

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

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

Form C-144
July 21, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

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

1011
Type of action: ☒ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
☐ Modification to an existing permit
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: McElvain Oil & Gas Properties, Inc. OGRID #: 22044
Address: 1050 17th Street, Suite 1800, Denver, CO 80265
Facility or well name: SOUTHERN UNION I
API Number: 30-045-08854 OCD Permit Number: _____
U/L or Qtr/Qtr B Section 3 Township 29N Range 13W County: SAN JUAN
Center of Proposed Design: Latitude 36 45.591 N Longitude 108 11.353 W NAD: ☐ 1927 ☒ 1983
Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2.
☐ **Pit:** Subsection F or G of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☐ Lined ☐ Unlined Liner type: Thickness _____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____

3.
☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other _____
☐ Lined ☐ Unlined Liner type: Thickness _____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____

4.
☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: 70 bbl Type of fluid: Oil & Water
Tank Construction material: Steel
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☒ Visible sidewalls only ☐ Other _____
Liner type: Thickness _____ mil ☐ HDPE ☐ PVC ☐ Other _____

5.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.



6.

Fencing: Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

☒ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate. Please specify _____

7.

Netting: Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

☐ Screen ☐ Netting ☒ Other _____ Closed Top _____

☐ Monthly inspections (If netting or screening is not physically feasible)

8.

Signs: Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☒ Signed in compliance with 19.15.3.103 NMAC

9.

Administrative Approvals and Exceptions:

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

Please check a box if one or more of the following is requested, if not leave blank:

☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☒ No

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

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

(Applies to temporary, emergency, or cavitation pits and below-grade tanks)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No
☒ NA

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

(Applies to permanent pits)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No
☒ NA

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☒ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☒ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☒ No

11.

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☒ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.

Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Previously Approved Design (attach copy of design) API Number: _____
☐ Previously Approved Operating and Maintenance Plan API Number: _____ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13.

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Climatological Factors Assessment
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Quality Control/Quality Assurance Construction and Installation Plan
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Nuisance or Hazardous Odors, including H₂S, Prevention Plan
☐ Emergency Response Plan
☐ Oil Field Waste Stream Characterization
☐ Monitoring and Inspection Plan
☐ Erosion Control Plan
☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.

Proposed Closure: 19.15.17.13 NMAC**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☒ Below-grade Tank ☐ Closed-loop System
☐ Alternative
 Proposed Closure Method: ☒ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)

Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please provide the information below) ☐ No

Required for impacted areas which will not be used for future service and operations:

☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC

Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 50 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No

☐ NA

Ground water is between 50 and 100 feet below the bottom of the buried waste

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No

☐ NA

Ground water is more than 100 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No

☐ NA

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

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

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

18.

On-Site Closure Plan Checklist: (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC

☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC

☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC

☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)

☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.

Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Deborah K Powell Title: Engineering Tech Supervisor

Signature: Deborah K Powell Date: 9-10-08

e-mail address: DebbyP@McElvain.com Telephone: 303-893-0933

20.

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

OCD Representative Signature: Jonathan V. Kelly Approval Date: 4/25/2012

Title: Deputy Oil & Gas Inspector, District #3 OCD Permit Number:

21.

Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ Closure Completion Date:

22.

Closure Method:

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)
☐ If different from approved plan, please explain.

23.

Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: Disposal Facility Permit Number:

Disposal Facility Name: Disposal Facility Permit Number:

Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

- ☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

24.

Closure Report Attachment Checklist: *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Proof of Closure Notice (surface owner and division)
☐ Proof of Deed Notice (required for on-site closure)
☐ Plot Plan (for on-site closures and temporary pits)
☐ Confirmation Sampling Analytical Results (if applicable)
☐ Waste Material Sampling Analytical Results (required for on-site closure)
☐ Disposal Facility Name and Permit Number
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique
☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude Longitude NAD: ☐ 1927 ☐ 1983

25.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Title:

Signature: Date:

e-mail address: Telephone:

NEW MEXICO OIL CONSERVATION COMMISSION

Well Location and Acreage Dedication Plat

Section A.

Date November 11, 1959

Operator Sunshine Royalty Company Lease Southern Union
Well No. 1 Unit Letter B Section 3 Township 29 North Range 13 West NMPM
Located 990 Feet From North Line, 1500 Feet From East Line
County San Juan G. L. Elevation 5610 Dedicated Acreage 300 N. 321.08 Acres
Name of Producing Formation Dakota Pool Undesignated

1. Is the Operator the only owner* in the dedicated acreage outlined on the plat below?
Yes _____ No X
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? Yes X No _____. If answer is "yes,"
Type of Consolidation Communitization Agreement
3. If the answer to question two is "no," list all the owners and their respective interests below:

Owner

Land Description

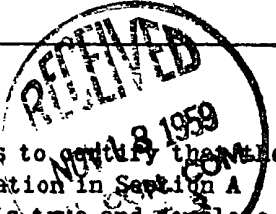
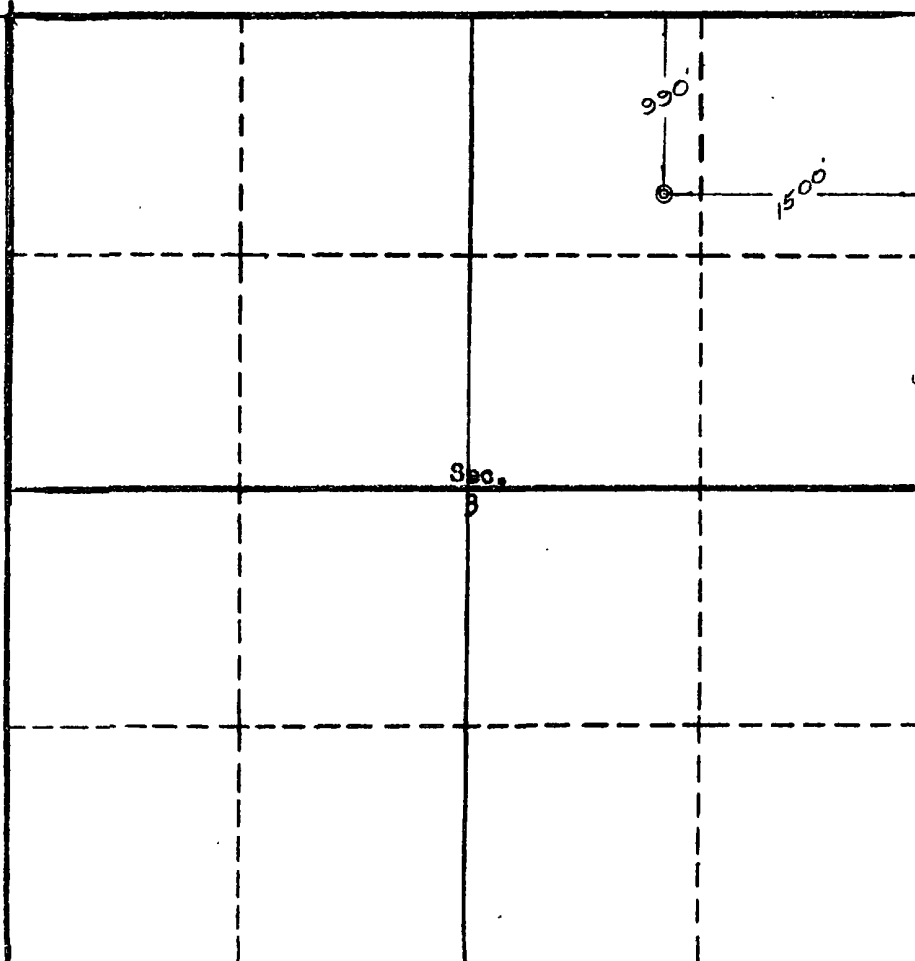
Sunshine Royalty Company

1/4, 1/2, 3/4 Sec. 3, T. 29N., R. 13W.,

Southern Union Gas Company

1/4, 1/2, 3/4 Sec. 3, T. 29N., R. 13W.

Section B



This is to certify that the information in Section A above is true and complete to the best of my knowledge and belief.

Sunshine Royalty Company

(Operator)

(Representative)

Box 5669, Roswell, N. M.

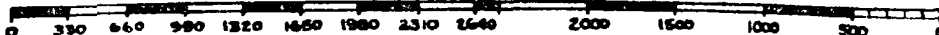
Address

This is to certify that the well location shown on the plat in Section B was obtained from field notes and actual surveys made by me or under my supervision and to the best of my knowledge and belief.

Date Surveyed Oct. 7, 1959

Ernest V. Echoshawk
Ernest V. Echoshawk
Registered Land Surveyor.

Certificate No. 1545



New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 29N Range: 13W Sections: 2,3,4,9,10,11

NAD27 X: Y: Zone: ☐ Search Radius:

County: ☐ Basin: ☐ Number: Suffix:

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

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

WATERS Menu

Help

WATER COLUMN REPORT 08/25/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)
 (quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water (in Column)
SJ 03272	29N	13W	02	1	3	3				140	35	105
SJ 03273	29N	13W	02	3	2	1				120	20	100
SJ 03288	29N	13W	02	3	4	1				120	90	30
SJ 02412	29N	13W	02	4	2					48	28	20
SJ 02750	29N	13W	02	4	2	4				59	18	41
SJ 02751	29N	13W	02	4	2	4				58	17	41
SJ 02281	29N	13W	02	4	3	4				59	30	29
SJ 02328	29N	13W	04	3	3					40	10	30
SJ 02899	29N	13W	04	3	3	3				45		
SJ 02730	29N	13W	04	3	3	3				40	16	24
SJ 02912	29N	13W	04	3	3	3				50		
SJ 01333	29N	13W	09	1	1					38	20	18
SJ 01038	29N	13W	09	1	1					42	10	32
SJ 01487	29N	13W	09	1	1					26	10	16
SJ 01556	29N	13W	09	1	1	3				27	10	17
SJ 03457	29N	13W	09	1	1	3				29	9	20
SJ 02386	29N	13W	09	1	1	4				30	10	20
SJ 02594	29N	13W	09	1	1	4				44	17	27
SJ 01779	29N	13W	09	1	4					31	11	20
SJ 00512	29N	13W	09	1	4	1				41	15	26
SJ 02209	29N	13W	09	1	4	1						
SJ 00957	29N	13W	09	4	3					74	20	54
SJ 00894	29N	13W	09	4	3	1				30	15	15
SJ 02712	29N	13W	09	4	3	3				90	50	40
SJ 02367	29N	13W	09	4	3	4				50	20	30
SJ 02052	29N	13W	10							68	22	46
SJ 00775	29N	13W	10	2	1	4				36	14	22
SJ 01271	29N	13W	10	2	2	4				60	30	30
SJ 03404	29N	13W	10	2	3	4				42	22	20
SJ 00852	29N	13W	10	2	4	2				50	24	26
SJ 01317	29N	13W	10	2	4	2				50	23	27
SJ 00314 X	29N	13W	10	2	4	2				58	38	20

SJ 01402	29N 13W 10 3 2	25	15	10
SJ 03311	29N 13W 10 3 2 1	42	20	22
SJ 03314	29N 13W 10 3 2 3	32	18	14
SJ 02935	29N 13W 10 3 2 4	100	10	90
SJ 03578	29N 13W 10 3 3 1	240	23	217
SJ 03297	29N 13W 10 3 3 2	29	9	20
SJ 00720	29N 13W 10 3 3 3	29	15	14
SJ 03332	29N 13W 10 4 2 3	60		
SJ 00776	29N 13W 10 4 4	25	10	15
SJ 02417	29N 13W 11 1 3 1	37	20	17
SJ 00955	29N 13W 11 1 4	59	30	29
SJ 02333	29N 13W 11 2 2 1	40	10	30
SJ 02136	29N 13W 11 2 2 2	50	20	30
SJ 01951	29N 13W 11 2 3	39	39	
SJ 02001	29N 13W 11 2 3	20	10	10
SJ 00758	29N 13W 11 2 3	35	15	20
SJ 00310	29N 13W 11 2 3 1	45	11	34
SJ 00301	29N 13W 11 3		20	
SJ 02795	29N 13W 11 4 4 1	180		

Record Count: 51

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

Township: 30N Range: 13W Sections: 33,34,35

NAD27 X: Y: Zone: ☐ Search Radius:

County: ☐ Basin: ☐ Number: Suffix:

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

WATER COLUMN REPORT 08/25/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are biggest to smallest)

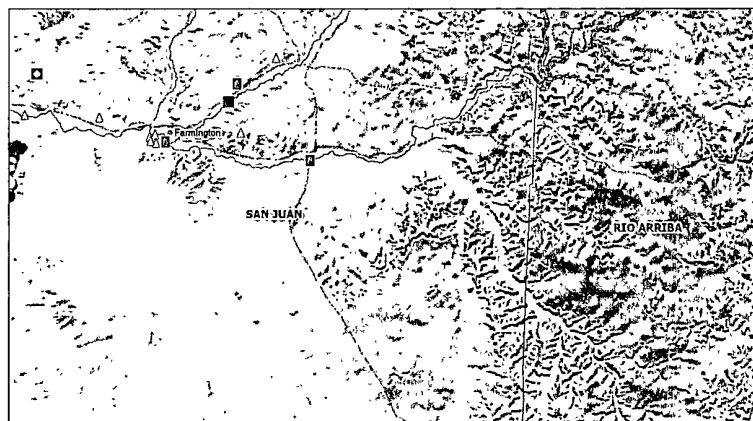
POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water (in Column
SJ 02391	30N	13W	35	1	1	1				260	200	60

Record Count: 1

San Juan Mines, Mills And Quarries Web Map

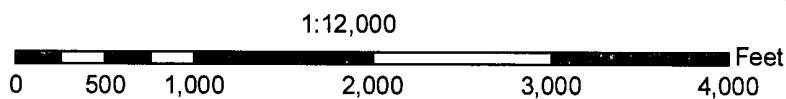
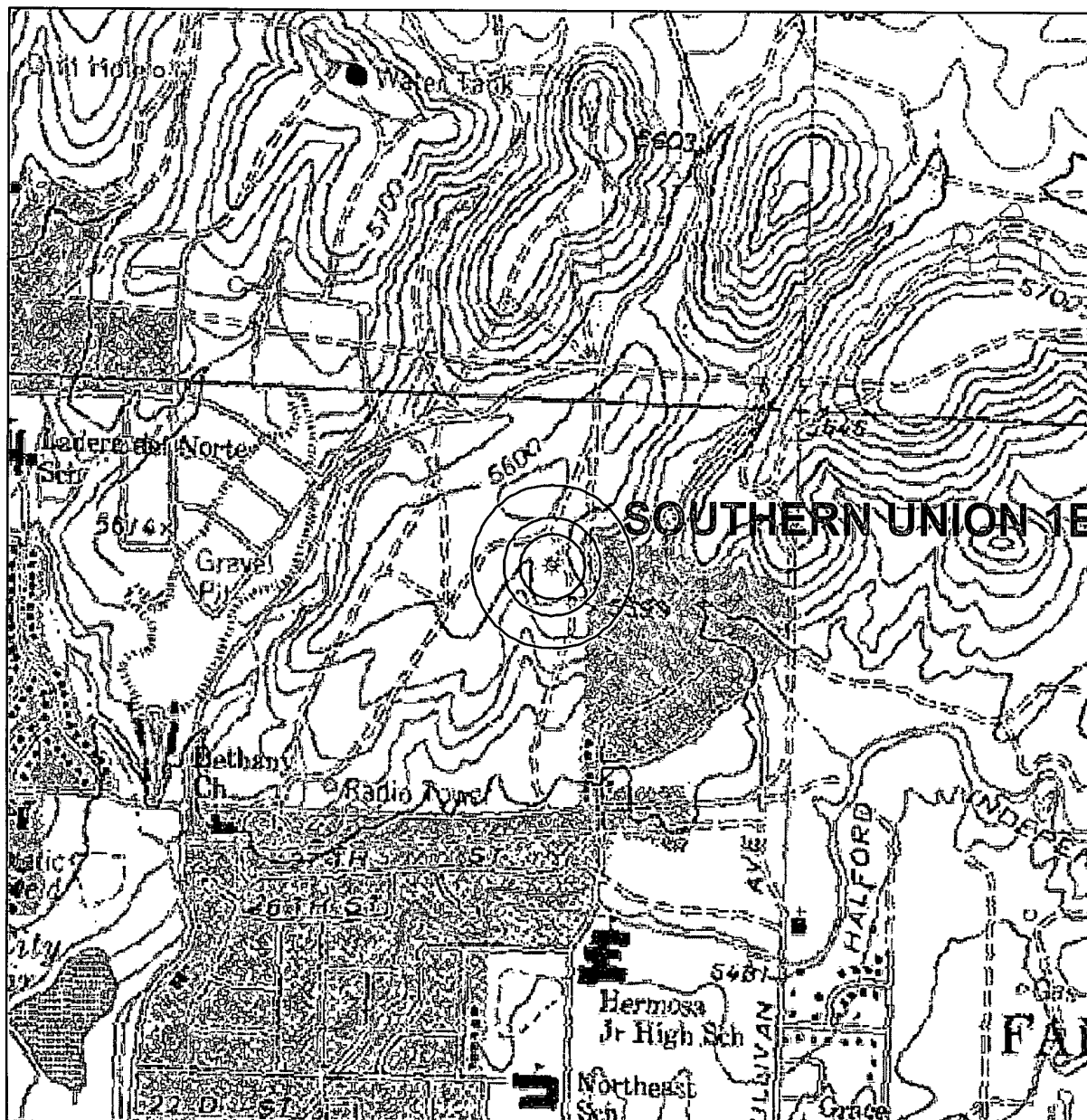
Mines, Mills & Quarries Commodity Groups

-  Aggregate & Stone Mines
-  Coal Mines
-  Industrial Minerals Mines
-  Industrial Minerals Mills
-  Metal Mines and Mill Concentrate
-  Potash Mines & Refineries
-  Smelters & Refinery Ops.
-  Uranium Mines



SCALE 1 : 1,065,032





Legend

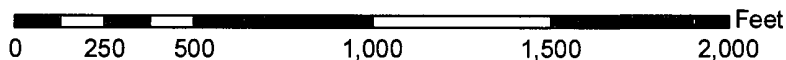
-  McElvain Well & 200' Radius
-  McElvain Well & 300' Radius
-  McElvain Well & 500' Radius

Source: USGS 1:24,000 Scale
Topographic Map Series

San Juan Basin
New Mexico
Township 29N 13W
Section 3



1:6,000

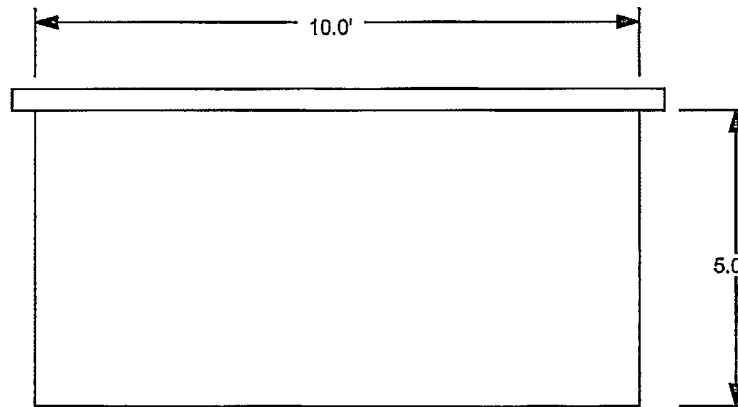
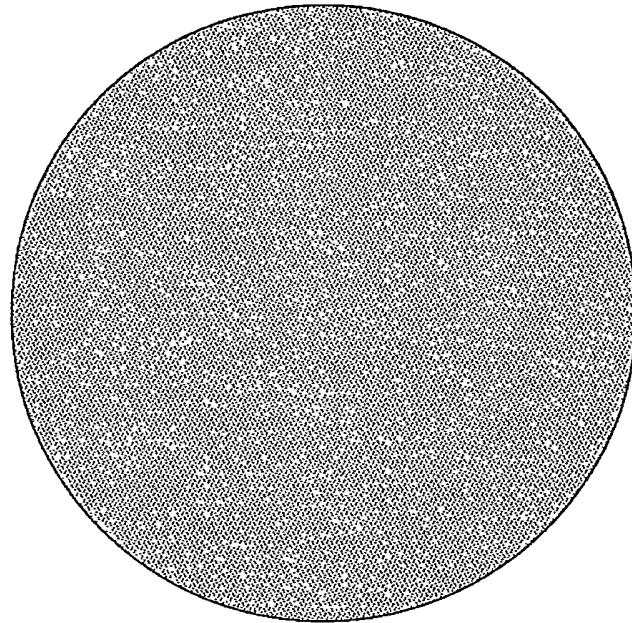


Legend

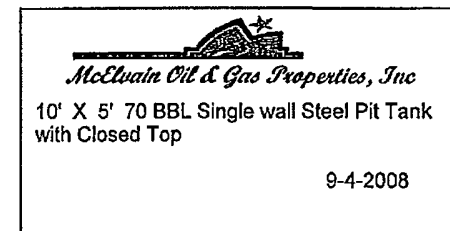
- McElvain Well & 300' Radius
- McElvain Well & 1000' Radius

Aerial Source: NM Resource Geographic Information System
 Program made available by the University of New Mexico
 and the State of New Mexico 2005-2006 vintage Digital
 Orthophoto Quarter-Quadrangles were derived from
 the New Mexico Statewide Orthophotography Project.
 Source imagery flown at 35,000' above average ground.

San Juan Basin
 New Mexico
 Township 29N 13W
 Section 3



Southern Union #1B



Siting Criteria Compliance Demonstrations

Southern Union #1B well is not located in an unstable area. The location is not over a mine and is not on the side of a hill. The location of the excavated pit material is not located within 300' of any continuously flowing watercourse or 200' from any other water course.

McElvain Oil & Gas Properties, Inc.
San Juan Basin
Below Grade Tank Design and Construction

In accordance with Rule 19.15.17 NMAC the following describes the as-built construction of the Below Grade Tank on the McElvain Oil & Gas Properties, Inc (MOG) Southern Union #1B well located in the NWNE of Sec 3, T29N, 13W.

As-built Installation:

1. The existing tank pit consists of an approximate 12 foot by 32 foot Wooden shored, earth walled, covered structure into which a 70 foot by 10 foot single walled, horizontal, 210 bbl steel tank is housed.
2. The tank walls are open for visual inspection to identify the occurrence of leaks.
3. The below grade horizontal tank is enclosed on three sides with wooden framing and covered with a wooden roof.
4. The tank pit is surrounded by a 30ft X 30ft X 2ft berm that is contained within a 50 ft X 140 ft berm that encloses the tank battery to prevent overflow or surface water run-on.
5. A general location sign is displayed on site.
6. The pit tank is fenced with 6 foot chain link.

McElvain Oil & Gas Properties, Inc.
San Juan Basin
Below Grade Tank Design and Construction

In accordance with Rule 19.15.17 NMAC the following describes the as-built construction of the Below Grade Tank on the McElvain Oil & Gas Properties, Inc (MOG) Southern Union #1B well located in the NWNE of Sec 3, T29N, 13W.

As-built Installation:

1. The existing tank pit consists of an approximate 15 foot by 15 foot by 2 foot earth walled excavation into which a 10 foot by 5 foot single walled, steel, 70 bbl tank is placed.
2. The tank walls are open for visual inspection to identify the occurrence of leaks.
3. The below grade tank has an expanded metal cover.
4. The tank pit is surrounded by a 30ft X 30ft X 2ft berm that is contained within a 50 ft X 140 ft berm that encloses the tank battery to prevent overflow or surface water run-on.
5. A general location sign is displayed on site.
6. The pit tank is fenced with 6 foot chain link.

McElvain Oil & Gas Properties, Inc.
San Juan Basin
Below Grade Tank Maintenance and Operating Plan

In accordance with Rule 19.15.17 NMAC the following describes the below grade tank operation and maintenance plan for the McElvain Oil & Gas Properties, Inc (MOG) on the Southern Union #1B well located in the NWNE of Sec 3, T29N, 13W.

General Plan:

1. MOG shall operate and maintain the below grade tank to contain liquids and solids and prevent contamination of fresh water to protect the public health and environment.
2. MOG shall not allow a below grade tank to overflow or allow surface water run-on to enter the below grade tank.
3. MOG shall continuously remove any visible or measurable layer of oil from the fluid surface of a below grade tank in an effort to prevent significant accumulation of oil over time.
4. MOG shall inspect the below grade tank monthly and maintain a written record of each inspection for five years.
5. MOG shall maintain adequate freeboard to prevent overtopping of the below grade tank.

McElvain Oil & Gas Properties, Inc.
San Juan Basin
Below Grade Tank Maintenance and Operating Plan

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5. MOG shall maintain adequate freeboard to prevent overtopping of the below grade tank.

McElvain Oil & Gas Properties, Inc.
San Juan Basin
Closure Plan

In accordance with Rule 19.15.17.1 NMAC the following procedure describes the closure plan for the McElvain Oil & Gas Properties, Inc (MOG) below grade tank on the Southern Union #1B well located in the NWNE of Sec 3, T29N, 13W.

Closure Requirements:

1. MOG shall close the 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.
2. MOG shall close an existing below grade tank that does not meet the requirements of Paragraph (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.
3. MOG shall close a permitted below grade tank within 60 days of cessation of the below ground tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on C-144.
4. All liquids will be removed from the temporary permit prior to closure and the liquids disposed of in a division approved facility.
5. MOG shall remove the below grade tank and dispose of it in a division approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.
6. MOG will remove any on-site equipment associated with the below grade tank unless the equipment is required for some other purpose.
7. MOG shall test the soils beneath the below grade tank to determine whether a release has occurred. MOG shall collect a five point composite sample and individual grab samples from any area that is wet, discolored, or showing other evidence of a release. The samples will be analyzed for BTEX, TPH, and chlorides to demonstrate that the benzene concentration as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration as determined by EPA method 418.1 or other EPA method that the division approves does not exceed 100 mg/kg; and the chloride concentration as determined by EPA

method 300.1 or other EPA method that the division approves does not exceed 250 mg/kg or the background concentration, whichever is greater. MOG shall notify the division of its results on form C-141.

8. If MOG or the division determines that a release has occurred, then MOG shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC as appropriate.
9. If contamination is confirmed by field sampling. MOG will follow the Guidelines For Remediation Of Leaks, Spills, and Releases NMOCD August 1993 when remediating identified contaminants.
10. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, then MOG shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; re-contour, and re-vegetate the site.
11. Notice of closure will be given to the Aztec Division office between 72 hours and one week of closure via email or verbally. The notification of closure will include the following:
 - Operator's name
 - Location by Unit Letter, Section Township, and Range.
 - Well name and API number
12. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the blow grade tank. The closure report will be filed on C-144 and incorporate the following:
 - Details on capping and covering where applicable
 - Inspection reports
 - Sampling results
13. The site will be re-contoured to match the surrounding area. Natural drainages will be unimpeded and erosion control will be utilized where necessary.
14. MOG shall seed the disturbed areas the first growing season with a division approved seed mixture after pit closure. Seeding will be accomplished by drilling on the contour whenever possible or by other division approved methods. Repeat seeding or planting will be continued until successful vegetative growth occurs.
15. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the thickness of the topsoil native to the area , whichever is greater.

16. The surface owner shall be notified of MOG's closing of the below grade tank as per the approved closure plan using certified mail with return receipt requested.

McElvain Oil & Gas Properties, Inc.
San Juan Basin
Closure Plan

In accordance with Rule 19.15.17.1 NMAC the following procedure describes the closure plan for the McElvain Oil & Gas Properties, Inc (MOG) below grade tank on the Southern Union #1B well located in the NWNE of Sec 3, T29N, 13W.

Closure Requirements:

1. MOG shall close the 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.
2. MOG shall close an existing below grade tank that does not meet the requirements of Paragraph (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.
3. MOG shall close a permitted below grade tank within 60 days of cessation of the below ground tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on C-144.
4. All liquids will be removed from the temporary permit prior to closure and the liquids disposed of in a division approved facility.
5. MOG shall remove the below grade tank and dispose of it in a division approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.
6. MOG will remove any on-site equipment associated with the below grade tank unless the equipment is required for some other purpose.
7. MOG shall test the soils beneath the below grade tank to determine whether a release has occurred. MOG shall collect a five point composite sample and individual grab samples from any area that is wet, discolored, or showing other evidence of a release. The samples will be analyzed for BTEX, TPH, and chlorides to demonstrate that the benzene concentration as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration as determined by EPA method 418.1 or other EPA method that the division approves does not exceed 100 mg/kg; and the chloride concentration as determined by EPA

method 300.1 or other EPA method that the division approves does not exceed 250 mg/kg or the background concentration, whichever is greater. MOG shall notify the division of its results on form C-141.

8. If MOG or the division determines that a release has occurred, then MOG shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC as appropriate.
9. If contamination is confirmed by field sampling. MOG will follow the Guidelines For Remediation Of Leaks, Spills, and Releases NMOCD August 1993 when remediating identified contaminants.
10. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, then MOG shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; re-contour, and re-vegetate the site.
11. Notice of closure will be given to the Aztec Division office between 72 hours and one week of closure via email or verbally. The notification of closure will include the following:
 - Operator's name
 - Location by Unit Letter, Section Township, and Range.
 - Well name and API number
12. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the blow grade tank. The closure report will be filed on C-144 and incorporate the following:
 - Details on capping and covering where applicable
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14. MOG shall seed the disturbed areas the first growing season with a division approved seed mixture after pit closure. Seeding will be accomplished by drilling on the contour whenever possible or by other division approved methods. Repeat seeding or planting will be continued until successful vegetative growth occurs.
15. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the thickness of the topsoil native to the area , whichever is greater.

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Hydrogeological Report For

Southern Union #1B

Surface Formation:

Kirtland Formation

Regional and Local Geology

The late Cretaceous Kirtland Formation is of Mesozoic age and represents an upper coastal or alluvial-plain deposit landward of the Fruitland coal swamp environment. The Kirtland Formation conformably overlies the Fruitland Formation, and in most of the San Juan Basin is unconformably overlain by the Tertiary Ojo Alamo. In this area, where buried, the Ojo Alamo interfingers with the Tertiary Nacimiento; therefore, both the Ojo Alamo and Nacimiento come in contact with the Kirtland Formation (Baltz, 1967). The Kirtland Formation outcrops along almost the entire inner margin of the San Juan Basin. In the north and east the formation outcrops in a thin band, but in a much wider swath to the south and west.

Fassett & Hinds (1971) divided the Kirtland into three members: the lower shale member, the Farmington Sandstone Member, and the upper shale member. The lower shale is a continental flood plain deposit consisting predominantly of shale containing a few thin interbeds of siltstone and sandstone. The Farmington and upper shale are composed of a series of interbedded, small, channel sandstone beds and flood plain shales. In this area, local conglomeratic beds and shales occur in the Farmington and upper shale. Little carbonaceous shale or coal is present in the Kirtland, distinguishing it from the underlying Fruitland Formation which was also deposited in a fluvial environment.

The Farmington Sandstone Member of the Kirtland Formation predominantly contains water but has produced gas and oil from small stratigraphic traps yielding low reserves.

Hydraulic Properties

In the northwest, west and south the Kirtland is mapped separately from the Fruitland. In the northeast and eastern regions of the San Juan Basin the Kirtland is mapped with the Fruitland in an undivided unit (Fassett and Hinds, 1971). The Kirtland and Fruitland have similar hydrologic properties. Stone et al. (1983) stated the transmissivity of the "Kirtland Shale-Fruitland Formation" to be less than $10 \text{ ft}^2/\text{d}$ with a specific conductance averaging over 5000 μmhos (Stone et al., 1983). The Kirtland and Fruitland Formations are also important because they are the principal "aquifers" disturbed by mining of coal in the Fruitland Formation (Stone et al., 1983).

Hydrology & Conclusion

A records search of the NM Office of the State Engineer iWaters database was conducted on a 9-section area centered on the section in which lies the Southern Union #1B well location, 29N 13W section 3. 30 wells with depth to water records were identified. The range of 'average depth to water' is great due to drastic changes in elevation in the area.

The water wells located near the Halford Independent Ditch (as it is named on topography maps) have an average depth to water of 23' at an elevation of 5480' (water table elevation calculates to 5457'). The one well located to the north of the Southern Union #1B at a higher elevation of 5700' records 200' depth to water (water table elevation calculates to 5500').

The water table elevation shows a very gradual change in water table elevation allowing the following calculation: the wells located around the Halford Independent Ditch are 130' lower in ground elevation than the Southern Union #1B. The Southern Union #1B ground elevation is 5610'; the difference

between the two elevations, plus the depth to water/water table calculates to a depth to water of 153' at the Southern Union #1B location.

References

Baltz, E.H., 1967, Stratigraphy and Regional Tectonic Implications of Part of Upper Cretaceous Rocks, East-Central San Juan Basin, New Mexico, USGS Professional Paper 552, 101p.

Fassett, J.E., and Hinds, J.S., 1971, Geology and Fuel Resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado, USGS Professional Paper 676, 76p.

Scholle, P.A., 2003, Geologic Map of New Mexico 1:500,000, NM Bureau of Geology and Mineral Resources, published in cooperation with the USGS, 2 sheets.

Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and water resources of San Juan Basin, New Mexico, New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 6, 70p.

BGT Closure Sampling Required by NMOCD

Components	Method	Limit
Benzene	EPA SW-846 8021B or 8260B	0.2 mg/Kg
BTEX	EPA SW-846 8021B or 8260B	50 mg/Kg
TPH	EPA SW-846 418.1	100 mg/Kg
Chlorides	EPA 300.1	250 mg/Kg