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

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

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.

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

X Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method

 Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system,
below-grade tank, or proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
1. Operator: Maralex Resources, Inc OGRID #: 013998
Address: P. O. Box338, Ignacio, CO. 81137
Facility or well name: _Dome Federal FC 17 #1
API Number: 30-045-34045 OCD Permit Number:
U/L or Qtr/QtrNWNWSection17Township27NRange13WCounty: San Juan County New Mexico
Center of Proposed Design: Latitude _36.57614 N Longitude108.24808 W NAD:1927 X 1983
Surface Owner: Federal State Private X Tribal Trust or Indian Allotment
X Pit: Subsection F or G of 19.15.17.11 NMAC
Below-grade tank: Subsection I of 19.15.17.11 NMAC Volume:
s. 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, institution or church) X Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify	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)	
s. Signs: Subsection C of 19.15.17.11 NMAC 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers X 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: X Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau of consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	office for
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 accematerial are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the approffice or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of 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.	opriate district approval.
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 X 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 X 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 X No
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 X 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 search; Visual inspection (certification) of the proposed site	Yes X 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 X No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes X No
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Ýes X No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes X No
Within a 100-year floodplain FEMA map	☐ Yes X No

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are
attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
X Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number:
12. Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.
Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API Number:
Previously Approved Operating and Maintenance Plan API Number: (Applies only to closed-loop system that use
above ground steel tanks or haul-off bins and propose to implement waste removal for closure)
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: X Drilling X Workover
Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) X On-site Closure Method (Only for temporary pits and closed-loop systems)
X 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 I of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I 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, facilities are required.	Steel Tanks or Haul-off Bins Only: (19.15.17.13.D drilling fluids and drill cuttings. Use attachment if	NMAC) more than two
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 of Yes (If yes, please provide the information below) No		
Required for impacted areas which will not be used for future service and operation Soil Backfill and Cover Design Specifications based upon the appropriate Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	e requirements of Subsection H of 19.15.17.13 NMA I of 19.15.17.13 NMAC	C
17. Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the provided below. Requests regarding changes to certain siting criteria may requireconsidered an exception which must be submitted to the Santa Fe Environmental demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC.	re administrative approval from the appropriate dist I Bureau office for consideration of approval. Just	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	a obtained from nearby wells	☐ Yes X 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	a obtained from nearby wells	☐ Yes X 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	a obtained from nearby wells	X Yes No No NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other sig lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	nificant watercourse or lakebed, sinkhole, or playa	Yes X No
Within 300 feet from a permanent residence, school, hospital, institution, or church Visual inspection (certification) of the proposed site; Aerial photo; Satellit		☐ Yes X No
Within 500 horizontal feet of a private, domestic fresh water well or spring that les watering purposes, or within 1000 horizontal feet of any other fresh water well or s NM Office of the State Engineer - iWATERS database; Visual inspection (pring, in existence at the time of initial application.	Yes X No
Within incorporated municipal boundaries or within a defined municipal fresh wat adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approve	•	Yes X No
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visu	al inspection (certification) of the proposed site	☐ Yes X No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining	g and Mineral Division	☐ Yes X No
 Within an unstable area. Engineering measures incorporated into the design; NM Bureau of Geolog Society; Topographic map 	y & Mineral Resources; USGS; NM Geological	☐ Yes X No
Within a 100-year floodplain FEMA map		☐ Yes X No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the by a check mark in the box, that the documents are attached. X Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of X Proof of Surface Owner Notice - based upon the appropriate requirements of	nirements of 19.15.17.10 NMAC	an. Please indicate,
Construction/Design Plan of Burial Trench (if applicable) based upon the at X Construction/Design Plan of Temporary Pit (for in-place burial of a drying pat X Protocols and Procedures - based upon the appropriate requirements of 19.15 X Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements.	ppropriate requirements of 19.15.17.11 NMAC d) - based upon the appropriate requirements of 19.1 .17.13 NMAC	5.17.11 NMAC
X Waste Material Sampling Plan - based upon the appropriate requirements of S X Disposal Facility Name and Permit Number (for liquids, drilling fluids and dr X Soil Cover Design - based upon the appropriate requirements of Subsection F	subsection F of 19.15.17.13 NMAC rill cuttings or in case on-site closure standards cannot of 19.15.17.13 NMAC	t be achieved)
X Re-vegetation Plan - based upon the appropriate requirements of Subsection X Site Reclamation Plan - based upon the appropriate requirements of Subsection		

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):Bob L. Bixler P. E Title: Regulatory and Special Operations Engineer
Signature:
e-mail address:_handibob@earthlink.net Telephone:(970) 563-4000
20.
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature: 4-2-08
OCD Representative Signature: Approval Date: 1-2-08
Title: Enviro/spec 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:
Cosure 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. <u>Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:</u> 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) No
Required for impacted areas which will not be used for future service and operations: Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (required for on-site closure) Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude
25.
Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.
Name (Print): Title:
Signature: Date:

e-mail address:_

Telephone: __

Siting Criteria

- 1. Ground water is more than 50' below the bottom (5976') of the pit. Estimated depth to ground water is \geq 167'. This estimate is based on the DON B. PENNIVGTON water well (Exhibit A & B) which is approximately 3.31 miles away in the SE direction sec 33, T27N, R13W. Depth of the well is 310'. The ground elevation is 6119' so the water level is 5809'.
- 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. Pit is located on irrigated farm land. See (Exhibit C)
- 3. Pit is not within 300' of any building. See(Exhibit D)
- 4. Pit is not within 1,000' of any fresh water well or spring. See(Exhibit B & D)
- 5. Pit is not within municipal boundaries or within a municipal fresh water well field. See(Exhibit B&D)
- 6. Pit is not within 500' of a wetland. The resolution of the maps showing wetlands and the well site are such that both cannot appear on one map; however, (Exhibit F) is a map of the area and clearly there are no wetlands within 500' of the pit.
- 7. Pit does not overlay a mine. (See Exhibit G)
- 8. Pit is not in an unstable area. No evidence of earth movement was found during an July 12, 2006 inspection. (See Exhibit H)
- 9. Pit is not within a 100 year flood plain. Pit is located in panel 350064 1025B. There is no map available as there is no flood plain area in that panel and therefore subject pit is not in a 100 year flood plain.
- 10. C-102 is attached. (Exhibit I)

Hydrogeology

The surface formation in the area of the well is the Nacimiento. According to Stone et al in <u>Hydrogeology and water resources of San Juan Basin, New Mexico.</u> The Nacimiento is a mudstone. There is also a mixture of medium to coarse sandstone. The conductivity ranges from 1,500-2,000 µmhos. The base water level in the area is

estimated to be 167'. This is based on the Don Pennivgton water well which is 3.31 miles away. The only other water in the area would be purge water from that same formation. The ground level at the Don Pennivgton is 6119' and the well is 310' so the water elevation would be 6119' - 310' = 5809'. The elevation at the pit is 5986' and the bottom of the pit is 5976'. The estimated water level will be the bottom of the pit minus the elevation of the water which is 5976' - 5809' = 167'

Alternative for 19.15.17.11 D. (3)

Maralex is proposing an alternate fence. Sheep graze in the project area and hog wire has been found more effective than just barbed wire. The operator will fence the pit with a minimum 48" high fence. Fence will consist of a minimum of 36" high woven wire (hog wire) topped with at least one strand of barbed wire making the fence a minimum of 48" tall.

Alternative for 19.15.17.11 F. (2)

Maralex is proposing alternate (vertical) slopes for the long (140') sides of the pit. Alternate is requested to minimize well site footprint. This allows smaller rig to be used. Rig must be close to deep part of pit since pump is on rig itself. Maralex will install extra liner to allow for some slack and avoid stress & strain. Maralex will also install two rope ladders, one on each of the long sides.

Executed this 22nd day of August, 2008

Bob L. Bixler P. E.

Regulatory and Special Operations Engineer

Maralex Resources, Inc.

The operator's representative is:

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

Design and Construction

- **A.** General specifications. Maralex will design and construct a pit 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 Maralex shall strip and stockpile the topsoil for use as the final cover or fill at the time of closure.
- **C.** Signs. Maralex 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 unless the

pit is located on a well site that the operator controls. Maralex shall post the sign in a manner and location such that a person can 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 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. During drilling operations, the operator is not required to fence the edge of the pit adjacent to the drilling rig or work-over rig.
- (2) Maralex shall fence any other pit or below-grade tank to exclude wildlife and livestock, with at least four strands of barbed wire in the interval between one foot and five 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.
- (3) 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. Maralex will fence the pit with a minimum 48" high fence. Fence will consist of a minimum 36" woven wire (hog wire) topped with at least 1 strand of barbed wire.
- F. Temporary pits. Maralex will design and construct a temporary pit in accordance with the following requirements
- (1) Maralex will design and construct a temporary pit to ensure the confinement of oil, gas or water to prevent uncontrolled 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. Maralex will construct a temporary pit so that the short (40' wide) slopes are no steeper than two horizontal feet to one vertical foot (2H:1V). The long (140') wide 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 safe manner to prevent contamination of fresh water and protect public health and the environment.
- (3) Maralex will design and construct a temporary pit with a geomembrane liner. The geomembrane liner shall consist of 20mil 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 SW846 method 9090A.

- (4) Maralex will minimize liner seams and orient them up and down, not across a slope. The operator shall use factory seams where possible. The operator shall overlap liners four to six inches before seaming, 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. Maralex will weld field 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) Maralex will 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) Maralex will 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 degree angle.
- (9) Maralex will design and construct a temporary pit to prevent run-on of surface water. A berm, ditch 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 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 size 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. Maralex will 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. Maralex will maintain and operate a pit in accordance with the following requirements.
- (1) Maralex will operate and maintain a pit 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) Maralex will recycle, reuse or reclaim or dispose of all drilling fluids in a manner that prevents the contamination of fresh water and protects public health and the environment. Maralex will haul such fluids to the evaporation pond (F 3-29m-11w) Basin Disposal (NM-01-005).
- (3) Maralex will not discharge into or store any hazardous waste in a pit.

- (4) If the integrity of the pit liner 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 lined pit develops a leak, or if any penetration of the liner occurs below the liquid's surface, then the operator shall remove all liquid above the damage or leak line from the pit within 48 hours and repair the damage or replace the liner.
- (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) Maralex will operate and install the pit to prevent the collection of surface water run-on.
- (8) Maralex will 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. Maralex will 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 to contain hydrocarbon based drilling fluids that the appropriate division district office approves. 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) Maralex will maintain at least two feet of freeboard for a temporary pit.
- (3) Maralex will inspect a temporary pit containing drilling fluids at least daily while the drilling or work-over rig is onsite. Thereafter, the Maralex will inspect the temporary pit weekly so long as liquids remain in the temporary pit. Maralex will maintain a log of such inspections and make the log available for the appropriate division district office's review upon request. Maralex will file a copy of the log with the appropriate division district office when Maralex closes the temporary pit.
- (4) Maralex will remove all free liquids from a drilling pit within 30 days from the date that the operator releases the drilling or work-over rig. Maralex will 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) Maralex will remove any liquids from the temporary pit used for cavitation within 48 hours after completing cavitation. Maralex may request and receive additional time to remove the liquids from the temporary pit used for cavitation if Maralex demonstrates to the appropriate division district office's satisfaction that it is not feasible to access the location within 48 hours.

19.15.17.13 CLOSURE REQUIREMENTS:

A. Time requirements for closure. Maralex will close the pit 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.

Maralex will close any other permitted temporary pit within six months from the date that Maralex 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. Maralex will 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. Maralex will close by on-site burial.

Maralex will demonstrate and comply with the siting requirements in Subsection C of 19.15.17.10 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 Maralex proposes a closure method for a drying pad associated with 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) Maralex shall provide the surface owner notice of maralex's proposal of an on-site closure method. Maralex shall attach the proof of notice to the permit application.
- (c) Maralex shall comply with the closure requirements and standards of paragraphs (20 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 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 and subsection B of 19.15.17.15 NMAC.
- (d) Maralex shall place a steel marker at the center of an on-site burial. The steel marker shall not be 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 top of the pipe. A minimum 12" by 12" steel plate will be welded atop the collar. Top of plate will be flush with 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 plate. Upon plugging the well, the plate will be removed and the pit marked as described in the preceding paragraph.

- (e) Maralex shall report the exact location of the on-site burial on form C-105 filed with the division office.
- (f) Maralex 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 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 must 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.
- (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 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 re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation 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 re-vegetation 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) Maralex will 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) Maralex will 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) Maralex will 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) Maralex will notify the division when it has seeded or planted and when it successfully achieves re-vegetation.

J. Closure notice.

- (1) Maralex will notify the surface owner by certified mail, return receipt requested, that the operator plans to close a temporary pit 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.

Maralex 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,

8/22/2008

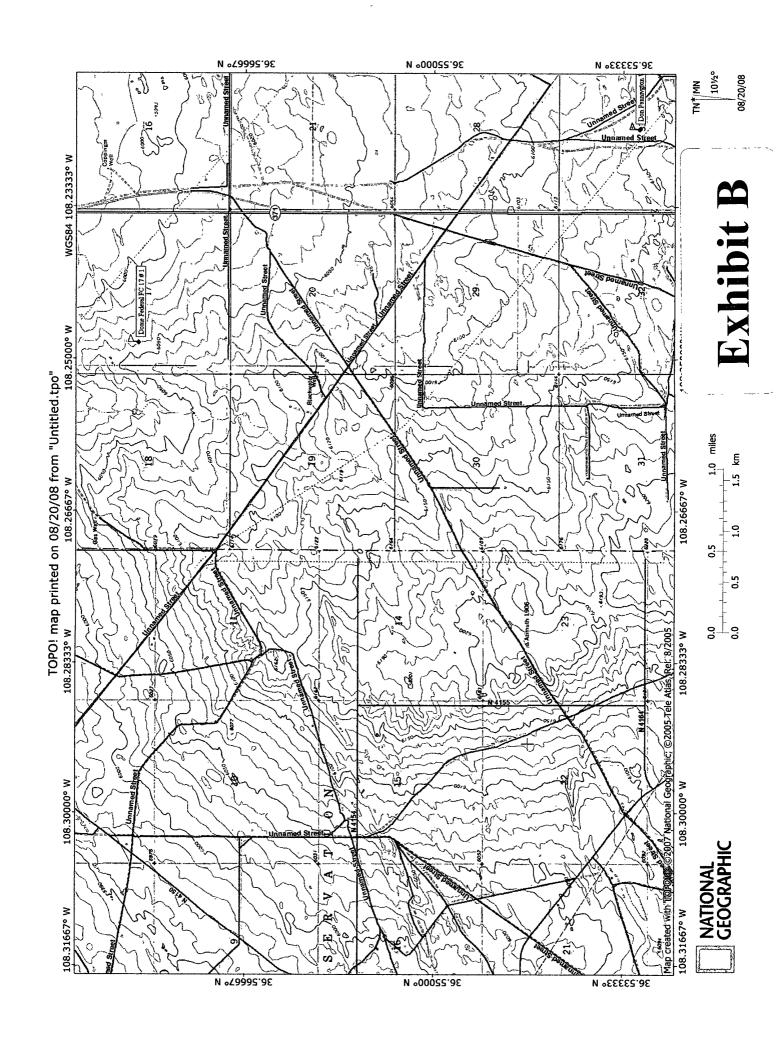
This attachment to the form C-144 has been prepared by Bob L. Bixler P. E.

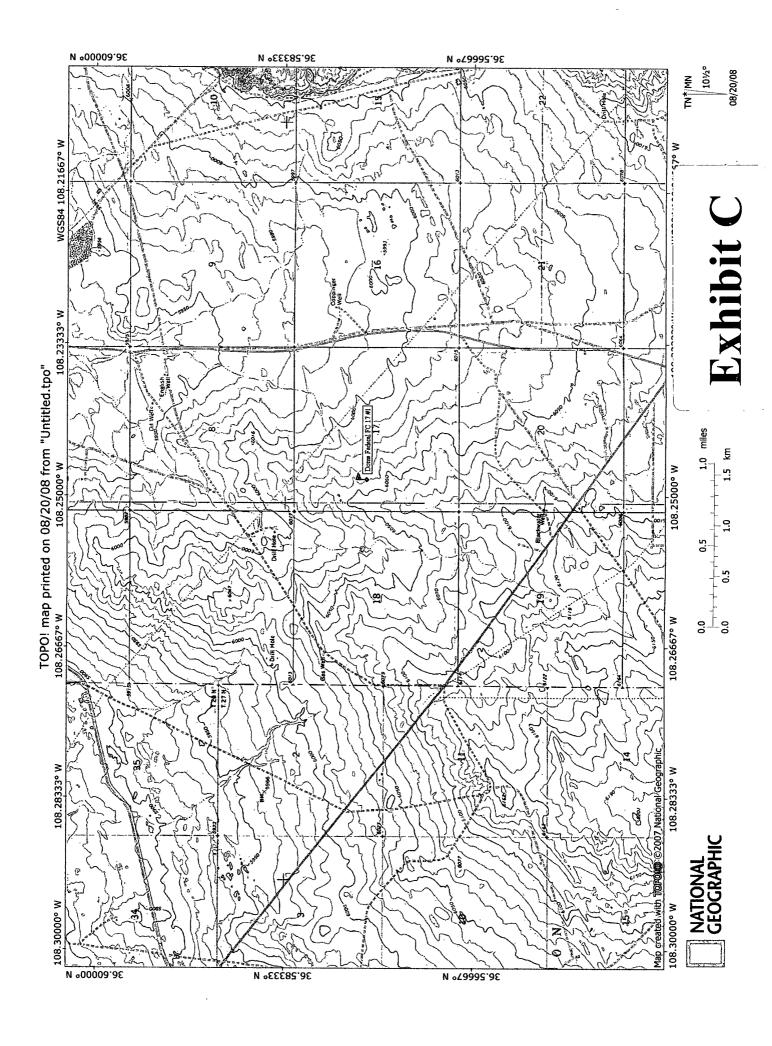
of Mills

New Mexico Office of the State Engineer POD Reports and Downloads

Township: 27N Range: 13W Sections: 1-36
NAD27 X: Y: Zone: Search Radius:
County: Basin: Number: Suffix:
Owner Name: (First) (Last) Onn-Domestic Omestic
POD / Surface Data Report Avg Depth to Water Report
Water Column Report
Clear Form iWATERS Menu Help
AVERAGE DEPTH OF WATER REPORT 08/20/2008 (Depth Water in Feet) Bsn Tws Rng Sec Zone X Y Wells Min Max Avg RG 27N 13W 33 1 310 310 310 Record Count: 1
New Mexico Office of the State Engineer POD Reports and Downloads
Township: 27N Range: 13W Sections: 1-36
NAD27 X: Y: Zone. Search Radius
County Basin Number: Suffix. Owner Name. (First) (Last) Onn-Domestic Onnestic Onnes
Owner Name. (First) (Last) One-Domestic Odenestic All
Clear Form (WATERS Menu Help)
POD / SURFACE DATA REPORT 08/20/2008 (acre ft per annum) (acre ft per annum) DB File Nbr Use Diversion Owner RG 44629 DOM 3 DON B. PENNIVGTON RG 44629 POD Number RG 44629 Shallow 27N 13W 33

Exhibit A





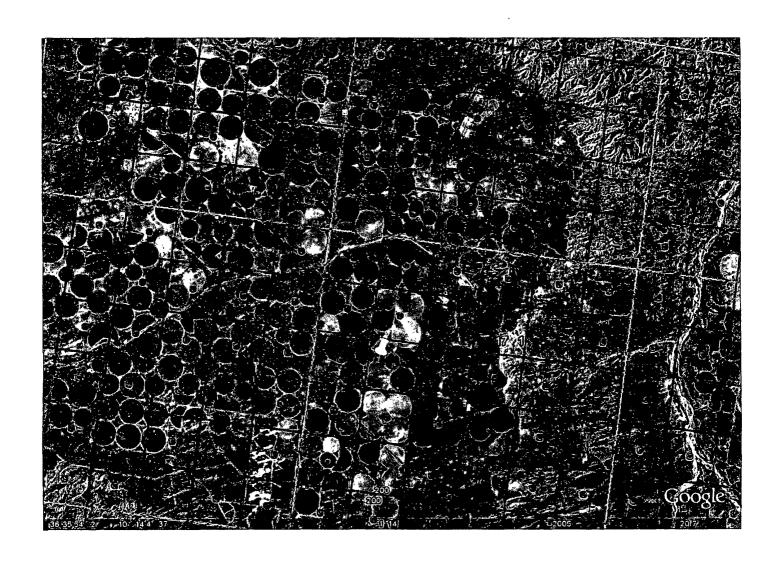
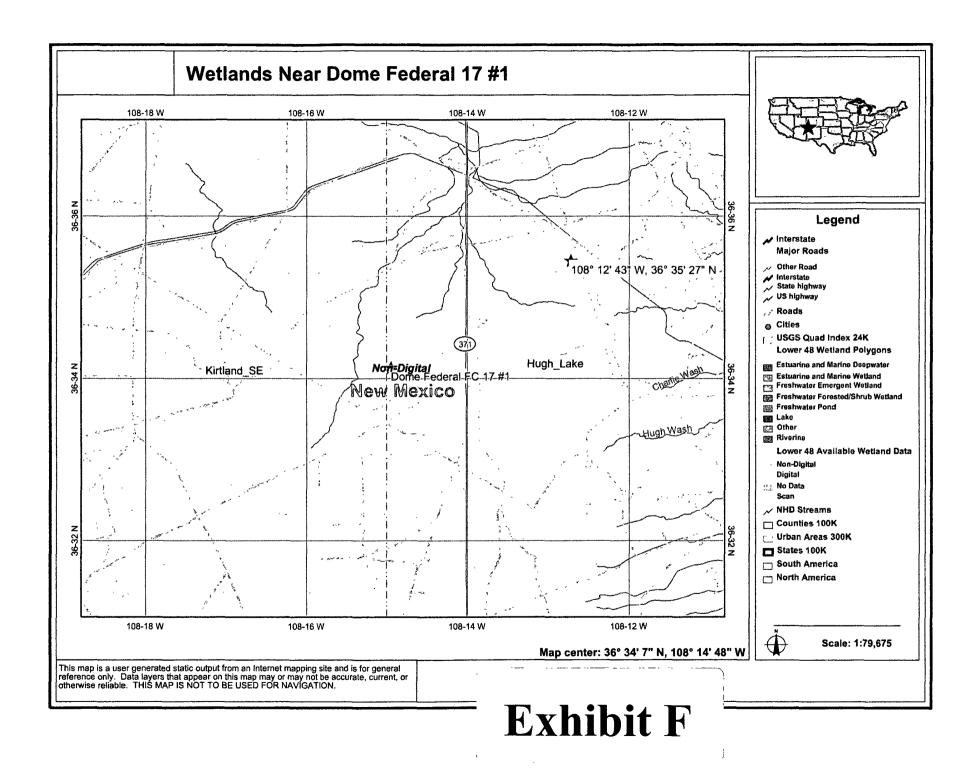
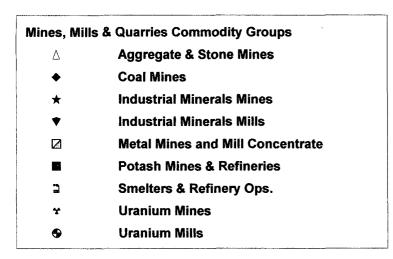


Exhibit D



MMQonline Public Version

Flag indicates location of Dome Federal FC 17 #1, There are no mines within 20 miles of this location.



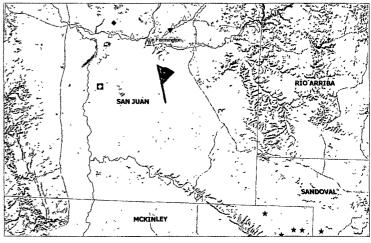






Exhibit G

District I 1625 N. French Dr., Hobb. District II 1361 W. Grand Avenue, A District III 1600 Rio Brazos Rd., Azic District IV 1220 S. St. Francis Dr., Sas	riesia, NM 88210 c, NM 87410 sta Fc, NM 87585	The state of the s	OIL C	nerals & Na CONSERV 220 South Santa Fe	New Mexico stural Resource (ATION DIV St. Francis) NM 87505	es Depar VISIOI (UU0 Dr.	Mar an	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	Form Revised June 10 oppropriate District State Lease - 4 Fee Lease - 3 AMENDED RE	Office Copies Copies
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OGRID No.				*Oper	stor Name				* Elevation	
013998	n		MARAI		SOURCES,	INC	· · ·		5986	
S. S. S. A. S.		T 5I	7.4.2.		ce Location		70.46		1	·
UL or lot no. Sect 17	Township 27N	Range 13W	Lot ida	Feet from 2125	North/So North		Feet from the 879	West	San Ju	an
		¹¹ Bot	tom Ho	le Location	n If Differen	t From	Surface		Pui ou	
UL or lat no. Sect	ios Township	Range	Let Ide	Feet from			Feet from the	East/We	est fine C	ousty
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18 SURVEYOR CERTIFICATION

William E Mahnke II
Certificate Number 8466

Exhibit I

80.04ch.

WEST

80 ch.