

DATE IN 9/9/16	SUSPENSE	ENGINEER PRG	LOGGED IN 9/12/16	TYPE SWD	APP NO. PKSC 1625631018
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ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
**- Engineering Bureau -**  
 1220 South St. Francis Drive, Santa Fe, NM 87505



**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

**[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]**  
**[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]**  
**[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]**  
**[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]**  
**[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]**  
**[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]**

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A] SWD 1650  
(371115)  
 [A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD Rockcliff Operating New Mexico LLC  
McCloy State SWD 1 (30-005-29214)  
SWD; Devonian-Silurian (9686A)

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement  
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify \_\_\_\_\_

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply  
 [A] ☒ Working, Royalty or Overriding Royalty Interest Owners  
 [B] ☒ Offset Operators, Leaseholders or Surface Owner  
 [C] ☒ Application is One Which Requires Published Legal Notice  
 [D] ☒ Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office  
 [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,  
 [F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Brian Wood

Print or Type Name

Signature

Consultant

Title

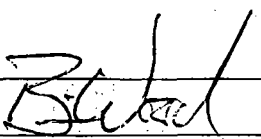
9-9-16

Date

brian@permitswest.com

e-mail Address

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance XXX Disposal Storage  
Application qualifies for administrative approval? Yes No
- II. OPERATOR: ROCKCLIFF OPERATING NEW MEXICO LLC  
ADDRESS: 1301 MCKINNEY, SUITE 1300, HOUSTON TX 77010  
CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-8120
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? Yes XXX No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
- McCloy State SWD 1**  
**30-005-29214**  
**SWD; Devonian-Silurian**
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: BRIAN WOOD  TITLE: CONSULTANT  
SIGNATURE: \_\_\_\_\_ DATE: SEPT. 8, 2016  
E-MAIL ADDRESS: brian@permitswest.com
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

### III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

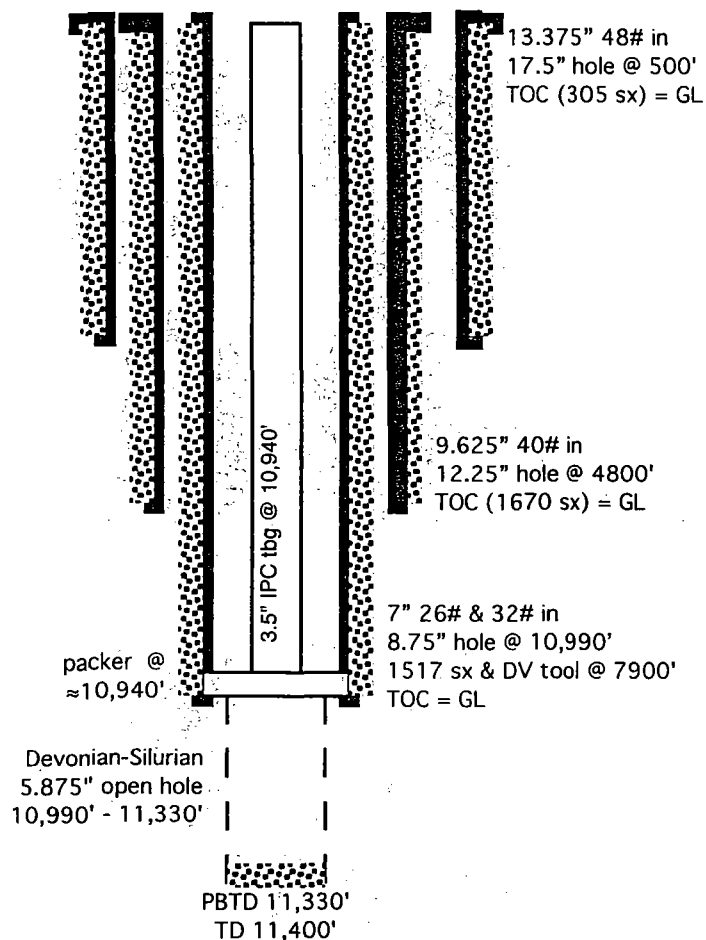
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NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

## INJECTION WELL DATA SHEET

OPERATOR: ROCKCLIFF OPERATING NEW MEXICO LLCWELL NAME & NUMBER: McCLOY STATE SWD 1WELL LOCATION: 220 FSL & 2080 FWL  
FOOTAGE LOCATIONN  
UNIT LETTER15  
SECTION8 S  
TOWNSHIP32 E  
RANGEWELLBORE SCHEMATIC

(not to scale)

WELL CONSTRUCTION DATASurface Casing

Hole Size: 17.5" Casing Size: 13.375"  
 Cemented with: 305 sx. or                      ft<sup>3</sup>  
 Top of Cement: SURFACE Method Determined: CIRCULATE

Intermediate Casing

Hole Size: 12.25" Casing Size: 9.625"  
 Cemented with: 1670 sx. or                      ft<sup>3</sup>  
 Top of Cement: SURFACE Method Determined: CIRCULATE

Production Casing

Hole Size: 8.75" Casing Size: 7"  
 Cemented with: 1517 sx. or                      ft<sup>3</sup>  
 Top of Cement: SURFACE Method Determined: CBL

Total Depth: 10990' (csg), 11330' (PBTD), & 11400' (TD)Injection Interval5.875" HOLE SIZE 10990 feet to 11330'(Perforated or Open Hole; indicate which)

**INJECTION WELL DATA SHEET**Tubing Size: 3.5" Lining Material: PLASTICType of Packer: 7" X 3.5" NICKEL PLATED &/OR STAINLESS STEELPacker Setting Depth: ≈10,940'

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

**Additional Data**

1. Is this a new well drilled for injection? XXX Yes        No

If no, for what purpose was the well originally drilled? \_\_\_\_\_

2. Name of the Injection Formation: DEVONIAN & SILURIAN

3. Name of Field or Pool (if applicable): SWD; DEVONIAN-SILURIAN (97869)

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. N/A

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: \_\_\_\_\_

OVER: SAN ANDRES (3410')UNDER: NONE

ROCKCLIFF OPERATING NEW MEXICO LLC  
McCLOY STATE SWD 1  
220' FSL & 2080' FWL  
SEC. 15, T. 8 S., R. 32 E.  
CHAVES COUNTY, NM

PAGE 1

30-005-29214

I. Plan is to drill an 11,400' deep saltwater disposal well. Proposed disposal interval will be 10,990' - 11,330' in the SWD; Devonian-Silurian (97869). See Exhibit A for map and Form C-102.

II. Operator: Rockcliff Operating New Mexico LLC  
Operator phone number: (713) 351-0500  
Operator address: 1301 McKinney, Suite 1300, Houston TX 77010  
Contact for Application: Brian Wood (Permits West, Inc.)  
Phone: (505) 466-8120

III. A. (1) Lease: New Mexico State Land Office lease V0-9935-0002  
Lease Size: 320.00 acres  
Closest Lease Line: 220'  
Lease Area: S2 Section 15, T. 8 S., R. 32 E.  
Well name and number: McCloy State SWD 1  
Location: 220' FSL & 2080' FWL Section 15, T. 8 S., R. 32 E.

A. (2) Surface casing (13.375", 48#, H-40, ST&C) will be set at 500' in a 17.5" hole and cemented to GL with 305 sacks Class C.

Intermediate casing (9.625", 40#, L-80, LT&C) will be set at 4,800' in a 12.25" hole and cemented to GL with 1670 sacks Class C.

First production casing (7", 26#, L-80, LT&C) will be set at 7,500' in an 8.75" hole.

Second production casing (7", 32#, L-80, LT&C) will be run from 7,500' to 10,990' in an 8.75" hole.

Production casing will be cemented to GL with 1517 sacks Class H. DV tool will be set at 7,900'.

ROCKCLIFF OPERATING NEW MEXICO LLC  
McCLOY STATE SWD 1  
220' FSL & 2080' FWL  
SEC. 15, T. 8 S., R. 32 E.  
CHAVES COUNTY, NM

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30-005-29214

A 5.875" open hole will be drilled from 10,990' to 11,400' (TD) and plugged back to 11,330'.

- A. (3) Tubing will be 3.5", N-80, 9.3#, IPC. Setting depth will be  $\approx 10,940'$ . (Disposal interval will be 10,990' to 11,330'.)
- A. (4) A retrievable nickel plated or stainless steel packer will be set at  $\approx 10,940'$  (or  $\leq 100'$  above the top of the open hole which will be at 10,990').
- B. (1) Disposal zone will be the Devonian (SWD; Devonian-Silurian (97869) pool). Estimated fracture gradient is  $\approx 0.65$  psi per foot.
- B. (2) Disposal interval will be open hole from 10,990' to 11,330'.
- B. (3) Well has not been drilled. It will be drilled as a saltwater disposal well.
- B. (4) No perforated intervals are in the well.
- B. (5) One existing well (30-005-21128) is in the area of review and it penetrated the Devonian. It was P&A without yielding any production from any zone. No oil or gas zone is above the Devonian or below the Silurian in the area of review. Closest Devonian producer (30-005-21071) is 7 miles northwest in E-29-7s-31e. Closest Silurian producer (30-005-63567) is 45 miles southwest in A-35-11s-26e.

IV. This is not an expansion of an existing injection project. It is disposal only.

V. Exhibit B shows the 2 existing wells (both P&A) within a half-mile radius. Exhibit C shows 25 existing wells (1 SWD + 4 oil wells + 20 P&A wells) within a 2-mile radius.

ROCKCLIFF OPERATING NEW MEXICO LLC  
 McCLOY STATE SWD 1  
 220' FSL & 2080' FWL  
 SEC. 15, T. 8 S., R. 32 E.  
 CHAVES COUNTY, NM

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Exhibits D and E shows all leases and lessors within a half-mile radius (only State) and two-mile radius (only fee, BLM, and State) leases within each radius. Details on the leases are:

Aliquot Parts in Area of Review (T8S, R32E)	Lessor	Lease	Lessee(s) of Record
S2SW4 & SWSE Sec. 15	NMSLO	V0-9923-0002	Rockcliff
S2 Sec. 15	NMSLO	V0-9935-0002	Rockcliff
E2SE4 Sec. 16	NMSLO	unleased	N/A
E2NE4 Sec. 21	NMSLO	VB-2620-0002	Rockcliff
N2 Sec. 22	NMSLO	V0-9936-0002	Rockcliff

VI. Two wells are within a half-mile radius, one of which penetrated the Devonian. A table abstracting the penetrator is in Exhibit F, which also has the P&A diagram for that well. The closest wells are:

API	WHO	UL-SECTION-T8S-R32E	TVD	WELL	STATUS	ZONE(S) OF INTEREST	FEET FROM McCLOY STATE SWD 1
3000510046	Coastal	P-15	9095'	Bell State 1	P&A	San Andres & Penn	2577
3000521128	Apache	M-22	10877'	State 22-1	P&A	San Andres - Penn	2595
3000510028	Bell	P-16	4600'	State 1	P&A	San Andres	2775

- VII. 1. Average injection rate will be  $\approx 15,000$  bwpd.  
 Maximum injection rate will be  $\approx 20,000$  bwpd.
2. System will be open and closed. Some water will be trucked and some will be piped.
3. Average injection pressure will be  $\approx 2,000$  psi and maximum will be 2,198 psi ( $= 0.2$  psi/foot  $\times 10,990'$  (top of open hole)).



ROCKCLIFF OPERATING NEW MEXICO LLC  
McCLOY STATE SWD 1  
220' FSL & 2080' FWL  
SEC. 15, T. 8 S., R. 32 E.  
CHAVES COUNTY, NM

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4. Main source of disposal water will be water produced from San Andres wells. A San Andres well (30-005-10458) 1-1/2 miles southwest found TDS at 243,827 mg/l and chlorides at 147,000 mg/l. However, water produced from other Permian Basin zones could also be disposed.
5. Closest (7 miles northwest in E-29-7s-31e) Devonian producer is Lee's McCombs 1 (30-005-21071). It is in the Lone Wolf; Devonian (Gas) Pool (80490). Closest (45 miles southwest in A-35-11s-26e) Silurian producer is Yates' Luminary BAU Federal Com 2 (30-005-63567). It is in the Wildcat; Silurian (Gas) Pool (96079). Three Devonian water analyses are in Exhibit G.

VIII. The Silurian-Devonian ( $\approx 344'$  thick) is highly permeable fractured and vuggy limestone and dolomite. Closest possible underground source of drinking water above the proposed disposal interval are the  $\approx 1600'$  deep red beds at the surface. State Engineer records (Exhibit H) show 3 water wells within 2 miles. Deepest of those 3 wells is 180'. No underground source of drinking water is below the proposed disposal interval.

Estimated formation tops are:

Quaternary = 0'  
Rustler = 1681'  
Salado = 1800'  
Yates = 2231'  
Queen = 2927'  
San Andres = 3410'  
Glorieta = 4787'  
Yeso = 4886'  
Tubb = 6283'  
Abo = 7140'  
Wolfcamp = 8081'  
Penn = 8744'  
Mississippian = 10282'  
Woodford = 10803'

ROCKCLIFF OPERATING NEW MEXICO LLC  
McCLOY STATE SWD 1  
220' FSL & 2080' FWL  
SEC. 15, T. 8 S., R. 32 E.  
CHAVES COUNTY, NM

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Siluro-Devonian = 10988'  
*disposal interval = 10990' - 11330'*  
Montoya = 11332'  
TD = 11400'

No water wells are within a 1-mile radius according to State Engineer records (Exhibit H). However, a water well not in State Engineer records was found within a mile (Exhibit H) on August 13, 2016. This windmill (Sweetwater Well on USGS map) is 0.7 mile west and was sampled. A water well (RA 12225) 1.04 miles southeast was also sampled. There will be  $\approx 9,300'$  of vertical separation, including 550' of salt and anhydrite and 185' of shale, between the bottom of the only likely underground water source (red beds) and the top of the Devonian.

IX. The well will be stimulated with acid if needed.

X. Triple combo logs will be run.

XI. Based on an August 13, 2016 field inspection, one water well is within a mile radius and it was sampled. A second well, 1.04 miles from the proposed disposal well, was also sampled. Analyses are in Exhibit H.

XII. Closest Quaternary fault (Guadalupe) is  $\approx 114$  miles southwest (Exhibit I). Rockcliff Operating New Mexico LLC is not aware of any geologic or engineering data that may indicate the Silurian or Devonian are in hydrologic connection with any underground sources of water. Hundreds of feet of evaporites and shale prevent that from occurring. Deepest water well within a 2-mile radius is 180' (Exhibit G). There are 144 approved Devonian saltwater disposal wells, 5 approved Silurian disposal wells, and 11 approved Devonian water injection wells in New Mexico. Four of the Devonian SWD wells also dispose into the Silurian.

ROCKCLIFF OPERATING NEW MEXICO LLC  
McCLOY STATE SWD 1  
220' FSL & 2080' FWL  
SEC. 15, T. 8 S., R. 32 E.  
CHAVES COUNTY, NM

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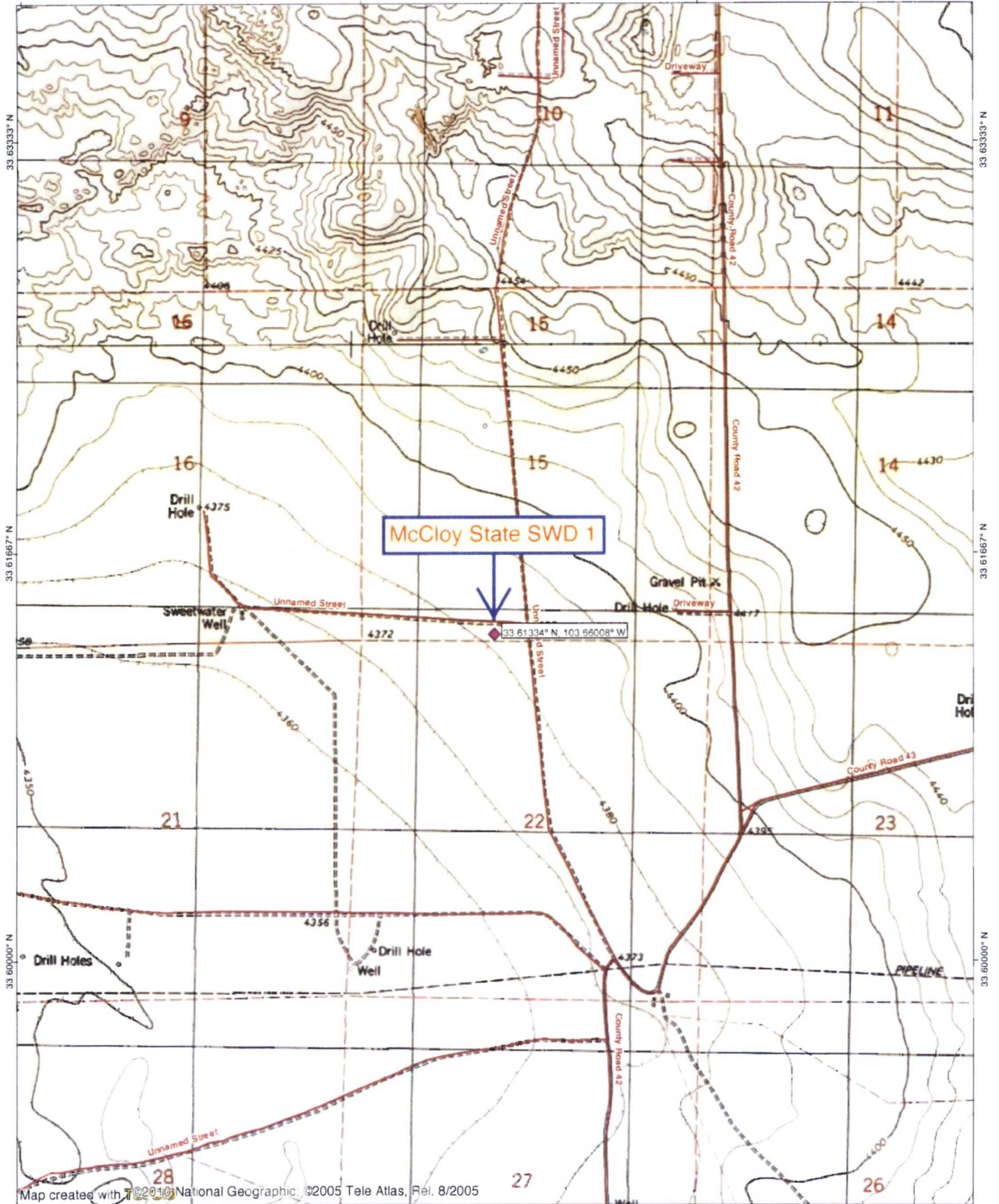
30-005-29214

XIII. A legal ad (see Exhibit J) was published on August 12, 2016. Notice (this application) has been sent (Exhibit K) to the surface owner (NM State Land Office), lessees (only Rockcliff), and unleased mineral owners (only NM State Land Office) within a half-mile. There are no well operators within a half-mile.

103.68333° W

103.66667° W

WGS84 103.65000° W



Map created with TOPO! National Geographic, ©2005 Tele Atlas, Rel. 8/2005

103.68333° W

103.66667° W

WGS84 103.65000° W

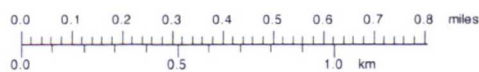


EXHIBIT A

TN MN

7°

09/04/16

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**District III**  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**District IV**  
1320 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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 August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number <b>30-005-29214</b>	<sup>2</sup> Pool Code <b>97869</b>	<sup>3</sup> Pool Name <b>SWD; Devonian-Silurian</b>
<sup>4</sup> Property Code <b>316772</b>	<sup>5</sup> Property Name <b>MCCLOY STATE SWD</b>	
<sup>7</sup> OGRID No. <b>371115</b>	<sup>6</sup> Operator Name <b>Rockcliff Operating New Mexico LLC</b>	
		<sup>8</sup> Well Number <b>1</b>
		<sup>9</sup> Elevation <b>4387'</b>

**<sup>10</sup> Surface Location**

UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
N	15	8 SOUTH	32 EAST, N.M.P.M.		220'	SOUTH	2080'	WEST	CHAVES

**<sup>11</sup> Bottom Hole Location If Different From Surface**

UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
N	15	8 SOUTH	32 EAST, N.M.P.M.		220'	SOUTH	2080'	WEST	CHAVES

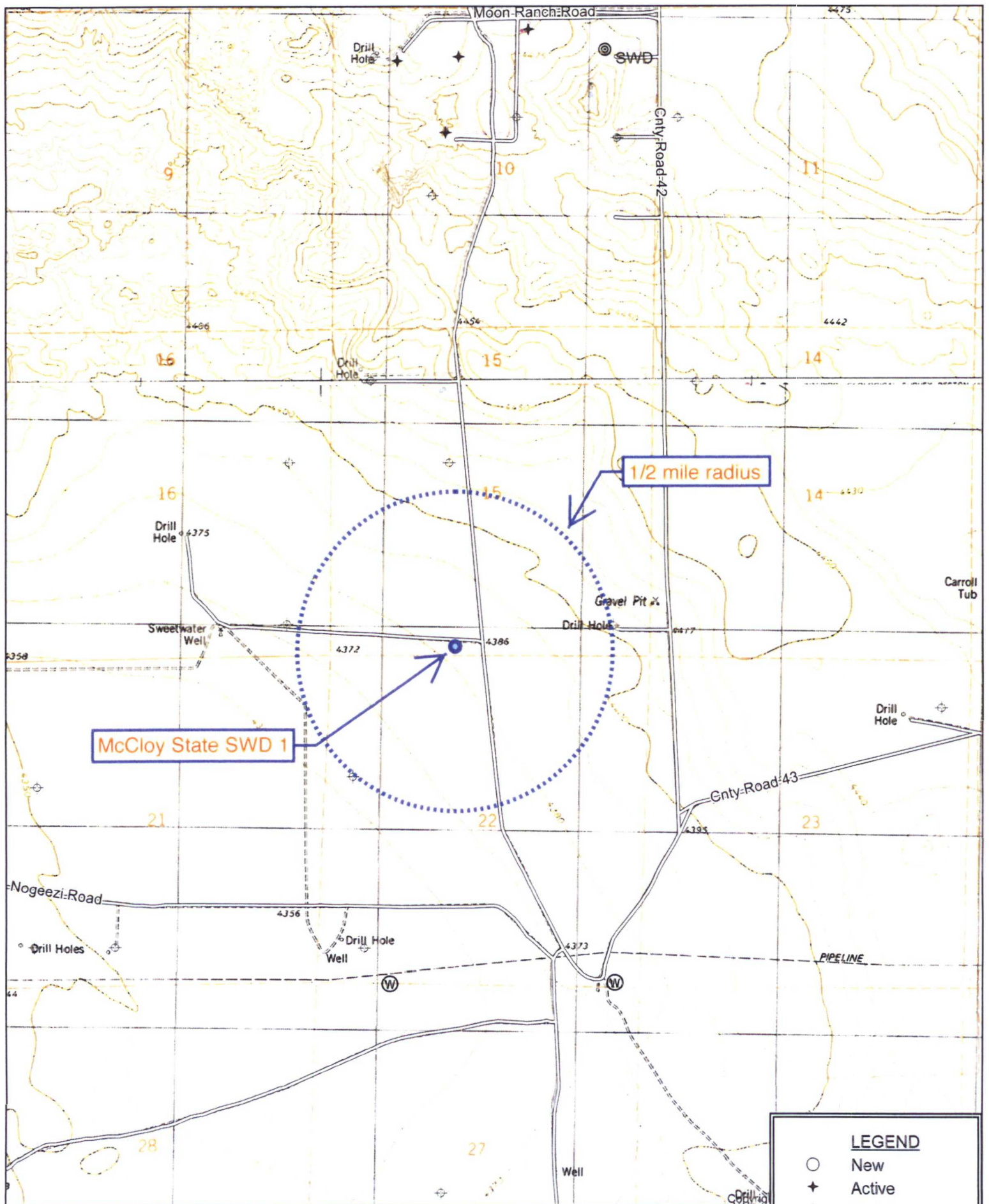
<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.

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.

	<p><b><sup>1</sup> OPERATOR CERTIFICATION</b></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 undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well in this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>Signature: <i>Brian Wood</i> Date: <b>8-28-16</b></p> <p>Printed Name: <b>Brian Wood</b></p> <p>E-mail Address: <b>brian@permitswest.com</b></p> <p><b><sup>16</sup> SURVEYOR CERTIFICATION</b></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>Date of Survey: <b>7-19-2016</b></p> <p>Signature and Seal of Professional Surveyor: <i>[Signature]</i></p> <p>Certificate Number: <b>23006</b></p>
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EXHIBIT A





McClary State SWD 1

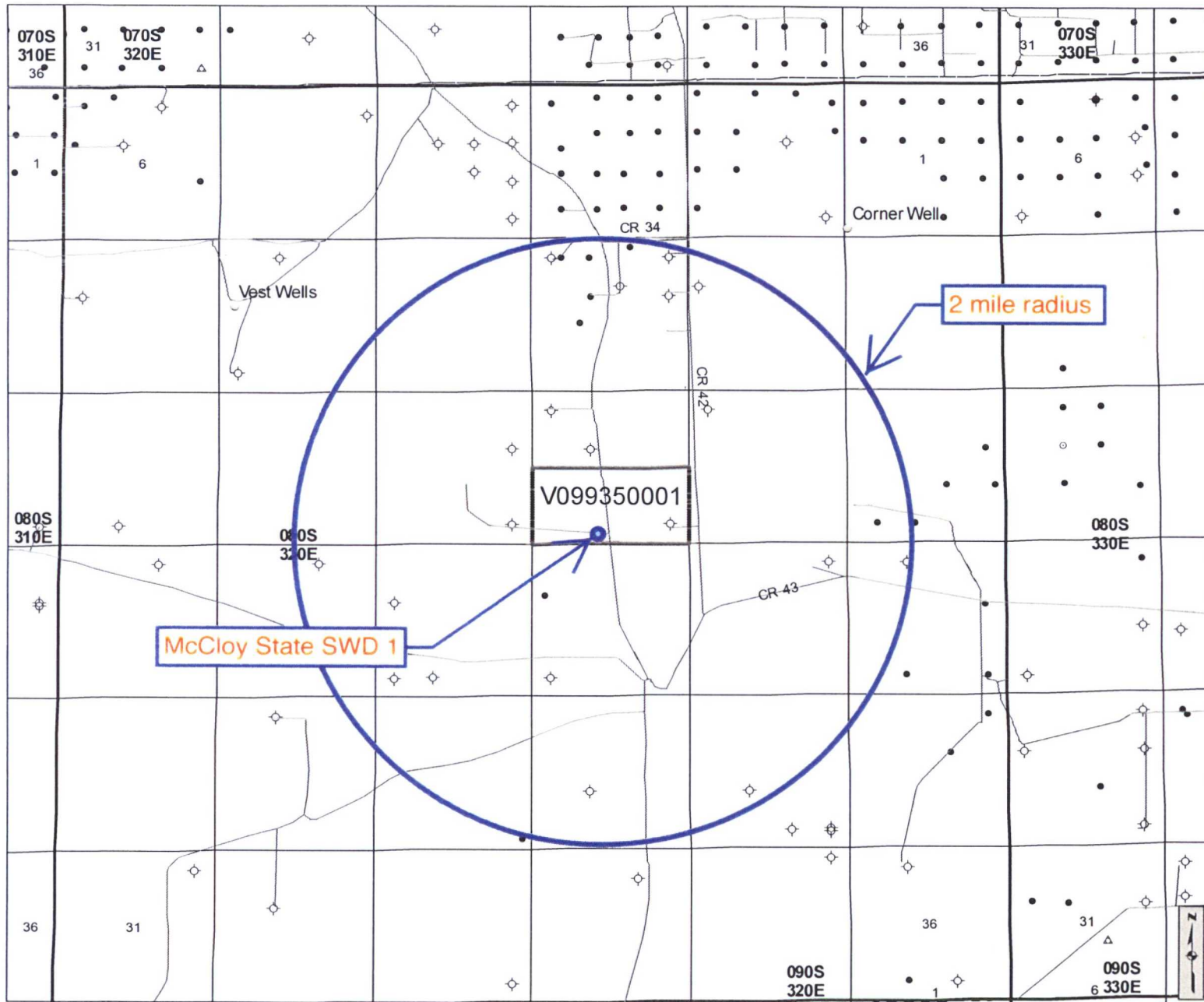
1/2 mile radius

Quad: BUTTON MESA SOUTH  
Scale: 1 inch = 2,000 ft.

EXHIBIT B

**LEGEND**

- New
- ★ Active
- P&A
- ⊙ INJ
- ⊗ SWD
- Ⓜ Water



#### Cartographic Features

- County Boundaries
- County Seats
- City, Town or Village
- SLO District Offices
- SLO District Boundary
- Hwy Mileposts
- Interstate
- US Hwy
- NM Hwy
- Local Road
- Continental Divide

#### Federal Minerals Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

#### State Trust Lands

- Surface Estate
- Subsurface Estate
- Surface and Subsurface Estate

#### State Leases

- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

#### Oil and Gas Related Features

- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- Volcanic Vents
- NMOC D Order R-111-P Potash Enclave Outline

#### NMOC D Oil and Gas Wells

- CO<sub>2</sub>
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

## New Mexico State Land Office Oil, Gas and Minerals

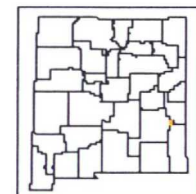
0 0.2 0.4 0.8 1.2 1.6 Miles  
Universal Transverse Mercator Projection, Zone 13  
1983 North American Datum

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Land Office Geographic Information Center  
logic@slo.state.nm.us

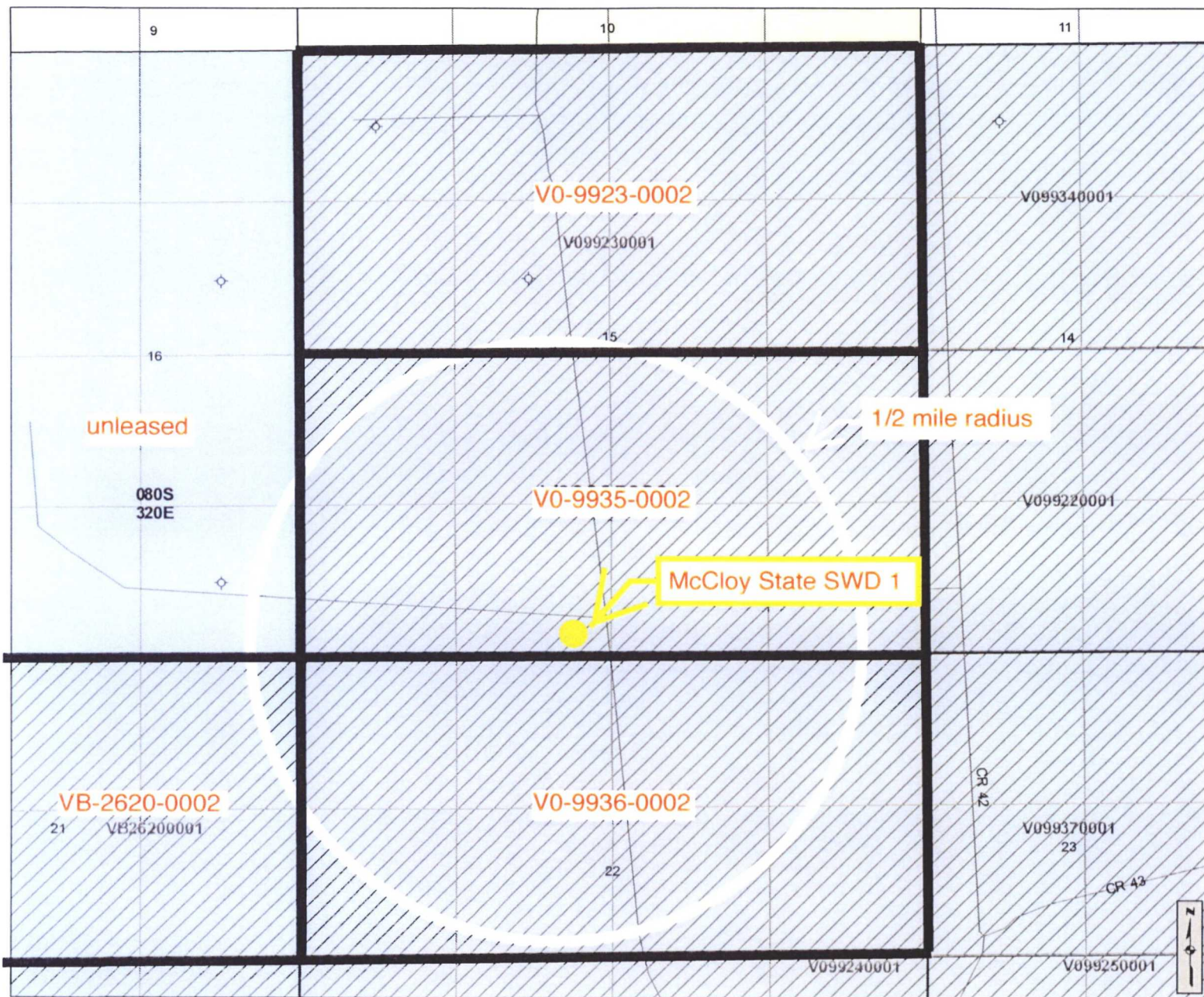
Created On: 9/4/2016 12:54:08 PM

**EXHIBIT C**



[www.nmstatelands.org](http://www.nmstatelands.org)





### Cartographic Features

- County Boundaries
- County Seats
- City, Town or Village
- SLO District Offices
- SLO District Boundary
- Hwy Mileposts
- Interstate
- NM Hwy
- Local Road
- Continental Divide
- US Hwy

### Federal Minerals Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

### State Trust Lands

- Surface Estate
- Subsurface Estate
- Surface and Subsurface Estate

### State Leases

- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

### Oil and Gas Related Features

- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- Volcanic Vents
- NMOCD Order R-111-P
- Potash Enclave Outline

### NMOCD Oil and Gas Wells

- CO<sub>2</sub>
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

## New Mexico State Land Office Oil, Gas and Minerals

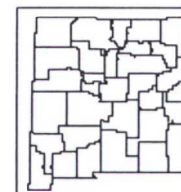
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Universal Transverse Mercator Projection, Zone 13  
1983 North American Datum

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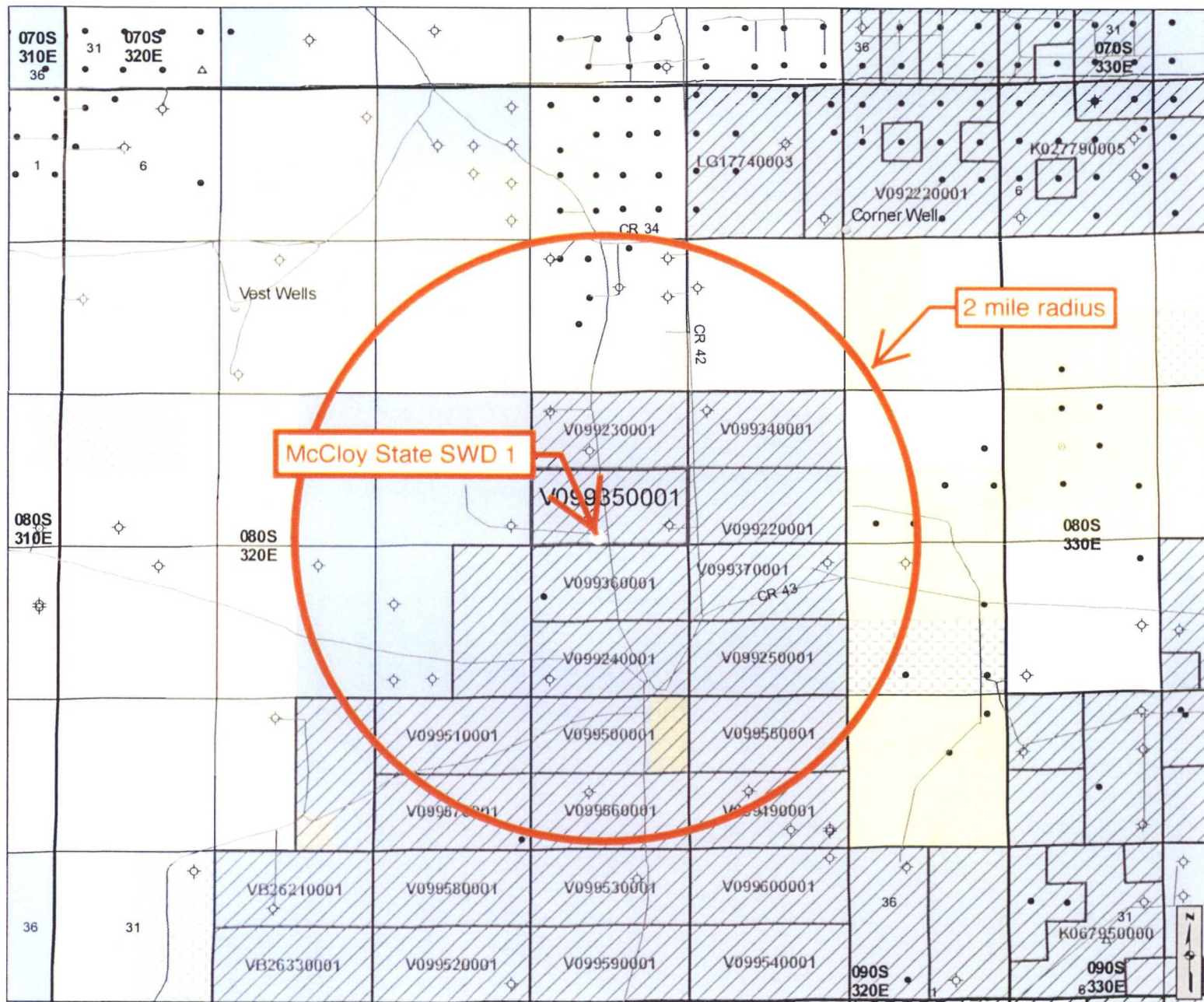
Created On: 9-4-2016 1:17:39 PM

**EXHIBIT D**



[www.nmstatelands.org](http://www.nmstatelands.org)





### Cartographic Features

- County Boundaries
- County Seats
- City, Town or Village
- SLO District Offices
- SLO District Boundary
- Hwy Mileposts
- Interstate
- NM Hwy
- US Hwy
- Local Road
- Continental Divide

### Federal Minerals Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

### State Trust Lands

- Surface Estate
- Subsurface Estate
- Surface and Subsurface Estate

### State Leases

- Oil and Gas Leases
- Agricultural Leases
- Commercial Leases
- Minerals Leases
- Not Available for Oil and Gas Leasing
- Oil and Gas Leasing Influenced by Restriction

### Oil and Gas Related Features

- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- Volcanic Vents
- NMOCD Order R-111-P
- Potash Enclave Outline

### NMOCD Oil and Gas Wells

- CO<sub>2</sub>
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

## New Mexico State Land Office Oil, Gas and Minerals

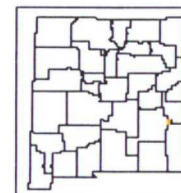
0 0.2 0.4 0.8 1.2 1.6 Miles  
Universal Transverse Mercator Projection, Zone 13  
1983 North American Datum

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loginc@slo.state.nm.us

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EXHIBIT E



www.nmstatelands.org

Devonian Penetrators within 1/2 Mile of McCloy State SWD 1

WELL	SPUD	TD	POOL	STATUS	HOLE O.D.	CASING O.D.	SET	CEMENT	TOC
State 22-1	8/10/94	10877'	wildcat	P&A	17.5	13.375	406	415 sx	no report
30-005-21128	PLUG				12.25	8.625	3819	1115 sx	no report
M-22-8s-32e	9/28/94				7.875	long	string	not	run

State 22-1  
30-005-21128  
M-22-8s-32e  
Roosevelt County NM  
spud: 8-10-94  
plug 9-28-94

(not to scale)

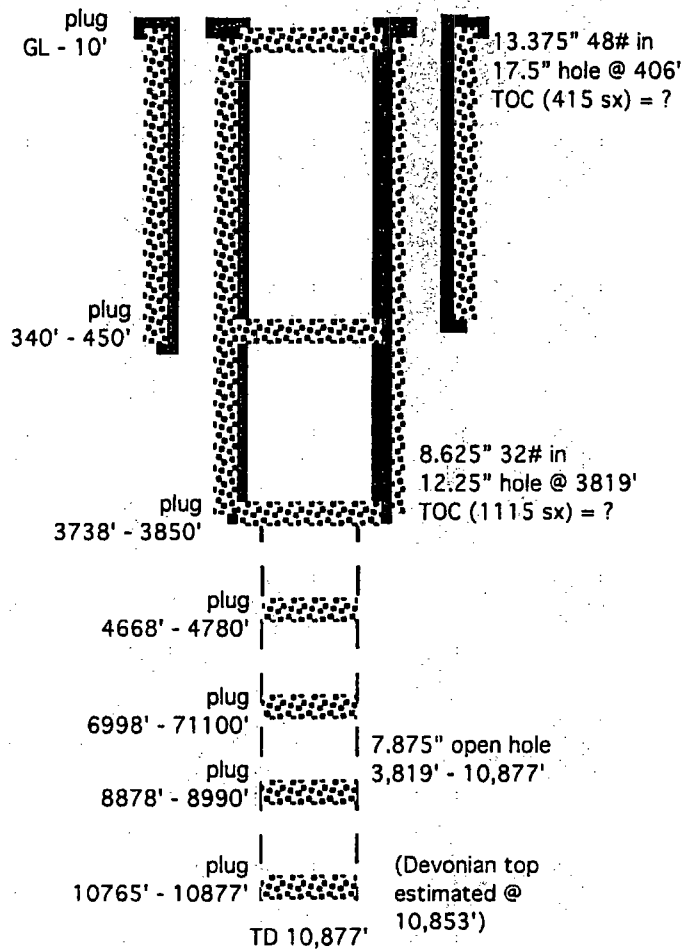


EXHIBIT F

HALLIBURTON DIVISION LABORATORY  
HALLIBURTON COMPANY  
MIDLAND DIVISION

CASE NO. 3971

## LABORATORY WATER ANALYSIS

No. 11-22-68

To Bill McCoy

San Andres water

Date 11-22-68Roswell, New Mexico

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or utilized without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or persons and employees thereof receiving such report from Halliburton Company.

Submitted by \_\_\_\_\_

Date Rec. 11-22-68

Well No. \_\_\_\_\_

Depth \_\_\_\_\_

Formation \_\_\_\_\_

County \_\_\_\_\_

Field \_\_\_\_\_

Source \_\_\_\_\_

Southern Minerals  
"C" Lease

Resistivity \_\_\_\_\_

.048 @ 71 F.

Specific Gravity \_\_\_\_\_

1.178

pH \_\_\_\_\_

5.7

Calcium (Ca) \_\_\_\_\_

28,000

Magnesium (Mg) \_\_\_\_\_

9,600

Chlorides (Cl) \_\_\_\_\_

161,500Sulfates (SO<sub>4</sub>) \_\_\_\_\_120Bicarbonates (HCO<sub>3</sub>) \_\_\_\_\_390

Soluble Iron (Fe) \_\_\_\_\_

N11Sulfides (H<sub>2</sub>S) \_\_\_\_\_5

from well file  
30-005-10478  
C-1-8s-33e  
R-3615  
Case 3971

BEFORE EXAMINER USE	
OIL CONSERVATION	4
APP. EXAMINER	
CASE NO.	3971

Remarks:

\*Milligrams per liter

Respectfully submitted,

Analyst: Whitfield

HALLIBURTON COMPANY

cc:

By Frank Whitfield

DIVISION CHEMIST

## NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

EXHIBIT G

from well file  
SWD-651  
30-005-62523

## Devonian

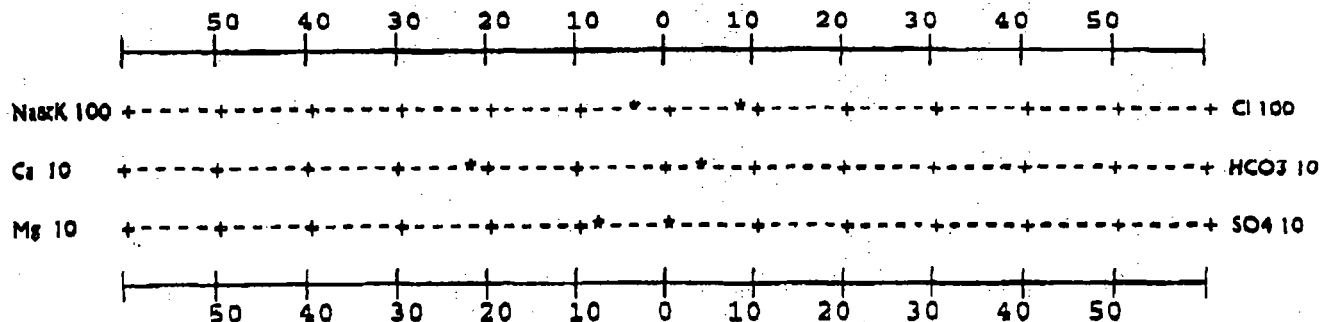
ANALYSIS #: ATO10037

DEPTH:  
DATE SAMPLED: 10/22/96  
DATE RECEIVED: 10/23/96  
SUBMITTED BY: John Gray  
WORKED BY: Mike Hill  
PHONE #: (505) 746-2757

## PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY:	1.030 @ 70 °F	PH:	7.2
RESISTIVITY (CALC.)	: .115 OHMS @ 75 °F		
IRON (FE++):	3 PPM	SULFATE:	194 PPM
CALCIUM:	4350 PPM	TOTAL HARDNESS:	14660 PPM
MAGNESIUM:	920 PPM	BICARBONATE:	1925 PPM
CHLORIDE:	26208 PPM	SODIUM CHLORIDE (CALC)	43112 PPM
SODIUM+POTASS:	11086 PPM	TOT. DISSOLVED SOLIDS:	54073 PPM

## STIFF TYPE PLOT (IN MEQ/L)



Mike Hill

EXHIBIT G

# HALLIBURTON ENERGY SERVICES

from well file  
SWD-651  
30-005-62523

## WATER ANALYSIS

Devonian

Artesia, NM LAB

ANALYSIS #: ATO10037

### GENERAL INFORMATION

OPERATOR: Marbob Energy	DEPTH:
WELL: Charlie St # 1	DATE SAMPLED: 10/22/96
FIELD: 30-005-62980	DATE RECEIVED: 10/23/96
FORMATION: B-33-12s-28e	SUBMITTED BY: John Gray
COUNTY:	WORKED BY: Mike Hill
STATE:	PHONE #: (505) 746-2757

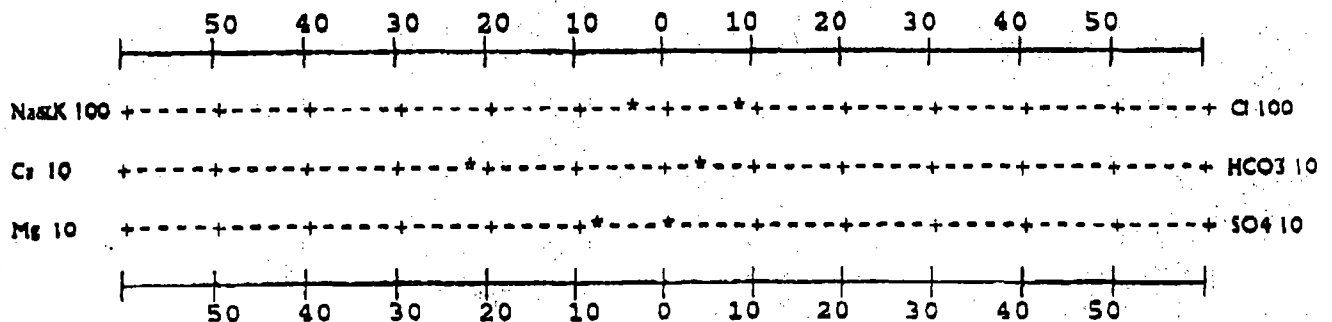
SAMPLE DESCRIPTION: *25% Emulsion, Most likely Due to Iron Contaminant*

### PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY: 1.025 @ 70 °F	PH: 7.2
RESISTIVITY (CALC. ): .115 OHMS @ 75 °F	
IRON (FE++): 25 PPM	SULFATE: 390 PPM
CALCIUM: 4488 PPM	TOTAL HARDNESS: 15122 PPM
MAGNESIUM: 948 PPM	BICARBONATE: 1934 PPM
CHLORIDE: 25360 PPM	SODIUM CHLORIDE (CALC): 41717 PPM
SODIUM+POTASS: 10421 PPM	TOT. DISSOLVED SOLIDS: 53228 PPM

REMARKS:

### STIFF TYPE PLOT (IN MEQ/L)



ANALYST

Mike Hill

EXHIBIT G

# HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

ARTESIA DISTRICT

## LABORATORY REPORT

from well file  
SWD-651  
30-005-62523

No. W146-89

TO Hanagan Petroleum  
P. O. Box 1737  
Roswell, NM 88201

Date May 1, 1989

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Submitted by \_\_\_\_\_ Date Rec. April 28, 1989

Well No. Long Arroyo #2 30-005-62523 Depth \_\_\_\_\_ Formation Devonian  
Field \_\_\_\_\_ K-33-12s-28e County \_\_\_\_\_ Source Swab

Resistivity ..... .195 @ 60°  
Specific Gravity .. 1.025 @ 60°  
pH ..... 7.0  
Calcium ..... 3,800  
Magnesium ..... 800  
Chlorides ..... 22,000  
Sulfates ..... 1,600  
Bicarbonates ..... 900  
Soluble Iron ..... 150

Remarks:

EXHIBIT G

*Art Carrasco*  
Respectfully submitted

Analyst: Art Carrasco - District Engineer

HALLIBURTON SERVICES

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from well file  
SWD-651  
30-005-62523

Devonian **Water Comparison Table**

	Devonian Long Arroyo #2	Devonian Ramos #1	Devonian Charlie St. #1
<b>Resistivity</b>	<b>.195@60</b>	<b>.115@75</b>	<b>.115@75</b>
<b>Specific Gravity</b>	<b>1.025@60</b>	<b>1.030@75</b>	<b>1.025@75</b>
<b>pH</b>	<b>7.0</b>	<b>7.2</b>	<b>7.5</b>
<b>Calcium</b>	<b>3800ppm</b>	<b>4350ppm</b>	<b>4488ppm</b>
<b>Magnesium</b>	<b>800ppm</b>	<b>920ppm</b>	<b>948ppm</b>
<b>Chlorides</b>	<b>22000ppm</b>	<b>26208ppm</b>	<b>25360ppm</b>
<b>Sulfates</b>	<b>1600ppm</b>	<b>194ppm</b>	<b>390ppm</b>
<b>Bicarbonates</b>	<b>900ppm</b>	<b>1925ppm</b>	<b>1934ppm</b>

EXHIBIT G





# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW#### in the  
POD suffix indicates the  
POD has been replaced  
& no longer serves a  
water right file.)

(R=POD has  
been replaced,  
O=orphaned,  
C=the file is  
closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 12225 POD1			CH	2	1	1	27	08S	32E	624005	3718438	1677	115	70	45
RA 12226 POD1			CH	4	4	4	22	08S	32E	625136	3718457	1834	115	80	35
RA 10573			CH	3	2	1	10	08S	32E	624174	3722911	2823	180	165	15

Average Depth to Water: 105 feet

Minimum Depth: 70 feet

Maximum Depth: 165 feet

Record Count: 3

UTM NAD83 Radius Search (in meters):

Easting (X): 624301

Northing (Y): 3720090

Radius: 3220 meters

x 3.28 feet/meter

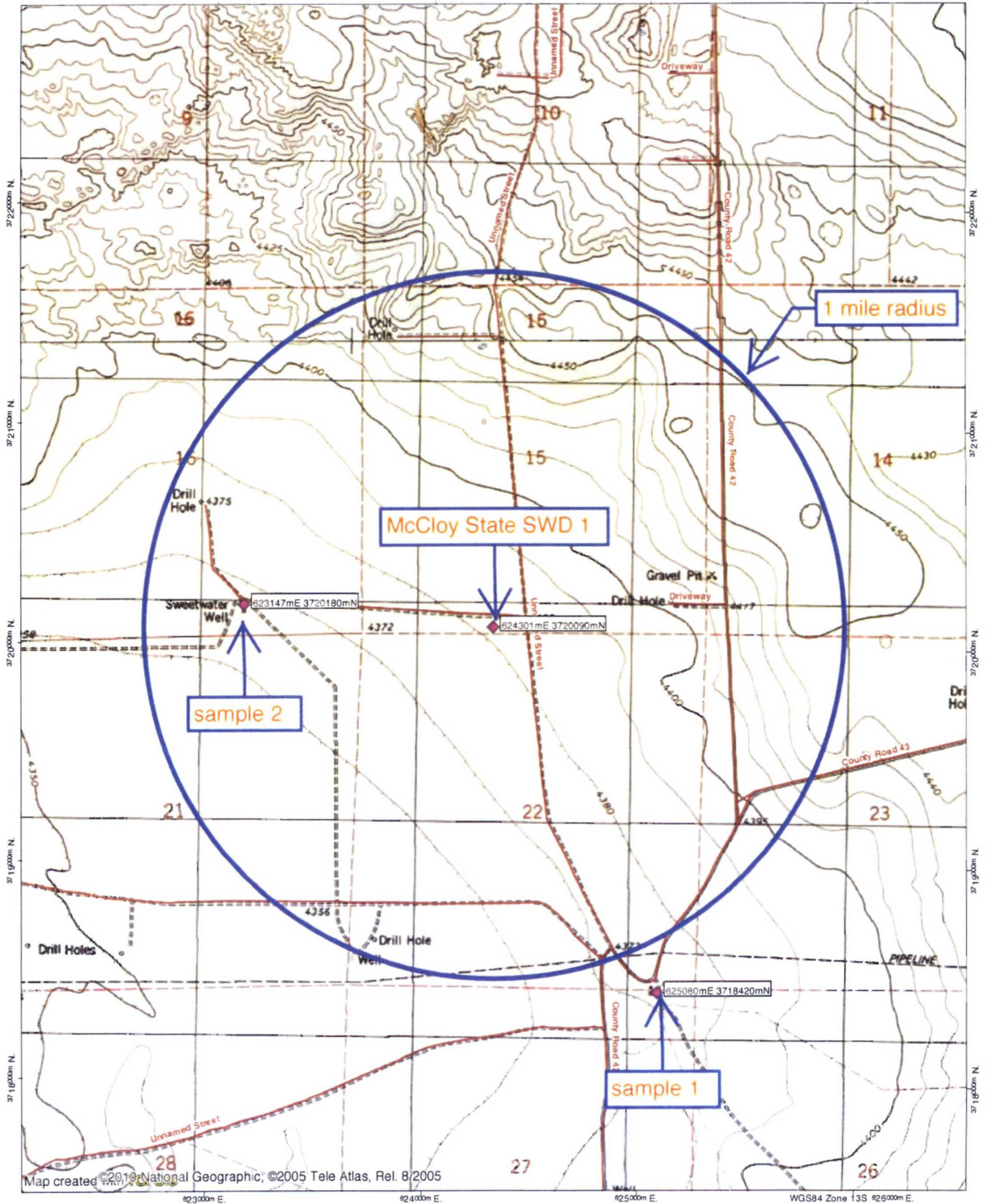
10,561 feet

(10,560 ft = 2.00 miles)

EXHIBIT H

\*UTM location was derived from PLSS - see Help

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



Map created ©2019 National Geographic; ©2005 Tele Atlas, Rel. 8/2005

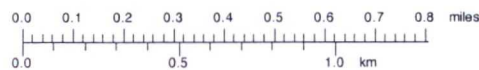


EXHIBIT H

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1608956

Date Reported: 8/29/2016

CLIENT: Permits West

Project: Rockcliff McCloy SWD

Lab ID: 1608956-001

Matrix: AQUEOUS

Client Sample ID: McCloy SWD #1

Collection Date: 8/13/2016 10:45:00 AM

Received Date: 8/16/2016 12:48:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	310	50	*	mg/L	100	8/17/2016 9:13:45 PM
<b>EPA METHOD 1664A</b>						Analyst: tnc
N-Hexane Extractable Material	ND	9.8		mg/L	1	8/22/2016 9:06:00 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: KS
Total Dissolved Solids	1070	20.0	*	mg/L	1	8/20/2016 5:35:00 PM

EXHIBIT H

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Analytical Report**

Lab Order 1608956

Date Reported: 8/29/2016

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Permits West**Project:** Rockcliff McCloy SWD**Lab ID:** 1608956-002**Matrix:** AQUEOUS**Client Sample ID:** McCloy SWD #2**Collection Date:** 8/13/2016 1:16:00 PM**Received Date:** 8/16/2016 12:48:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	120	5.0		mg/L	10	8/17/2016 9:26:10 PM
<b>EPA METHOD 1664A</b>						Analyst: tnc
N-Hexane Extractable Material	ND	10		mg/L	1	8/22/2016 9:06:00 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: KS
Total Dissolved Solids	708	20.0	*	mg/L	1	8/20/2016 5:35:00 PM

**EXHIBIT H**

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1608956

29-Aug-16

Client: Permits West  
Project: Rockcliff McCloy SWD

Sample ID: MB-27097	SampType: MBLK	TestCode: EPA Method 1664A								
Client ID: PBW	Batch ID: 27097	RunNo: 36688								
Prep Date: 8/22/2016	Analysis Date: 8/22/2016	SeqNo: 1136744 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	10								

Sample ID	LCS-27097	SampType:	LCS	TestCode:	EPA Method 1664A					
Client ID:	LCSW	Batch ID:	27097	RunNo:	36688					
Prep Date:	8/22/2016	Analysis Date:	8/22/2016	SeqNo:	1136745	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	40	10	40.00	0	101	78	114			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1608956

29-Aug-16

Client: Permits West  
Project: Rockcliff McCloy SWD

Sample ID	MB	SampType	mblk	TestCode	EPA Method 300.0: Anions					
Client ID	PBW	Batch ID	R36593	RunNo	36593					
Prep Date:		Analysis Date:	8/17/2016	SeqNo	1133301	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS	SampType	lcs	TestCode	EPA Method 300.0: Anions					
Client ID	LCSW	Batch ID	R36593	RunNo	36593					
Prep Date:		Analysis Date:	8/17/2016	SeqNo	1133302	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.3	90	110			

Sample ID	1608956-002AMS	SampType	ms	TestCode	EPA Method 300.0: Anions					
Client ID	McCloy SWD #2	Batch ID	R36593	RunNo	36593					
Prep Date:		Analysis Date:	8/17/2016	SeqNo	1133324	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	180	5.0	50.00	124.0	106	81.9	117			

Sample ID	1608956-002AMSD	SampType	msd	TestCode	EPA Method 300.0: Anions					
Client ID	McCloy SWD #2	Batch ID	R36593	RunNo	36593					
Prep Date:		Analysis Date:	8/17/2016	SeqNo	1133325	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	180	5.0	50.00	124.0	107	81.9	117	0.0837	20	

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

Page 4 of 5

EXHIBIT H

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1608956

29-Aug-16

Client: Permits West  
Project: Rockcliff McCloy SWD

Sample ID	MB-27062	SampType	MBLK	TestCode	SM2540C MOD: Total Dissolved Solids					
Client ID	PBW	Batch ID	27062	RunNo	36650					
Prep Date	8/18/2016	Analysis Date	8/20/2016	SeqNo	1135072	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

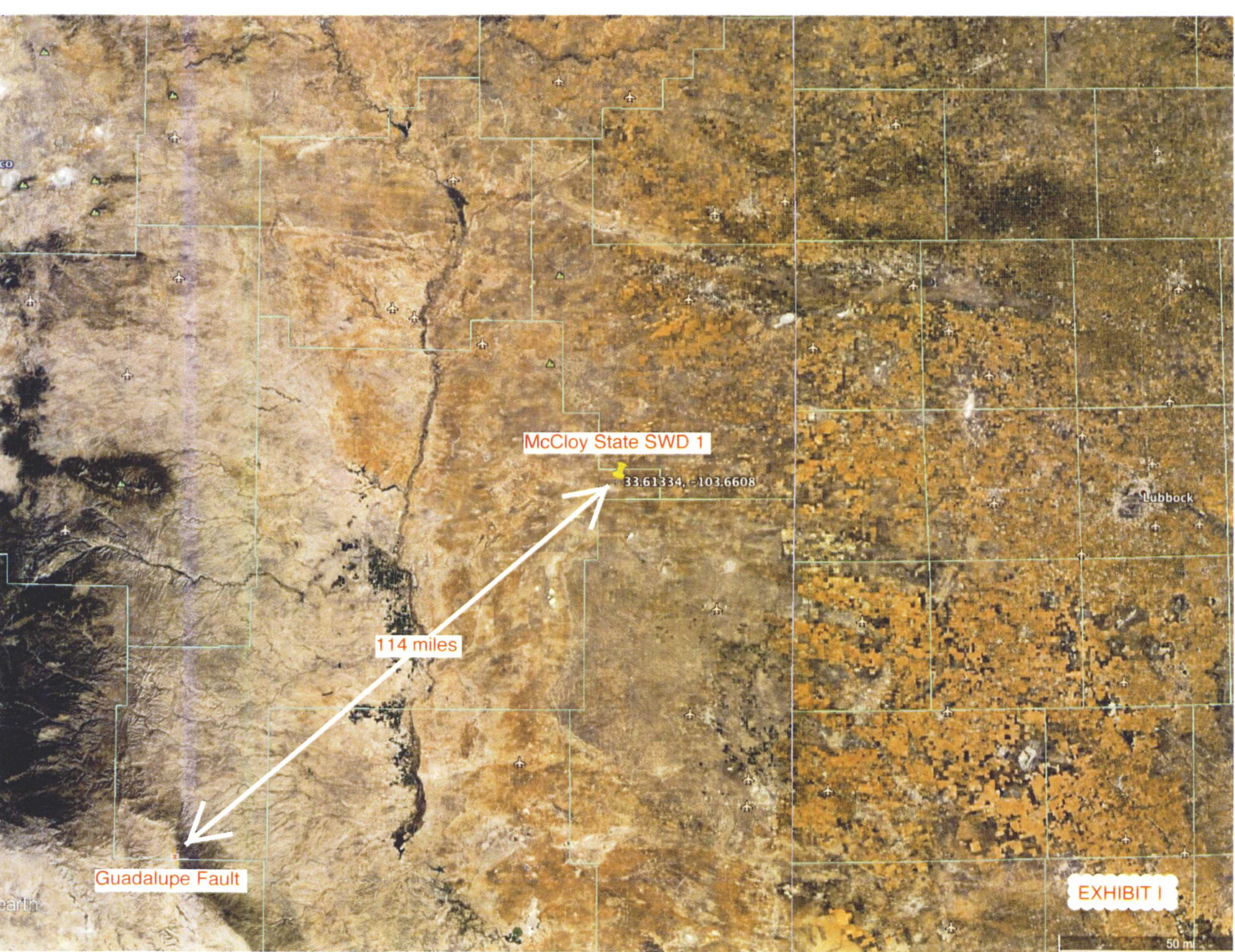
Sample ID	LCS-27062	SampType	LCS	TestCode	SM2540C MOD: Total Dissolved Solids					
Client ID	LCSW	Batch ID	27062	RunNo	36650					
Prep Date	8/18/2016	Analysis Date	8/20/2016	SeqNo	1135073	Units	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1030	20.0	1000	0	103	80	120			

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified





McCloy State SWD 1

33.61334, -103.6608

Lubbock

114 miles

Guadalupe Fault

EXHIBIT I

50 mi





August 23, 2016

New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

RE: Geologic Statement  
McCloy State SWD #1  
Section 15-Township 8 South-Range 32 East  
Chaves County, New Mexico

To whom it may concern:

Rockcliff Energy has reviewed all currently available geologic and engineering data related to the proposed well and no evidence for open faults or any other hydrological connection between the proposed deep Devonian injection zone, located at approximately 10,988' MD (-6601 ss), and any underground sources of drinking water has been found.

Regards,

A handwritten signature in black ink that reads 'Nanis Wallace'.

Nanis Wallace  
Geologic Advisor  
Rockcliff Energy LLC

EXHIBIT I

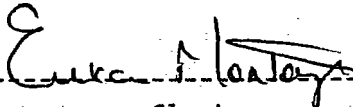
AFFIDAVIT OF PUBLICATION  
STATE OF NEW MEXICO

I, Erika Montoya  
Legals Clerk

Of the Roswell Daily Record, a daily newspaper published at Roswell, New Mexico do solemnly swear that the clipping hereto attached was published in the regular and entire issue of said paper and not in a supplement thereof for a period of:

One time with the issue dated

August 12, 2016

-----  
  
Clerk

Sworn and subscribed to before me

this 12th day of August, 2016

-----  


Notary Public

My Commission expires

June 13, 2018

*Saltwater Disposal Well...*

Publish August 12, 2016

Rockcliff Operating New Mexico LLC is applying to drill the McCloy State SWD 1 as a saltwater disposal well. The well is staked at 220 FSL & 2080 FWL Sec. 15, T. 8 S., R. 32 E., Chaves County and is 15 miles north-northeast of Caprock, NM. Disposal will be in the Siluro-Devonian from 10,000' to 12,000'. Maximum injection pressure will be 2,000 psi. Maximum disposal rate will be 20,000 bwpd. Interested parties must file objections or requests for hearing with the NM Oil Conservation Division, 1220 South Saint Francis Dr., Santa Fe, NM 87505 within 15 days. Additional information can be obtained by contacting: Brian Wood, Permits West, Inc., 37 Verano Loop, Santa Fe, NM 87508. Phone number is (505) 466-8120.

EXHIBIT J

**PERMITS WEST, INC.**  
PROVIDING PERMITS for LAND USERS  
37 Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

September 8, 2016

NM State Land Office  
PO Box 1148  
Santa Fe NM 87504

Rockcliff Operating New Mexico LLC is applying (see attached application) to drill the McCloy State SWD 1 as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) rules, I am notifying you of the following proposal. This letter is a notice only. No action is needed unless you have questions or objections.

Well: McCloy State SWD 1      ID = 11,400'

Proposed Disposal Zones: Devonian & Silurian (10,990' - 11,330')

Location: 220' FSL & 2080' FWL Sec. 15, T. 8 S., R. 32 E., Chaves County, NM

Approximate Location: 15 miles north-northeast of Caprock, NM

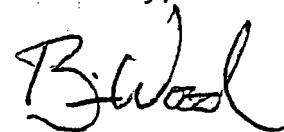
Applicant Name: Rockcliff Operating New Mexico LLC (713) 351-0500

Applicant's Address: 1301 McKinney, Suite 1300, Houston TX 77010

Submittal Information: Application for a saltwater disposal well will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,



Brian Wood


SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY		
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>NMSLO P. O. Box 1148 Santa Fe NM 87504</p> <div style="border: 1px solid black; height: 20px; width: 100%; margin-top: 10px;"></div> <p>9590 9403 0887 5223 6385 02 Rockcliff - McCloy State SWD 1</p> <p>2. Article Number (Transfer from service label)</p>	<p>A. Signature  <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) Faith Crosby</p> <p>C. Date of Delivery 9-8-16</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <table style="width: 100%;"><tr><td style="vertical-align: top;"><input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td><td style="vertical-align: top;"><input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery</td></tr></table>	<input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	<input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery
<input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	<input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery		

EXHIBIT K



C-108 Review Checklist: Received 9/1/2016 Add. Request: \_\_\_\_\_ Reply Date: \_\_\_\_\_ Suspended: \_\_\_\_\_ [Ver 15]

ORDER TYPE: WFX / PMX / SWD Number: \_\_\_\_\_ Order Date: \_\_\_\_\_ Legacy Permits/Orders: \_\_\_\_\_

Well No. 1 Well Name(s): McCLOY State SWD

API: 30-0 05-29214 Spud Date: TBD New or Old: N (UIC Class II Primacy 03/07/1982)

Footages 220 FSL  
2080 FWL Lot \_\_\_\_\_ or Unit N Sec 15 Tsp 8S Rge 32E County CHAVES

General Location: 220 miles S Sal Kenna Pool: SWD, Devonian-Silurian Pool No.: 96846  
Rockcliff Operating  
BLM 100K Map: Elida Operator: New Mexico LLL OGRID: 371115 Contact: Brian Woul;  
agent

COMPLIANCE RULE 5.9: Total Wells: 58 Inactive: 1 Fincl Assur: Y Compl. Order? NA IS 5.9 OK? Y Date: \_\_\_\_\_

WELL FILE REVIEWED ☐ Current Status: Proposed

WELL DIAGRAMS: NEW: Proposed ☒ or RE-ENTER: Before Conv. ☐ After Conv. ☐ Logs in Imaging: NA

Planned Rehab Work to Well: \_\_\_\_\_

Well Construction Details		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned ___ or Existing ___ Surface	<u>5 1/2 / 3 3/8</u>	<u>500'</u>	Stage Tool	<u>305</u>	<u>Surface/Visual</u>
Planned ___ or Existing ___ Interm/Prod	<u>12 3/4 / 5 7/8</u>	<u>4800</u>		<u>1670</u>	<u>Surface/Visual</u>
Planned ___ or Existing ___ Interm/Prod	<u>8 3/4 / 7"</u>	<u>10990</u>	<u>7900</u>	<u>1517</u>	<u>Surface/Visual</u>
Planned ___ or Existing ___ Prod/Liner					
Planned ___ or Existing ___ Liner					
Planned ___ or Existing <u>(OH) / PERF</u>	<u>10990 / 11330</u>		Inj Length <u>340'</u>		
Injection Lithostratigraphic Units:		Depths (ft)	Injection or Confining Units	Tops	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.			<u>MS</u>	<u>10282</u>	Drilled TD <u>1140</u> PBDT <u>11330</u>
Confining Unit: Litho. Struc. Por.			<u>wd</u>	<u>10803</u>	NEW TD <u>1</u> NEW PBDT _____
Proposed Inj Interval TOP:	<u>2200/911</u>			<u>DL</u>	NEW Open Hole <input checked="" type="checkbox"/> or NEW Perfs <input type="checkbox"/>
Proposed Inj Interval BOTTOM:	<u>1021152</u>			<u>MT</u>	Tubing Size <u>3 1/2</u> in. Inter Coated? _____
Confining Unit: Litho. Struc. Por.					Proposed Packer Depth <u>10940</u> ft
Adjacent Unit: Litho. Struc. Por.					Min. Packer Depth <u>10890</u> (100-ft limit)
					Proposed Max. Surface Press. <u>2000</u> psi
					Admin. Inj. Press. <u>2198</u> (0.2 psi per ft)
<b>AOR: Hydrologic and Geologic Information</b>					
POTASH: R-111-P <u>NA</u> Noticed? _____ BLM Sec Ord <input type="radio"/> WIPP <input type="radio"/> Noticed? _____ Salt/Salado T: _____ B: _____ NW: Cliff House fm _____					
FRESH WATER: Aquifer <u>Quaternary</u> Max Depth <u>115'</u> HYDRO AFFIRM STATEMENT By Qualified Person <input checked="" type="checkbox"/>					
NMOSE Basin: <u>Doswell</u> CAPITAN REEF: thru adj <u>NA</u> No. Wells within 1-Mile Radius? <u>5</u> FFW Analysis <u>Y</u>					
Disposal Fluid: Formation Source(s) <u>SA, DEV</u> Analysis? <u>Y</u> On Lease <input type="checkbox"/> Operator Only <input type="checkbox"/> or Commercial <input checked="" type="checkbox"/>					
Disposal Int: Inject Rate (Avg/Max BWPD): <u>150/200</u> Protectable Waters? <u>NA</u> Source: _____ System: <u>Closed</u> or <u>Open</u> <u>"both"</u>					
HC Potential: Producing Interval? <u>N</u> Formerly Producing? _____ Method: Logs/DST/P&A/Other <u>DST</u> 2-Mile Radius Pool Map <input type="checkbox"/>					
AOR Wells: 1/2-M Radius Map? <u>Y</u> Well List? <u>Y</u> Total No. Wells Penetrating Interval: <u>1141</u> Horizontals? <u>NA</u>					
Penetrating Wells: No. Active Wells <u>0</u> Num Repairs? _____ on which well(s)? _____ Diagrams? _____					
Penetrating Wells: No. P&A Wells <u>11</u> Num Repairs? _____ on which well(s)? _____ Diagrams? <u>Y</u>					
NOTICE: Newspaper Date <u>8-12-2016</u> Mineral Owner <u>NMSLD</u> Surface Owner <u>NMSLD</u> N. Date <u>8-8-2016</u>					
RULE 26.7(A): Identified Tracts? <u>Y</u> Affected Persons: <u>NMSLD</u> N. Date <u>8-8-24</u>					

Order Conditions: Issues: C-B-L OF 7" CASING/SURFACE

Add Order Cond: \_\_\_\_\_

2 OFFS to S.A. Production is 4120' - 4255'