

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.

2436

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

Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
 Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

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

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

Operator: McElvain Oil & Gas Properties, Inc. OGRID #: 22044
Address: 1050 17th Street, Suite 1800
Facility or well name: Reya #1S Pit permit Approved 5/2/2008 to extend pit to 11/27/2008
API Number: 30-045-32846 OCD Permit Number: _____
U/L or Qtr/Qtr D Section 20 Township 30N Range 13W County: San Juan
Center of Proposed Design: Latitude 36.80374 N Longitude -108.23437W NAD: 1927 1983
Surface Owner: Federal State Private Tribal Trust or Indian Allotment

Pit: Subsection F or G of 19.15.17.11 NMAC
Temporary: Drilling Workover
 Permanent Emergency Cavitation Steel Pit
 Lined Unlined
Liner type: Thickness 12 mil LLDPE HDPE PVC
 Other Woven CD12WB String-Reinforced
Seams: Welded Factory Other _____
Volume: 2850 bbl Dimensions: L 80 x W 25 x D 8

Closed-loop System: Subsection H of 19.15.17.11 NMAC
 Drying Pad Tanks Haul-off Bins Other _____
 Lined Unlined
Liner type: Thickness _____ mil LLDPE HDPE PVC
 Other _____
Seams: Welded Factory Other _____
Volume: _____ bbl _____ yd³
Dimensions: Length _____ x Width _____

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

Fencing: Subsection D of 19.15.17.11 NMAC
 Chain link, six feet in height, two strands of barbed wire at top
 Four foot height, four strands of barbed wire evenly spaced between one and four feet **Four Feet -Hog wire- 1 Strand Barbed Wire - top**
Netting: Subsection E of 19.15.17.11 NMAC
 Screen Netting Other _____
 Monthly inspections
Signs: Subsection C of 19.15.17.11 NMAC
 12'x24', 2' lettering, providing Operator's name, site location, and emergency telephone numbers
 Signed in compliance with 19.15.3.103 NMAC

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

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.



Siting Criteria (regarding permitting): 19.15.17.10 NMAC

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

- | | |
|--|--|
| Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).
- Topographic map; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> NA |
| Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.
(Applies to permanent pits)
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> NA |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.
- Written confirmation or verification from the municipality; Written approval obtained from the municipality | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within 500 feet of a wetland.
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within the area overlying a subsurface mine.
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within an unstable area.
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within a 100-year floodplain.
- FEMA map | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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
 - Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 NMAC
 - Siting Criteria Compliance Demonstrations (required 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 - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- NMAC
- Previously Approved Design (attach copy of design) API Number: _____

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 (I) 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

Proposed Closure: 19.15.17.13 NMAC

- Type: Drilling Workover Emergency Cavitation 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)

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 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> 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 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> 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 | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> 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 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.
- Written confirmation or verification from the municipality; Written approval obtained from the municipality | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within 500 feet of a wetland.
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within the area overlying a subsurface mine.
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within an unstable area.
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within a 100-year floodplain.
- FEMA map | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

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

Waste Removal Closure For Closed-loop Systems That Utilize 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.*

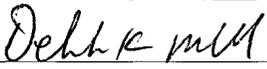
Disposal Facility Name: JFJ Land Farm Disposal Facility Permit Number: NM1-10-B

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.*

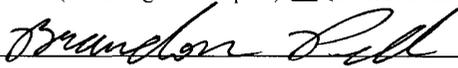
- Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- Construction and Design of Burial Trench (if applicable) based upon the appropriate 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

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:  Date: 7/15/2008 re-10/31/2008
e-mail address: DebbyP@McElvain.com Telephone: 303-893-0933

OCD Approval: Permit Application (including closure plan) Closure Plan (only)

OCD Representative Signature:  Approval Date: 11-10-08
Title: Enviro/spec OCD Permit Number: _____

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

Closure Completion Date: _____

Closure Method:

- Waste Excavation and Removal On-Site Closure Method Alternative Closure Method
- If different from approved plan, please explain.

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
- Proof of Deed Notice (if applicable)
- Plot Plan
- Confirmation Sampling Analytical Results
- Waste Material Sampling Analytical Results
- Disposal Facility Name and Permit Number
- Soil Backfilling and Cover Installation
- Re-vegetation Application Rates and Seeding Technique
- Site Reclamation (Photo Documentation)

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

Operator Closure Certification:

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

Name (Print): _____ Title: _____
Signature: _____ Date: _____
e-mail address: _____ Telephone: _____

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

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

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-32846	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 36593	⁵ Property Name Reya	
⁷ OGRID No. 22044	⁸ Operator Name McElvain Oil & Gas Properties, Inc.	⁶ Well Number 1S ⁹ Elevation 5533

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	20	30N	13W		840	North	720	West	San Juan

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

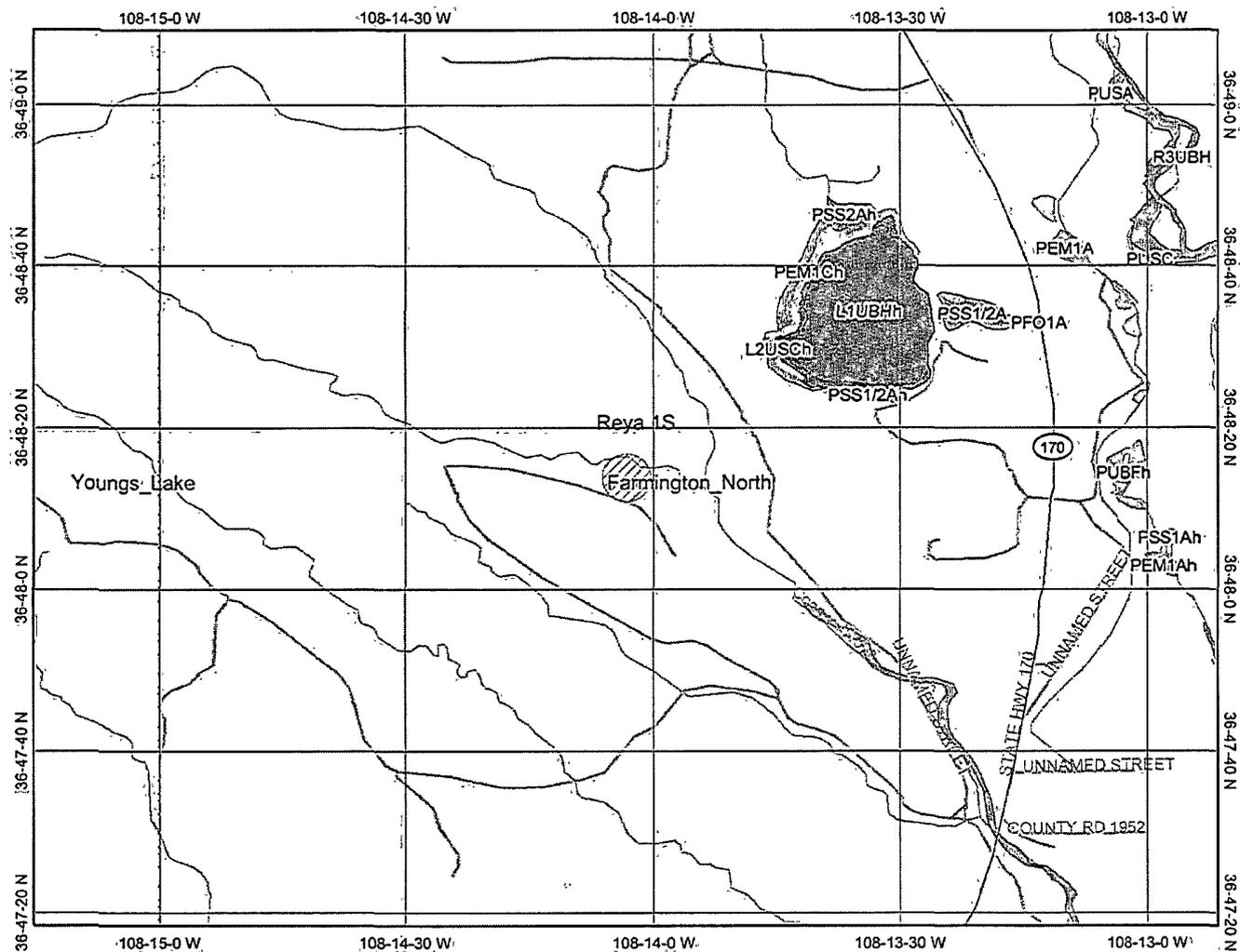
RCVD MAR 14 '08

¹² Dedicated Acres 320	¹³ Joint or Infill Y	¹⁴ Consolidation Code	¹⁵ Order No.
OIL CONS. DIV.			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division. **DIST. 3**

<p>¹⁰</p> <p style="text-align: center;">NMNM09867</p> <p style="text-align: center;">FEE</p>	<p>¹⁷ OPERATOR CERTIFICATION</p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the department.</i></p> <p style="text-align: right;"> Signature Date 3-11-08 </p> <p>John D. Steuble Printed Name</p>
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <p>12-27-04 Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>Original signed by Edgar Risenhoover 5979</p> <p>Certificate Number</p>

Reya #1S NWNW Sec 20, T30N, R13W



Legend

- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- NHD Streams
- Counties 100K
- South America
- North America

Map center: 36° 48' 14" N, 108° 14' 3" W

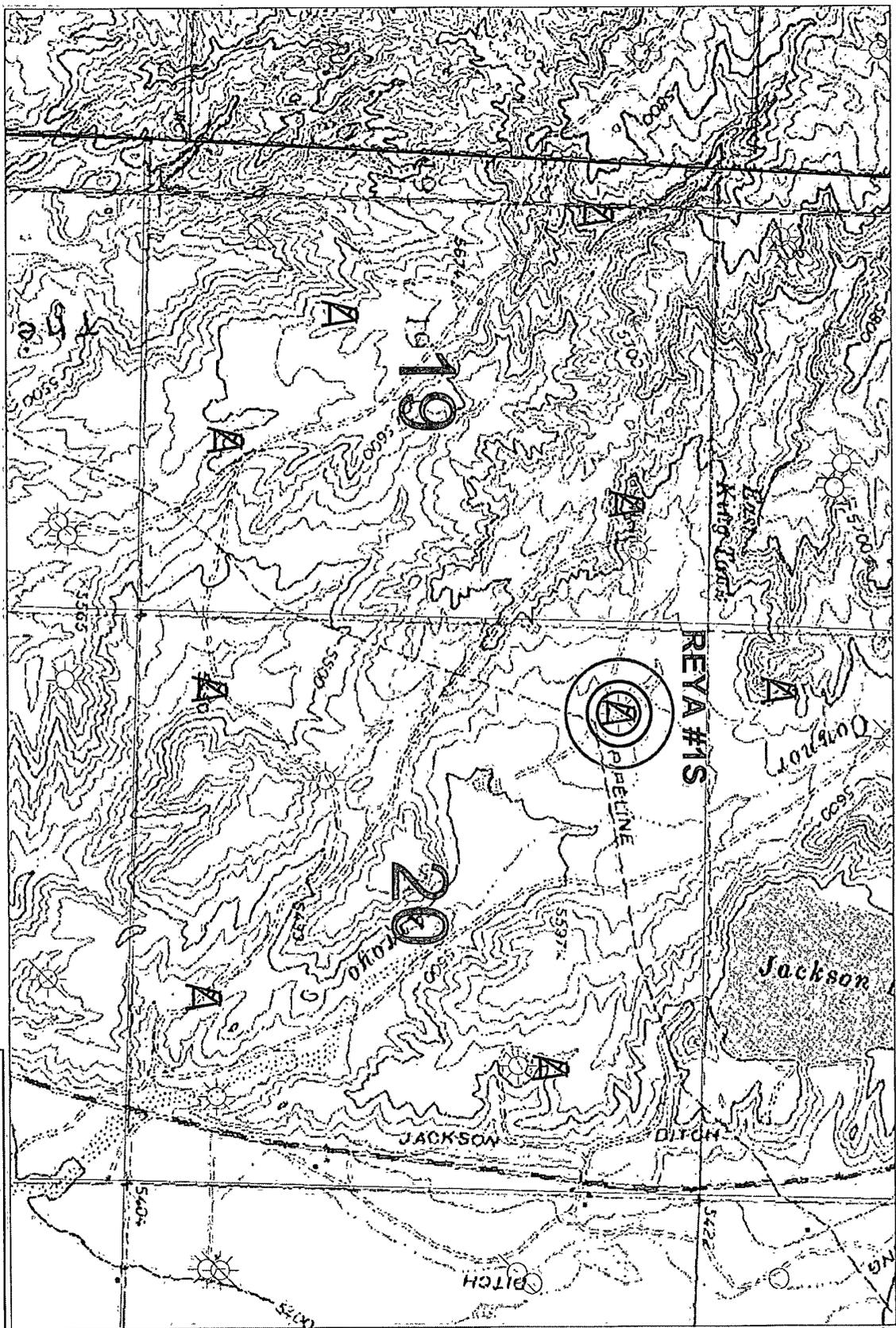


Scale: 1:24,000

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

Notes: Wetlands data acquired from U.S. Fish and Wildlife - 300 ft radius circle.

- 200 FT
- 300 FT
- 500 FT

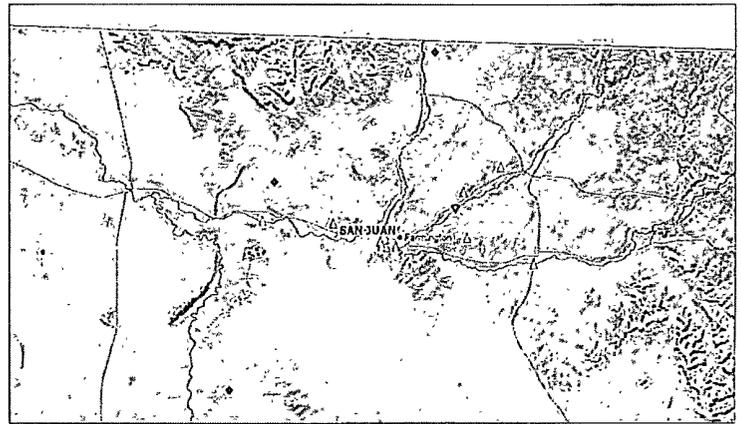


	
Melikoun Oil and Gas Properties, Inc.	
San Juan Basin Project Farnsworth Area REVA #1S	
Copyright: (1983)	Date: 12/16/2010 1500/1500/2010

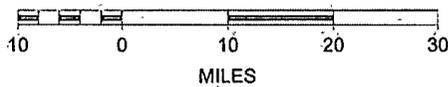
MMQonline Public Version

Mines, Mills & Quarries Commodity Groups

- △ Aggregate & Stone Mines
- ◇ Coal Mines
- ☆ Industrial Minerals Mines
- ▽ Industrial Minerals Mills
- ☒ Metal Mines and Mill Concentrate
- ⊠ Potash Mines & Refineries
- Ⓜ Smelters & Refinery Ops.
- ✱ Uranium Mines



SCALE 1 : 1,078,252



New Mexico Office of the State Engineer
 POD Reports and Downloads

Township: Range: Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

WATER COLUMN REPORT 10/27/2008

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

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water (in feet) Column
RG 22431	30N	13W	30	2						100	45	55
SJ 02943	30N	13W	17	2	1	2				60		
SJ 03029	30N	13W	17	2	2	1				65	45	20
SJ 03017	30N	13W	17	2	4	2				37	20	17
SJ 02574	30N	13W	17	2	4	4				26	9	17
SJ 00992	30N	13W	28	2	1	1				624	306	318
SJ 00992 CLW303071	30N	13W	28	2	1	2				624	306	318
SJ 00262	30N	13W	29	2						38	25	13
SJ 00868	30N	13W	29	2						49	25	24
SJ 01357	30N	13W	29	2	2					71	56	15
SJ 01040	30N	13W	29	2	2					49	20	29
SJ 03046	30N	13W	29	2	2	4				80	30	50
SJ 01502	30N	13W	29	4						47	20	27
SJ 00448	30N	13W	29	4						45	20	25
SJ 02159	30N	13W	29	4	3					40	15	25
SJ 00215	30N	13W	29	4	3					55	35	20
SJ 02754	30N	13W	29	4	4	4				65	65	
SJ 00467	30N	13W	30	4	4					36	21	15

Record Count: 18

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: Range: Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

WATER COLUMN REPORT 10/27/2008

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

POD Number	Tws	Rng	Sec	q	q	Zone	X	Y	Depth Well	Depth Water	Water (in feet) Column
------------	-----	-----	-----	---	---	------	---	---	------------	-------------	------------------------

No Records found, try again

Hydrogeological Report For

Reya #1S

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 ft²/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

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 Reya #1S well location, 30N 13W section 20. In section 17, 7 water wells were located. Average depth of water in these wells is 25', minimum 9'. In section 28, one well was located; depth of water was found at 306'. In section 29, 13 wells were located; average depth of water is 31', minimum 15'. All but one well are domestic/private water wells, the one is commercial. All wells are located no closer than 5000' from the Reya #1S.

Conclusion

Based on topography and iWaters data, water depths in wells are found close to the La Plata River surface elevation. These wells are within 3500' lateral distance of the La Plata River. The Reya #1S is

located approx. 7000' from the La Plata River and 150' above the river's elevation. Considering a semi-horizontal water table, water depth at the Reya #1S location should be at 150'.

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.

McElvain Oil & Gas Properties, Inc.
San Juan Basin
Dig and Haul Pit Closure Plan

In accordance with Rule 19.15.17.13 NMAC the following procedure describes the closure plan for the McElvain Oil & Gas temporary pit on the Reya #1S well located in the NWNW of Sec 20, T30N, 13W.

Closure Requirements:

1. All free liquids will be removed at the start of the pit closure process from the pit and disposed of in a division-approved facility.
2. The NMOCD district office will be notified at least 72 hours but no greater than one week in advance prior to on-site closure. Notice will include operator name, API number, and location (unit letter, section, township, and range).
3. The surface owner will be notified of closing of the temporary pit as per the approved closure plan by certified mail, return receipt requested.
4. All contents of the temporary pit including the pit liner will be excavated and hauled to the JFJ Land Farm disposal facility located on CR 3150.
5. A minimum five point composite sample from the soil under the pit will be analyzed for benzene, the GRO and DRO combined fraction, BTEX, TPH, and chlorides to demonstrate that the levels do not exceed the standards as specified in 19.15.17.13 B(1)(b) or the background concentration, whichever is greater.

Components	Test Method	Limit (mg/kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8031B or 8260B	50
TPH	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	500
Chlorides	EPA 300.1	1000/500

6. Upon testing standards being passed, the pit area will be backfilled with compacted, non-waste containing earthen material. The cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.
7. Re-contouring of the location will match fit, shape, line, form and texture of the surrounding area. Re-shaping will include drainage control, prevent

ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface fitting the natural landscape.

8. Notification will be sent to the OCD when the reclaimed area is seeded.
9. The area will be re-seeded to comply with Subsections G, H, and I of 19.15.17.13 NMAC. Re-seeding will be repeated until 70% of the native natural cover is achieved and maintained for two consecutive growing seasons. The seeding method will be to drill on contour whenever possible.
10. The NMOCD will be notified once successful re-vegetation has been achieved.
11. A steel marker will be set at the center of the on-site burial following the pit closure. The marker will be 24" X 24" and will have the operator name, lease name, well number, location (UL, Sec., Twp., and Rge) and will designate "on-site burial location" lettering welded on the top side with a 4" threaded collar welded to the bottom side. The marker will be set at ground level and attached to a 4" diameter pipe that is cemented in a hole three feet deep. When the well is abandoned, a 4" diameter steel marker extending 4' above ground level will be welded to the pipe anchored in cement below the surface. The riser will have lettering welded on the side showing operator name, well number, location (US, Sec., Twp., Rge.) and that it designates an on-site burial location.
12. Upon approval the reserve pit will be closed within 60 days from the OCD approval date.

Siting Criteria Compliance Demonstrations

The Reya #1S 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 will be excavated and hauled due to the siting criteria not being met.

McELVAIN OIL & GAS PROPERTIES, INC.

1050 17th Street, Suite 1800

Denver, CO 80265

October 30, 2008

VIA CERTIFIED MAIL- RETURN RECEIPT REQUESTED

7000-1670-0008-8577-2411

City of Farmington
800 Municipal Drive
Farmington, NM 87401

Attn: Community Development Dept.

RE: Reya #1S
NWNW Sec 20 T30N R13W
San Juan County, New Mexico

Dear Landowner,

Pursuant to paragraph 1 (b) of subsection F of 19.15.17.13 NMAC, an operator shall provide the surface owner of the operator's proposal to close the temporary pit on-site in compliance with the dig and haul closure methods specified in the same subsection of the NMAC. In compliance of this requirement, please consider this notification of McElvain's intent to close the temporary pit on the above referenced location.

If you have any questions please contact Ron Millet @ 303-893-0933
ex 375.

Sincerely



Deborah Powell
Engineering Tech Supervisor