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

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.

Santa Pe, NW 87303 D	istrict Office.
Pit, Closed-Loop System, Below-Grade Tar	
Proposed Alternative Method Permit or Closure Plan	n Application
Type of action: Permit of a pit, closed-loop system, below-grade tank, or pr Closure of a pit, closed-loop system, below-grade tank, or p Modification to an existing permit Closure plan only submitted for an existing permitted or no below-grade tank, or proposed alternative method	proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system,	helow-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of hability should operations result in poenvironment. Nor does approval relieve the operator of its responsibility to comply with any other applicable government.	ollution of surface water, ground water or the
1.	
Operator: MARALEX RESOURCES, INC. OGRID #: 013998	RCVD JUH 17 '09 OIL CONS. DIV.
Address: P. O. BOX 338, IGNACIO CO 81337	
Facility or well name: TRADING POST 29 #1	PST. 3
API Number: <u>30-045-3993</u> OCD Permit Number:	
U/L or Qtr/Qtr <u>B</u> Section <u>29</u> Township <u>25 N</u> Range <u>10 W</u> County: <u>SAN JUAN</u>	:
Center of Proposed Design: Latitude <u>36.37746° N</u> Longitude <u>107.91628° W</u> 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: 2,741 bbl Dimens	sions: L <u>65'</u> x W <u>40'</u> x D <u>8'</u>
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 intent)	require prior approval of a permit or notice of
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other	
☐ Lined ☐ Unfined Liner type: Thicknessmil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Ot	ther
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 overf	low shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other	
Liner type: Thickness mıl	
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.

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:
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 Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H 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 ☐ On-site Trench Burial ☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19 15.17.13.I Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if 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 ser 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	С .
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 sour provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate dist considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Just demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	rict office or may be
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 - 1WATERS 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
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure p by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19 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 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 G of 19.15.17.13 NMAC	.15.17.11 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: <u>6-15-09</u>				
e-mail address: <u>brian@permitswest.com</u> Telephone (505) 466-8120				
20. OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)				
OCD Representative Signature: 3-7-09 Approval Date: 7-7-09				
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:				
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 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)				
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. <u>Closure Report Attachment Checklist</u> : _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				
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 >400' below the bottom of the pit. Closest reported water well is an NTUA water well which is $\approx 5,000$ southwest in SWSW Section 29. Pit will be in the Nacimiento Formation. Office of the State Engineer records for the township and a map showing the wells are attached as Exhibits A & B. (The NTUA well is not listed in the state records. Depth to water is from NTUA.)

6,748' NTUA well elevation <u>- 553' depth to water</u> 6,195' water level elevation

6,654' gas well elevation

- 8' deep pit
6,646' pit bottom elevation

6,646' bottom of pit
- 6,195' water level elevation
≈451' 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 Gallegos Canyon is over a mile northwest (Exhibits B & C).
- 3. Pit is not within 300' of any building (Exhibit D). Closest building is >5,000' west.
- 4. Pit is not within 1,000' of 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 E).
- 7. Pit does not overly a mine (Exhibit F).
- 8. Pit is not in an unstable area. No evidence of earth movement was found during a January 14 inspection. Maximum grade is \approx 4%. All of the pit will be in cut (Exhibit 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 7 in APD) to surface owner (BLM) is attached as Exhibit J.

Hydrogeology

Surface formation is the Nacimiento. According to Stone et al in <u>Hydrogeology</u> and <u>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 is expected to be >800' below ground level.

Alternative for 19.15.17.11 D. (3)

Maralex proposes an alternate fence. Sheep graze in the 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)

Maralex is proposing alternate (vertical) slopes for the 65' 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. Maralex will install extra liner to allow for some slack and avoid stress and strain. Maralex will also install two rope ladders - one on each of the 65' 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 $12" \times 12"$ 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 15th day of June, 2009.

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 representative is:

Jeremy Golob Maralex Resources, Inc. P. O. Box 338 Ignacio, CO 81137 (970) 563-4000

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 inheight 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.
- (2) A temporary pit shall have a properly constructed foundation and interior 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 long (140' 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 earthfilled 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 tankor 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 evaporation pond (3-29n-11w) at Basin Disposal (NM-01-005).
- (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.
- (3) The operator shall inspect a temporary pit containing drilling fluids at least 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 is permitted 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 19.15.17.13 NMAC and Subsection B of 19.15.17.15 NMAC.
 - (d) The operator shall place a steel marker at the center of an on-site 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.

- (d) Where the ground water will be more than 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 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 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

Point of Diversion by Location (with Drilling Information)

		(quarter	s are 1=NW 2=NE 3=SW 4=SE)		
	(acre ft per annum)	. (quarters are smallest to largest)	(NAD83 UTM in meters)	(in feet)
*	Sub		qqq		Depth Depth
WR File Nbr	basin Use Diversion County POD Number	Grant	Source 6416 4 Sec Tws Rn	g X Y_Start Date	Finish Date Well Water
RG 31794	DOM CA <u>RG 31794</u>		3 4 11 25N 10\	N 243192 4033255*	
RG 36933	SAN 3 XX <u>RG 36933</u>		Shallow 2 2 3 11 25N 10N	N 242903 4033769* 02/15/1983	07/20/1983 180 60
<u>SJ 01715</u>	STK 15 SJ SJ 01715		Shallow 4 4 22 25N 10N	N 241895 4030074* 07/13/1963	01/30/1964 637 250
SJ 02377	DOM 3 SJ <u>SJ 02377</u>		2 3 2 06 25N 10N	N 236941 4035959*	

Record Count: 4

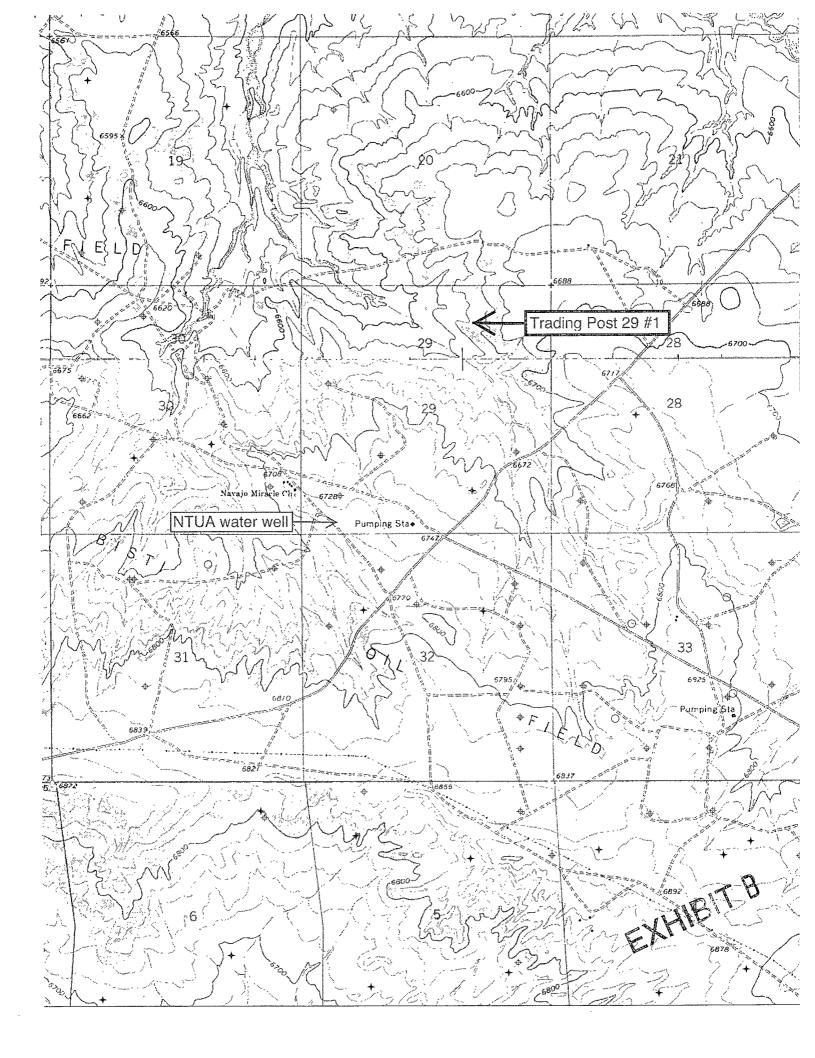
PLSS Search:

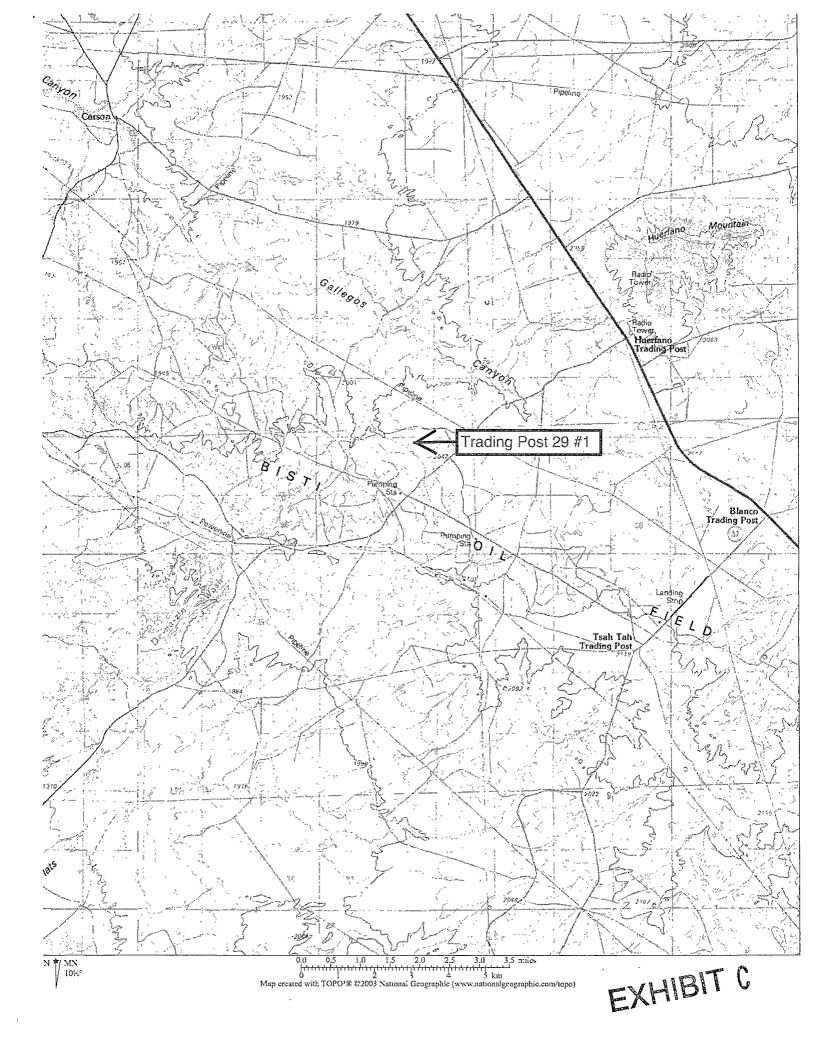
Township: 25N Range: 10W

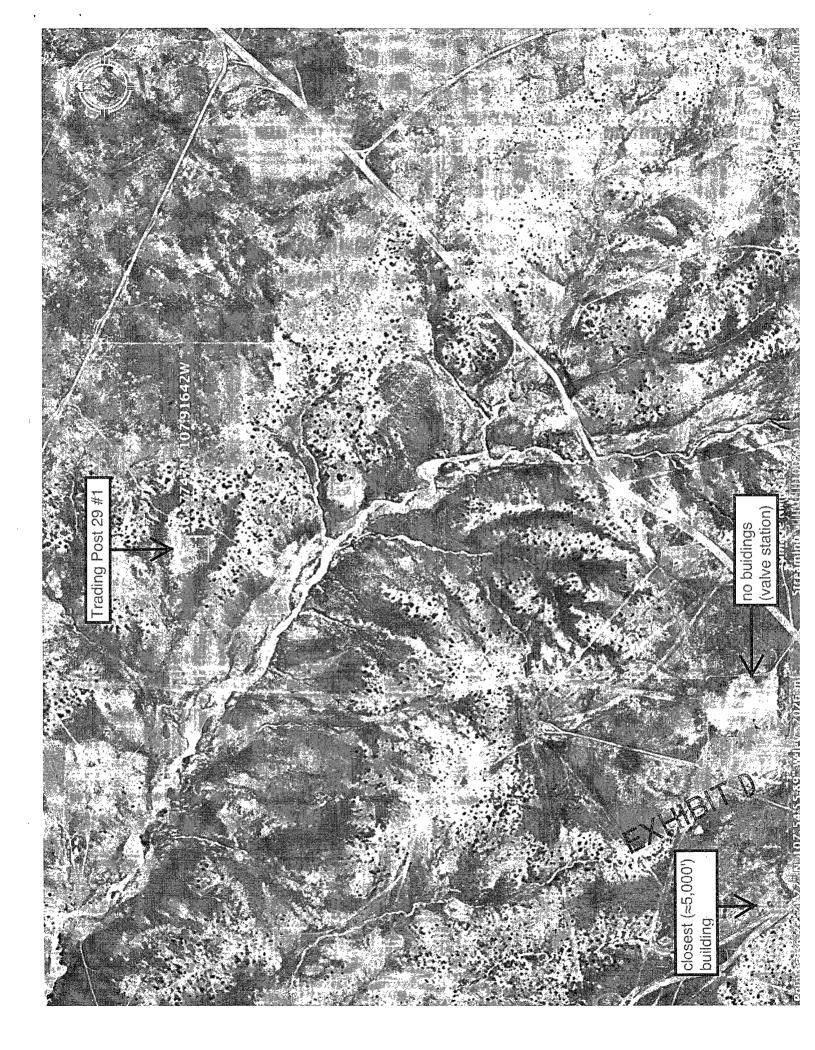
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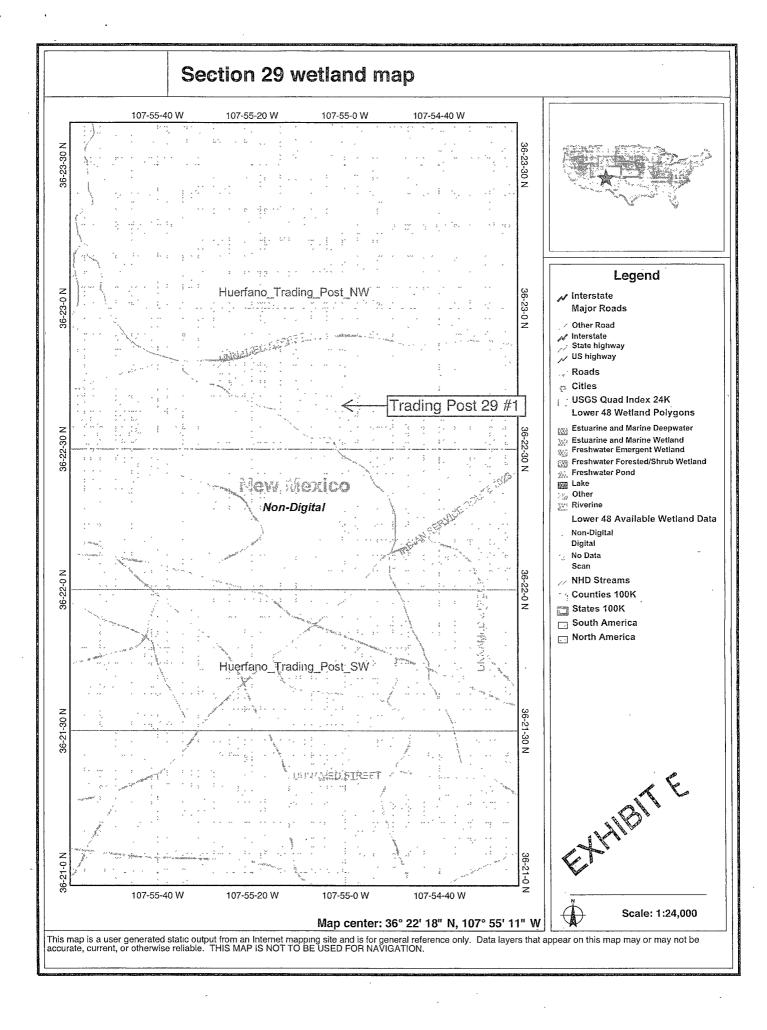
*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data









MMQonline Public Version

Trading Post 29 #1

Aggregate & Stone Mines

Aggregate & Stone Mines

Coal Mines

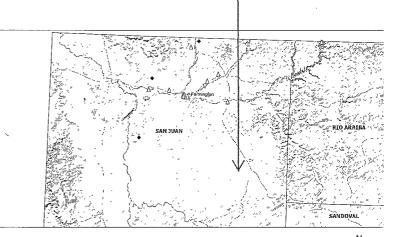
Industrial Minerals Mines

Industrial Minerals Mills

Metal Mines and Mill Concentrate

Potash Mines & Refineries

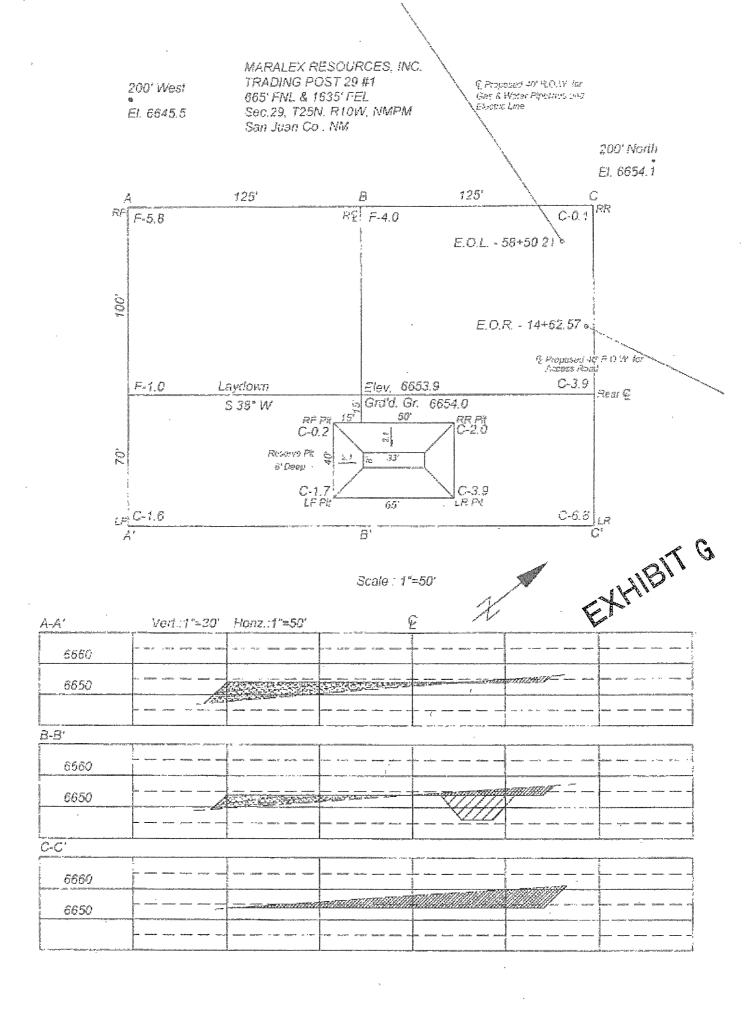
Smelters & Refinery Ops.

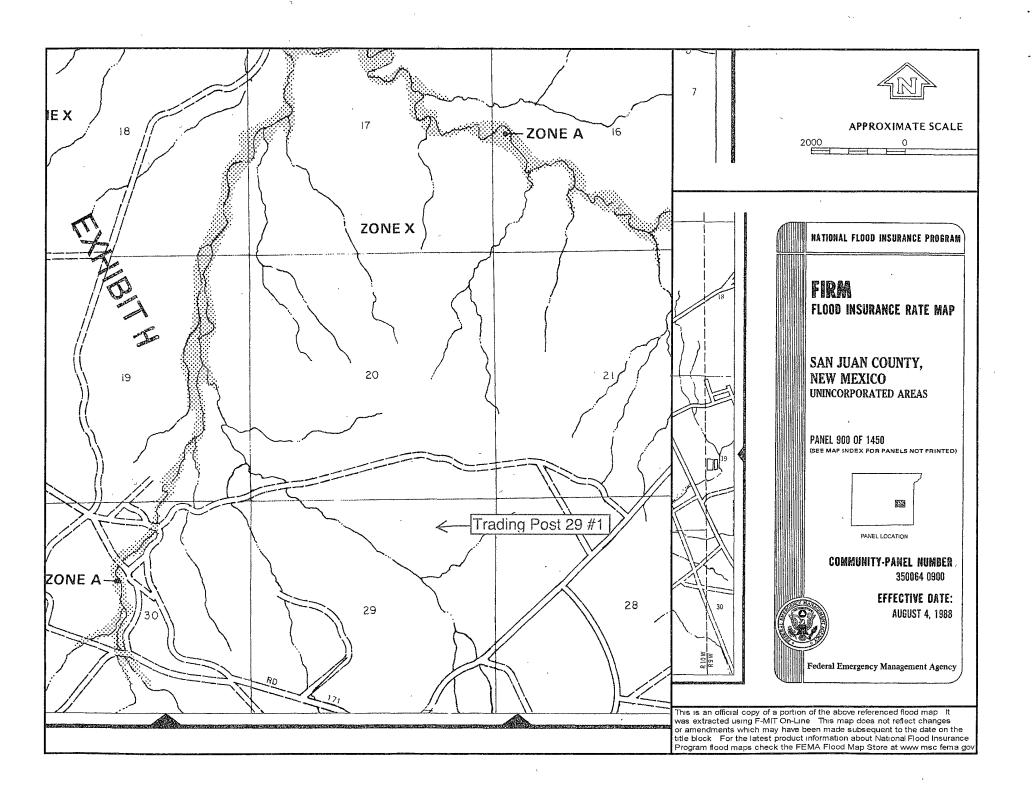


SCALE 1: 1,948,802 20 0 20 40 60 MILES



EXHIBITE





<u>Dated (</u> 1925 N. Siepech Un. Holder, Nat. 1822A (h.met.if 1900 W. Grent Arman, Arman, NM, 88210 pesque: III 10'st the large RJ. Arms, Not. 57456

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

Form 7-102 Revised October 12, 2005 Subsoit to Appropriate District Office State Lease - 4 Copies For Lease - 1 Clopies

AMENDIO RUPORT

MING SE PERCE OF SEEL PERCENTERS WELL LOCATION AND ACREAGE DEDICATION PLAT 'aPiN'mba 1 Property Cody Property Name 4 Well Sumber TRADING POST 29 1 COURSEN " Openson it out Etevetico MARALEX RESOURCES, INC. 6654 Surface Location GL et Look 死* * Sections Ter-ning I on Edm Ten Van de N mySouth Los fire inc. a Presidence in Casser 8 29 10 W 665 25 N Nurth 1635 East_ San Juan 14 Bottom Usia Escation of Different From Surface Contacts "MT 24 Tencor k.e.ge Lylde Pert Sout the Neradoubla. Postinen da MarWerlins (war 19 Dedictored Auras P Roug or beilt * Complete, at the contract of l-* Cirúm X ,

No afformable will be assigned to this completion unsit off interests have been consolidated on a non-section and has been approved by the division.

79 55 Ch.		79. 1990 26.37747W © 107.91542*W \	91 Ch. 1635' '50 92 6	1.1 OPERATOR CERTIFICATION Thereby complicate information amount at hereby in our and enoughnous in the complete or the lead of the formation and described in the computation of the format in the computation of the lead o
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		29	Š	18 SURVEYOR CERTIFICATION Interior scaled that the well to amore severa or the plan one planted from sheld name a Crotical acre govern to by the or under my supervision, and that the scale is true and correct to the best Tries before Off Alig 2000
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There are 3 plugged wells, 2 oil or gas wells, and 1 water well within a 1 mile radius. There are no injection wells within a mile.

4. PROPOSED PRODUCTION FACILITIES (See PAGES 11 & 12)

Production facilities will include a pump, separator, dehydrator, meter run, and ≈210 barrel tank. All of the equipment will be painted a flat juniper green.

A 9,842.06' long (= 1,928.31' on lease \pm 7,913.75' off lease) \approx 36" deep trench will run northeast, southeast, and southwest along roads to Maralex's existing Brookhaven A 2 pad. Maralex will install two \approx 3" O. D. SDR-11 polyethylene pipelines (1 water and 1 gas) and one power line in the same trench. Maximum disturbed width will be 40'.

5. WATER SUPPLY

Water will be trucked from Blanco Trading Post.

6. CONSTRUCTION MATERIALS & METHODS

New Mexico One Call (1-800-321-ALERT) will be called >48 hours before construction starts. The top 12" of soil and brush will be bladed and piled southeast of the reserve pit. Pit subsoil will be piled between the pit and topsoil pile. A diversion ditch will be cut south of the pad and east of the soil piles.



7. WASTE DISPOSAL

A > 20 mil plastic liner will be installed in the reserve pit. The pit will be fenced



Of The second

Maralex Resources, Inc.
Trading Post 29 #1
665' FNL & 1635' FEL
Sec. 29, T. 25 N., R. 10 W.
San Juan County, New Mexico

11. SURFACE OWNER

All construction will be on BLM.

12. OTHER INFORMATION

The closest hospital is a ≈3/4 hour drive away in southwest Farmington.

Aztec Archaeological Consultants will file the archaeology report.

On site inspection was conducted February 19, 2009 by Roger Herrera and Scott Hall (both BLM) and Charles Black (Permits West).

13. REPRESENTATION & CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this <u>27th</u> day of <u>March. 2009</u>.

Brian Wood, Consultant

