Initial Application Part I

Received: **06/27/2019**

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

Revised March 23, 2017

RECEIVED: 06/27/2019	REVIEWER: MAM	TYPE: SWD	APP NO: pMAM1917852293

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Geological & 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

Applicant: Trove Energy and Water, LLC **OGRID Number:** 372488
Well Name: SEC SW Federal SWD No.1 **API:** 30-015-xxxxx
Pool: Proposed: SWD; Devonian-Silurian **Pool Code:** 97869

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

SWD-2173

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ■ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐ PMX ■ SWD ☐ IPI ☐ EOR ☐ PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ■ Offset operators or lease holders
B. ☐ Royalty, overriding royalty owners, revenue owners
C. ■ Application requires published notice
D. ■ Notification and/or concurrent approval by SLO
E. ■ Notification and/or concurrent approval by BLM
F. ■ Surface owner
G. ■ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **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.

Ben Stone
Print or Type Name

Signature

6/27/2019
Date

903-488-9850
Phone Number

ben@sosconsulting.us
e-mail Address

McMillan, Michael, EMNRD

From: ben@sosconsulting.us
Sent: Thursday, June 27, 2019 12:52 PM
To: Goetze, Phillip, EMNRD; McMillan, Michael, EMNRD; Jones, William V, EMNRD
Subject: [EXT] Trove Energy and Water, LLC's C-108 for SWD in its SEC SW Federal SWD #1 prospect...
Attachments: C-108_Trove_SEC-SW-Fed SWD#1_AsSubmitted_20190627.pdf

Gentlemen:

Please find the attached subject C-108. This location was vetted w/ XTO which indicated they have no current development plans for the area yet.

Hard copies via FedEx – going out this afternoon. A link to the PDF file for Affected Parties is also provided below.

Please let me know if additional info is needed.

Thanks,
Ben

https://sosconsulting.sharefile.com/d-s0aa5714c68f4543b

SOS Consulting, LLC
Ph. 903.488.9850 Fax 866.400.7628
P.O. Box 300 - Como, TX 75431
Visit us on the web at www.sosconsulting.us!

June 27, 2019

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

Attn: Ms. Adrienne Sandoval, Director

Re: Application of Trove Energy and Water, LLC to permit for salt water disposal the proposed SEC SW Federal SWD No.1, located in Section 25, Township 26 South, Range 28 East, NMPM, Eddy County, New Mexico.

Dear Ms. Sandoval,

Please find the enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request for salt water disposal. The well will be operated as a commercial endeavor offering operators in the area additional options for produced water disposal.

Trove Energy and Water is a developing salt water disposal option for operators in southeast New Mexico and seeks to optimize efficiency, both economically and operationally, of all its operations. Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

This application for a proposed Devonian SWD interval includes the currently mandated increased One-Mile Area of Review including pertinent and available seismic information for the area and region. Published legal notice ran June 21, 2019 in the Artesia Daily Press and all offset operators and other affected parties have been notified individually. The legal notice affidavit is included with this application. The application also includes a wellbore schematic, area of review maps, affected party plat and other required information for a complete Form C-108. The well is located on federal surface and minerals and the Bureau of Land Management CFO and offset operators have been notified of this application.

I respectfully request that the approval of this salt water disposal well proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

Best regards,

Ben Stone, Partner
SOS Consulting, LLC
Agent for Trove Energy and Water, LLC

Cc: Application attachment and file

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ***Salt Water Disposal*** and the application ***QUALIFIES*** for administrative approval.

II. OPERATOR: ***Trove Energy and Water, LLC***
ADDRESS: ***1919 North Turner, Hobbs, NM 88240***

CONTACT PARTY: ***Agent: SOS Consulting, LLC – Ben Stone (903) 488-9850***

III. WELL DATA: ***All well data and applicable wellbore diagrams are ATTACHED.***

IV. ***This is not an expansion of an existing project.***

V. ***A map is attached*** that identifies all wells and leases within two miles of any proposed injection well with a ***ONE-Mile*** radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

*VI. A tabulation is attached of data on all wells of public record within the area of review which penetrate the proposed injection zone. ***There are NO (0) Wells in the subject AOR which Penetrate the proposed Devonian interval.*** The data includes a description of each well's type, construction, date drilled, location, depth, and a schematic of any plugged well illustrating all plugging detail. ***NO P&A Wells penetrate.***

VII. ***The following data is ATTACHED*** on the proposed operation, including:

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. ***Appropriate geologic data on the injection zone is ATTACHED*** 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. ***Stimulation program – a conventional acid job may be performed to clean and open the formation.***

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). ***Well Logs will be filed with OCD.***

*XI. ***There are 2 water wells/ PODs within one mile of the proposed salt water disposal well. Representative analyses are included herein and one or two of the subject wells will be sampled and analyzed and submitted.***

XII. ***An affirmative statement is ATTACHED that available geologic and engineering data has been examined and no evidence was found*** of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. ***"Proof of Notice" section on the next page of this form has been completed and ATTACHED. There are 5 offset lessees and/or mineral owners within 1 mile, federal and state minerals - all have been noticed. Well location is Federal.***

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: ***Ben Stone*** TITLE: ***SOS Consulting, LLC agent for Trove Energy and Water, LLC***

SIGNATURE: _____ DATE: ***6/27/2019***

E-MAIL ADDRESS: ***ben@sosconsulting.us***

* 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:

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

FORM C-108 – APPLICATION FOR AUTHORIZATION TO INJECT (cont.)

III. WELL DATA – ***The following information and data is included (See ATTACHED Wellbore Schematic):***

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 ***pursuant to the following criteria is ATTACHED.***

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.

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.

C-108 - Items III, IV, V

Item III - Subject Well Data

Wellbore Diagram - PROPOSED

Item IV – Tabulation of AOR Wells

NO wells penetrate the proposed injection interval.

Item V – Area of Review Maps

1. Two Mile AOR Map with One-Mile Fresh Water Well Radius

2. One-Half Mile AOR Map

All Above Exhibits follow this page.

WELL SCHEMATIC - PROPOSED
SEC SW Federal SWD Well No.1

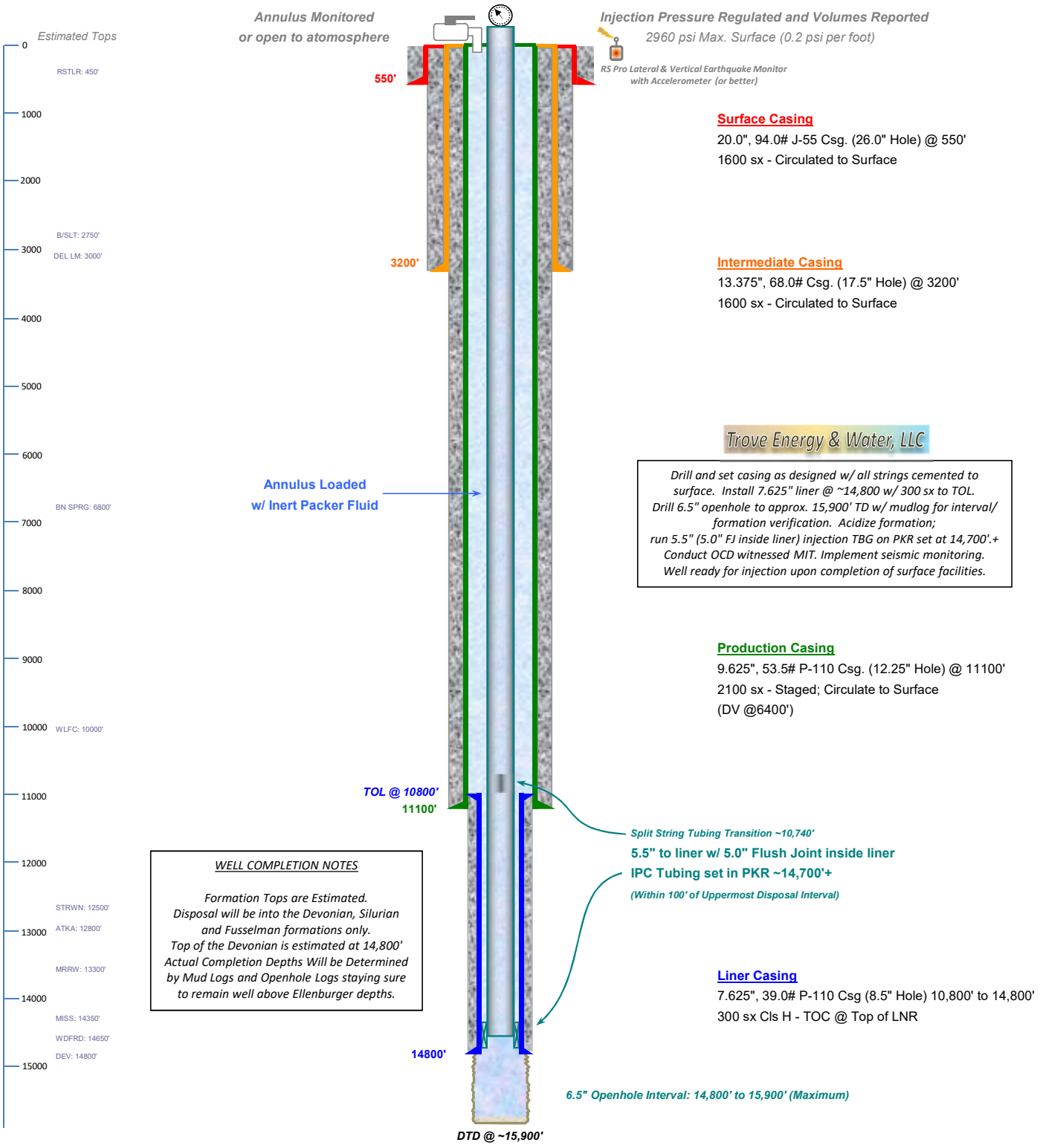
TROVE ENERGY and WATER

API 30-015-xxxxx

2310' FNL & 10' FEL, SEC. 25-T26S-R28E
EDDY COUNTY, NEW MEXICO

Proposed: SWD; Devonian-Silurian-Fusselman

Spud Date: 4/01/2020
SWD Config Dt: 5/15/2020



Surface Casing
20.0", 94.0# J-55 Csg. (26.0" Hole) @ 550'
1600 sx - Circulated to Surface

Intermediate Casing
13.375", 68.0# Csg. (17.5" Hole) @ 3200'
1600 sx - Circulated to Surface

Trove Energy & Water, LLC

Drill and set casing as designed w/ all strings cemented to surface. Install 7.625" liner @ ~14,800 w/ 300 sx to TOL. Drill 6.5" openhole to approx. 15,900' TD w/ mudlog for interval/ formation verification. Acidize formation; run 5.5" (5.0" FJ inside liner) injection TBG on PKR set at 14,700'.+ Conduct OCD witnessed MIT. Implement seismic monitoring. Well ready for injection upon completion of surface facilities.

Production Casing
9.625", 53.5# P-110 Csg. (12.25" Hole) @ 11100'
2100 sx - Staged; Circulate to Surface
(DV @6400')

Liner Casing
7.625", 39.0# P-110 Csg (8.5" Hole) 10,800' to 14,800'
300 sx Cls H - TOC @ Top of LNR

WELL COMPLETION NOTES

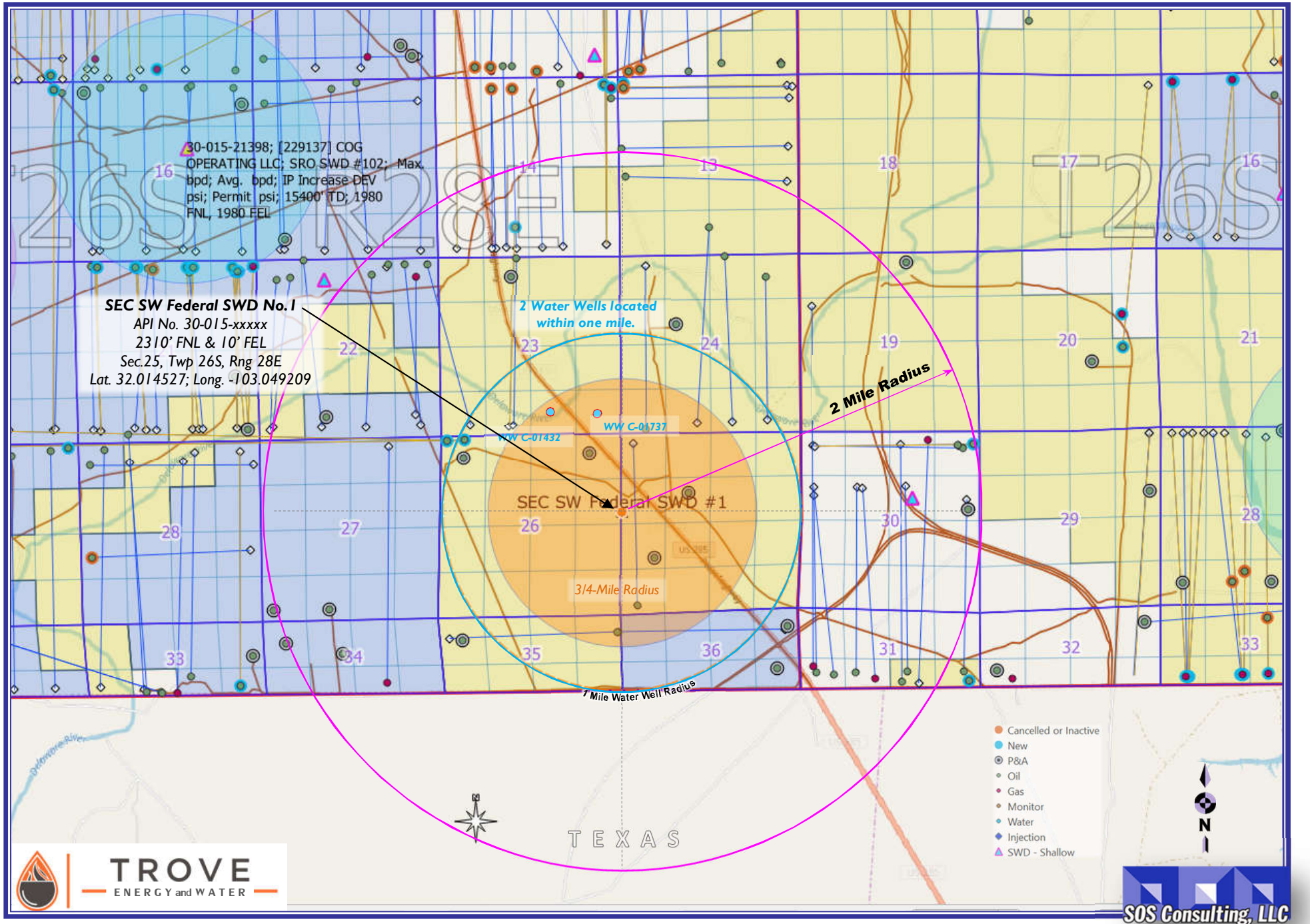
Formation Tops are Estimated. Disposal will be into the Devonian, Silurian and Fusselman formations only. Top of the Devonian is estimated at 14,800' Actual Completion Depths Will be Determined by Mud Logs and Openhole Logs staying sure to remain well above Ellenburger depths.

Drawn by: Ben Stone, 6/20/2019

SOS Consulting, LLC

SEC SW Federal SWD No.1 - Area of Review / 2 Miles

(Attachment to NMOCD Form C-108 - Item V)



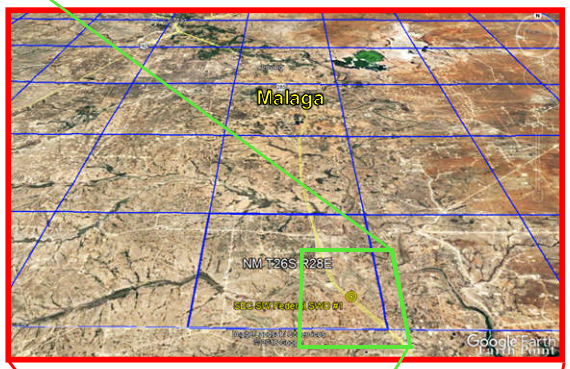
TROVE ENERGY and WATER

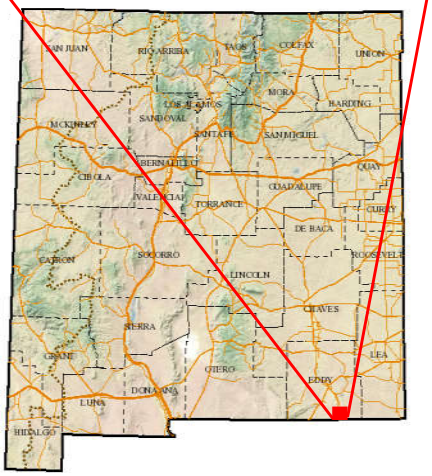
SOS Consulting, LLC

SEC SW Federal SWD Well No.1 – One Mile Area of Review / Overview Map

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)

14.7 miles S/SE of Malaga, NM





Eddy County, New Mexico

TROVE ENERGY and WATER

SOS Consulting, LLC

C-108 ITEM VII – PROPOSED OPERATION

Trove SEC SW Federal SWD #1

COMMERCIAL SWD FACILITY

Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take approximately 6-8 weeks. Facility construction including installation of the tank battery, berms, plumbing and other and associated equipment would be occurring during the same interval but at a different location from the well. In any event, it is not expected for the facility construction phase of the project to last more than 60 days, depending on availability of contractors and equipment. Facility design is currently in the planning phase with a company which specializes in such construction.

DRILL AND CONFIGURE FOR SALT WATER DISPOSAL

Interval Determination

Prior to commencing disposal, Trove Energy and Water shall submit mudlog and geophysical logs information, to the Division's District geologist and Santa Fe Engineering Bureau, showing evidence agreeable that only the permitted formation is open for disposal including a summary of depths (picks)for contacts of the formations which the Division shall use to amend any order for a final description of the depth for the injection interval. If significant hydrocarbon shows occur while drilling, the operator shall notify Artesia district office and Trove will seek written permission prior to commencing disposal.

Casing and Logging

Trove's design is to circulate all casing strings to surface. If cement does not circulate on any casing string, the Trove will run a cement bond log (CBL) or other log to determine top of cement and shall notify the Artesia district office with the top of cement (emergency phone number if after normal business hours) prior to continuing with any further cement activity with the proposed well. If cement does not tie back in to next higher casing shoe, the operator shall perform remedial cement job(s) to bring cement, at a minimum, 200 feet above the next higher casing shoe. The operator shall run a CBL (or equivalent) for the 7-5/8-inch liner to demonstrate placement cement and the cement bond with the tie-in with 9-5/8-inch casing string. All logs on the well will be copied to the Artesia district office; CBL logs and mudlogs will be provided prior to commencing disposal. Additionally, prior to commencing disposal the operator shall obtain a bottom-hole pressure of the open-hole completion. This information shall be provided with the sundry notice of commencement of disposal operations.

Monitoring and Reporting

Prior to commencing any work, an NOI sundry(ies) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per OCD test procedures. (Notify NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity.

C-108 ITEM VII – PROPOSED OPERATION

(continued)

OPERATIONAL SUMMARY

The SWD facility will not be fenced so that trucks may access for load disposal 24/7.

Ultimately, Trove's plans would include tying the SWD into a pipeline, when and if available, so the well and injection equipment will be a closed system and equipped with pressure limiting devices and volume meters. The annulus, loaded with an inert, anti-corrosion packer fluid, will be monitored for pressure.

SCADA System

The facility and tanks will be equipped with telemetry devices and visual alarms to alert the operator and customers of full tanks or an overflow situation. Operational details including rates, pressures, valve, tank and levels will be continually monitored and either controlled remotely or personnel dispatched for further action.

In addition to operational SCADA system control and monitoring, Trove is considering installing RS Pro Lateral & Vertical Earthquake Monitors with Accelerometer, or better for continuous monitoring. Data will be remotely accessible; monitored and shared as needed. An alternative solution being considered would employ a third party to provide seismic monitoring using public and private seismometers as available. ALL Consulting, LLC has expressed interest in providing these services.

Rates, Pressures, Releases

Anticipated daily maximum volume is 30,000 bpd and an average of 22,500 bpd at a maximum surface injection pressure of 2960 psi (.2 psi/ft gradient) – maximum pressure will be adjusted If the top of interval is modified after well logs are run.

Potential releases will be contained and cleaned up immediately. The operator shall repair or otherwise correct the situation within 48 hours before resuming operations. OCD will be notified within 24 hours of any release greater than 5 bbls. If required, remediation will start as soon as practicable. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC; as necessary and appropriate and OCD form C-141 will be submitted promptly.

C-108 ITEM VII – PRODUCED WATER ANAYLSES

Item VII.4 – Water Analysis of Source Zone Water

Glorieta/ Yeso
Bone Spring
Wolfcamp

Item VII.5 – Water Analysis of Disposal Zone Water

Devonian

Water Analyses follow this page.

C-108 Item VII.5 - Produced Water Data

Trove Energy and Water, LLC - SEC SW Project Area

SOURCE ZONE

GLO/YESO

Lab ID

Sample ID 1146

API No 3001524754

Sample No

Well Name PLATT PA 009

Location ULSTR 26 18 S 26 E **Lat / Long** 32.71216 -104.35742

330 S 990 W **County** Eddy

Operator (when sampled) Yates Petroleum Corp.

Field ATOKA Unit M

Sample Date 8/4/1984 Analysis Date

Sample Source Wellhead Depth (if known)

Water Typ Produced Water

ph	7.5	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	1800
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	120382	resistivity_ohm_cm_temp	
tds_mgL_180C		conductivity	
chloride_mgL	113000	conductivity_temp_F	
sodium_mgL	71415	carbonate_mgL	0
calcium_mgL	2560	bicarbonate_mgL	476
iron_mgL	0	sulfate_mgL	2001
barium_mgL		hydroxide_mgL	
magnesium_mgL	0	h2s_mgL	0
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

SOS Consulting, LLC

C-108 Item VII.5 - Produced Water Data

Trove Energy and Water, LLC - SEC SW Project Area

SOURCE ZONE

GLO/YESO

Lab ID

Sample ID 1207

API No 3001524619

Sample No

Well Name PLATT PA 008

Location ULSTR 26 18 S 26 E **Lat / Long** 32.71245 -104.35329

430 S 2260 W **County** Eddy

Operator (when sampled) Yates Petroleum Corporation

Field ATOKA Unit N

Sample Date 1/19/1985 Analysis Date

Sample Source well head Depth (if known)

Water Typ Produced Water

ph	6	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	11500
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	136324	resistivity_ohm_cm_temp	
tds_mgL_180C		conductivity	
chloride_mgL	121000	conductivity_temp_F	
sodium_mgL	61571	carbonate_mgL	
calcium_mgL	4160	bicarbonate_mgL	104
iron_mgL	0	sulfate_mgL	3720
barium_mgL		hydroxide_mgL	
magnesium_mgL	7340	h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

SOS Consulting, LLC

C-108 Item VII.5 - Produced Water Data

Trove Energy and Water, LLC - SEC SW Project Area

SOURCE ZONE

BONE SPRING

Lab ID

Sample ID 5847

API No 3001520225

Sample No

Well Name BIG EDDY UNIT 012

Location ULSTR 21 20 S 31 E **Lat / Long** 32.56399 -103.87994

660 N 660 W **County** Eddy

Operator (when sampled) MALLON OIL COMPANY

Field BIG EDDY Unit D

Sample Date 8/27/1999 Analysis Date 8/31/1999

Sample Source

Water Typ

Depth (if known)

ph	5.2	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity	1.125	hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	181697	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	123750	conductivity_temp_F	
sodium_mgL	73895.6	carbonate_mgL	
calcium_mgL	5625	bicarbonate_mgL	13.725
iron_mgL	337.5	sulfate_mgL	787.5
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	0
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

SOS Consulting, LLC

C-108 Item VII.5 - Produced Water Data

Trove Energy and Water, LLC - SEC SW Project Area

SOURCE ZONE

WOLFCAMP

Lab ID

Sample ID 5688

Sample No

API No 3001520138

Well Name MAHUN STATE 001

Location ULSTR 16 22 S 22 E **Lat / Long** 32.39340 -104.70979

1800 N 1980 W **County** Eddy

Operator (when sampled)

Field ROCKY ARROYO Unit F

Sample Date 5/17/1968 Analysis Date

Sample Sourc DST Depth (if known)

Water Typ

ph	8.6	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	35495	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	19000	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	830
iron_mgL		sulfate_mgL	2500
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

SOS Consulting, LLC

C-108 Item VII.5 - Produced Water Data
Trove Energy and Water, LLC - SEC SW Project Area

DISPOSAL ZONE

DEVONIAN

Lab ID

Sample ID 6170

Sample No

API No. 3001510280

Well Name JURNEGAN POINT 001

Location ULSTR 05 24 S 25 E **Lat / Long** 32.24037 -104.42375

660 S 660 W **County** Eddy

Operator (when sampled)

Field WILDCAT Unit M

Sample Date 12/14/1964 Analysis Date

Sample Source DST Depth (if known)

Water Type

ph	7	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	229706	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	136964	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	198
iron_mgL		sulfate_mgL	2511
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

SOS Consulting, LLC

C-108 – Item VIII

Geologic Information

The Devonian and Silurian consist of carbonates including light colored dolomite and chert intervals interspersed with some tight limestone intervals. Several thick sections of porous dolomite capable of taking water are believed present within the subject formations in the area. Depth control data was inferred from deep wells in the area and charted contours. If the base of Devonian and top of Silurian rocks come in as expected the well will only be drilled deep enough for adequate logging rathole.

At a proposed depth of 15,900' BGL (Below Ground Level) the well will TD approximately 1,100' below the estimated top of the Devonian. Mud logging through the interval will ensure the target interval remains in Devonian and Silurian. Once Devonian is determined, the casing shoe depth will be set at an approximate maximum upper depth of 14,800' BGL. Injection will occur through the resulting openhole interval.

TROVE ATTEMPTS TO BRACKET POTENTIAL INJECTION INTERVALS BASED ON OFFSETTING WELLS, AVAILABLE NEARBY LOGS AND CONTOURS PLOTS; IT IS EXPECTED THAT ONCE DRILLING COMMENCES AND MUDLOGGING RETURNS ARE EVALUATED, THE INTERVAL MAY BE ADJUSTED ACCORDINGLY TO EXPLOIT THE DESIRED FORMATION AS DESCRIBED. C-103 SUNDRY REPORTS WITH APPROPRIATE DATA WILL BE FILED WITH THE OCD AND FINALIZED WITH THE C-105 COMPLETION REPORT.

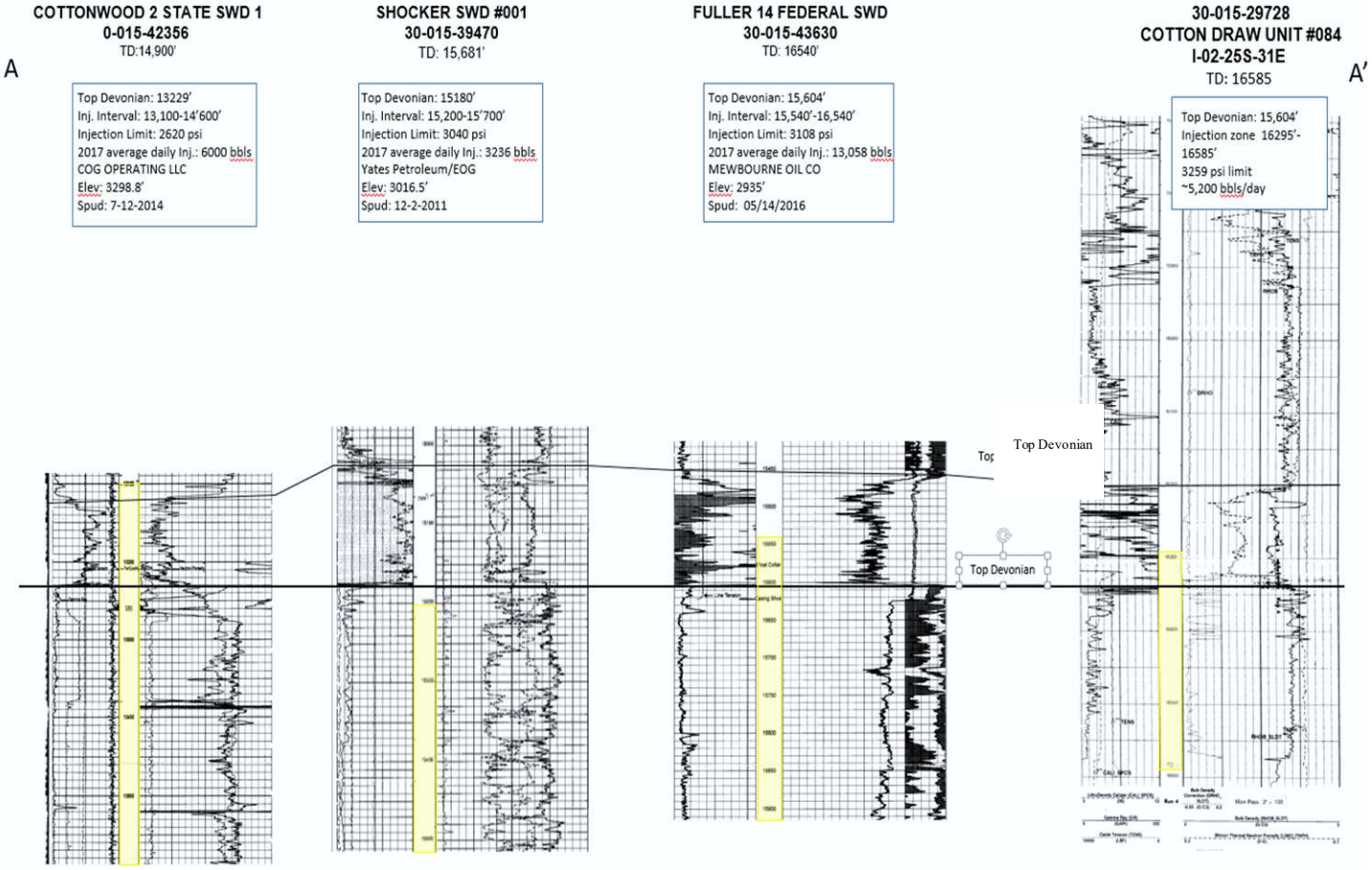
The Devonian is overlain by the Woodford Shale and Mississippian Lime and underlain by the Middle and Lower Ordovician; Simpson, McKee and Ellenburger.

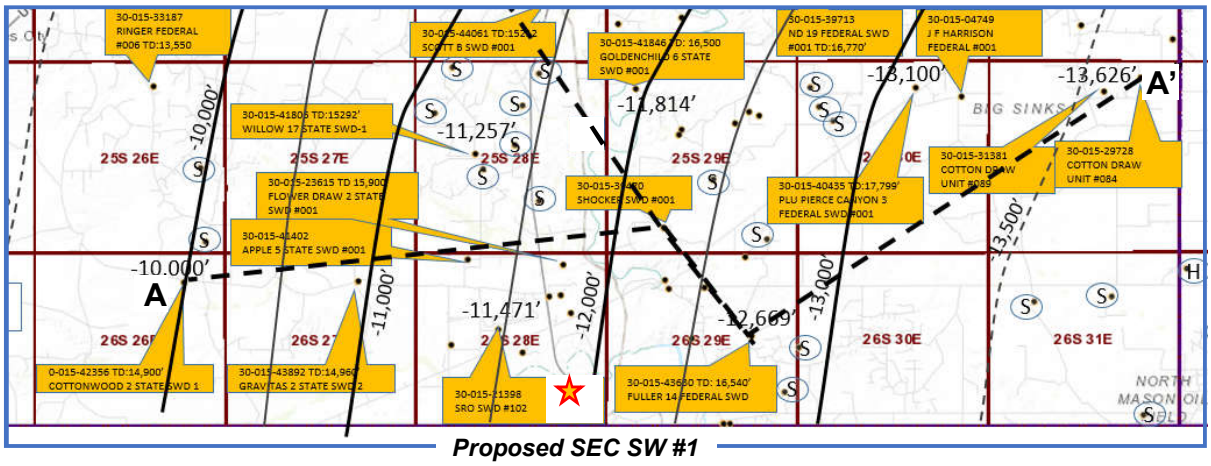
The SWD prospect is in the Carlsbad Basin. The site is approximately 0.6 miles from the Delaware River watershed segment with drainage into the Pecos River. Some shallower wells *may* exploit thin layers of valley and basin fill of the Carlsbad-Pecos segment of the lower Pecos Valley complex of Quaternary alluvial sand and gravel deposits. However; fresh water is generally available from the Rustler and Santa Rosa formations. State Engineer's records show water wells in the area with a depth to groundwater of 100 to 175 feet and an average depth of 124 feet.

There are 2 (two) water wells located within one mile of the proposed SWD. Representative analyses from the area are included herein and one or both of the subject wells will be sampled, analyzed and submitted to the division.

C-108 - Item VIII
Geologic Information (cont.)

EAST-WEST X-SECTION





C-108 ITEM X

LOGS and AVAILABLE TEST DATA

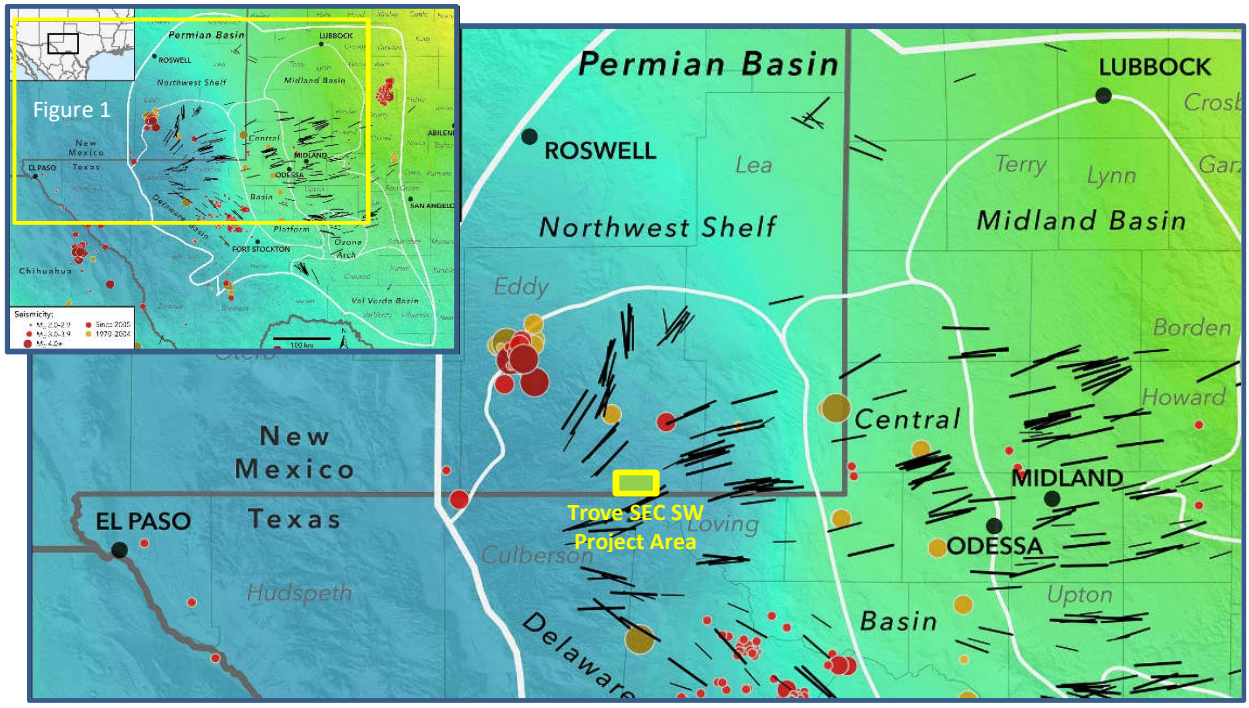
A Standard Suite of Logs will be run after drilling the well and submitted to the Division.

C-108 - Item VIII

Geological Data

EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT

Map Source: State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity (Figure 1); Jens-Erik Lund Snee/ Mark Zoback, February 2018



TROVE SEC SW PROJECT VICINITY

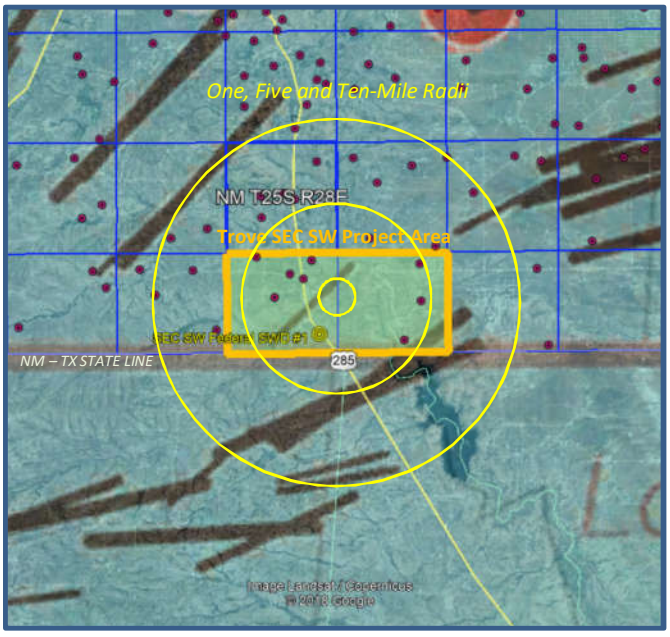


Figure 1. State of stress in the Permian Basin, Texas and New Mexico. Black lines are the measured orientations of the maximum horizontal stress (SHmax), with line length scaled by data quality. The colored background is an interpolation of measured relative principal stress magnitudes (faulting regime) expressed using the Aφ parameter (see text for details) of Simpson (1997). Blue lines are fault traces known to have experienced normal-sense offset within the past 1.6 Ma, from the USGS Quaternary Faults and Folds Database (Crone and Wheeler, 2000). The boundary between the Shawnee and Mazatzal basement domains is from Lund et al. (2015), and the Precambrian Grenville Front is from Thomas (2006). The Permian Basin boundary is from the U.S. Energy Information Administration, and the subbasin boundaries are from the Texas Bureau of Economic Geology Permian Basin Geological Synthesis Project. Earthquakes are from the USGS National Earthquake Information Center, the TexNet Seismic Monitoring Program, and Gan and Frohlich (2013). Focal mechanisms are from Saint Louis University (Herrmann et al., 2011).

C-108 - Item VIII

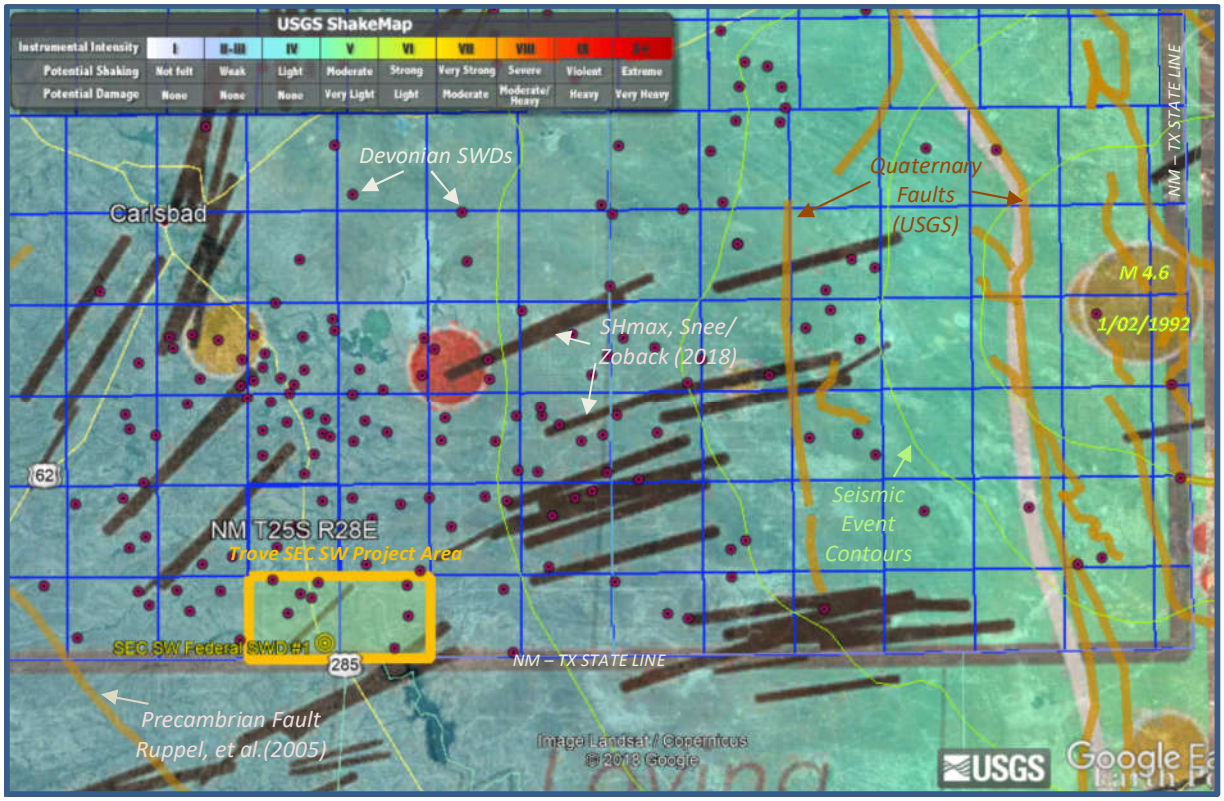
Geological Data

EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT (cont.)

In the following map, a layer with USGS historical earthquake data is overlaid and, a layer showing lines to represent Precambrian faults as documented by Ruppel, et al. (2005). Finally, a layer showing all currently permitted SWDs completed or proposed to be completed in the Devonian (Silurian) formation.

The USGS earthquakes shown are well known to the area. The 2012 quake located approximately 13 miles due east of Loving is also shown (17.5 miles). This was perhaps the most significant of the area in recent years but was determined to not be related to oil and gas activity. The best known and largest in recent history was the 1992, 4.6 magnitude quake centered south of Eunice, NM (57.2 miles).

The Precambrian faults and existing Devonian SWDs are discussed in more detail on the next page.



REGIONAL VIEW - DEVONIAN SWD LOCATIONS, PRECAMBRIAN FAULTS, S_{Hmax}, USGS MAGNITUDE

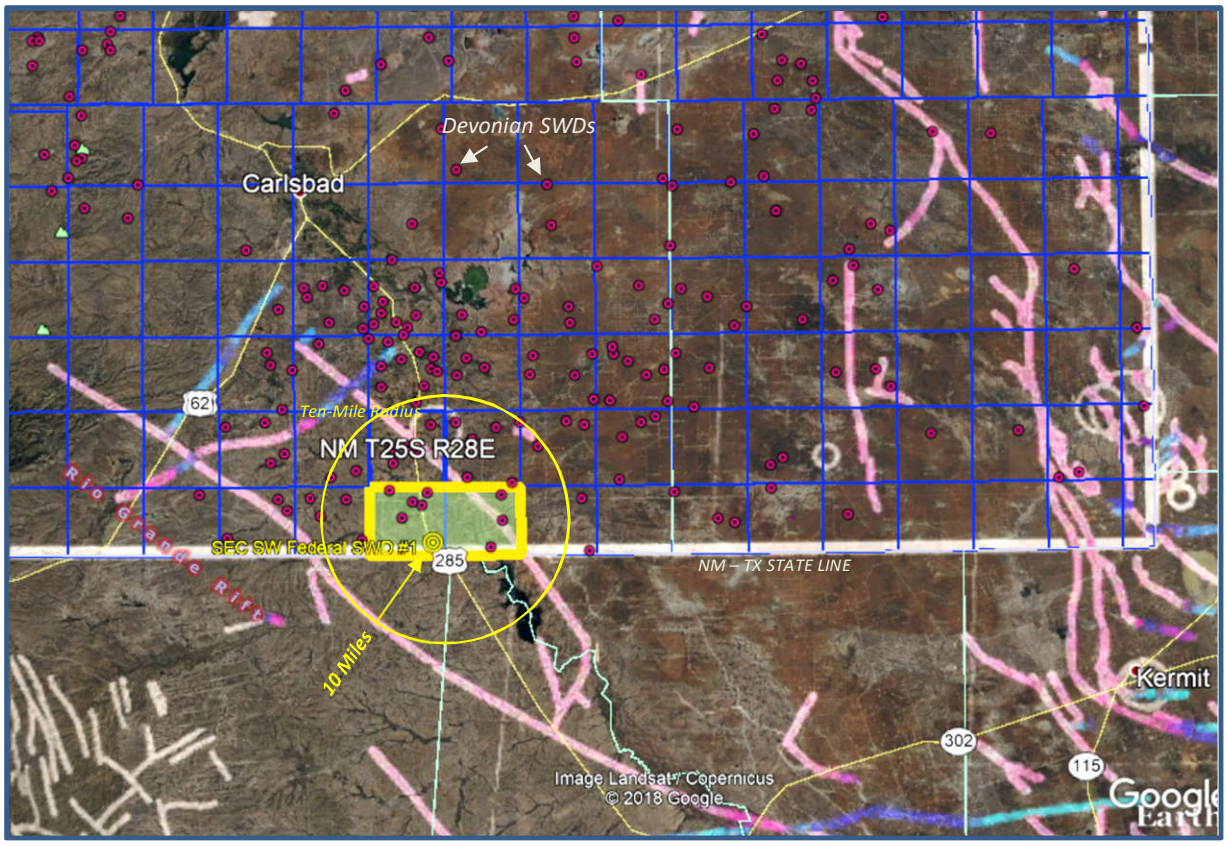
C-108 - Item VIII

Geological Data

EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT (cont.)

The primary Precambrian faults in the area as documented by Ruppel, et al. (2005) is represented on this map by the thick, pink colored lines. The most significant of these is the fault associated with the Rio Grande Rift, running southeast to northwest and, runs adjacent to a portion of Hwy 285; a portion the associated fault which runs parallel approximately 5 miles northeast is also depicted below. The Trove SEC SW Project Area is located some 10 miles from the fault. Other documented faults (USGS, 2000) are shown for eastern Lea County and extending into west Texas. Other Devonian SWDs in the area are also shown (small purple spots) completed or proposed to be completed in the Devonian (Silurian) formation.

The previously referenced study by Snee and Zoback (shown on previous exhibits) evaluated the strike-slip probability using probabilistic FSP (Fault Slip Potential) analysis of known faults in the Permian Basin. The study predicts that the Precambrian fault shown here has less than a 10% probability of being critically stressed to the point of creating an induced seismicity event. The main reason for the low probability is due to the relationship of the strike of the fault to the regional S_{Hmax} orientation; the proposed SWD being well removed from the area.

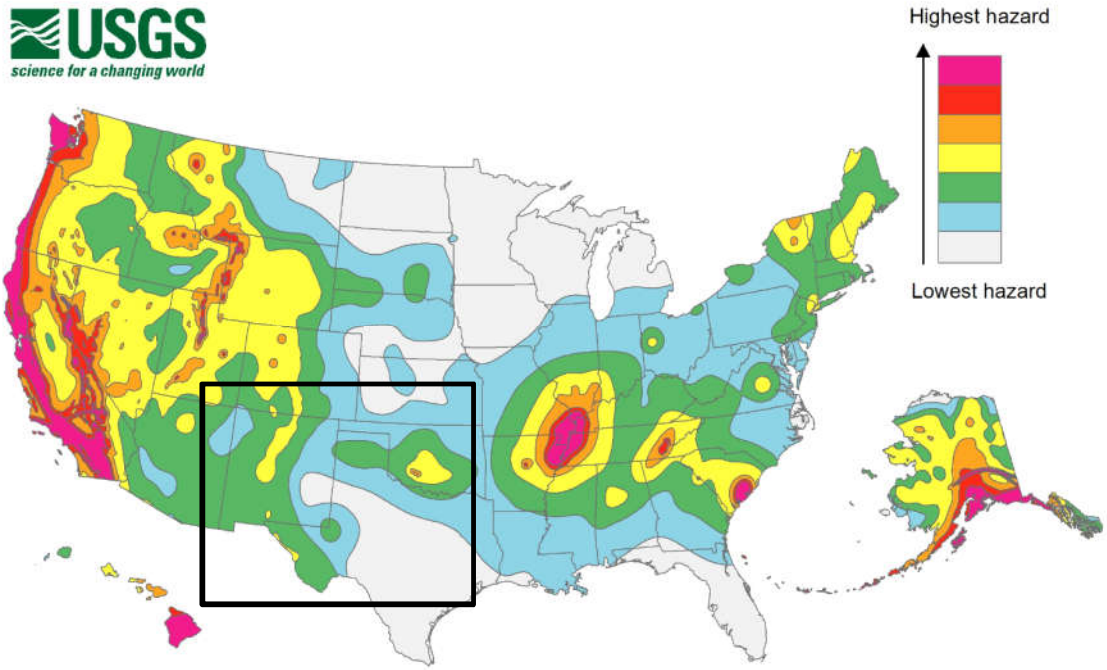


VICINITY - PERMITTED DEVONIAN SWDS, COMPOSITE FAULTS

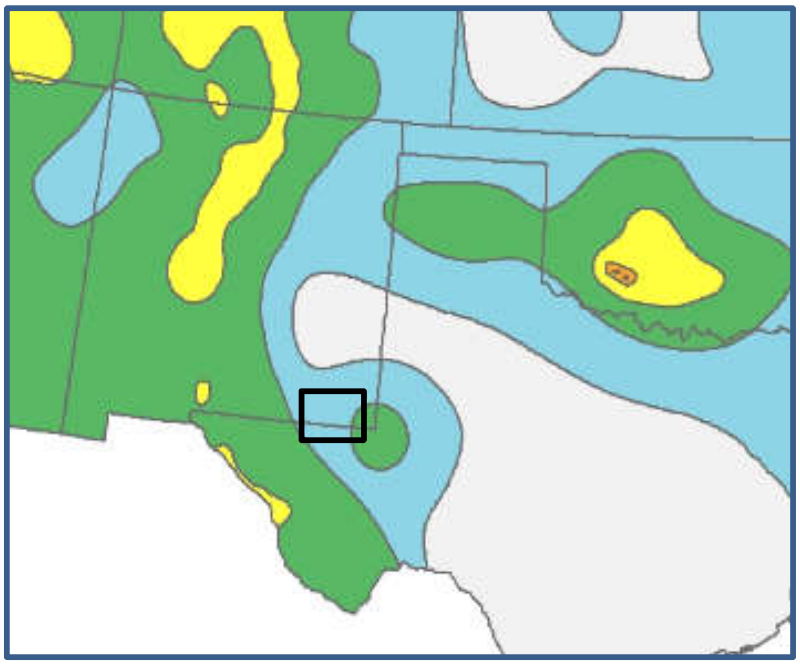
C-108 - Item VIII

Geological Data

EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT (cont.)



2014 map data: The USGS notes in its report that fracking may be to blame for a sizeable uptick in earthquakes in places like Oklahoma. "Some states have experienced increased seismicity in the past few years that may be associated with human activities such as the disposal of wastewater in deep wells," the report says. USGS hopes to use that data in future maps but it isn't included in this one. "Injection-induced earthquakes are challenging to incorporate into hazard models because they may not behave like natural earthquakes and their rates change based on man-made activities," the report says.

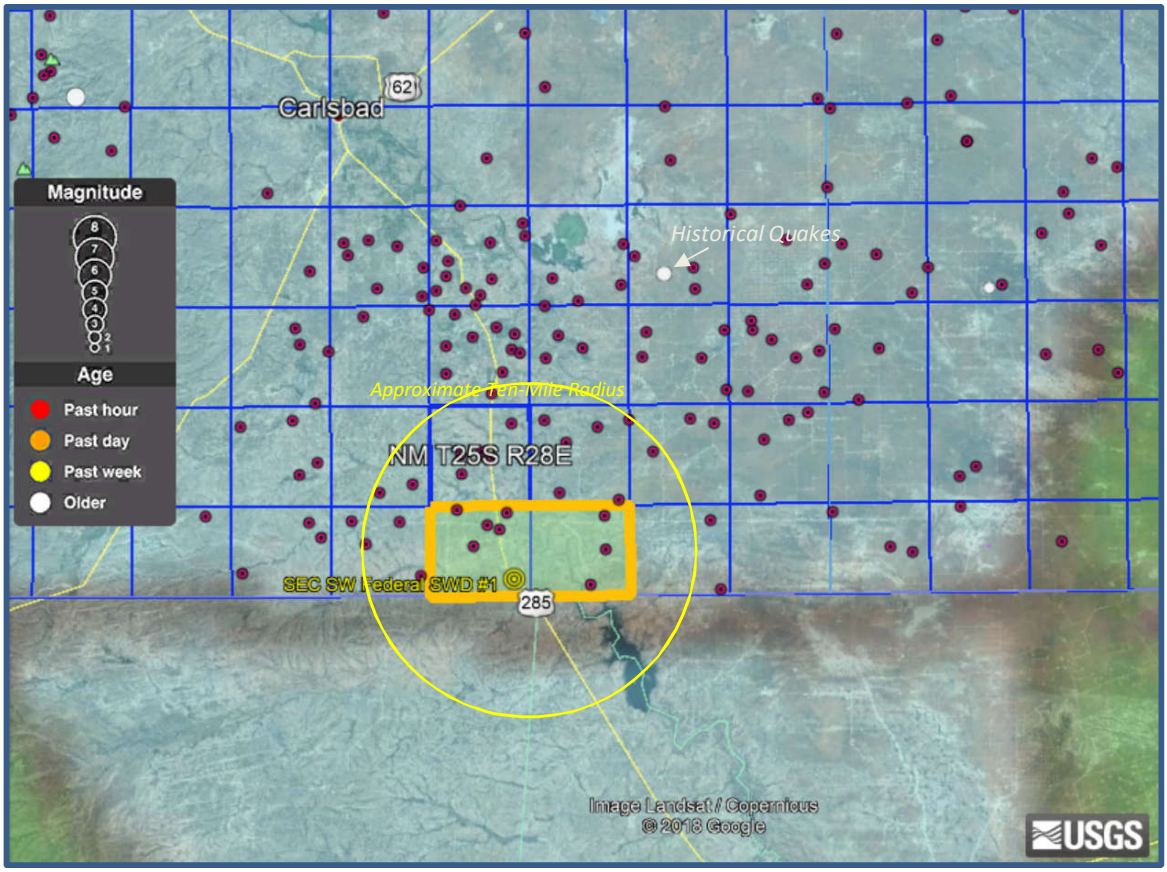


C-108 - Item VIII

Geological Data

EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT (cont.)

USGS 2014 REGIONAL MAP DATA OVERLAY IN GOOGLE EARTH W/ HISTORICAL EARTHQUAKES



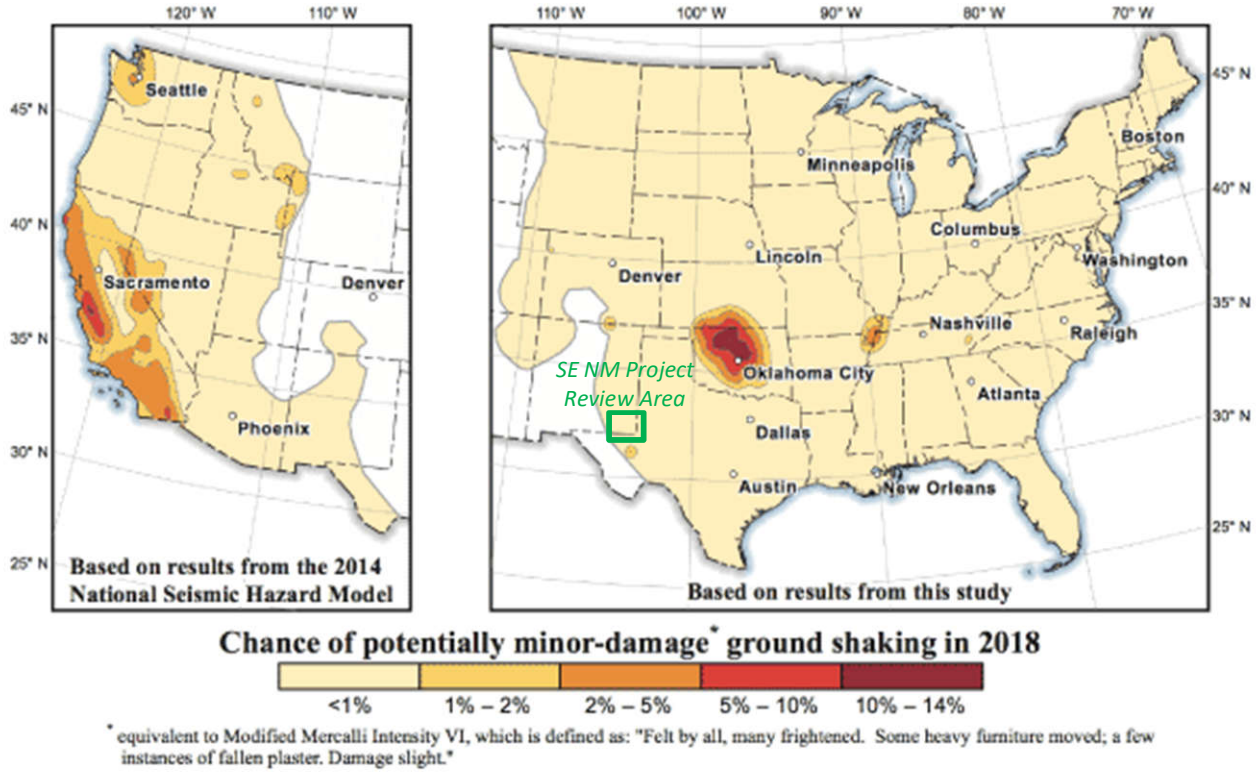
An updated USGS map for 2018 is on the next page. While methodology remained essentially the same according to USGS, the interpreted results and color-coding did have some modification. However, the subject area in southeast New Mexico on both maps remains very low and on the 2018 map, the area is assigned a value of <1% of "potentially minor-damage ground shaking".

C-108 - Item VIII

Geological Data

EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT (cont.)

USGS 2018 ONE-YEAR MODEL



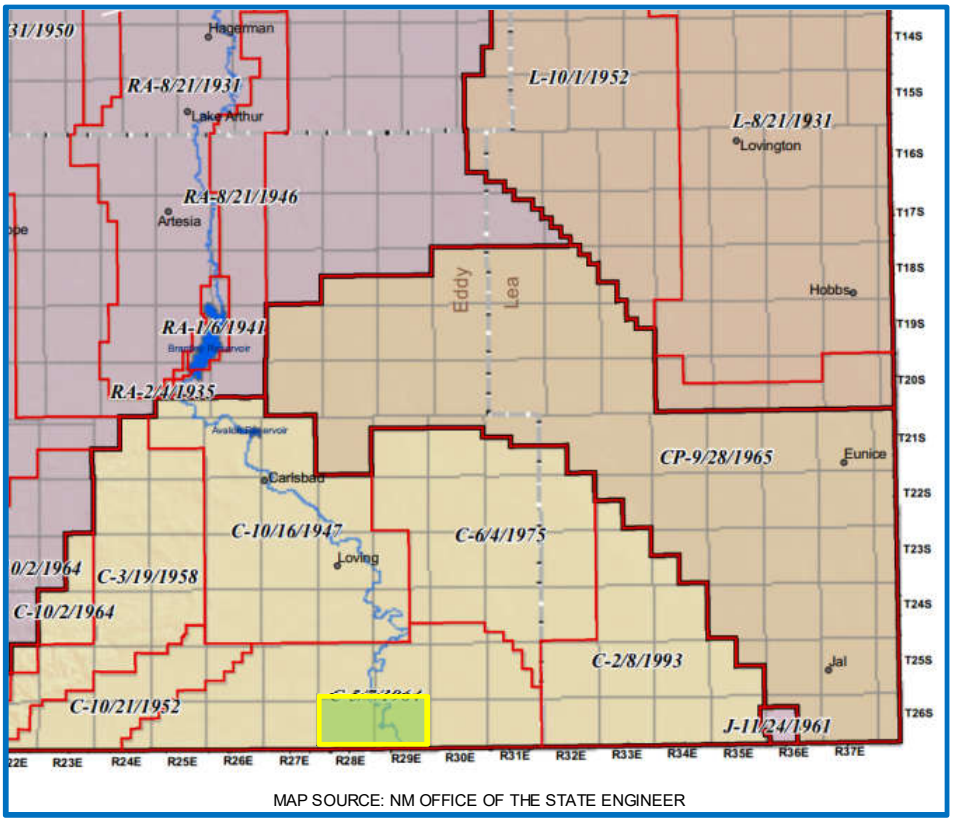
Map showing chance of damage from an earthquake in the Central and Eastern United States during 2018. Percent chances are represented as follows: pale yellow, less than 1 percent; dark yellow, 1 to 2 percent; orange, 2 to 5 percent; red, 5 to 10 percent; dark red, 10 to 12 percent. See Hazard from the western United States from the 2014 National Seismic Hazard Maps (Petersen et al., 2014) for comparison.

The USGS has produced the 2018 one-year probabilistic seismic hazard forecast for the central and eastern United States from induced and natural earthquakes. For consistency, the updated 2018 forecast is developed using the same probabilistic seismicity-based methodology as applied in the two previous forecasts.

Based on publicly available data for the subject area, it is reasonable to believe the risk of induced seismic activity due to disposal injection into this well is extremely low.

C-108 - Item XI

Groundwater Basins - Water Column / Depth to Groundwater



MAP SOURCE: NM OFFICE OF THE STATE ENGINEER

The subject well is located within the Carlsbad Basin.

The SWD prospect is in the Carlsbad Basin. The site is approximately 0.6 miles from the Delaware River watershed segment with drainage into the Pecos River. Some shallower wells *may* exploit some alluvial sand and gravel deposits of the lower Pecos Valley. However; fresh water is generally available from the Rustler and Santa Rosa formations. State Engineer's records show water wells in the area with a depth to groundwater of 100 to 175 feet and an average depth of 124 feet.

There are 2 (two) water wells located within one mile of the proposed SWD. Representative analyses from the area are included herein and one or both of the subject wells will be sampled, analyzed and submitted to the division.

SOS Consulting, LLC

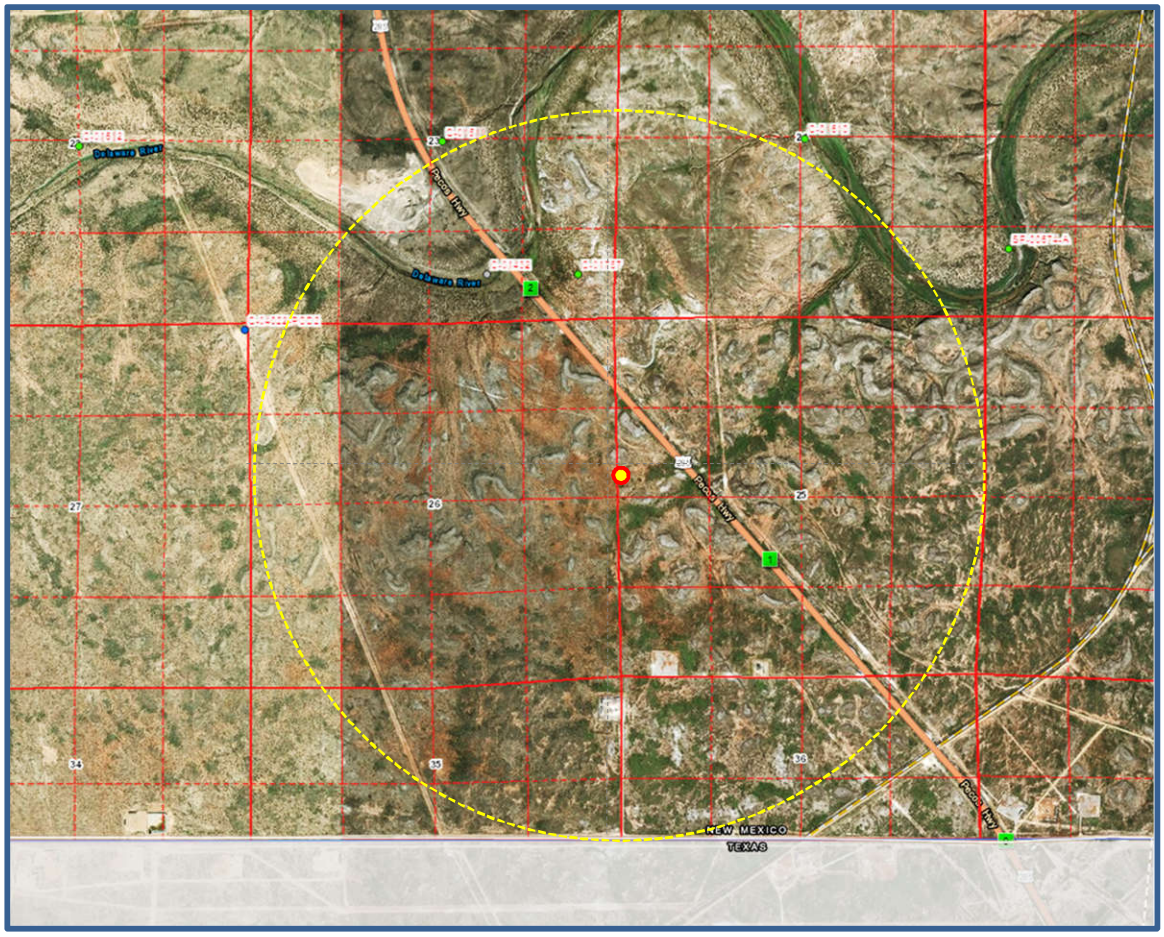
C-108 Item XI

Water Wells Within One Mile

SEC SW Federal SWD No.1 - Water Well Locator Map

There are 2 water well (PODs) within a one-mile radius of the proposed SWD.

A representative analysis is included with this application. Samples from subject wells will be analyzed and results submitted to the division.



Data from NM Office of the State Engineer displayed in OSE-GIS System.

SOS Consulting, LLC

DownHole SAT™ Water Analysis Report

PERFORMANCE
Chemical Company

SYSTEM IDENTIFICATION

Mewbourne
Fresh Water Tank

Fresh Water Well
POD 01411

Sample ID#: 0
ID:

Sample Date: 01-30-2018 at 1626
Report Date: 01-31-2018

WATER CHEMISTRY

CATIONS

Calcium(as Ca)	656.36
Magnesium(as Mg)	70.02
Barium(as Ba)	0.00
Strontium(as Sr)	8.42
Sodium(as Na)	38.52
Potassium(as K)	12.72
Iron(as Fe)	0.0440
Manganese(as Mn)	0.00

ANIONS

Chloride(as Cl)	400.44
Sulfate(as SO_4)	1261
Dissolved CO_2(as CO_2)	0.00
Bicarbonate(as HCO_3)	170.80
H_2S (as H_2S)	0.00

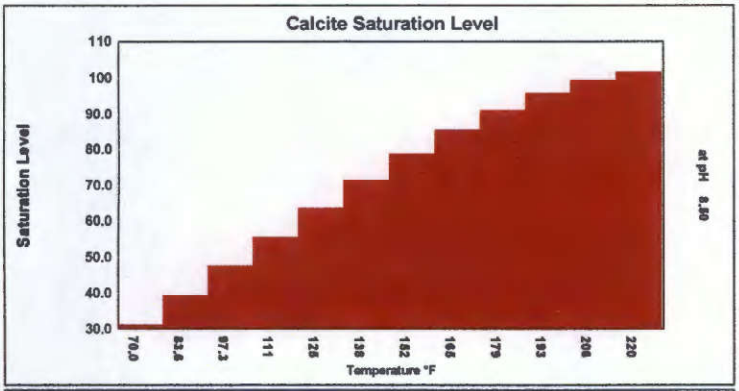
PARAMETERS

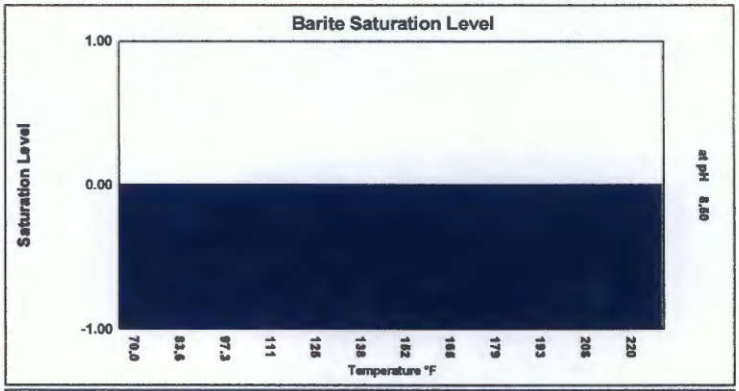
Temperature(°F)	61.00
Sample pH	8.50
Conductivity	2270
T.D.S.	2618
Resistivity	440.57
Sp.Gr.(g/mL)	1.01

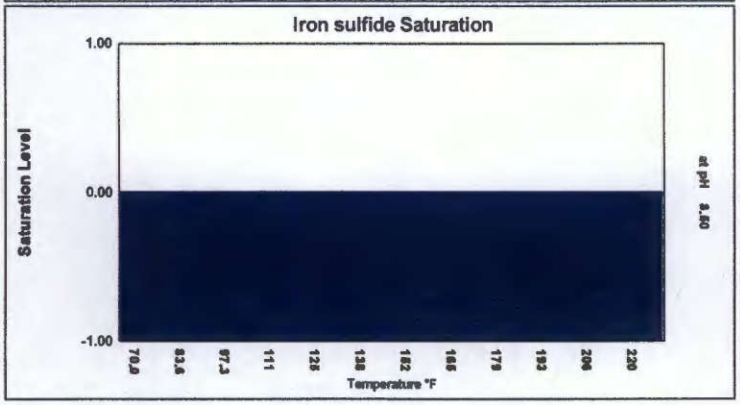
SCALE AND CORROSION POTENTIAL

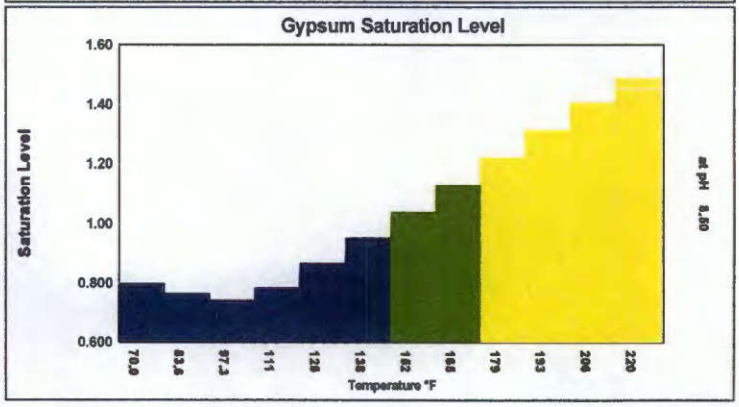
Temp. (°F)	Press. (psig)	Calcite $CaCO_3$		Anhydrite $CaSO_4$		Gypsum $CaSO_4*2H_2O$		Barite $BaSO_4$		Celestite $SrSO_4$		Siderite $FeCO_3$		Mackawenite FeS		CO_2 (mpy)	pCO_2 (atm)
70.00	0.00	31.02	5.39	0.464	-628.11	0.794	-185.50	0.00	-0.0125	0.703	-7.34	0.313	-0.0133	0.00	-0.0878	0.00374	< 0.001
83.64	0.00	39.15	6.12	0.476	-590.91	0.761	-217.37	0.00	-0.0170	0.712	-7.04	0.454	-0.00754	0.00	-0.0880	0.00505	< 0.001
97.27	0.00	47.45	6.70	0.508	-519.62	0.741	-236.12	0.00	-0.0221	0.737	-6.19	0.621	-0.00390	0.00	-0.0882	0.00636	< 0.001
110.91	0.00	55.48	7.12	0.562	-422.71	0.780	-189.68	0.00	-0.0277	0.773	-5.10	0.818	-0.00145	0.00	-0.0885	0.00663	< 0.001
124.55	0.00	63.49	7.45	0.642	-308.59	0.863	-107.68	0.00	-0.0343	0.809	-4.11	1.05	< 0.001	0.00	-0.0887	0.00556	< 0.001
138.18	0.00	71.30	7.70	0.754	-184.84	0.948	-37.24	0.00	-0.0421	0.844	-3.23	1.31	0.00158	0.00	-0.0891	0.00376	< 0.001
151.82	0.00	78.62	7.86	0.910	-57.91	1.04	23.55	0.00	-0.0514	0.877	-2.45	1.58	0.00247	0.00	-0.0895	0.00300	< 0.001
165.45	0.00	85.20	7.93	1.12	66.97	1.13	76.20	0.00	-0.0622	0.909	-1.75	1.83	0.00301	0.00	-0.0899	0.00238	< 0.001
179.09	0.00	90.90	7.91	1.42	186.14	1.22	122.21	0.00	-0.0747	0.939	-1.13	2.02	0.00319	0.00	-0.0904	0.00163	< 0.001
192.73	0.00	95.60	7.83	1.83	296.88	1.31	162.62	0.00	-0.0892	0.968	-0.577	2.08	0.00296	0.00	-0.0910	< 0.001	< 0.001
206.36	0.00	99.22	7.68	2.41	397.55	1.40	198.30	0.00	-0.106	0.995	-0.0927	1.93	0.00230	0.00	-0.0918	< 0.001	< 0.001
220.00	2.51	101.50	7.56	3.19	487.69	1.49	227.33	0.00	-0.127	1.01	0.142	1.70	0.00157	0.00	-0.0931	0.00161	< 0.001
		xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L		

Saturation Levels (xSAT) are the ratio of ion activity to solubility, e.g. $\{Ca\}\{CO_3\}/K_{sp}$. pCO_2 (atm) is the partial pressure of CO_2 in the gas phase.
mg/L scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.









Analytical Report
Lab Order **1609364**
Date Reported: **9/20/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West
Project: Solaris US 285 SWD
Lab ID: 1609364-001 **Matrix:** AQUEOUS

Client Sample ID: US 285 SWD #1
Collection Date: 9/1/2016 1:35:00 PM
Received Date: 9/7/2016 1:55:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664A						Analyst: **tnc**	
N-Hexane Extractable Material	ND	10		mg/L	1	9/12/2016 10:45:00 AM	27440
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	350	10	*	mg/L	20	9/9/2016 4:38:51 AM	A37081
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **SRM**	
Total Dissolved Solids	2620	20.0	*	mg/L	1	9/9/2016 5:12:00 PM	27408

EXHIBIT H

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

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

C-108 ITEM XI – WATER WELLS IN AOR

Depth to Ground Water

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-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01668	CUB	ED		3	3	12	26S	28E	589957	3546554*	250	100	150
C 02160	CUB	ED	4	1	2	14	26S	28E	589243	3546044*	300	120	180
C 02160 S	CUB	ED	1	1	2	14	26S	28E	589043	3546244*	300	120	180
C 02160 S2	CUB	ED	1	1	2	14	26S	28E	589043	3546244*	300	120	180
C 02160 S3	CUB	ED	2	2	1	14	26S	28E	588834	3546241*	300	120	180
C 02160 S4	CUB	ED	2	2	1	14	26S	28E	588834	3546241*	300	120	180
C 02160 S5	CUB	ED	1	1	1	14	26S	28E	588225	3546237*	300	120	180
C 02160 S6	CUB	ED	3	3	1	14	26S	28E	588232	3545635*	300	120	180
C 02160 S7	CUB	ED	3	3	1	22	26S	28E	586638	3543998*	300	120	180
C 02160 S8	CUB	ED	2	3	3	12	26S	28E	590056	3546653*	200	120	80
C 02160 S9	CUB	ED	3	3	2	02	26S	28E	589020	3548868*	300	120	180
C 02477	CUB	ED		1	1	03	26S	28E	586687	3549347*	150		
C 02478	CUB	ED		2	1	05	26S	28E	583848	3549325*	100		
C 02479	CUB	ED		4	4	10	26S	28E	587909	3546534*	200		
C 02480	CUB	ED		4	4	10	26S	28E	587909	3546534*	150		
C 02481	CUB	ED		1	1	14	26S	28E	588326	3546138*	200		
C 02894	C	ED	2	2	3	12	26S	28E	590458	3547061*	240		
C 02924	C	ED	1	3	2	11	26S	28E	589032	3547451*			
C 04022 POD1	CUB	ED	4	4	2	15	26S	28E	588082	3545647	220	175	45
C 04022 POD2	CUB	ED	2	2	2	27	26S	28E	588106	3543082	250	145	105

Average Depth to Water: **124 feet**
Minimum Depth: **100 feet**
Maximum Depth: **175 feet**

Record Count: 20

PLSS Search:

Township: 26S **Range:** 28E

***UTM location was derived from PLSS - see Help**

C-108 ITEM XII

Geologic Affirmation

We have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and any underground sources of drinking water.

Ben Stone, Partner
SOS Consulting, LLC

Project: Trove Energy and Water, LLC
SEC SW Project Area
Reviewed 6/26/2019

C-108 ITEM XIII – PROOF OF NOTIFICATION

IDENTIFICATION AND NOTIFICATION OF INTERESTED PARTIES

Exhibits for Section

Affected Parties Map

List of Interested Parties

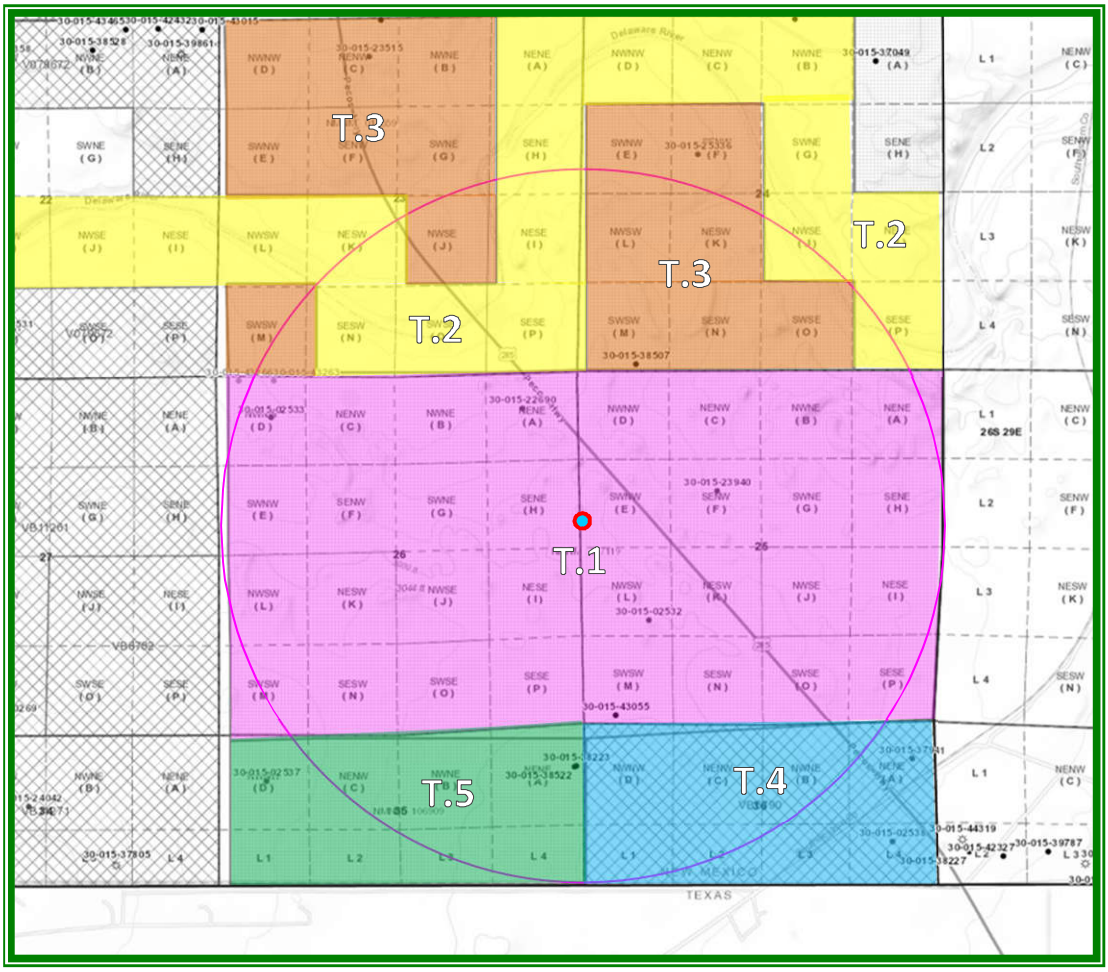
Notification Letter to Interested Parties

Proof of Certified Mailing

Published Legal Notice

SEC SW Federal SWD Well No.1 – Affected Parties Plat

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



TROVE
ENERGY and WATER

LEGEND

T.1 – NMNM-117119 – Chevron USA, Inc.

T.2 – BLM Split Estate – Multiple Private w/ Lessee

T.3 – NMNM-012559 – Oxy USA, Inc.

T.4 – VB-0679-0000 – Featherstone Development

T.5 – NMNM-012559 – EOG Resources, Inc.

SOS Consulting, LLC

C-108 ITEM XIII – PROOF OF NOTIFICATION
AFFECTED PARTIES LIST

SOS Consulting is providing electronic delivery of C-108 applications.
ALL APPLICABLE AFFECTED PARTIES ARE PROVIDED A LINK IN THE NOTICE LETTER TO A SECURE SOS/ CITRIX SHAREFILE® SITE TO VIEW AND DOWNLOAD A FULL COPY OF THE SUBJECT C-108 APPLICATION IN PDF FORMAT.

"AFFECTED PERSON" MEANS THE DIVISION DESIGNATED OPERATOR; IN THE ABSENCE OF AN OPERATOR, A LESSEE WHOSE INTEREST IS EVIDENCE BY A WRITTEN CONVEYANCE DOCUMENT EITHER OF RECORD OR KNOWN TO THE APPLICANT AS OF THE DATE THE APPLICANT FILES THE APPLICATION; OR IN THE ABSENCE OF AN OPERATOR OR LESSEE, A MINERAL INTEREST OWNER WHOSE INTEREST IS EVIDENCED BY A WRITTEN CONVEYANCE DOCUMENT EITHER OF RECORD OR KNOWN TO THE APPLICANT AS OF THE DATE THE APPLICANT FILED THE APPLICATION FOR PERMIT TO INJECT.; PER OCD RULES NMAC 19.15.26.7, A. AND 19.15.26.8, B.2.

SURFACE OWNER

1 U.S. DEPARTMENT OF INTERIOR
Bureau of Land Management
Oil & Gas Division
620 E. Greene St.
Carlsbad, NM 88220
Certified: 7018 2290 0001 2038 6100

OFFSET MINERALS LESSEES and OPERATORS (All Notified via USPS Certified Mail)

BLM Leases NMNM-117119 (T.1 on Map)
Lessee & Operator
2 CHEVRON USA, INC.
Attn: Linda McMurray, Permitting Team
6301 Deauville Blvd.
Midland, TX 79706
Certified: 7018 2290 0001 2038 6117

BLM Split Estate – (T.2 on Map)
Lessee & Operator
3 COG OPERATING, LLC
Attn: NM Land/ Leases
600 W. Illinois Avenue
Midland, TX 79701
Certified: 7018 2290 0001 2038 6124

BLM Lease NMNM-012259 (T.3 on Map)
Lessee
OXY USA, INC.
6001 Deauville Blvd.
Midland, TX 79706

Operator
COG OPERATING, LLC
Attn: NM Land/ Leases
600 W. Illinois Avenue
Midland, TX 79701

C-108 ITEM XIII – PROOF OF NOTIFICATION
AFFECTED PARTIES LIST (cont.)

State Lease VB-0679-0000 (T.4 on Map)
Lessee

4 FEATHERSTONE DEVELOPMENT CORP.
P.O. Box 429
Roswell, NM 88202
Certified: 7018 2290 0001 2038 6131

BLM Lease NMNM-106909 (T.5 on Map)
Lessee & Operator

5 EOG RESOURCES, INC.
Attn: Chuck Moran
5509 Champions Drive
Midland, TX 79706
Certified: 7018 2290 0001 2038 6148

OFFSET MINERALS OWNERS (Notified via USPS Certified Mail)

U.S. DEPARTMENT OF INTERIOR
Bureau of Land Management
Oil & Gas Division
620 E. Greene St.
Carlsbad, NM 88220

6 STATE OF NEW MEXICO
Oil, Gas and Minerals Division
310 Old Santa Fe Trail
Santa Fe, NM 87504
Certified: 7018 2290 0001 2038 6155

REGULATORY

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed original and copy)
1220 S. St. Francis Dr.
Santa Fe, NM 87505

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed copy)
811 South First St.
Artesia, NM 88210

June 25, 2019

NOTIFICATION TO INTERESTED PARTIES
via U.S. Certified Mail – Return Receipt Requested

To Whom It May Concern:

Trove Energy and Water, LLC, Hobbs, New Mexico, is preparing applications to the New Mexico Oil Conservation Division to drill and complete for salt water disposal the SEC SW Federal SWD Well No.1. The proposed commercial operation will be for produced water disposal from area operators. As indicated in the notice below, the well will be located in Section 25, Township 26 South, Range 28 East in Eddy County, New Mexico.

The published notice states that the interval will be from 14,800 feet to 15,900 feet into the Devonian and Silurian formations.

Following is the notice published in the Artesia Daily Press, Artesia, New Mexico on or about June 21, 2019.

LEGAL NOTICE

Trove Energy and Water, LLC, 1919 North Turner, Hobbs, NM 88240, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the SEC SW Federal SWD Well No.1 will be located 2310' FNL and 10' FEL, Section 25, Township 26 South, Range 28 East, Eddy County, New Mexico; approximately 14.5 miles south/ southeast of Malaga, NM.

Produced water from area production will be commercially disposed into the Devonian, Silurian and Fusselman formations at a maximum interval depth of 14,800' to 15,900' at a maximum surface pressure of 2960 psi and a rate limited only by such pressure. Mudlogging and e-logs will confirm final interval depths.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice or the OCD receive date, whichever is later. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email info@sosconsulting.us.

You have been identified as a party who may be interested as an offset lessee or operator.

You are entitled to a full copy of the application. A full copy in PDF format will be posted on the SOS Consulting ***ShareFile*** site and available for future download (posting may lag behind the notice effort).

Use the URL link: https://sosconsulting.sharefile.com/d-sa75559b3a354fe3a
(Please Note: The ShareFile service is powered by Citrix Systems and is completely secure.*)

The link to this file will be active for 60 days from the date of this letter. Your company can access and download the file a maximum of five (5) times. (One copy may be downloaded and shared as needed among your company.)

If preferred, you may call SOS Consulting, LLC at 903-488-9850, or email info@sosconsulting.us, and the same PDF file copy will be expedited to you via email.

Please use a subject like "**SEC SW Fed SWD #1 June 2019 PDF Copy Request**".

Thank you for your attention in this matter.

Best regards,

Ben Stone, SOS Consulting, LLC
Agent for Trove Energy and Water, LLC

Cc: Application File

SOS Consulting is committed to providing superior quality work using technology to assist clients and affected parties in obtaining the documentation required. SOS will continue to utilize methods which are less energy and resource intensive including, the reduction of paper copies.

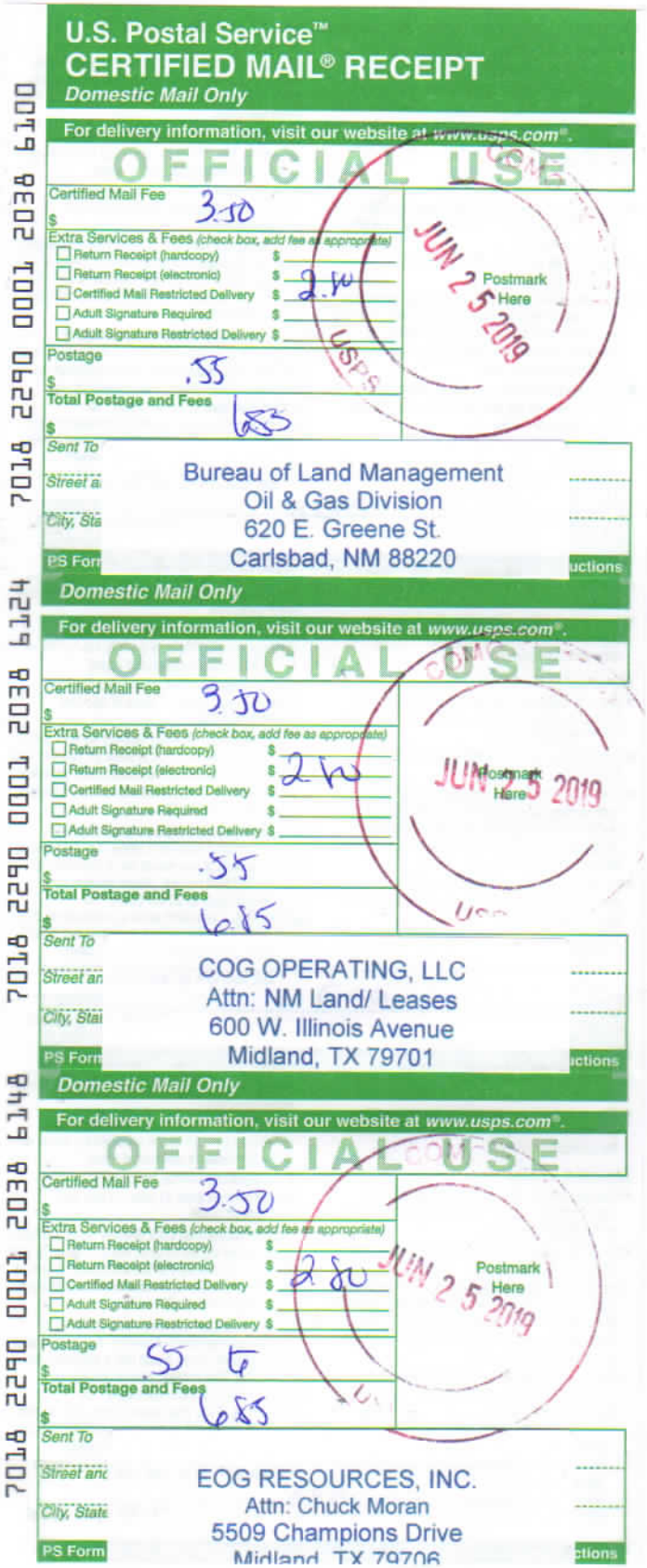
We hope you'll partner with us and appreciate these efforts.

***** You will be asked for your email, name and company.
This will not be used by anyone except keeping track of the file downloads.
You will not be solicited by SOS or anyone else. Data is stored on Citrix Systems servers only.

CITRIX
ShareFile

C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)



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Bureau of Land Management
Oil & Gas Division
620 E. Greene St.
Carlsbad, NM 88220

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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CHEVRON USA, INC.
Attn: Linda McMurray, Permitting Team
6301 Deauville Blvd.
Midland, TX 79706

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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COG OPERATING, LLC
Attn: NM Land/ Leases
600 W. Illinois Avenue
Midland, TX 79701

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 2290 0001 2038 6124

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FEATHERSTONE DVLPMNT CORP.
P.O. Box 429
Roswell, NM 88202

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 2290 0001 2038 6131

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STATE OF NEW MEXICO
Oil, Gas and Minerals Division
310 Old Santa Fe Trail
Santa Fe, NM 87504

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 2290 0001 2038 6155

Affidavit of Publication

No. 25172

State of New Mexico

County of Eddy:

Danny Scott

being duly sworn says that he is the **Publisher**

of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

Legal Ad

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same day as follows:

First Publication	June 21, 2019
Second Publication	
Third Publication	
Fourth Publication	
Fifth Publication	
Sixth Publication	
Seventh Publication	

Subscribed and sworn before me this

21st day of June 2019

OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires: 5/12/2023

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

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Published in the Artesia Daily Press, Artesia, N.M., June 21, 2019 Legal No. 25172.