

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]  
 [A] Location - Spacing Unit - Simultaneous Dedication  
 NSL  NSP  SD  
 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 \_\_\_\_\_

- SWD - 1691  
 - Trove Energy, LLC  
 326995  
 326995

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- [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

Well  
 - Trove Energy,  
 SWD #1  
 30-015-Pending  
 Pool  
 SWD,  
 Deviation -  
 Silurian

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

97869

[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.

|                    |           |                             |         |
|--------------------|-----------|-----------------------------|---------|
| Ben Stone          |           | Agent for Trove Energy, LLC | 8/07/17 |
| Print or Type Name | Signature | Title                       | Date    |
|                    |           | ben@sosconsulting.us        |         |
|                    |           | e-mail Address              |         |



August 7, 2017

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

Attn: Mr. David Catanach, Director

*Re: Application of Trove Energy, LLC to permit for salt water disposal in the proposed Trove Energy SWD Well No.1, to be located in Section 13, Township 24 South, Range 28 East, NMPM, Eddy County, New Mexico.*

Dear Mr. Catanach,

Please find enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request to permit for disposal, the Trove Energy SWD No.1.

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

Published legal notice ran on or about August 3, 2017 in the edition of the Artesia Daily Press and all offset operators and other interested parties have been notified individually. The legal notice affidavit will be forwarded when received. This application also includes a wellbore schematic, area of review maps, leaseholder plats and other required information for a complete Form C-108. The well is located on private land and minerals. As an offset minerals owner, a copy of this application has been submitted to the Bureau of Land Management, Carlsbad Field Office, Oil and Gas Division.

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,

A handwritten signature in black ink, appearing to read 'Ben Stone', is written over a white background.

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

Cc: Application attachment and file

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: **Salt Water Disposal** and the application **QUALIFIES** for administrative approval.
- II. OPERATOR: **Trove Energy, LLC (Ogrid 326495)**  
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-half 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 12 domestic water wells within one mile of the proposed salt water disposal well. 2 have been sampled and analyses will be forwarded upon receipt.**
- 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 4 offset lessees and/or operators within ½ mile and BLM minerals - all have been noticed. Well location is Private.**
- 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, LLC**

SIGNATURE:  DATE: **8/07/2017**

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:

**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: ***Affidavit will be FORWARDED upon receipt.***

- (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.



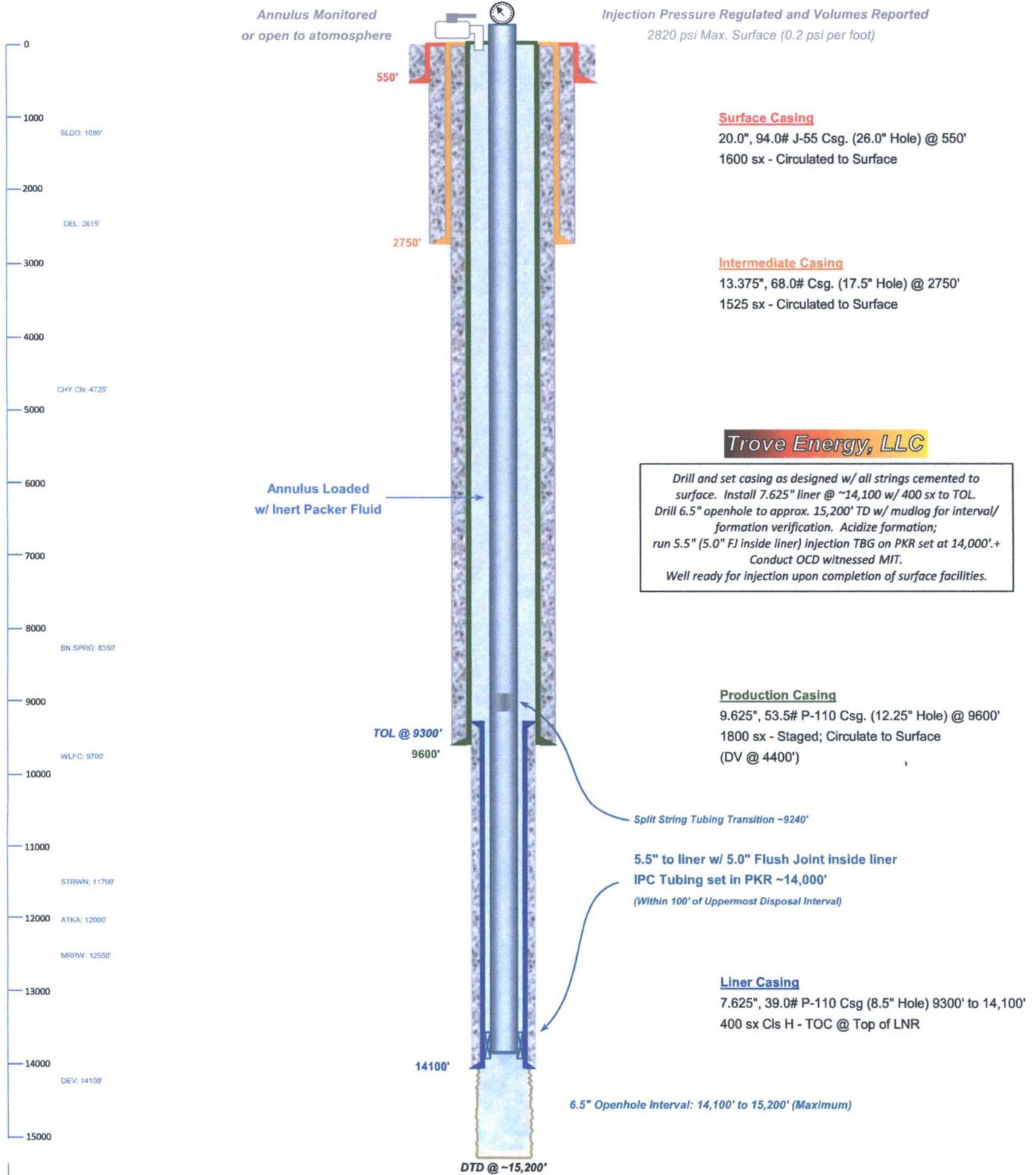




**WELL SCHEMATIC - PROPOSED**  
**Trove Energy SWD Well No.1**

**API 30-015-xxxxx**  
 994' FSL & 2508' FWL, SEC. 13-T24S-R28E  
 EDDY COUNTY, NEW MEXICO

**SWD; Devonian (96101)**  
 Spud Date: 10/01/2017  
 SWD Config Dt: 10/25/2017



**Trove Energy, LLC**

Drill and set casing as designed w/ all strings cemented to surface. Install 7.625" liner @ ~14,100 w/ 400 sx to TOL. Drill 6.5" openhole to approx. 15,200' TD w/ mudlog for interval/formation verification. Acidize formation; run 5.5" (5.0" FJ inside liner) injection TBG on PKR set at 14,000'+. Conduct OCD witnessed MIT. Well ready for injection upon completion of surface facilities.



Drawn by: Ben Stone, Rvsd 8/01/2017

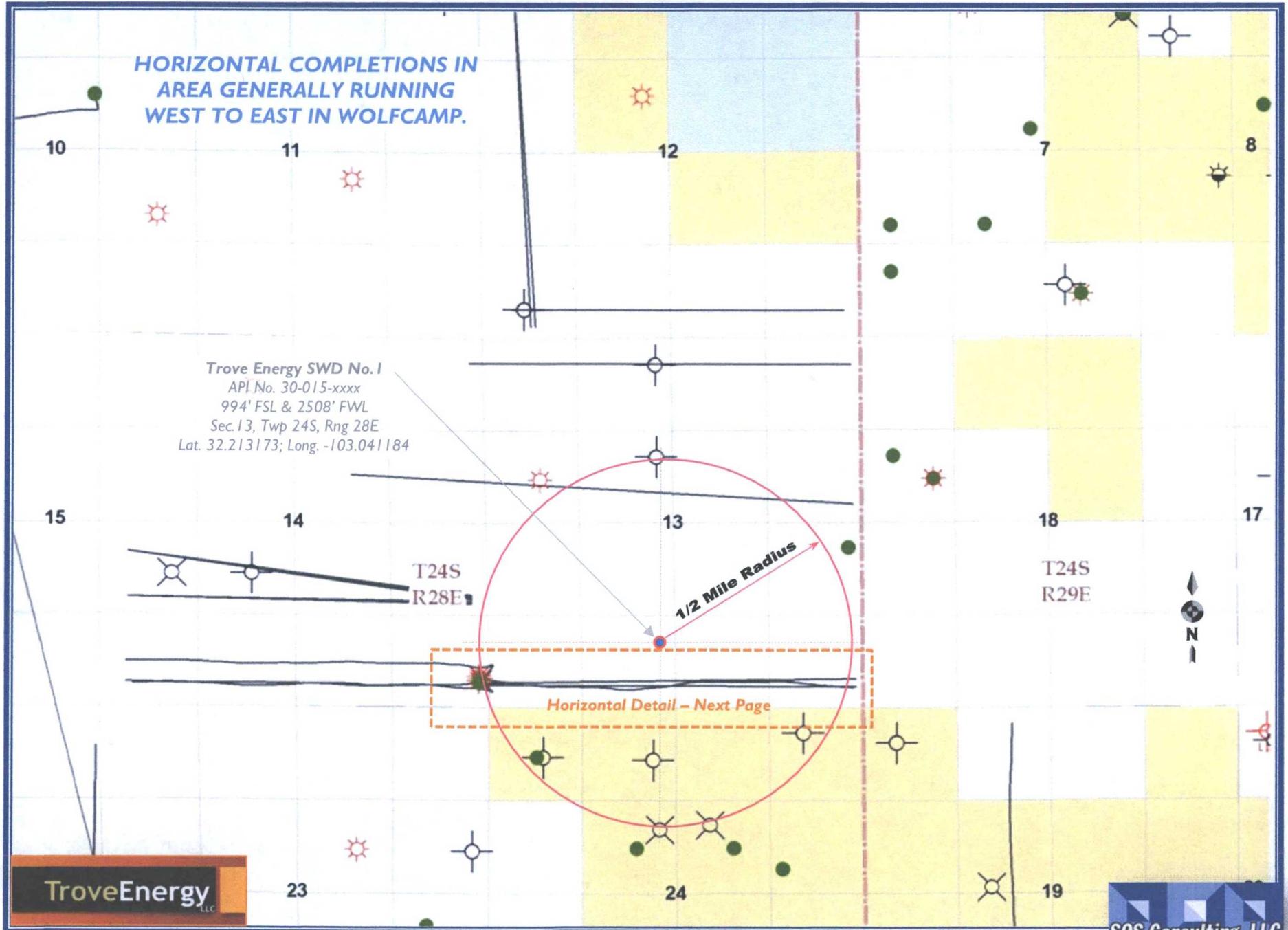
## **C-108 - Item VI**

### **Area of Review Well Data**

**THERE ARE NO WELLS WHICH PENETRATE THE  
PROPOSED DEVONIAN FORMATION IN THE  
ONE-HALF MILE AREA of REVIEW**

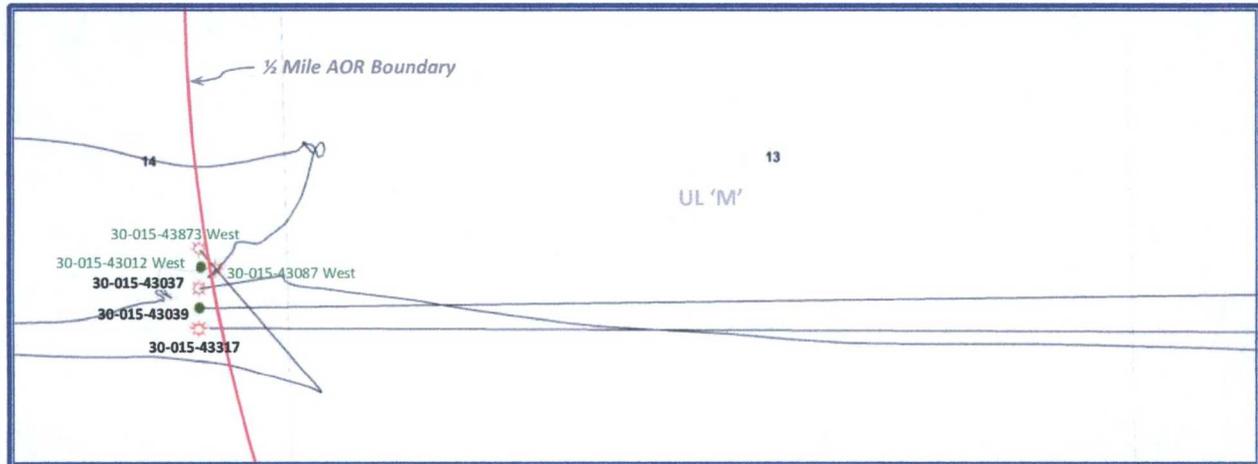
# Trove Energy SWD No.1 – AOR / Horizontal Completion Transverse Areas

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



# Trove Energy SWD No.1 – AOR / Horizontal Completions

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



~ Please refer to other AOR Map views ~

## Matador Production Company

**30-015-43037** – Janie Conner 13 24S 28E RB No.224H  
Horizontal Completion: Wolfcamp @ 10,589' +/-  
*Nominal distance to proposed vertical SWD: 656 feet*

**30-015-43039** – Janie Conner 13 24S 28E RB No.124H  
Horizontal Completion: Bone Spring @ 8449' +/-  
*Nominal distance to proposed vertical SWD: 558 feet*

**30-015-43317** - Janie Conner 13 24S 28E RB No.204H  
Horizontal Completion: Wolfcamp @ 9770' +/-  
*Nominal distance to proposed vertical SWD: 616 feet*

## **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 VII – PROPOSED OPERATION**

## **Trove Energy SWD No.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 construction phase of the project to last more than 60 days, depending on availability of contractors and equipment.

### ***Configure for Salt Water Disposal***

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 and BLM test procedures. (Notify NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity.

### ***Operational Summary***

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

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.

The tanks will be equipped with telemetry devices and visual alarms to alert the operator and customers of full tanks or an overflow situation.

Anticipated daily maximum volume is 25,000 bpd and an average of 15,000 bpd at a maximum surface injection pressure of 2820 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 ANALYSES**

**Item VII.4 – Water Analysis of Source Zone Water**

Delaware  
Bone Spring  
Wolfcamp  
Morrow

**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 SWD Well No.1**

**SOURCE ZONE**

**DELAWARE**

|                                |                                   |                          |                     |
|--------------------------------|-----------------------------------|--------------------------|---------------------|
| <b>API No</b>                  | 3002508367                        | <b>Lab ID</b>            |                     |
| <b>Well Name</b>               | BELL LAKE UNIT 007                | <b>Sample ID</b>         | 4347                |
| <b>Location</b>                | ULSTR 01 24 S 33 E<br>660 N 660 E | <b>Sample No</b>         |                     |
|                                |                                   | <b>Lat / Long</b>        | 32.25143 -103.51924 |
|                                |                                   | <b>County</b>            | Lea                 |
| <b>Operator (when sampled)</b> | Field SWD                         | <b>Unit</b>              | 1                   |
| <b>Sample Date</b>             |                                   | <b>Analysis Date</b>     |                     |
|                                | <b>Sample Source</b> UNKNOWN      | <b>Depth (if known)</b>  |                     |
|                                | <b>Water Type</b>                 |                          |                     |
| ph                             |                                   | alkalinity_as_caco3_mgL  |                     |
| ph_temp_F                      |                                   | hardness_as_caco3_mgL    |                     |
| specificgravity                |                                   | hardness_mgL             |                     |
| specificgravity_temp_F         |                                   | resistivity_ohm_cm       |                     |
| tds_mgL                        | 87686                             | resistivity_ohm_cm_temp_ |                     |
| tds_mgL_180C                   |                                   | conductivity             |                     |
| chloride_mgL                   | 53920                             | conductivity_temp_F      |                     |
| sodium_mgL                     |                                   | carbonate_mgL            |                     |
| calcium_mgL                    |                                   | bicarbonate_mgL          | 391                 |
| iron_mgL                       |                                   | sulfate_mgL              | 749                 |
| 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.)



**C-108 Item VII.5 - Produced Water Data**

**Trove Energy SWD Well No.1**

**SOURCE ZONE**

**BONE SPRING**

|                                |                    |                          |                     |
|--------------------------------|--------------------|--------------------------|---------------------|
| <b>API No</b>                  | 3002502429         | <b>Lab ID</b>            |                     |
| <b>Well Name</b>               | LEA UNIT           | <b>Sample ID</b>         | 4916                |
|                                |                    | <b>Sample No</b>         |                     |
|                                | 005                |                          |                     |
| <b>Location</b>                | ULSTR 12 20 S 34 E | <b>Lat / Long</b>        | 32.58504 -103.51106 |
|                                | 1980 S 1980 E      | <b>County</b>            | Lea                 |
| <b>Operator (when sampled)</b> |                    |                          |                     |
|                                | Field LEA          |                          | Unit J              |
| <b>Sample Date</b>             |                    | <b>Analysis Date</b>     |                     |
|                                | Sample Sourc DST   |                          | Depth (if known)    |
|                                | Water Typ          |                          |                     |
| ph                             |                    | alkalinity_as_caco3_mgL  |                     |
| ph_temp_F                      |                    | hardness_as_caco3_mgL    |                     |
| specificgravity                |                    | hardness_mgL             |                     |
| specificgravity_temp_F         |                    | resistivity_ohm_cm       |                     |
| tds_mgL                        | 202606             | resistivity_ohm_cm_temp_ |                     |
| tds_mgL_180C                   |                    | conductivity             |                     |
| chloride_mgL                   | 118100             | conductivity_temp_F      |                     |
| sodium_mgL                     |                    | carbonate_mgL            |                     |
| calcium_mgL                    |                    | bicarbonate_mgL          | 5196                |
| iron_mgL                       |                    | sulfate_mgL              | 992                 |
| 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.)*



**C-108 Item VII.5 - Produced Water Data**

**Trove Energy SWD Well No.1**

**SOURCE ZONE**

**WOLFCAMP**

|                  |                    |                   |                     |
|------------------|--------------------|-------------------|---------------------|
| <b>API No</b>    | 3001520138         | <b>Lab ID</b>     |                     |
| <b>Well Name</b> | MAHUN STATE 001    | <b>Sample ID</b>  | 5688                |
|                  |                    | <b>Sample No</b>  |                     |
| <b>Location</b>  | ULSTR 16 22 S 22 E | <b>Lat / Long</b> | 32.39340 -104.70979 |
|                  | 1800 N 1980 W      | <b>County</b>     | Eddy                |

**Operator (when sampled)**

|                    |              |                      |   |
|--------------------|--------------|----------------------|---|
| <b>Field</b>       | ROCKY ARROYO | <b>Unit</b>          | F |
| <b>Sample Date</b> | 5/17/1968    | <b>Analysis Date</b> |   |

|                        | 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.)*



**C-108 Item VII.5 - Produced Water Data**

**Trove Energy SWD Well No.1**

**SOURCE ZONE**

**MORROW**

|                  |                                     |                   |                     |
|------------------|-------------------------------------|-------------------|---------------------|
| <b>API No</b>    | 3002520756                          | <b>Lab ID</b>     |                     |
| <b>Well Name</b> | CUSTER MOUNTAIN UNIT 001            | <b>Sample ID</b>  | 2434                |
|                  |                                     | <b>Sample No</b>  |                     |
| <b>Location</b>  | ULSTR 09 24 S 35 E<br>1980 S 1980 W | <b>Lat / Long</b> | 32.22999 -103.37431 |
|                  |                                     | <b>County</b>     | Lea                 |

**Operator (when sampled)**

Field CINTA ROJA Unit K

Sample Date Analysis Date

Sample Source DST Depth (if known)

Water Typ

|                        |        |                          |     |
|------------------------|--------|--------------------------|-----|
| ph                     |        | alkalinity_as_caco3_mgL  |     |
| ph_temp_F              |        | hardness_as_caco3_mgL    |     |
| specificgravity        |        | hardness_mgL             |     |
| specificgravity_temp_F |        | resistivity_ohm_cm       |     |
| tds_mgL                | 282741 | resistivity_ohm_cm_temp_ |     |
| tds_mgL_180C           |        | conductivity             |     |
| chloride_mgL           | 176800 | conductivity_temp_F      |     |
| sodium_mgL             |        | carbonate_mgL            |     |
| calcium_mgL            |        | bicarbonate_mgL          | 161 |
| iron_mgL               |        | sulfate_mgL              | 650 |
| 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.)*



**C-108 Item VII.5 - Produced Water Data**

**Trove Energy SWD Well No.1**

**DISPOSAL ZONE**

**DEVONIAN**

|                  |                    |                   |                     |
|------------------|--------------------|-------------------|---------------------|
| <b>API No.</b>   | 3002508483         | <b>Lab ID</b>     |                     |
| <b>Well Name</b> | BELL LAKE UNIT     | <b>Sample ID</b>  | 5733                |
|                  | 006                | <b>Sample No</b>  |                     |
| <b>Location</b>  | ULSTR 06 23 S 34 E | <b>Lat / Long</b> | 32.32821 -103.50663 |
|                  | 660 S 1980 E       | <b>County</b>     | Lea                 |

**Operator (when sampled)**

Field BELL LAKE NORTH Unit O

Sample Date Analysis Date

Sample Source HEATER/TREATER 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                | 71078 | resistivity_ohm_cm_temp_ |      |
| tds_mgL_180C           |       | conductivity             |      |
| chloride_mgL           | 42200 | conductivity_temp_F      |      |
| sodium_mgL             |       | carbonate_mgL            |      |
| calcium_mgL            |       | bicarbonate_mgL          | 500  |
| iron_mgL               |       | sulfate_mgL              | 1000 |
| 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.)*



**C-108 Item VII.5 - Produced Water Data**

**Trove Energy SWD Well No.1**

**DISPOSAL ZONE**

**DEVONIAN**

|                                |                                     |                          |                     |
|--------------------------------|-------------------------------------|--------------------------|---------------------|
| <b>API No.</b>                 | 3002521082                          | <b>Lab ID</b>            |                     |
| <b>Well Name</b>               | ANTELOPE RIDGE UNIT 003             | <b>Sample ID</b>         | 5720                |
| <b>Location</b>                | ULSTR 34 23 S 34 E<br>1980 S 1650 W | <b>Sample No</b>         |                     |
|                                |                                     | <b>Lat / Long</b>        | 32.25922 -103.46068 |
|                                |                                     | <b>County</b>            | Lea                 |
| <b>Operator (when sampled)</b> |                                     |                          |                     |
|                                | <b>Field</b> ANTELOPE RIDGE         | <b>Unit</b>              | K                   |
| <b>Sample Date</b>             | 11/14/1967                          | <b>Analysis Date</b>     |                     |
|                                | <b>Sample Source</b> UNKNOWN        | <b>Depth (if known)</b>  |                     |
|                                | <b>Water Type</b>                   |                          |                     |
| ph                             | 6.9                                 | alkalinity_as_caco3_mgL  |                     |
| ph_temp_F                      |                                     | hardness_as_caco3_mgL    |                     |
| specificgravity                |                                     | hardness_mgL             |                     |
| specificgravity_temp_F         |                                     | resistivity_ohm_cm       |                     |
| tds_mgL                        | 80187                               | resistivity_ohm_cm_temp_ |                     |
| tds_mgL_180C                   |                                     | conductivity             |                     |
| chloride_mgL                   | 47900                               | conductivity_temp_F      |                     |
| sodium_mgL                     |                                     | carbonate_mgL            |                     |
| calcium_mgL                    |                                     | bicarbonate_mgL          | 476                 |
| iron_mgL                       |                                     | sulfate_mgL              | 900                 |
| 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.)*



## **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 to the south and east. 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 15,300' BGL (Below Ground Level) the well will TD approximately 1,200' 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 14,100' BGL. Injection will occur through the resulting openhole interval. Should mud or other logs indicate depth adjustment is required to exploit the desired formation as described; sundries with appropriate data will be filed with the OCD and BLM.

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

Fresh water in the area is generally available from valley and basin fill of the Carlsbad-Pecos segment of the lower Pecos Valley complex of Quaternary alluvial sand and gravel deposits. State Engineer's records show water wells in the area with a depth to groundwater of 12 to 60 feet with an average depth to groundwater of 35 feet.

There are 12 water wells located within one mile of the proposed SWD; 2 have been sampled and analyses will be forwarded upon receipt.

# C-108 ITEM XI – WATER WELLS IN AOR

Red knockout – not within one mile...



## New Mexico Office of the State Engineer Active & Inactive Points of Diversion (with Ownership Information)

| WR File Nbr                 | Sub basin      | Use            | Diversion    | Owner                             | County        | POD Number                | Code Grant | Source             | (quarters are 1=NW 2=NE 3=SW 4=SE) |              |               |                | X              | Y                 |                     |                     |
|-----------------------------|----------------|----------------|--------------|-----------------------------------|---------------|---------------------------|------------|--------------------|------------------------------------|--------------|---------------|----------------|----------------|-------------------|---------------------|---------------------|
|                             |                |                |              |                                   |               |                           |            |                    | 6416                               | 4            | Sec           | Tws            |                |                   | Rng                 |                     |
| <a href="#">C 00329</a>     | C              | DOM            | 3            | DEKALB AGRI. ASSOC. INC.          | ED            | <a href="#">C 00329</a>   |            | Shallow            | 2                                  | 1            | 2             | 13             | 24S            | 28E               | 590682              | 3565677*            |
| <a href="#">C 00353</a>     | C              | CLS            | 0            | DEKALB AGRICULTURAL ASSOC.        | ED            | <a href="#">C 00353</a>   |            |                    | 3                                  | 4            | 13            | 24S            | 28E            | 590603            | 3564367*            |                     |
| <a href="#">C 00354</a>     | C              | CLS            | 0            | DEKALB ALGRICULTURAL ASSN. INC    | ED            | <a href="#">C 00354</a>   |            |                    | 4                                  | 4            | 13            | 24S            | 28E            | 591005            | 3564367*            |                     |
| <a href="#">C 00464</a>     | IRR            |                | 314.245      | JACKIE DALE MCDONALD              | ED            | <a href="#">C 00464</a>   |            | Shallow            | 2                                  | 2            | 1             | 13             | 24S            | 28E               | 590277              | 3565674*            |
| <a href="#">C 00464 ENL</a> | IRR            |                | 0            | PREWITT MRS J A                   | ED            | <a href="#">C 00464</a>   |            | Shallow            | 2                                  | 2            | 1             | 13             | 24S            | 28E               | 590277              | 3565674*            |
| <a href="#">C 00513</a>     | C              | IRR            | 1422         | PARDUE LIMITED COMPANY            | ED            | <a href="#">C 00513 S</a> |            | Shallow            | 1                                  | 3            | 3             | 16             | 24S            | 28E               | 584802              | 3564432             |
| <a href="#">C 00684</a>     | IRR            |                | 0            | EASTLAND OIL CO.                  | ED            | <a href="#">C 00684</a>   |            | Shallow            | 2                                  | 1            | 2             | 13             | 24S            | 28E               | 590682              | 3565677*            |
| <del>C 00700</del>          | <del>C</del>   | <del>DOL</del> | <del>0</del> | <del>G.P. PARDUE &amp; SONS</del> | <del>ED</del> | <del>C 00700</del>        |            | <del>Shallow</del> | <del>2</del>                       | <del>3</del> | <del>3</del>  | <del>16</del>  | <del>24S</del> | <del>28E</del>    | <del>594903</del>   | <del>3564233*</del> |
| <a href="#">C 00738</a>     | IRR            |                | 343.5        | W.J. BURKHAM                      | ED            | <a href="#">C 00738</a>   |            | Shallow            | 3                                  | 1            | 1             | 13             | 24S            | 28E               | 589673              | 3565472*            |
| <a href="#">C 00750</a>     | IRR            |                | 74.7         | BETH ANN BOTROS                   | ED            | <a href="#">C 00750</a>   |            | Shallow            | 1                                  | 2            | 4             | 13             | 24S            | 28E               | 590898              | 3564871*            |
| <a href="#">C 00768</a>     | C              | IRR            | 0            | MARCELO P. NAVARRETTE             | ED            | <a href="#">C 00768</a>   |            |                    | 2                                  | 3            | 13            | 24S            | 28E            | 590194            | 3564770*            |                     |
| <a href="#">C 00903</a>     | C              | DOL            | 3            | HENRY MCDONALD                    | ED            | <a href="#">C 00903</a>   |            | Shallow            | 2                                  | 1            | 13            | 24S            | 28E            | 590178            | 3565575*            |                     |
| <a href="#">C 01137</a>     | EXP            |                | 0            | MORRIS R. ANTWEIL                 | LE            | <a href="#">C 01137</a>   |            |                    | 4                                  | 1            | 4             | 13             | 24S            | 28E               | 590696              | 3564670*            |
| <a href="#">C 01154</a>     | C              | PRO            | 0            | MORRIS R. ANTWEIL                 | ED            | <a href="#">C 01154</a>   |            | Shallow            | 2                                  | 1            | 2             | 13             | 24S            | 28E               | 590682              | 3565677*            |
| <del>C 01200</del>          | <del>C</del>   | <del>IRR</del> | <del>0</del> | <del>HAROLD WALKER</del>          | <del>ED</del> | <del>C 01200</del>        |            |                    | <del>4</del>                       | <del>2</del> | <del>10</del> | <del>24S</del> | <del>28E</del> | <del>500100</del> | <del>3566174*</del> |                     |
| <a href="#">C 02057</a>     | C              | PRO            | 0            | POGO PRODUCING CO.                | ED            | <a href="#">C 02057</a>   |            | Shallow            | 1                                  | 4            | 14            | 24S            | 28E            | 588956            | 3564774*            |                     |
| <a href="#">C 02256</a>     | C              | DOM            | 3            | ROBERT HIGGINS                    | ED            | <a href="#">C 02256</a>   |            |                    | 3                                  | 2            | 3             | 13             | 24S            | 28E               | 590093              | 3564669*            |
| <del>C 02700</del>          | <del>C</del>   | <del>DOL</del> | <del>0</del> | <del>EFREN B GOLLINS</del>        | <del>ED</del> | <del>C 02700</del>        |            |                    | <del>2</del>                       | <del>2</del> | <del>16</del> | <del>24S</del> | <del>28E</del> | <del>596203</del> | <del>3566676*</del> |                     |
| <del>C 02800</del>          | <del>C</del>   | <del>OTK</del> | <del>0</del> | <del>ZULEMA GOLLINS</del>         | <del>ED</del> | <del>C 02800</del>        |            | Shallow            | <del>2</del>                       | <del>2</del> | <del>16</del> | <del>24S</del> | <del>28E</del> | <del>596203</del> | <del>3566676*</del> |                     |
| <a href="#">C 03665</a>     | C              | PRO            | 0            | LEGEND NATURAL GAS                | ED            | <a href="#">C 00513 S</a> |            | Shallow            | 1                                  | 3            | 3             | 16             | 24S            | 28E               | 584802              | 3564432             |
| <del>C 03804</del>          | <del>GUD</del> | <del>EXP</del> | <del>0</del> | <del>EFREN B GOLLINS</del>        | <del>ED</del> | <del>C 03804.POD1</del>   |            | Shallow            | <del>4</del>                       | <del>1</del> | <del>3</del>  | <del>16</del>  | <del>24S</del> | <del>28E</del>    | <del>595770</del>   | <del>3565579</del>  |
| <del>C 03808</del>          | <del>GUD</del> | <del>PRO</del> | <del>0</del> | <del>GONGHO OIL &amp; GAS</del>   | <del>ED</del> | <del>C 03808.POD1</del>   |            | Shallow            | <del>4</del>                       | <del>1</del> | <del>3</del>  | <del>16</del>  | <del>24S</del> | <del>28E</del>    | <del>595770</del>   | <del>3565579</del>  |
| <del>C 03804</del>          | <del>GUD</del> | <del>PRO</del> | <del>0</del> | <del>GONGHO OIL &amp; GAS</del>   | <del>ED</del> | <del>C 03804.POD1</del>   |            | Shallow            | <del>4</del>                       | <del>1</del> | <del>3</del>  | <del>16</del>  | <del>24S</del> | <del>28E</del>    | <del>595770</del>   | <del>3565579</del>  |
| <del>C 03808</del>          | <del>GUD</del> | <del>PRO</del> | <del>0</del> | <del>GONGHO OIL &amp; GAS</del>   | <del>ED</del> | <del>C 03808.POD1</del>   |            | Shallow            | <del>4</del>                       | <del>1</del> | <del>3</del>  | <del>16</del>  | <del>24S</del> | <del>28E</del>    | <del>595770</del>   | <del>3565579</del>  |
| <del>C 03870</del>          | <del>GUD</del> | <del>EXP</del> | <del>0</del> | <del>EFREN GOLLINS</del>          | <del>ED</del> | <del>C 03870.POD1</del>   | NON        |                    | <del>2</del>                       | <del>1</del> | <del>3</del>  | <del>16</del>  | <del>24S</del> | <del>28E</del>    | <del>595801</del>   | <del>3565501</del>  |

Record Count: 25

**PLSS Search:**

Section(s): 13, 14, 16, 19, Township: 24S Range: 28E  
23, 24

Sorted by: File Number

Note: 16 PODs identified above resulted in 11 well spots based on OSE coordinates in GIS mapping.

(See aerial map following this page.)

2 wells sampled – Analyses will be forwarded upon receipt.

\*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.

8/3/17 2:43 PM

Page 2 of 2

ACTIVE & INACTIVE POINTS OF DIVERSION

## C-108 Item XI

### Water Wells Within One Mile

*11 Water Wells are Shown to be Within One Mile of the Proposed SWD  
(See 2-Mile AOR Map for Radius Presentation)*



Samples were obtained on 2 wells. The analyses will be forwarded when received.

# 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-Code | basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws    | Rng      | X        | Y        | Depth Well | Depth Water | Water Column |     |
|------------------------------|--------------|-------|--------|------|------|-----|-----|--------|----------|----------|----------|------------|-------------|--------------|-----|
| <a href="#">C 00329</a>      | C            | ED    | 2      | 1    | 2    | 13  | 24S | 28E    | 590682   | 3565677* |          | 95         | 30          | 65           |     |
| <a href="#">C 00353</a>      | C            | C     | ED     | 3    | 4    | 13  | 24S | 28E    | 590603   | 3564367* |          | 2726       |             |              |     |
| <a href="#">C 00354</a>      | C            | C     | ED     | 4    | 4    | 13  | 24S | 28E    | 591005   | 3564367* |          | 2739       |             |              |     |
| <a href="#">C 00464</a>      |              |       | ED     | 2    | 2    | 1   | 13  | 24S    | 28E      | 590277   | 3565674* |            | 111         | 28           | 83  |
| <a href="#">C 00513 S</a>    | C            | ED    | 1      | 3    | 3    | 16  | 24S | 28E    | 584802   | 3564432  |          | 161        | 42          | 119          |     |
| <a href="#">C 00684</a>      |              |       | ED     | 2    | 1    | 2   | 13  | 24S    | 28E      | 590682   | 3565677* |            | 95          | 40           | 55  |
| <a href="#">C 00709</a>      | C            | ED    | 3      | 3    | 3    | 16  | 24S | 28E    | 584802   | 3564232* |          |            |             |              |     |
| <a href="#">C 00738</a>      |              |       | ED     | 3    | 1    | 1   | 13  | 24S    | 28E      | 589673   | 3565472* |            | 125         | 12           | 113 |
| <a href="#">C 00750</a>      |              |       | ED     | 1    | 2    | 4   | 13  | 24S    | 28E      | 590898   | 3564871* |            | 110         |              |     |
| <a href="#">C 00903</a>      | C            | ED    | 2      | 1    | 13   | 24S | 28E | 590178 | 3565575* |          | 57       | 30         | 27          |              |     |
| <a href="#">C 01154</a>      | C            | ED    | 2      | 1    | 2    | 13  | 24S | 28E    | 590682   | 3565677* |          | 95         | 50          | 45           |     |
| <a href="#">C 02057</a>      | C            | ED    | 1      | 4    | 14   | 24S | 28E | 588956 | 3564774* |          | 126      | 52         | 74          |              |     |
| <a href="#">C 02836</a>      | C            | ED    | 2      | 2    | 2    | 16  | 24S | 28E    | 586203   | 3565676* |          | 15         |             |              |     |
| <a href="#">C 03824 POD1</a> | CUB          | ED    | 4      | 1    | 2    | 16  | 24S | 28E    | 585770   | 3565578  |          | 290        | 60          | 230          |     |

Average Depth to Water: **35 feet**

Minimum Depth: **12 feet**

Maximum Depth: **60 feet**

**Record Count:** 14

**PLSS Search:**

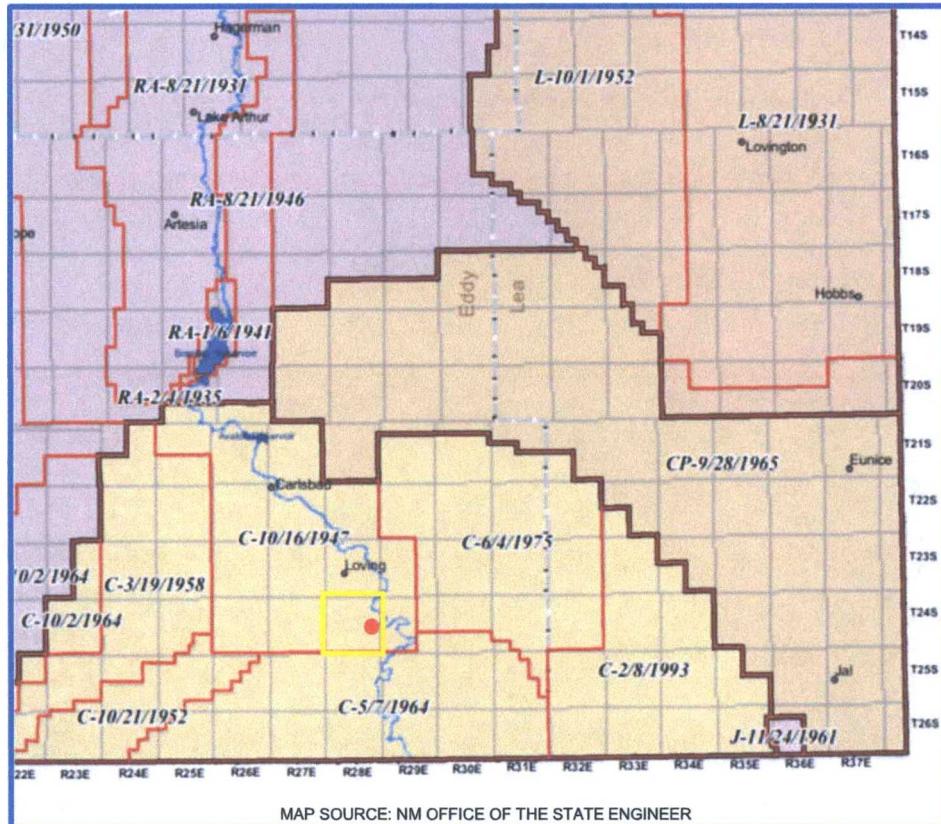
**Section(s):** 13, 14, 16, 19, 23, 24 **Township:** 24S **Range:** 28E

\*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.

## C-108 - Item XI

### Groundwater Basins - Water Column / Depth to Groundwater



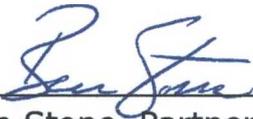
The subject well is located within the Carlsbad Basin.

Fresh water in the area is generally available from valley and basin fill of the Carlsbad-Pecos segment of the lower Pecos Valley complex of Quaternary alluvial sand and gravel deposits. State Engineer's records show water wells in the area with a depth to groundwater of 12 to 60 feet with an average depth to groundwater of 35 feet.

There are 12 water wells located within one mile of the proposed SWD; 2 have been sampled and analyses will be forwarded upon receipt.

## **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, LLC  
Trove Energy SWD No.1  
Reviewed 8/01/2017

# **C-108 ITEM XIII – PROOF OF NOTIFICATION**

## IDENTIFICATION AND NOTIFICATION OF INTERESTED PARTIES

### **Exhibits for Section**

Leasehold Plat

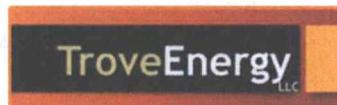
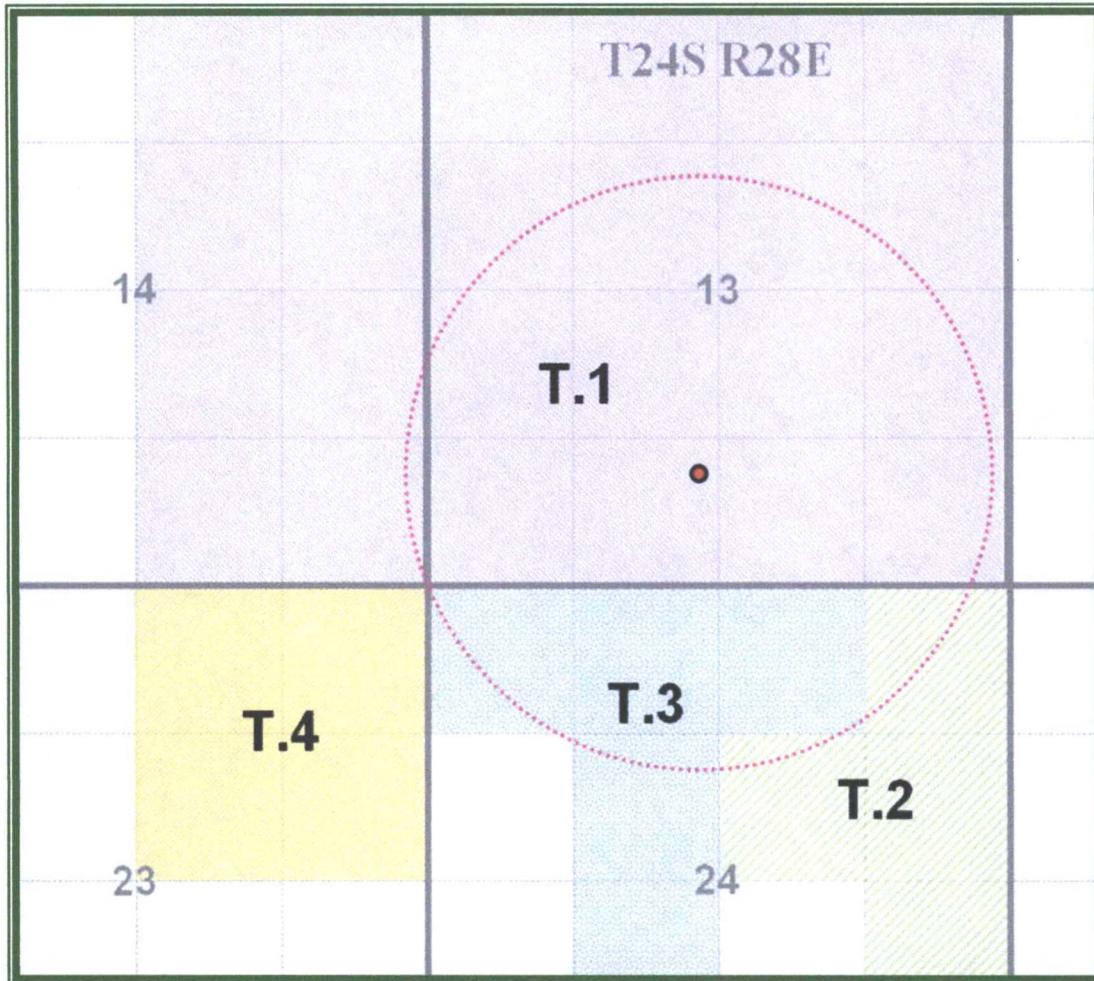
List of Interested Parties

Notification Letter to Interested Parties

Proof of Certified Mailing

Published Legal Notice

**Trove Energy SWD No.1 - Leasehold Plat**  
(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



**LEGEND**

- T.1 – Matador Production Company
- T.2 – BLM NMNM-110829; ConocoPhillips
- T.3 – BLM NMNM-027919; ConocoPhillips
- T.4 – Marathon Oil Company

**C-108 ITEM XIII – PROOF OF NOTIFICATION  
INTERESTED PARTIES LIST**

**SURFACE OWNER**

- 6 BARTON BROTHERS, ET AL (Notified via USPS Certified Mail)  
1919 N. Turner St.  
Hobbs, NM 88240  
Certified: 7015 3010 0001 3789 9514

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

**T.1 on Leasehold Plat**

***Lessee/Operator***

- 1 MATADOR PRODUCTION COMPANY  
One Lincoln Center  
5400 LBJ Freeway, Ste. 1500  
Dallas, TX 75240  
Certified: 7015 3010 0001 3789 9507

**T.2 & T.3 on Leasehold Plat – BLM Lease NMNM-110829 & NMNM-027919**

***Minerals***

- 2 BUREAU OF LAND MANAGEMENT  
Oil & Gas Division  
620 E. Greene St.  
Carlsbad, NM 88220  
Certified: 7015 3010 0001 3789 9477

***Lessee***

- 3 CONOCOPHILLIPS  
P.O. Box 7500  
Bartlesville, OK 77005-7500  
Certified: 7015 3010 0001 3789 9491

***Operators***

- 4 DINERO OPERATING COMPANY  
P.O. Box 10505  
Midland, TX 79702  
Certified: 7015 3010 0001 3789 9484

- 5 MARATHON OIL COMPANY  
P.O. Box 22164  
Tulsa, OK 74121-2164  
Certified: 7015 3010 0001 3789 9521

**T.4 on Leasehold Plat**

***Operator***

- MARATHON OIL COMPANY  
P.O. Box 22164  
Tulsa, OK 74121-2164

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

**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 S. First St.  
Artesia, NM 88210



August 4, 2017

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

To Whom It May Concern:

Trove Energy, LLC, Hobbs, New Mexico, has made application to the New Mexico Oil Conservation Division to drill and complete for salt water disposal the Trove Energy 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 is located in Section 13, Township 24 South, Range 28 East in Eddy County, New Mexico.

The published notice states that the interval will be from 14,100 feet to 15,200 feet.

Following is the notice published in the Artesia Daily Press, New Mexico on or about August 3, 2017.

**LEGAL NOTICE**

Trove Energy, 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 Trove Energy SWD No.1, is located 994' FSL and 2508' FWL, Section 13, Township 24 South, Range 28 East, Eddy County, New Mexico; approximately 2.0 miles southeast of Malaga, NM.

Produced water from area production will be commercially disposed into the Devonian and Silurian formations at a maximum interval depth of 14,100' to 15,200' at a maximum surface pressure of 2820 psi and a rate limited only by such pressure.

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. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email [info@sosconsulting.us](mailto: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 on a mini-CD will be arriving within a few days of this notice. If you do not receive it, please call or email SOS Consulting, LLC at 903-488-9850, info@sosconsulting.us, and a copy will be expedited to you and may also be sent via email if preferred.

Thank you for your attention in this matter.

Best regards,

A handwritten signature in black ink, appearing to read "Ben Stone". The signature is fluid and cursive, with the first name "Ben" and last name "Stone" clearly distinguishable.

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

Cc: Application File

# C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)

7015 3010 0001 3789 9514

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Return Receipt (electronic) \$ 2.75

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Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$ 6.59

Total Postage and Fees \$ 6.59

Sent To \_\_\_\_\_  
 Street \_\_\_\_\_  
 City, State \_\_\_\_\_  
 PS Form \_\_\_\_\_

**BARTON BROTHERS, ET AL**  
 1919 N. Turner St.  
 Hobbs, NM 88240

Postmark Here: **COMO TX 15431 AUG 05 2017**

7056 692E 1000 010E 5102

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Return Receipt (electronic) \$ 2.75

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$ 6.59

Total Postage and Fees \$ 6.59

Sent To \_\_\_\_\_  
 Street \_\_\_\_\_  
 City, State \_\_\_\_\_  
 PS Form \_\_\_\_\_

**MATADOR PRODUCTION COMPANY**  
 One Lincoln Center  
 5400 LBJ Freeway, Ste. 1500  
 Dallas, TX 75240

Postmark Here: **NO TX 15431 AUG 05 2017**

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Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$ 6.59

Total Postage and Fees \$ 6.59

Sent To \_\_\_\_\_  
 Street \_\_\_\_\_  
 City, State \_\_\_\_\_  
 PS Form \_\_\_\_\_

**BUREAU OF LAND MANAGEMENT**  
 Oil & Gas Division  
 620 E. Greene St.  
 Carlsbad, NM 88220

Postmark Here: **COMO TX 15431 AUG 05 2017**

7015 3010 0001 3789 9477

**U.S. Postal Service™**  
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For delivery information, visit our website at [www.usps.com](http://www.usps.com)®.

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Adult Signature Restricted Delivery \$

Postage \$ 6.59

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**CONOCOPHILLIPS**  
 P.O. Box 7500  
 Bartlesville, OK 77005-7500

Postmark Here: **COMO TX 15431 AUG 05 2017**

# C-108 - Item XIV

Proof of Notice (Certified Mail Receipts - cont.)

7015 3010 0001 3789 9484

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Extra Services & Fees (check box, add fee as appropriate)

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 Adult Signature Required \$  
 Adult Signature Restricted Delivery \$

Postage: \$  
 Total Postage and Fees: 6.59  
 \$

Sent To:  
 Street and:  
 City, State:  
 PS Form

**DINERO OPERATING COMPANY**  
 P.O. Box 10505  
 Midland, TX 79702

Postmark Here: 275 AUG 05 2017

7015 3010 0001 3789 9521

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Certified Mail Fee: 3.35  
 \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$  
 Return Receipt (electronic) \$  
 Certified Mail Restricted Delivery \$  
 Adult Signature Required \$  
 Adult Signature Restricted Delivery \$

Postage: \$  
 Total Postage and Fees: 6.59  
 \$

Sent To:  
 Street and:  
 City, State:  
 PS Form

**MARATHON OIL COMPANY**  
 P.O. Box 22164  
 Tulsa, OK 74121-2164

Postmark Here: 275 AUG 05 2017

## **C-108 - Item XIV**

**Proof of Notice – Legal Notice  
Newspaper of General Circulation**

### **Legal Notice**

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Published in the Artesia Daily Press, Artesia, N.M., Aug. 3, 2017 Legal No. 24379.

The above is the "Proof Copy" sent from the Artesia Daily Press.  
The affidavit of publication will be forwarded as soon as it is received.

# Affidavit of Publication

No. 24379

State of New Mexico

County of Eddy:

**Danny Scott**



being duly sworn says that she 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 August 3, 2017

Second Publication \_\_\_\_\_

Third Publication \_\_\_\_\_

Fourth Publication \_\_\_\_\_

Fifth Publication \_\_\_\_\_

Sixth Publication \_\_\_\_\_

Seventh Publication \_\_\_\_\_

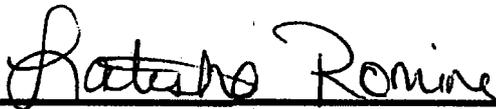
Subscribed and sworn before me this

3rd day of August 2017



OFFICIAL SEAL  
Latisha Romine  
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2019



Latisha Romine

Notary Public, Eddy County, New Mexico

# Copy of Publication:

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Published in the Artesia Daily Press, Artesia, N.M., Aug. 3, 2017 Legal No. 24379.

**SENDER: COMPLETE THIS SECTION**

Complete items 1, 2, and 3.  
Print your name and address on the reverse so that we can return the card to you.  
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

**BARTON BROTHERS, ET AL**  
1919 N. Turner St.  
Hobbs, NM 88240

Trove

9590 9402 1356 5285 2663 57

Article Number (Transfer from service label)  
**7015 3010 0001 3789 9514**

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X **Brandia Stewart**  Agent  Addressee

B. Received by (Printed Name)  
**Brandia Stewart** C. Date of Delivery  
**8-8-17**

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

3. Service Type  
 Adult Signature  Priority Mail Express®  
 Adult Signature Restricted Delivery  Registered Mail™  
 Certified Mail®  Registered Mail Restricted Delivery  
 Certified Mail Restricted Delivery  Return Receipt for Merchandise  
 Collect on Delivery  Signature Confirmation™  
 Collect on Delivery Restricted Delivery  Signature Confirmation Restricted Delivery  
 Mail Restricted Delivery  Restricted Delivery

**SENDER: COMPLETE THIS SECTION**

Complete items 1, 2, and 3.  
Print your name and address on the reverse so that we can return the card to you.  
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

**BUREAU OF LAND MANAGEMENT**  
Oil & Gas Division  
620 E. Greene St.  
Carrtsbad, NM 88220

Trove

9590 9403 0195 5120 3852 91

Article Number (Transfer from service label)  
**7015 3010 0001 3789 9477**

PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**COMPLETE THIS SECTION ON DELIVERY**

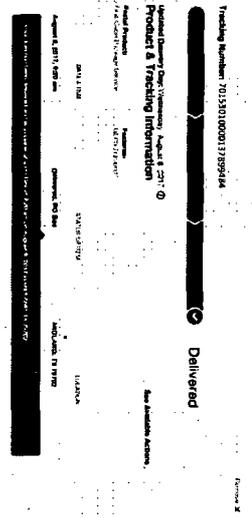
A. Signature  
X   Agent  Addressee

B. Received by (Printed Name)  
**BRADIA** C. Date of Delivery  
**8/10/17**

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

3. Service Type  
 Adult Signature  Priority Mail Express®  
 Adult Signature Restricted Delivery  Registered Mail™  
 Certified Mail®  Registered Mail Restricted Delivery  
 Certified Mail Restricted Delivery  Return Receipt for Merchandise  
 Collect on Delivery  Signature Confirmation™  
 Collect on Delivery Restricted Delivery  Signature Confirmation Restricted Delivery  
 Mail Restricted Delivery  Restricted Delivery

Other Addressees for Trove C-108



DINERO OPERATING COMPANY

**SENDER: COMPLETE THIS SECTION**

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Print your name and address on the reverse so that we can return the card to you.  
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

**CONOCOPHILLIPS**  
P.O. Box 7500  
Bartlesville, OK 77005-7500

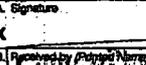
Trove

9590 9402 1356 5285 2664 18

Article Number (Transfer from service label)  
**7015 3010 0001 3789 9491**

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**COMPLETE THIS SECTION ON DELIVERY**

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X   Agent  Addressee

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**8/10/17**

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

3. Service Type  
 Adult Signature  Priority Mail Express®  
 Adult Signature Restricted Delivery  Registered Mail™  
 Certified Mail®  Registered Mail Restricted Delivery  
 Certified Mail Restricted Delivery  Return Receipt for Merchandise  
 Collect on Delivery  Signature Confirmation™  
 Collect on Delivery Restricted Delivery  Signature Confirmation Restricted Delivery  
 Mail Restricted Delivery  Restricted Delivery

9590 9402 1356 5285 2663 64  
7015 3010 0001 3789 9507  
PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

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Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

**MATADOR PRODUCTION COMPANY**  
One Lincoln Center  
5400 LBJ Freeway, Ste. 1500  
Dallas, TX 75240

Trove

**SENDER: COMPLETE THIS SECTION**

Complete items 1, 2, and 3.  
Print your name and address on the reverse so that we can return the card to you.  
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

**MARATHON OIL COMPANY**  
P.O. Box 22164  
Tulsa, OK 74121-2164

Trove

9590 9403 0195 5120 3855 38

Article Number (Transfer from service label)  
**7015 3010 0001 3789 9521**

PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X   Agent  Addressee

B. Received by (Printed Name)  
**MAR OIL** C. Date of Delivery  
**8/11/17**

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

3. Service Type  
 Adult Signature  Priority Mail Express®  
 Adult Signature Restricted Delivery  Registered Mail™  
 Certified Mail®  Registered Mail Restricted Delivery  
 Certified Mail Restricted Delivery  Return Receipt for Merchandise  
 Collect on Delivery  Signature Confirmation™  
 Collect on Delivery Restricted Delivery  Signature Confirmation Restricted Delivery  
 Mail Restricted Delivery  Restricted Delivery

9590 9402 1356 5285 2663 64  
7015 3010 0001 3789 9507  
PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X   Agent  Addressee

B. Received by (Printed Name)  
**MAR OIL** C. Date of Delivery  
**8/11/17**

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

Trove Energy



GE Power & Water  
Water & Process Technologies

Customer Analytical Services Laboratory  
9669 Grogans Mill Road  
The Woodlands, TX 77380  
Telephone: 877.251.3479  
Fax: 281.363.7724

## WATER ANALYSIS REPORT

WESTERN ENVIRONMENTAL MANAGEMENT, CARLSBAD, NM  
WESTERN ENVIRONMENTAL MANAGEMENT, 3106 EAST GREENE  
STRFFT  
CARLSBAD, NM 88221  
United States  
Customer #: 4000101850  
Ship To #: 4000101850  
Sold To #: 1000090673

Project ID: WDLW170815024

Sales Rep: Laird, Kelly  
Receive Date: 15-Aug-2017  
Report Date: 24-Aug-2017

Report Authorized By:

Susan Overbeck

24-Aug-2017

The results listed within the report relate only to the samples received on the dates indicated. This report must not be reproduced, except in full, without the written approval from the Customer Analytical Services Laboratory



GE Power & Water  
Water & Process Technologies

Customer: WESTERN ENVIRONMENTAL

Project ID: WDLW170815024

Submitted Samples: 2

**SAMPLE INFORMATION**

| Sample Name                  | Grid | Bottles | Asset | Sampling Point | Sampled Date | Lab Sample ID |
|------------------------------|------|---------|-------|----------------|--------------|---------------|
| #C02256                      |      | 3       |       | GGNR           | 08-Aug-2017  | WDLW170815067 |
| #C 00329/#C00684/<br>#C01154 |      | 3       |       | GGNR           | 08-Aug-2017  | WDLW170815068 |

The results listed within the report relate only to the samples received on the dates indicated. This report must not be reproduced, except in full, without the written approval from the Customer Analytical Services Laboratory



GE Power & Water  
Water & Process Technologies

Customer: WESTERN ENVIRONMENTAL

Project ID: WDLW170815024

Sample Name: #C02256  
Sampled Date: 8-Aug-2017

Lab Sample ID: WDLW170815067

| Parameter Name                                  | Result | Units | Reporting Limit |
|---|--------|-------|-----------------|
| <b>pH Analysis</b>                              |        |       |                 |
| pH  | 7.7    | -     | 1.0             |
| <b>Automated Colorimetric Analysis</b>          |        |       |                 |
| Chloride, as Cl                                 | 466    | ppm   | 0.5             |
| <b>ICP Analysis</b>                             |        |       |                 |
| Calcium Hardness, Total, as CaCO <sub>3</sub>   | 969    | ppm   | 0.5             |
| Hardness, Total, as CaCO <sub>3</sub>           | 1420   | ppm   | 1               |
| Magnesium Hardness, Total, as CaCO <sub>3</sub> | 448    | ppm   | 0.5             |
| <b>Total Dissolved Solids</b>                   |        |       |                 |
| Solids, Total Dissolved, at 105°C               | 2620   | ppm   | 20              |

The results listed within the report relate only to the samples received on the dates indicated. This report must not be reproduced, except in full, without the written approval from the Customer Analytical Services Laboratory.



GE Power & Water  
Water & Process Technologies

Customer: WESTERN ENVIRONMENTAL

Project ID: WDLW170815024

---

Sample Name: #C 00329/#C00684/# Lab Sample ID: WDLW170815068  
Sampled Date: 8-Aug-2017

---

| Parameter Name                                  | Result | Units | Reporting Limit |
|---|--------|-------|-----------------|
| pH Analysis                                     |        |       |                 |
| pH  | 7.6    |       | 1.0             |
| Automated Colorimetric Analysis                 |        |       |                 |
| Chloride, as Cl                                 | 470    | ppm   | 0.5             |
| ICP Analysis                                    |        |       |                 |
| Calcium Hardness, Total, as CaCO <sub>3</sub>   | 963    | ppm   | 0.5             |
| Hardness, Total, as CaCO <sub>3</sub>           | 1420   | ppm   | 1               |
| Magnesium Hardness, Total, as CaCO <sub>3</sub> | 451    | ppm   | 0.5             |
| Total Dissolved Solids                          |        |       |                 |
| Solids, Total Dissolved, at 105°C               | 2580   | ppm   | 20              |

Notes:

- 1) mg/kg = ppm ; 0.1wt% = 1000ppm
- 2) Filtered results may be slightly higher than non-filtered results. This is due to method variances.

The results listed within the report relate only to the samples received on the dates indicated. This report must not be reproduced, except in full, without the written approval from the Customer Analytical Services Laboratory

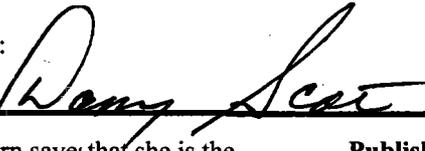
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County of Eddy:

**Danny Scott**



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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

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|                     |                |
|---------------------|----------------|
| First Publication   | August 3, 2017 |
| Second Publication  |                |
| Third Publication   |                |
| Fourth Publication  |                |
| Fifth Publication   |                |
| Sixth Publication   |                |
| Seventh Publication |                |

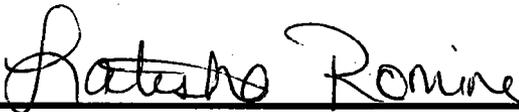
Subscribed and sworn before me this

3rd day of August 2017



OFFICIAL SEAL  
Latisha Romine  
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2019



Latisha Romine

Notary Public, Eddy County, New Mexico

# Copy of Publication:

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Published in the Artesia Daily Press, Artesia, N.M., Aug. 3, 2017 Legal No. 24379.

2017 AUG 15 A 10 06

RECEIVED OGD



8/09/2017

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

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

Well No. 15 Well Name(s): TRIVE Energy SWD # 1

API: 30-0 15-Pending Spud Date: TBD New or Old: N (UIC Class II Primacy 03/07/1982)

Footages 994 FSL 2508 FWL Lot \_\_\_\_\_ or Unit M Sec 13 Tsp 245 Rge 28E County Eddy

General Location: 2 miles SE / Malaga Pool: SWD Devonian-Silurian Pool No.: 97869

BLM 100K Map: CANUS 6A1 Operator: TRIVE Energy LLC OGRID: 322945 Contact: Ben Stone, Asst

COMPLIANCE RULE 5.9: Total Wells: 0 Inactive: 0 Fincl Assur: OK Compl. Order? NA IS 5.9 OK? X Date: 8-28-2017

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)<br>Borehole / Pipe | Setting<br>Depths (ft) | Cement<br>Sx or Cf | Cement Top and Determination Method                                    |
|---|-------------------------------|------------------------|--------------------|--|
| Planned ___ or Existing ___ Surface             | 26" / 20"                     | 550                    | 1600               | Surface / Visual   |
| Planned ___ or Existing ___ Interm/Prod         | 17 1/2" / 13 3/8"             | 2750                   | 1525               | Surface / Visual   |
| Planned ___ or Existing ___ Interm/Prod         | 12 1/4" / 9 5/8"              | 9600                   | 1800               | Surface / Visual   |
| Planned ___ or Existing ___ Prod <u>(Liner)</u> |                               |                        |                    |  |
| Planned ___ or Existing ___ Liner               |                               |                        |                    |  |
| Planned ___ or Existing ___ <u>OH / PERF</u>    | 14100 / 15200                 |                        |                    |  |
|   |                               |                        | Inj Length<br>1100 |  |
| Injection Lithostratigraphic Units:             |                               |                        |                    | Completion/Operation Details:  |
| Adjacent Unit: Litho. Struc. Por.               |                               | DV                     | 14100              | Drilled TD <u>15200</u> PBTD _____                                     |
| Confining Unit: Litho. Struc. Por.              |                               | M2                     | 12550              | NEW TD _____ NEW PBTD _____  |
| Proposed Inj Interval TOP:                      |                               | DV                     | 14100              | NEW Open Hole <input type="radio"/> or NEW Perfs <input type="radio"/> |
| Proposed Inj Interval BOTTOM:                   |                               |                        | 15200              | Tubing Size <u>(A)</u> in. Inter Coated? _____                         |
| Confining Unit: Litho. Struc. Por.              |                               |                        |                    | Proposed Packer Depth <u>1400</u> ft                                   |
| Adjacent Unit: Litho. Struc. Por.               |                               |                        |                    | Min. Packer Depth <u>1400</u> (100-ft limit)                           |
|   |                               |                        |                    | Proposed Max. Surface Press. <u>2820</u> psi                           |
|   |                               |                        |                    | Admin. Inj. Press. <u>2820</u> (0.2 psi per ft)                        |

(A) 5-1/2" Surface + 4" 2 1/2" Liner

**AOR: Hydrologic and Geologic Information**

POTASH: R-111-PMV Noticed? \_\_\_\_\_ BLM Sec Ord  WIPP  Noticed? \_\_\_\_\_ Salt/Salado T: 1050 B: 2640 NW: Cliff House fm \_\_\_\_\_

FRESH WATER: Aquifer Quaternary Max Depth 52' HYDRO AFFIRM STATEMENT By Qualified Person

NMOSE Basin: CARLSBAD CAPITAN REEF thru adj NA No. Wells within 1-Mile Radius? 12 FW Analysis \_\_\_\_\_

Disposal Fluid: Formation Source(s) Bonesprings, Lower Amp Analysis? \_\_\_\_\_ On Lease  Operator Only  or Commercial

Disposal Int: Inject Rate (Avg/Max BWPD): 15K/25K Protectable Waters? NA Source: \_\_\_\_\_ System: (Closed) or Open

HC Potential: Producing Interval? NA Formerly Producing? \_\_\_\_\_ Method: Logs/DST/P&A/Other Reservoir 2-Mile Radius Pool Map

AOR Wells: 1/2-M Radius Map? X Well List? X Total No. Wells Penetrating Interval: 0 Horizontals? \_\_\_\_\_

Penetrating Wells: No. Active Wells 0 Num Repairs? \_\_\_\_\_ on which well(s)? \_\_\_\_\_ Diagrams? \_\_\_\_\_

Penetrating Wells: No. P&A Wells 0 Num Repairs? \_\_\_\_\_ on which well(s)? \_\_\_\_\_ Diagrams? \_\_\_\_\_

NOTICE: Newspaper Date Aug 3 2017 Mineral Owner Ray G. Benton Surface Owner Benton Brothers LLC N. Date 8-8-2017

RULE 26.7(A): Identified Tracts? \_\_\_\_\_ Affected Persons: MARATHON, BENTON BROTHERS N. Date 8-09-2017

Order Conditions: Issues: \_\_\_\_\_

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