extension not to exceed three months.
- **B.** Closure methods for temporary pits. The operator of a temporary pit shall remove all liquids from the temporary pit prior to closure and dispose of the liquids in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves. The operator shall close the temporary pit by one of the following methods.
 - (1) -- Waste-excavation and removal.
- (2) On-site burial. The operator shall demonstrate and comply with the siting requirements in Subsection C of 19.15.17.10 NMAC and the closure requirements and standards of Subsection F of 19.15.17.13 NMAC if the proposed closure method of a temporary pit involves on-site burial.
- F. On-site closure methods. The following closure requirements and standards apply if the operator proposes a closure method for a drying pad associated with a closed-loop system or a temporary pit pursuant to Paragraph (2) of Subsection D of 19.15.17.13 NMAC or Paragraph (2) of Subsection B of 19.15.17.13 NMAC that involves on-site burial, or an alternative closure method pursuant to Paragraph (3) of Subsection D of 19.15.17.13 NMAC or Paragraph (3) of Subsection B of 19.15.17.13 NMAC and Subsection B of 19.15.17.15 NMAC.



(1) General requirements.

- (a) Any proposed on-site closure method shall comply with the siting criteria specified in Subsection C of 19.15.17.10 NMAC.
- (b) The operator shall provide the surface owner notice of the operator's proposal of an on-site closure method. The operator shall attach the proof of notice to the permit application.
- (c) The operator shall comply with the closure requirements and standards of Paragraphs (2) and (3), as applicable, of Subsection F of 19.15.17.13 NMAC if the proposed closure method for a drying pad associated with a closed-loop system or for a temporary pit involves on-site burial pursuant to Paragraph (2) of Subsection D of 19.15.17.13 NMAC or Paragraph (2) of Subsection B of 19.15.17.13 NMAC, or involves an alternative closure method pursuant to Paragraph (3) of Subsection D of 19.15.17.13 NMAC or Paragraph (3) of Subsection B of 19.15.17.15 NMAC.
- burial. The steel marker shall be not less than four inches in diameter and shall be cemented in a three-foot deep hole at a minimum. The steel marker shall extend at least four feet above mean ground level and at least three feet below ground level. The operator name, lease name and well number and location, including unit letter, section, township and range, and that the marker designates an on-site burial location shall be welded, stamped or otherwise permanently engraved into the metal of the steel marker. A person shall not build permanent structures over an on-site burial without the appropriate division district office's written approval. A person shall not remove an on-site burial marker without the division's written permission.

If the well goes into production, then 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 welded atop the threaded collar. Top of the plate will be flush with ground level. The same information listed in the preceding paragraph 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 the preceding paragraph.

(e) The operator shall report the exact location of the on-site burial on



form C-105 filed with the division.

- (f) The operator shall file a deed notice identifying the exact location of the on-site burial with the county clerk in the county where the on-site burial occurs.
 - (2) In-place burial.
- (a) Where the operator meets the siting criteria specified in Paragraphs (2) or (3) of Subsection C of 19.15.17.10 NMAC and the applicable waste criteria specified in Subparagraphs (c) or (d) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC, an operator may use in-place burial (burial in the existing temporary pit) for closure of a temporary pit or bury the contents of a drying pad associated with a closed-loop system in a temporary pit that the operator constructs in accordance with Paragraphs (1) through (6) and (10) of Subsection F of 19.15.17.11 NMAC for closure of a drying pad associated with a closed loop system.
- (b) Prior to closing an existing temporary pit or to placing the contents from a drying pad associated with a closed-loop system into a temporary pit that the operator constructs for disposal, the operator shall stabilize or solidify the contents to a bearing capacity sufficient to support the temporary pit's final cover. The operator shall not mix the contents with soil or other material at a mixing ratio of greater than 3:1, soil or other material to contents.
- (c) Where ground water will be between 50 and 100 feet below the bottom of the buried waste, the operator shall collect at a minimum, a five point, composite sample of the contents of the drying pad associated with a closed-loop system or the contents of a temporary pit after treatment or stabilization, if treatment or stabilization is required, to demonstrate that benzene, as determined by EPA SW-846 method 8021 B or 8260B, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021 B or 8260B, does not exceed 50 mg/kg; TPH, as determined by EPA SW-846 method 418.1 or other EPA method approved that the division approves, does not exceed 2500 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg; and chlorides, as determined by EPA method 300.1, do not exceed 500 mg/kg or the background concentration, whichever is greater. The operator may collect the composite sample prior to treatment or stabilization to demonstrate that the contents do not exceed these concentrations. However, if the contents collected prior to treatment or stabilization exceed the specified concentrations the operator shall collect a second five point, composite sample of the contents after



treatment or stabilization to demonstrate that the contents do not exceed these concentrations.

- Where the ground water will be more than 100 feet below the bottom (d) of the buried waste, the operator shall collect at a minimum, a five point, composite sample of the contents of the drying pad associated with a closed-loop system or the contents of a temporary pit after treatment or stabilization, if treatment or stabilization is required, to demonstrate that benzene, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 50 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg; TPH, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 2500 mg/kg; and chlorides, as determined by EPA method 300.1, do not exceed 1000 mg/kg or the background concentration, whichever is greater. The operator may collect the composite sample prior to treatment or stabilization to demonstrate that the contents do not exceed these concentrations. However, if the contents collected prior to treatment or stabilization exceed the specified concentrations the operator shall collect a second five point, composite sample of the contents after treatment or stabilization to demonstrate that the contents do not exceed these concentrations.
- (e) Upon closure of a temporary pit, or closure of a temporary pit that the operator constructs for burial of the contents of a drying pad associated with a closed-loop system, the operator shall cover the geomembrane lined, filled, temporary pit with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and revegetate the site. The division-prescribed soil cover, recontouring and revegetation shall comply with Subsections G, H and I of 19.15.17.13 NMAC.
 - **G.** Reclamation of pit locations, on-site burial locations and drying pad locations.
- (1) Once the operator has closed a pit or trench or is no longer using a drying pad, below-grade tank or an area associated with a closed-loop system, pit, trench or below-grade tank, the operator shall reclaim the pit location, drying pad location, below-grade tank location or trench location and all areas associated with the closed-loop system, pit, trench or below-grade tank including associated access roads to a safe and stable condition that blends with the surrounding undisturbed area. The operator shall substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as



provided in Subsection H of 19.15.17.13 NMAC, recontour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and revegetate according to Subsection I of 19.15.17.13 NMAC.

- (2) The operator may propose an alternative to the revegetation requirement if the operator demonstrates that the proposed alternative effectively prevents erosion, and protects fresh water, human health and the environment. The proposed alternative shall be agreed upon by the surface owner. The operator shall submit the proposed alternative, with written documentation that the surface owner agrees to the alternative, to the division for approval.
 - H. Soil cover designs.
- (1) 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.
- (2) The soil cover for burial-in-place or trench burial shall consist of a minimum of four feet of compacted, non-waste containing, earthen material. The soil cover shall include either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.
- (3) The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.
 - I. Re-vegetation.
- (1) The first growing season after the operator closes a pit or trench or is no longer using a drying pad, below-grade tank or an area associated with a closed-loop system, pit or below-grade tank including access roads, the operator shall seed or plant the disturbed areas.
- (2) 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.



- (3) The operator shall repeat seeding or planting until it successfully achieves the required vegetative cover.
- (4) When conditions are not favorable for the establishment of vegetation, such as periods of drought, the division may allow the operator to delay seeding or planting until soil moisture conditions become favorable or may require the operator to use additional cultural techniques such as mulching, fertilizing, irrigating, fencing or other practices.
- (5) The operator shall notify the division when it has seeded or planted and when it successfully achieves re-vegetation.
 - J. Closure notice.
- (1) The operator shall notify the surface owner by certified mail, return receipt requested, that the operator plans to close a temporary pit, a permanent pit, a below-grade tank or where the operator has approval for on-site closure. 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.
- (2) The operator of a temporary pit or below-grade tank or an operator who is approved for on-site closure shall notify the appropriate division district office 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. If the closure is associated with a particular well, then the notice shall also include the well's name, number and API number.
- K. Closure report. Within 60 days of closure completion, the operator shall submit a closure report on form C-144, with necessary attachments to document all closure activities including sampling results; information required by 19.15.17 NMAC; a plot plan; and details on back-filling, capping and covering, where applicable. In the closure report, the operator shall certify that all information in the report and attachments is correct and that the operator has complied with all applicable closure requirements and conditions specified in the approved closure plan. If the operator used a temporary pit, the operator shall provide a plat of the pit location on form C-105 within 60 days of closing the temporary pit.

The operator shall file a deed notice identifying the exact location of the on-site burial with the county clerk in the county where the on-site burial occurs.



New Mexico Office of the State Engineer POD Reports and Downloads

	Township: 25N Range: 12W Sections:	_										
	NAD27 X: Y: Zone: ‡ Search Radius.											
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POD / SURFACE DATA REPORT 08/04/2008

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	ft per ann			quarters ar					are in			in Meters		Start	Finish		Depth (in feet)
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RG 21872 DOM	Ü	LILA C. ROMERO	RG 21872		25N	12W 35					13	223514	4028055				
RG 37972 DOM	0	PATRICIA E. SOKOLL	RG 37972		25N	1217 24		С	689000	1959500	13	445425	4026680				
RG 43582 DOM	3	BERNICE F. CORDOVA	RG_ 43582	Shallow		12W 23					13	223616	4031274	05/01/1985	05/01/1985	50	8
RG 46561 DOM	0	SHIRLEY GORMAN	RG 46561			12W 30					13 .	217131	4029874				
RG 47243 DOM	3	JOSEPH & ELAINE LOVATO	RG 47243	Shallow		12W 12					13	225728	4034012	05/18/1987	05/18/1987	65	18
RG 49046 DOM		EDDIE BERG	RG 49046	Shallow	25N						13	222007	4031325	04/22/1988	04/25/1988	40	8
RG 61107 DOM		GLEN D. WEATHERS	RG 61107	Shallow	25N	12W 27	3 3	С	678500	1958950	13	442224	4026554	12/15/1994	12/15/1994	130	50
RG 63120 DOM	3	CHRISTINA TRUJILLO	RG 63120	Shallow	25N	12W 31		С	689100	1949800	13	445418	4023724	10/03/1995	10/03/1995	60	30
RG 76392 DOM	3	CYNTHIA AGUIRRE	RG 76392	Shallow	25N	12W 11		С	684250	1972400	13	444029	4030629	10/25/2001	10/25/2001	102	19
SJ 00079 OIL	0	SHELL OIL COMPANY	SJ 00079	Shallow	25N	12W 13	4		•		13	225677	4032403		03/27/1957	2550	
<u>SJ 01716</u> STK		U.S. DEPT. OF INTERIOR	SJ 01716	Shallow	25N	12W 01	3 2				13	225189	4035835	06/20/1963	02/05/1964	403	210
SP 02870 25 IRR	78.42	BLOOMFIELD IRRIGATION DISTRICT	SP 02870 25C		25N	12W 24	3 4				13	225023	4030606			0	-
SP 02870 25A IRR	5.4	ANN OSBURN	SP 02870 25C	-	25N	12W 24	3 4				13	225023	4030606				
SP 02870 25B IRR	0	D.J. ELKINS	SP 02870 25C		25N	12W 24	3 4				13	225023	4030606				
SP 02870 25BA IRR	0	MAX D. KENNEMER TRUST	SP 02870 25C		25N	12W 24	3 4				13	225023	4030606				
SP 02870 25BB IRR	0	CITY OF FARMINGTON	SP 02870 25C		25N	12₩ 24	3 4				13	225023	4030606				
<u>SP 02870 25C IRR</u>	8.76	MAX D. KENNEMER TRUST	SP 02870 25C	_	25N	12W 24	3 4				13	225023	4030606				
SP 02870 25D IRR	3	CECIL C. & GLADYS CAST TRUST	SP 02870 25C		25N	12W 24	3 4				13	225023	4030606				
SP 02870 25E IRR	6	DOUGLAS JAMES BURGER	SP 02870 25C	_	25N	12W 24	3 4				13	225023	4030606				
<u>SP 02870 25F IRR</u>	10.5	ROBIN C. PRICE	SP 02870 25C	_	25N	12W 24	3 4				13	225023	4030606				
SP 02870 25G IRR	41.1	LILLIE MAE JOHNSON	SP 02870 25C		25N	12W 24	3 4				13	225023	4030606				
SP 02870 25H IRR	0	HENRY JOHN NOWAKOWSKI	SP 02870 25C		25N	12W 24	3 4				13	225023	4030606				
SP 02870 251 IRR	4.65	MARTIN SALAZAR	SP 02870 25C		25N	12W 24	3 4				13	225023	4030606				
SP 02870 25L IRR	1.8	JUSTIN L. KIDDOO	SP 02870 25C		25N	12W 24	3 4				13	225023	4030606			*	
SP 02870 25M IRR	1.5	ZANE G. LESLIE, JR.	SP 02870 25C		25N	12W 24					13	225023	4030606				
SP 02870 25N IRR	0	CAROLYN BETH MCKEE	SP 02870 25C		25N						13	225023	4030606				
SP 02870 250 IRR	0	AURORA LEE CHRISTENSEN	SP 02870 25C		25N						13	225023	4030606				
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Record Count: 27

http://iwaters.ose.state.nm.us 7001/iWATERS/WellAndSurfaceDispatcher



New Mexico Office of the State Engineer POD Reports and Downloads

Township: 25N Range 13W, Sections:	<										
NAD27 X: Y: Zone: Search Radius:	ı										
County: Rasin: Suffix: Number: Suffix:											
Owner Name: (Fnst); (Last) CNon-Domestic ⊕ Domestic ⊕ All											
(POD / Surface Data Report) (Avg Depth to Water Report) (Water Column Report)											
(Clear Form) (IWATERS Menu) (Help)											

POD / SURFACE DATA REPORT 08/04/2008

(acre ft p	per annum)		(quarters are	e bigg	est to smallest	ХY	are in Fe	et	UTM are	in Meters)	Start	Finish		Depth (in feet)
DB File Nbr Use Dive	ersion Owner	POD Number	Source	Tws	Rng Sec q q q	Zone	x	Y	UTM_Zone	Easting	Northing		Date		later
RG 20770 DOM	3 ELMER W. SHUPE	RG 20770	Shallow	25N	13W 20				13	209136	4031751	04/17/1972	04/20/1972	85	60
RG 22050 DOM	3 ERNEST GONZALES	RG 22050	Shallow	25N	13W 18				13	207390	4033423	11/08/1972	11/11/1972	30	20
RG 22330 SAN	0 LOCH MARKETING CO.	RG 22330		25N	13W 19				13	207332	4031812				
RG 23347 DOM	3 FILBERT E. & ESTHER F VIGIL	RG 23347	Shallow	25N	13W 19				13	207332	4031812	08/14/1973	08/21/1973	63	52
RG 31138 DOM	3 STEVE & BETTY TRUJILLO	RG 31138	Shallow	25N	13W 18				13	207390	4033423	10/30/1978	11/02/1978	60	20
RG 31290 DOM	3 FREDERICK T. KACKLEY	RG 31290	Shallow	25N	13W 18				13	207390	4033423	09/20/1978	09/22/1978	62	
RG 33272 DOM	0 MRS. FRANK ESQUIBEL	RG 33272		25N	13W 18 3				13	206988	4033021				
RG 33425 DOM	3 RAYMOND PIPER	RG 33425	Shallow	25N	13W 20				13	209136	4031751	10/27/1979	10/30/1979	100	30
RG 33564 DOM	3 JUAN M. FERNANDEZ	RG 33564	Shallow	25N	13W 20				13	209136	4031751	03/08/1980	03/13/1980	100	40
RG 33723 DOM	3 FRANCELLA DEVIS	RG 33723	Shallow	25N	13W 05 1				13	208921	4036984	05/28/1980	06/06/1980		10
RG 33951 DOM	0 SIMON G. GONZALES	RG 33951		25N	13W 05				13	209297	4036582				
RG 34464 DOM	0 FELIPE DURAN	RG 34464		25N	13W 21				13	210745	4031698				
RG 34752 DOM	0 ALMAN H. VIETHS	RG 34752		25N	13W 20 3				13	208734	4031349				
RG 34799 DOM	3 EDD WETSEL	RG 34799	Shallow	25N	13W 05 4				13	209699	4036153			95	6
RG 35839 DOM	3 MYRON E. PRICE	RG 35839	Shallow	25N	13W 19 4				13	207930	4031376	08/24/1981	08/25/1981	95	60
RG 36707 DOM	3 MARK HIRSCH	RG 36707	Shallow	25N	13W 21 3				13	210343	4031296	08/13/1981	08/14/1981	120	80
RG 38021 DOM	3 ANTONIO B. RAEL	RG 38021	Shallow	25N	13W 17 4				13	209592		06/04/1982	06/05/1982	63	15
RG 38145 DOM	0 JANET TRUJILLO	RG 38145		25N	13W 08 2				13	209672	4035348				
RG 38411 DOM	0 DOCETIO CASADOS	RG 38411		25N	13W 12				13	215678	4034757				
RG 39398 DOM	0 RICHARD C. TRUJILLO	RG 39398		25N	13W 21		-		13	210745	4031698				
RG 40963 EXPL OBS	3 TOWN OF TAOS	RG 40963 ECPL	Shallow		13W 08 1 1				13	208680		03/02/1984	03/10/1984	250	11
RG 65826 CLW DOM	0 E. ANISETO ANGLADA	RG 65826 CLW		25M	13W 22	С	702200 1	962400	13	449459	4027512				

Record Count: 22

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

Township: 26N Range: 12W Sections:
NAD27 X: Y: Zone: Search Radius:
County: Basin: Surface Surface Suffix:
Owner Name: (First) (Last) C-Non-Domestic C-Domestic OAll
(POD / Surface Data Report) (Avg Depth to Water Report) (Water Column'Report)
(Clear Form) (IWATERS Menu) (Help)

POD / SURFACE DATA REPORT 08/04/2008

(acre ft per annum)				(quarters are biggest to smallest							in Meters		Start	Finish		Depth (in feet)
DB File Nbr	Use	Diversion Owner	POD Number	Source	Tws	Rng Sec q q q	Zone	x	¥	UTM_Zone		Northing		Date	Well W	ater
RG 30567	DOM	3 LEROY BENDER	RG 30567	Shallow	26N	12W 25 2				13			05/29/1978	05/30/1978	102	45
RG 34247	DOM	0 EDWARD L. MONTOYA	RG 34247		26N	12W 05				13	219249	4045920				
RG 45509	DOM	O DAVID A & LESLIE H. DELANEY	RG 45509		26N	12W 06				13	217660	4045971				
RG 50222	DOM	0 KINLOCK BROWN	RG 50222	Shallow	26N	12W 04				13				12/29/1988		180
SJ 01058	DOM	3 PETE WILFORD	SJ 01058	Shallow	26N	12W 03 1 4				13	222289	4046001	09/18/1979	09/28/1979	254	220

Record Count: 5

http://iwaters ose state nm.us 7001/iWATERS/WellAndSurfaceDispatcher



New Mexico Office of the State Engineer POD Reports and Downloads

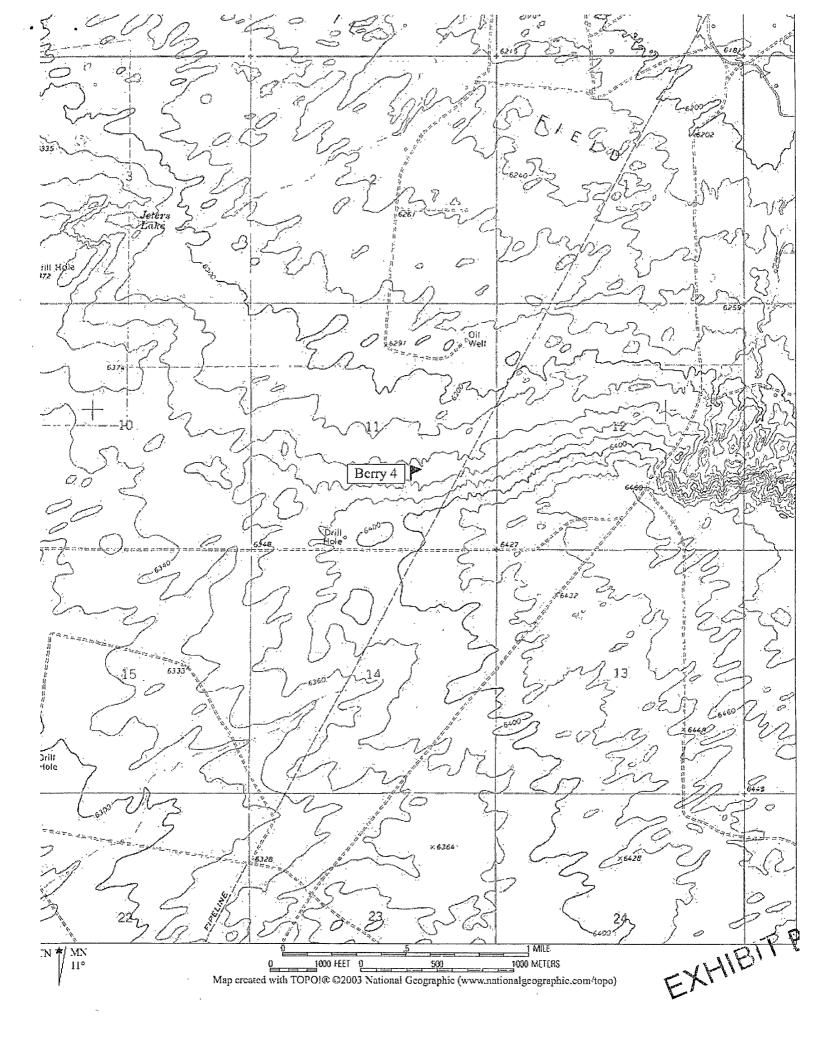
Township: 26N Range: 13W Sections:	
NAD27 X: Y: Zone: Search Radius:	
County Basin: Surface Number Suffix:	,
Owner Name: (First) ¹ (Last) ONon-Domestic ⊙Domestic ⊙All	
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POD / SURFACE DATA REPORT 08/04/2008

(quarters are ==NW Z=NE 3=SW 4=SE) (acre ft per annum) (quarters are biggest to smallest X Y are in Feet UTM are in Meters) Start Finish Depth Depth (in feet)												Donath (in Cook)					
	(acre	ft per annum)	(quarters are	e bigg	est to	smallest	: XX	are in F	reet	urm are	in Meters)	Start	Finish		Depth (in feet)
DB File Nbr	Use	Diversion Owner	POD Number	Source	Tws	Rng Se	cqqq	Zone	x	¥	UTM_Zone	Easting	Northing	Date	Date	Well W	Tater
RG 32714	DOM	3 ARROW GAS CO	RG 32714	Shallow	26N	13W 30					13	207625	4039860	07/12/1979	07/20/1979	160	90
RG 33630	DOM	3 LUDIA MEDINA	RG 33630	Shallow	26N	13W 32					13	209350	4038190	01/09/1980	01/11/1980	50	15
RG 34488	DOM	0 GLORIA CORDOVA	RG 34488		26N	13W 05					13	209614	4046241				
SJ 00802	SAN	3 THE NAVAJO NATION	SJ 00802	Artesian	26N	13W 02	1 1 2	W	237080	1995476	13	165960			09/05/1978	1774	
	HWY	0 NEW MEXICO STATE HIGHWAY DEPT.	SJ 00802	Artesian	26N	13W 02	1 1 2	M	237080	1995476	13	165960	4043745	09/04/1978	09/05/1978	1774	
SJ 02474	STK	3 CHARLIE, Y. BROWN	SJ 02474		26N	13W 34	3 3				13	211965	4037479				

Record Count: 6

http://iwaters.ose.state.nm.us:7001/iWATERS/WellAndSurfaceDispatcher



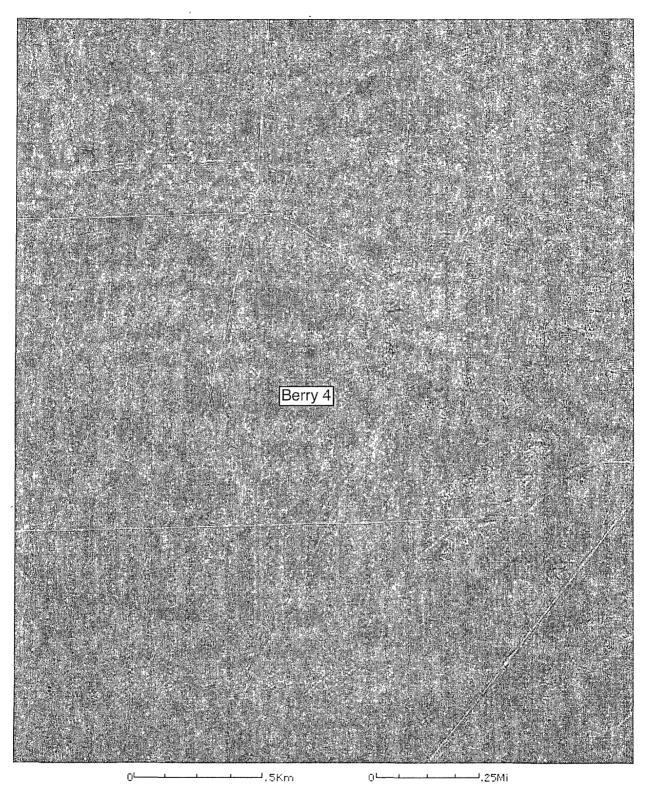
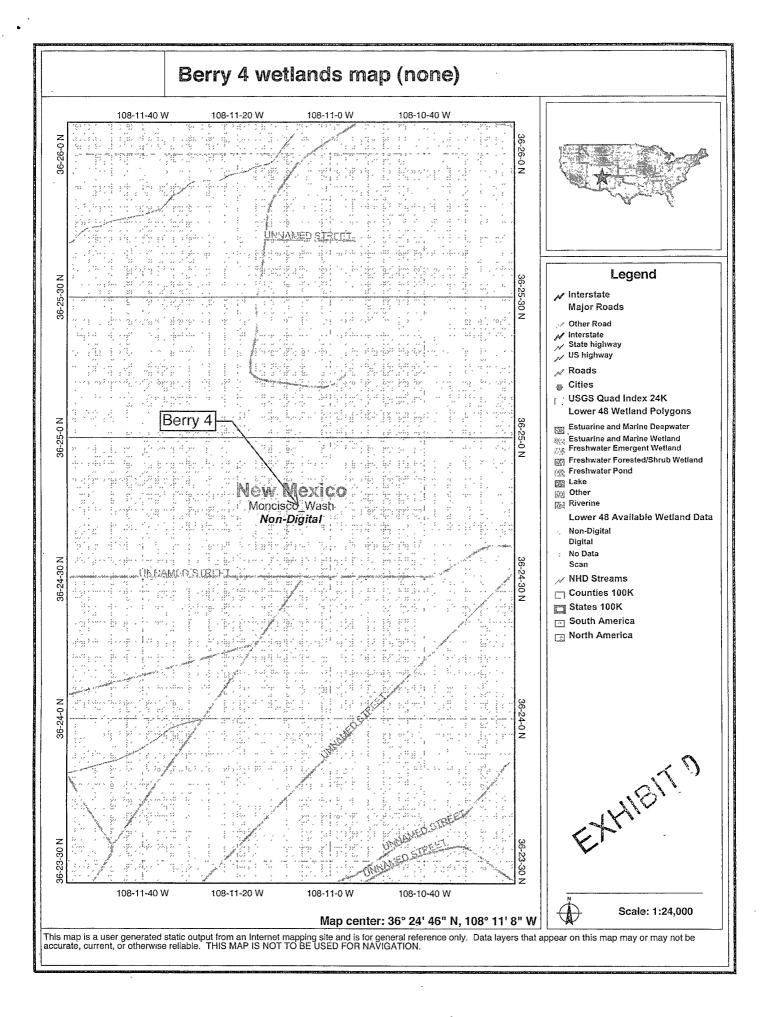


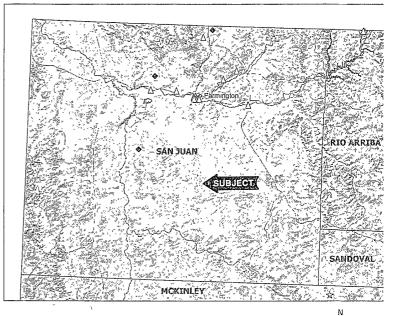
Image courtesy of the U.S. Geological Survey
© 2004 Microsoft Corporation. **Terms of Use Privacy Statement**

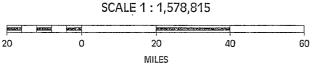
EXHIBITO



MMQonline Public Version

	,
Mines, Mills	& Quarries Commodity Groups
Δ	Aggregate & Stone Mines
*	Coal Mines
*	Industrial Minerals Mines
_ ♥	Industrial Minerals Mills
	Metal Mines and Mill Concentrate
F	Potash Mines & Refineries
	Smelters & Refinery Ops.
**	Uranium Mines
•	Uranium Mills
Population	
⊚	Cities - major
Transportati	on

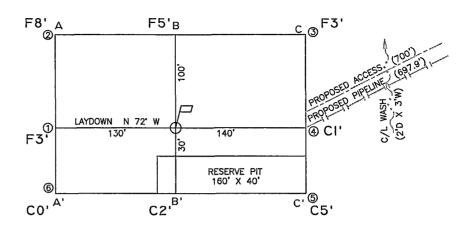






EXHIBITE





ELEVATION A-A' 6370 6360 6350 6340 6330 B-B' 6370 6360 6350 6340 6330 C-C' 6370 6360 EXHIBITE 6350 6340 6330

LEASE: BERRY FEDERAL 4

FOOTAGE: 1650' FSL, 1795' FEL

SEC. 11 TWN. 25 N RNG. 13 W N.M.P.M.

LATITUDE: 36.412993° LONGITUDE: 108.185660°

ELEVATION CZEO

ELEVATION: 6352

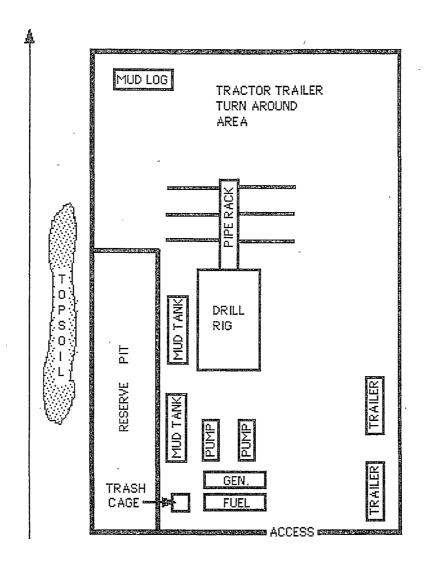
ELM RIDGE EXPLORATION DALLAS, TEXAS

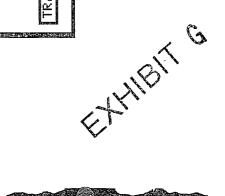
-	L		,					
	SURVEYED:	1/30/06	REV. DATE:	APP. BY R.P.				
	DRAWN BY:	A.D.	DATE DRAWN: 2/02/06	FILE NAME: 6465C01				
		. aradi. 900 mga .						

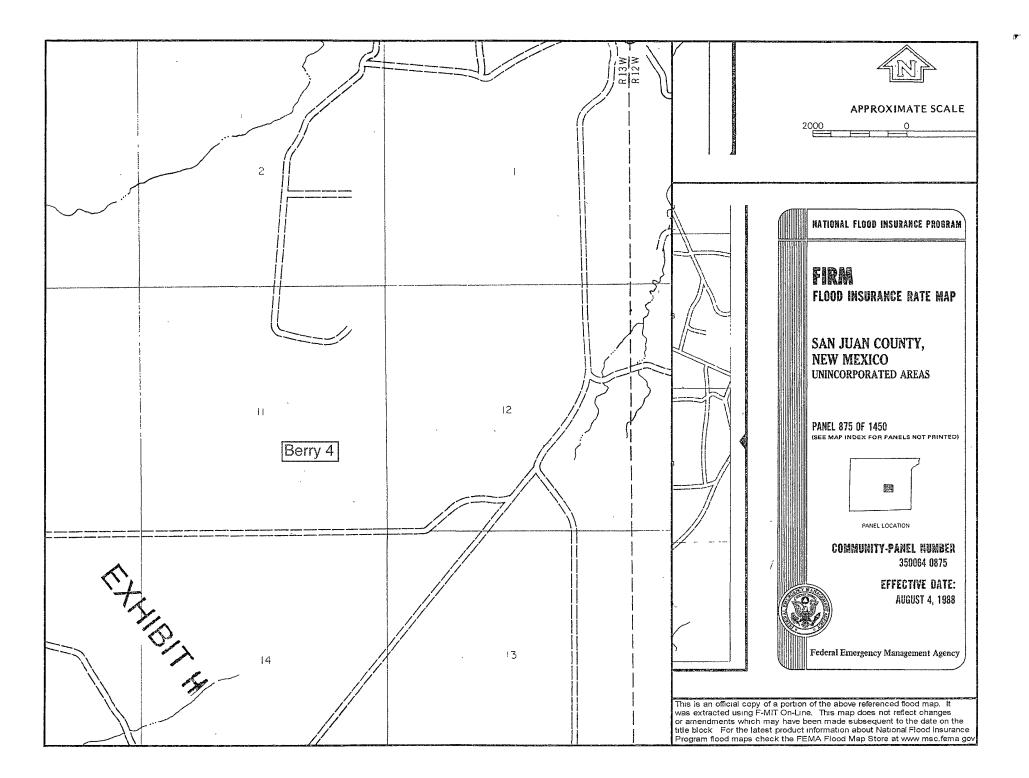
UNITED FIELD SERVICES INC.

P.O. BOX 3651 FARMINGTON, NM 87499 OFFICE: (505) 334-0408









DISTRICT 1 P.O Box 1980, Hobbs, N.M 68241-1980 DISTRICT II

811 South First, Artesia, N.M 88210

DISTRICT III

1000 Rio Brezos Rd., Aztec, N.M. 87410 DISTRICT IV

2040 South Pacheco, Santa Fe, NM 87504-2088

State of New Mexico Energy, Minerals & Natural Resources Department

P.O. Box 2088 Santa Fc, NM 87504-2088

Form C-102 Revised Febuary 21, 1994 Instructions on back OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fc. NM 87504-2088
Submit to Appropriate District Office
State Lease 4 Copies
Fee Lease - 3 Copies

□ _{AMENDED} REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

		*:	نىد ئىددىدىد،	0 011110	7.4 7.37.47	1. CIV	AND THE PARTY OF T	101	TITOM IN	36.7 I			
¹ API	Number			*Peol Code				* *********	*Pool Name	e			
Property C	ode		. l			 !roperty !Y FE	Namo DERAL			and the second	6 1	Well Number	
'OGRID N	lo.)	ELM	RIDG		PLORATION			Elevation 6352			
					10 Sur	rface	Location						
UL or lot no.	Section	Township	Range	Lot Idn	Feet fro		North/South line	Fe	et from the	East/West		County	
J	11	25 N	13 W		165	0	SOUTH		1795	EAS	Γ	SAN JUAN	
~~~~				m Hole	***************************************		f Different Fr		······				
UL or lot no.	Section	Township	Range	Let Idn	Feet fro	m the	North/South line	Fe	et from the	East/West	line	County	
² Dedicated Acre	s ¹³ Joint	or Infill 14 C	onsolidation	Code 15 0	rder No.		<u></u>	<u> </u>					
						***************************************	**************************************						
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<u>.</u>						***************************************		_				contained herein is knowledge and belief	
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			SEC.	TION II				S	Date				
				,, 5,, 1,			70.4			VEYOR (	ŒRT	IFICATION	
						ALA CADABA AS TRACT		9	i hereby certify	that the well	location	shown on this plat	
								85. 85.	or under my sup	ervision, and	that th	surveys made by me e same is true and	
				LONG.	6.41299 108.185			8	correct to the be	st of my being	ř		
				NAD 83	9-	<u> </u>	17951		1/30/0		ROBE	57-	
				<u> </u>					Date of Surv	" [	MUDE	3	
Ш				1		***************************************		3	Signature an	d Josh M.P.	Alsen	Surseyor	
				-	650	nit ce	enter		M	IR VI	66/		
				***************************************	. 9	•	36.407993°	0°10'35*		AZVA			
င် Z				***************************************			08.170802°	- 5	JOMIX.	人家人			
					.		······································	Ø	1846	150	ONAL	SUPLY	
N 89°46'	22" W	263	9.27'	N 89°4	6'57" V	V _	2639.11'		Certificate N	umber 🐃	State of the owner.	N. September 1975	

EXHIBITI

# PAGE 8

#### 8. ANCILLARY FACILITIES

There will be no air strip or camp. Camper trailers will be on location for the company man, tool pusher, and mud logger.

#### 9. WELL SITE LAYOUT

See Pages 13 and 14 for views of the well pad, cross sections, cut and fill diagrams, reserve pit, trash cage, access road onto the location, parking, living facilities, soil stockpile, and rig orientation.

#### 10. RECLAMATION

Reclamation starts once the reserve pit is dry, at which point it will be back filled. The pad and road will be contoured to a natural shape, slopes will be no steeper than 3:1, topsoil spread evenly over disturbed areas, water bars installed, and disturbed areas ripped or harrowed. BLM south seed mix #1 will be sown. If the well is a producer, then the pipeline, reserve pit, and any other areas not needed for a work over will be reclaimed as previously described.

#### 11. SURFACE OWNER

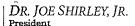
All construction will be on lease and on Navajo tribal surface. Tribal Project Review Office phone is (928) 871-6447. Address is P. O. Box 9000, Window Rock, Arizona, 86515.

#### 12. OTHER INFORMATION

The nearest hospital is a ≈1 hour drive away in southwest Farmington.









May 14, 2007



Mr. Omar Bradley, Acting Regional Director Bureau of Indian Affairs Navajo Region Post Office Box 1060 Gallup, New Mexico 87305

RE: Application for Permit to Drill (APD) to Elm Ridge Exploration Company, LLC.

Dear Mr. Bradley:

Transmittal herewith is a consent letter dated May 14, 2007, which was signed by Mr. W. Mike Halona, Program Director, Navajo Land Department with Division of Natural Resources.

Navajo Nation Consent Letter: <u>Approving an Application for Permit to Drill to Elm Ridge Exploration</u>, <u>LLC to Drill</u>, <u>Construct</u>, <u>Operate and Maintain the "Berry Federal 4" Gas Well and Ancillary Facilities on Federal Lease No. NMNM-031311 on, over and across Navajo Nation Trust Lands within the Navajo Indian Irrigation Project (NIIP), San Juan County, Navajo Nation (New Mexico).</u>

If you have any questions please call (928) 871-6447 or 6695.

Sincerely,

Esther Kee, Right-of-Way Agent NLD Project Review Section, DNR

ATTACHMENTS
xc: Chrono/Project File



Navajo Land Department
Post Office Box 2249 / Window Rock, AZ / 86515 / Telephone (928) 871-6401 / Fax (928) 871-7039