

|                               |           |                     |                                   |
|-------------------------------|-----------|---------------------|-----------------------------------|
| RECEIVED:<br><b>3/20/2018</b> | REVIEWER: | TYPE:<br><b>SWD</b> | APP NO:<br><b>DMAM19079 48878</b> |
|-------------------------------|-----------|---------------------|-----------------------------------|

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

|                                                          |                                    |
|----------------------------------------------------------|------------------------------------|
| <b>Applicant:</b> <u>Permian Oilfield Partners, LLC.</u> | <b>OGRID Number:</b> <u>328259</u> |
| <b>Well Name:</b> <u>Deep Thirst Federal SWD #1</u>      | <b>API:</b> <u>30-025-Pending</u>  |
| <b>Pool:</b> <u>SWD; Devonian-Silurian</u>               | <b>Pool Code:</b> <u>97869</u>     |

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

- 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

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

**FOR OCD ONLY**

|                          |                                    |
|--------------------------|------------------------------------|
| <input type="checkbox"/> | Notice Complete                    |
| <input type="checkbox"/> | Application<br>Content<br>Complete |

- 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.**

Gary Fisher

Print or Type Name

Signature

3-18-2019

Date

817-606-7630

Phone Number

gfisher@permianoilfieldpartners.com

e-mail Address

# Permian Oilfield Partners, LLC.

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P.O. Box 1220, Stephenville, TX. 76401 | (817) 606-7630 | gfisher@permianoilfieldpartners.com

**3/18/2019**

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

**Re: Addendum to C-108 previously submitted 3/11/2019**

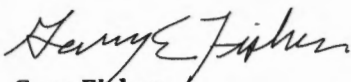
Permian Oilfield Partners, LLC  
C-108 Application for Authorization to inject  
Deep Thirst Federal SWD #1  
1044' FNL & 717' FWL  
Section 24, T24S, R33E  
Lea County, New Mexico

Mr. Goetze,

This letter is an addendum to the C-108 application for the above listed SWD well, by Permian Oilfield Partners, LLC.

Enclosed please find the additional information required for the administrative approval of this requested C-108 application. Please contact me with any further questions.

Sincerely,



Gary Fisher  
Operations Manager  
Permian Oilfield Partners, LLC.

Enclosure



**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. **PURPOSE:** **Disposal**  
Application qualifies for administrative approval? **Yes**
- II. **OPERATOR:** **Permian Oilfield Partners, LLC.**  
**ADDRESS:** **P.O. Box 1220, Stephenville, TX. 76401**  
**CONTACT PARTY:** **Gary Fisher** **PHONE:** **(817) 606-7630**
- III. **WELL DATA:** Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? **No**
- V. Attach a map 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. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: **Gary Fisher**

TITLE: **Manager**

SIGNATURE: *Gary Fisher*

DATE: **03/18/2019**

E-MAIL ADDRESS: **gfisher@permianoilfieldpartners.com**

- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: 3/11/2019, clarify notifications

### Additional Data

1. **Is this a new well drilled for injection?**  
Yes
2. **Name of the Injection Formation:**  
Devonian: Open Hole Completion
3. **Name of Field or Pool (if applicable):**  
SWD; Devonian-Silurian
4. **Has the well ever been perforated in any other zone(s)?**  
No: New Drill for Injection of Produced Water
5. **Give the name and depths of any oil or gas zones underlying or overlying the proposed Injection zone in this area:**

**Overlying Potentially Productive Zones:**

Delaware, Bone Spring, Wolfcamp, Strawn, Atoka & Morrow Tops all above 14,756'

**Underlying Potentially Productive Zones:**

None



## **WELL CONSTRUCTION DATA**

**Permian Oilfield Partners, LLC.**

**Deep Thirst Federal SWD #1**

**1044' FNL, 717' FWL**

**Sec. 24, T24S, R33E, Lea Co. NM**

**Lat 32.207490° N, Lon 103.532274° W**

**GL 3581', RKB 3611'**

### **Surface - (Conventional)**

**Hole Size:** 26"

**Casing:** 20" - 94# H-40 & 106.5# J-55 STC Casing

**Depth Top:** Surface

**Depth Btm:** 1312'

**Cement:** 890 sks - Class C + Additives

**Cement Top:** Surface - (Circulate)

### **Intermediate #1 - (Conventional)**

**Hole Size:** 17.5"

**Casing:** 13.375" - 61# J-55 & 68# J-55 STC Casing

**Depth Top:** Surface

**Depth Btm:** 5377'

**Cement:** 1789 sks - Lite Class C (50:50:10) + Additives

**Cement Top:** Surface - (Circulate)

### **Intermediate #2 - (Conventional)**

**Hole Size:** 12.25"

**Casing:** 9.625" - 40# L-80 & 40# HCL-80 BTC Casing

**Depth Top:** Surface

**Depth Btm:** 12338'

**ECP/DV Tool:** 5477'

**Cement:** 2117 sks - Lite Class C (60:40:0) + Additives

**Cement Top:** Surface - (Circulate)

### **Intermediate #3 - (Liner)**

**Hole Size:** 8.5"

**Casing:** 7.625" - 39# HCL-80 FJ Casing

**Depth Top:** 12138'

**Depth Btm:** 16250'

**Cement:** 225 sks - Lite Class C (60:40:0) + Additives

**Cement Top:** 12138' - (Volumetric)

### **Intermediate #4 - (Open Hole)**

**Hole Size:** 6.5"

**Depth:** 18513'

**Inj. Interval:** 16250' - 18513' (Open-Hole Completion)

### **Tubing - (Tapered)**

**Tubing Depth:** 16205'

**Tubing:** 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80

**X/O Depth:** 12138'

FJ Casing (Fiberglass Lined)

**X/O:** 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)

**Packer Depth:** 16215'

**Packer:** 5.5" - Perma-Pak or Equivalent (Inconel)

## WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.  
Deep Thirst Federal SWD #1  
1044' FNL, 717' FWL  
Sec. 24, T24S, R33E, Lea Co. NM  
Lat 32.207490° N, Lon 103.532274° W  
GL 3581', RKB 3611'

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Depth Top: Surface  
Depth Btm: 1312'  
Cement: 890 sks - Class C + Additives  
Cement Top: Surface - (Circulate)

### Intermediate #1 - (Conventional)

Hole Size: 17.5"  
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Depth Top: Surface  
Depth Btm: 5377'  
Cement: 1789 sks - Lite Class C (50:50:10) + Additives  
Cement Top: Surface - (Circulate)

### Intermediate #2 - (Conventional)

Hole Size: 12.25"  
Casing: 9.625" - 40# L-80 & 40# HCL-80 BTC Casing  
Depth Top: Surface  
Depth Btm: 12338'  
Cement: 2117 sks - Lite Class C (60:40:0) + Additives  
Cement Top: Surface - (Circulate)  
ECP/DV Tool: 5477'

### Intermediate #3 - (Liner)

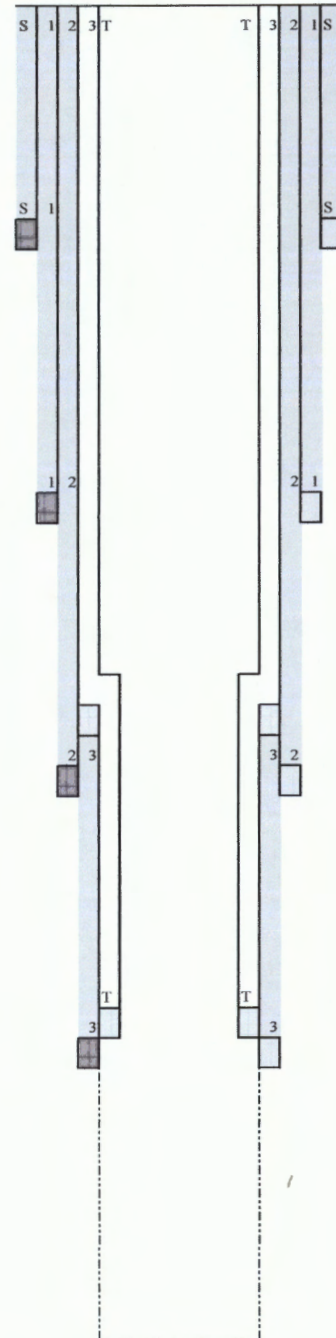
Hole Size: 8.5"  
Casing: 7.625" - 39# HCL-80 FJ Casing  
Depth Top: 12138'  
Depth Btm: 16250'  
Cement: 225 sks - Lite Class C (60:40:0) + Additives  
Cement Top: 12138' - (Volumetric)

### Intermediate #4 - (Open Hole)

Hole Size: 6.5"  
Depth: 18513'  
Inj. Interval: 16250' - 18513' (Open-Hole Completion)

### Tubing - (Tapered)

Tubing Depth: 16205'  
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)  
X/O Depth: 12138'  
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)  
Packer Depth: 16215'  
Packer: 5.5" - Perma-Pak or Equivalent (Inconel)



**VI:** There are no wells within the proposed wells area of review that penetrate the Devonian Formation.

**VII:**

1. The average injected volume anticipated is 49,875 BWPD  
The maximum injected volume anticipated is 66,500 BWPD
2. Injection will be through a closed system
3. The average injection pressure anticipated is 1,420 psi  
The proposed maximum injection pressure is 3,250 psi
4. Disposal Sources will be produced waters from surrounding wells in the Delaware, Avalon, Bone Spring and Wolfcamp formations. These formation waters are known to be compatible with Devonian formation water. Representative area produced water analyses were sourced from Go-Tech's website and are listed below.

| WELL NAME          | FIGHTING OKRA 18<br>FEDERAL COM #001H | SALADO DRAW 6<br>FEDERAL #001H | RATTLESNAKE 13 12 FEDERAL<br>COM #001H | SNAPPING 2<br>STATE #014H |
|--------------------|---------------------------------------|--------------------------------|----------------------------------------|---------------------------|
| api                | 3002540382                            | 3002541293                     | 3002540912                             | 3001542688                |
| latitude           | 32.0435333                            | 32.0657196                     | 32.0369568                             | 32.06555986               |
| longitude          | -103.5164566                          | -103.5146942                   | -103.416214                            | -103.7413815              |
| section            | 18                                    | 6                              | 13                                     | 2                         |
| township           | 26S                                   | 26S                            | 26S                                    | 26S                       |
| range              | 34E                                   | 34E                            | 34E                                    | 31E                       |
| unit               | E                                     | M                              | P                                      | P                         |
| ftgns              | 2590N                                 | 200S                           | 330S                                   | 250S                      |
| ftgew              | 330W                                  | 875W                           | 330E                                   | 330E                      |
| county             | Lea                                   | Lea                            | Lea                                    | EDDY                      |
| state              | NM                                    | NM                             | NM                                     | NM                        |
| formation          | AVALON UPPER                          | BONE SPRING 3RD SAND           | DELAWARE-BRUSHY CANYON                 | WOLFCAMP                  |
| sampledate         | 42046                                 | 41850                          | 41850                                  | 42284                     |
| ph                 | 8                                     | 6.6                            | 6.2                                    | 7.3                       |
| tds_mgL            | 201455.9                              | 99401.9                        | 243517.1                               | 81366.4                   |
| resistivity_ohm_cm | 0.032                                 | 0.064                          | 0.026                                  | 0.1004                    |
| sodium_mgL         | 66908.6                               | 34493.3                        | 73409.8                                | 26319.4                   |
| calcium_mgL        | 9313                                  | 3295                           | 15800                                  | 2687.4                    |
| iron_mgL           | 10                                    | 0.4                            | 18.8                                   | 26.1                      |
| magnesium_mgL      | 1603                                  | 396.8                          | 2869                                   | 326.7                     |
| manganese_mgL      | 1.6                                   | 0.37                           | 3.12                                   |                           |
| chloride_mgL       | 121072.7                              | 59986.5                        | 149966.2                               | 50281.2                   |
| bicarbonate_mgL    | 1024.8                                | 109.8                          | 48.8                                   |                           |
| sulfate_mgL        | 940                                   | 710                            | 560                                    | 399.7                     |
| co2_mgL            | 1950                                  | 70                             | 200                                    | 100                       |



5. Devonian water analysis from the area of review is unavailable. Representative area water analyses were sourced from Go-Tech's website and are listed below.

| WELL NAME       | ANTELOPE RIDGE UNIT #003 | BELL LAKE UNIT #006 |
|-----------------|--------------------------|---------------------|
| api             | 3002521082               | 3002508483          |
| latitude        | 32.2593155               | 32.3282585          |
| longitude       | -103.4610748             | -103.507103         |
| sec             | 34                       | 6                   |
| township        | 23S                      | 23S                 |
| range           | 34E                      | 34E                 |
| unit            | K                        | O                   |
| ftgns           | 1980S                    | 660S                |
| ftgew           | 1650W                    | 1980E               |
| county          | LEA                      | LEA                 |
| state           | NM                       | NM                  |
| field           | ANTELOPE RIDGE           | BELL LAKE NORTH     |
| formation       | DEVONIAN                 | DEVONIAN            |
| samplesource    | UNKNOWN                  | HEATER TREATER      |
| ph              | 6.9                      | 7                   |
| tds_mgL         | 80187                    | 71078               |
| chloride_mgL    | 42200                    | 47900               |
| bicarbonate_mgL | 500                      | 476                 |
| sulfate_mgL     | 1000                     | 900                 |

### VIII: Injection Zone Geology

Fluid injection will take place in what we are calling the Devonian-Silurian series of formations. This sequence is bounded on top by the Upper Devonian Woodford shale. Underneath the Woodford is the first injection formation, the Lower Devonian Thirtyone formation, consisting of dolomitic carbonates & chert, followed by the Upper Silurian Wristen Dolomite, and the Lower Silurian Fusselman Dolomite. The lower bound is the top of the Upper Ordovician Montoya Limestone. This proposed well will TD above the top of the Montoya, and will not inject fluids into the Montoya itself, in order to provide a sufficient barrier to preclude fluid injection into the Middle Ordovician Simpson, the Lower Ordovician Ellenburger, the Cambrian, and the PreCambrian below.

The injection formations are generally mixed as to rock types and deposition, with a preponderance of calcareous and siliceous sediments having been laid down, and then weathered to differing degrees due to rising and falling sea levels. This varied sequence of events led to large intervals of dolomitization mixed with intervals of limestones & cherts, relatively high primary porosities, high secondary porosities in the form of vugs and karsts, and intervals of mudstones, packstones and the like breaking up the relatively low porosity grainstones.

The Devonian-Silurian sequence is ideally suited for SWD purposes, with a low permeability shale barrier over the top to prevent upward fluid migrations to USDW's, sufficient permeability, primary & secondary porosities in zone, and multiple formations available over a large depth range. This large injection depth range allows an equivalently large injection surface area, keeping injection pressures low, even at higher rates.



| <b>GEOLOGY PROGNOSIS</b>  |             |               |                  |
|---------------------------|-------------|---------------|------------------|
| <b>FORMATION</b>          | <b>TOP</b>  | <b>BOTTOM</b> | <b>THICKNESS</b> |
|                           | KB TVD (ft) | KB TVD (ft)   | (ft)             |
| <b>Salt</b>               | 1,825       | 5,124         | 3,299            |
| <b>Delaware</b>           | 5,352       | 9,179         | 3,828            |
| <b>Bone Spring</b>        | 9,179       | 12,288        | 3,109            |
| <b>Wolfcamp</b>           | 12,288      | 13,280        | 992              |
| <b>Lwr. Mississippian</b> | 15,722      | 15,959        | 237              |
| <b>Woodford</b>           | 15,959      | 16,215        | 255              |
| <b>Devonian</b>           | 16,215      | 18,538        | 2,323            |
| <b>Montoya</b>            | 18,538      | 19,103        | 565              |

2. According to the NM State Engineer's website, there are underground sources of fresh water present below 110' within the proposed injection wells area of review (See Table in Section XI). There are no underground sources of fresh water present below the injection interval.

**IX:** Formation chemical stimulation with 40,000 gals of 15% Hydrochloric Acid is planned after well completion.

**X:** A compensated neutron/gamma ray log will be run from surface to TD upon well completion. All logs will be submitted to the NMOCD upon completion.

**XI:** According to the New Mexico Office of the State Engineer, there are 9 fresh water wells within the proposed well's one-mile area of review. Attempts were made to sample these wells, however, 8 of the 9 were capped and not producing. Well C 03666 POD1 is located inside a gas plant. Permian Oilfield Partners requested permission to sample this well, but access was denied.

| <b>Underground Drinking Water Sources (GL Depth)</b> |                   |                  |                     |
|------------------------------------------------------|-------------------|------------------|---------------------|
| <b>FORMATION</b>                                     | <b>POD Number</b> | <b>Top Depth</b> | <b>Bottom Depth</b> |
| <b>Un-Named</b>                                      | C 03917 POD1      | 420              | 600                 |
| <b>Un-Named</b>                                      | C 03666 POD1      | 390              | 650                 |
| <b>Un-Named</b>                                      | C 03662 POD1      | 110              | 550                 |
| <b>Un-Named</b>                                      | C 03601 POD1      | Not Given        | Not Given           |
| <b>Un-Named</b>                                      | C 03601 POD2      | Not Given        | Not Given           |
| <b>Un-Named</b>                                      | C 03601 POD3      | Not Given        | Not Given           |
| <b>Un-Named</b>                                      | C 03601 POD5      | Not Given        | Not Given           |
| <b>Un-Named</b>                                      | C 03601 POD6      | Not Given        | Not Given           |
| <b>Un-Named</b>                                      | C 03601 POD7      | Not Given        | Not Given           |

\* No fresh water sources present below the proposed injection interval

**XII:** Hydrologic affirmative statement attached.

**XIII:** Proof of notice and proof of publication attached.

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

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

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

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

|               |                                                        |                           |
|---------------|--------------------------------------------------------|---------------------------|
| API Number    | Pool Code                                              | Pool Name                 |
| Property Code | Property Name<br><b>DEEP THIRST FEDERAL SWD</b>        | Well Number<br><b>1</b>   |
| OGRID No.     | Operator Name<br><b>PERMIAN OILFIELD PARTNERS, LLC</b> | Elevation<br><b>3581'</b> |

Surface Location

| UL or lot No. | Section   | Township    | Range       | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County     |
|---------------|-----------|-------------|-------------|---------|---------------|------------------|---------------|----------------|------------|
| <b>D</b>      | <b>24</b> | <b>24-S</b> | <b>33-E</b> |         | <b>1044</b>   | <b>NORTH</b>     | <b>717</b>    | <b>WEST</b>    | <b>LEA</b> |

Bottom Hole Location If Different From Surface

| UL or lot No.   | Section         | Township           | Range     | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|-----------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
|                 |                 |                    |           |         |               |                  |               |                |        |
| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |         |               |                  |               |                |        |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

|  |                                                                                                                                            |                                                                                                                                            |
|--|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>GEODETTIC COORDINATES</b><br>NAD 27 NME<br>SURFACE LOCATION<br>Y=440083.4 N<br>X=747914.4 E<br>LAT.=32.207366° N<br>LONG.=103.531798° W | <b>GEODETTIC COORDINATES</b><br>NAD 83 NME<br>SURFACE LOCATION<br>Y=440142.0 N<br>X=789098.9 E<br>LAT.=32.207490° N<br>LONG.=103.532274° W |
|  |                                                                                                                                            |                                                                                                                                            |

**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Gary Fisher* 3-14-2019  
Signature Date  
**Gary Fisher**  
Printed Name  
gfisher@permianoilfieldpartners.com  
E-mail Address

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

FEBRUARY 20, 2019

Date of Survey  
Signature & Seal of Professional Surveyor:

Certificate Number 12641  
Ronald J. Eidson 3239  
ACK JWSC W.O.: 19.11.0091



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

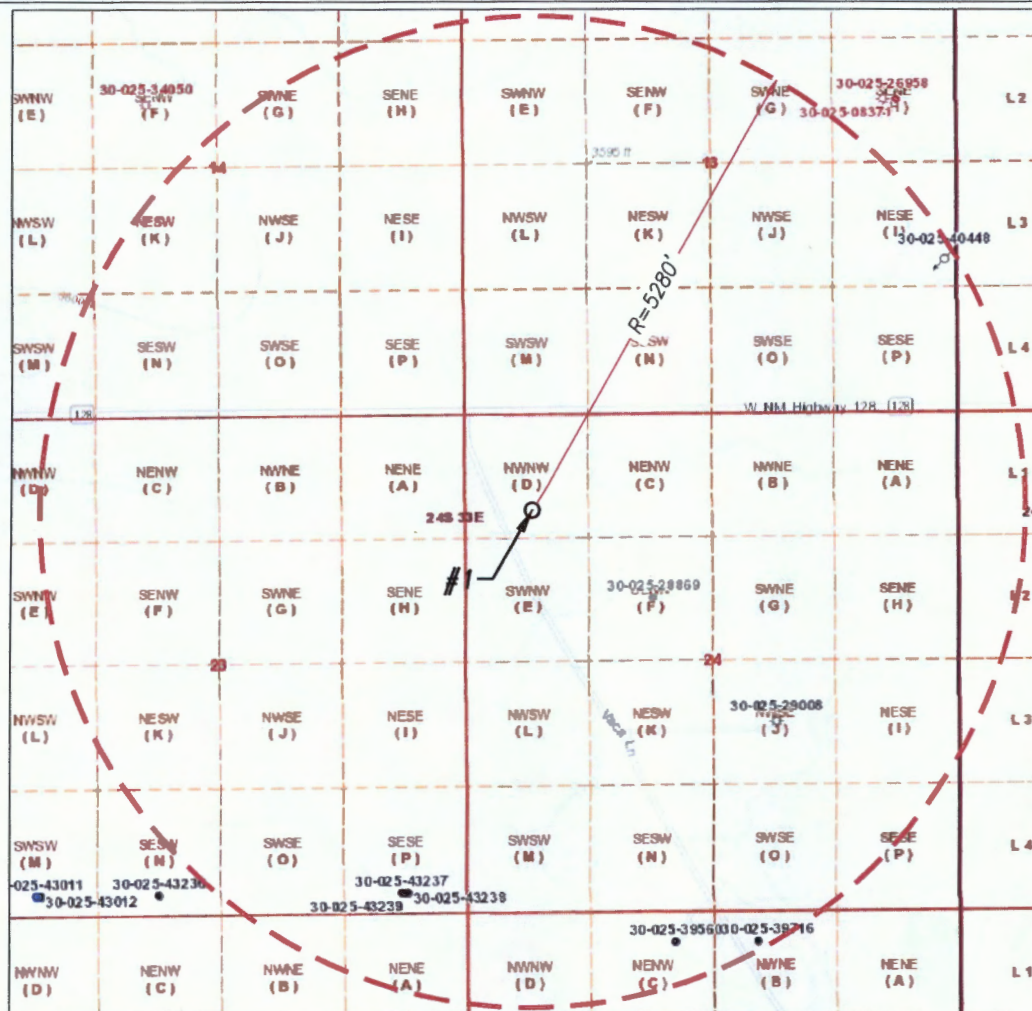
☐ AMENDED REPORT

|               |                                |             |
|---------------|--------------------------------|-------------|
| API Number    | Pool Code                      | Pool Name   |
| Property Code | Property Name                  | Well Number |
|               | DEEP THIRST FEDERAL SWD        | 1           |
| OGRID No.     | Operator Name                  | Elevation   |
|               | PERMIAN OILFIELD PARTNERS, LLC | 3581'       |

|               |         |          |       |         |               |                  |               |                |        |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
| D             | 24      | 24-S     | 33-E  |         | 1044          | NORTH            | 717           | WEST           | LEA    |

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

| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|-----------------|-----------------|--------------------|-----------|
|                 |                 |                    |           |



⊙ DENOTES PROPOSED WELL

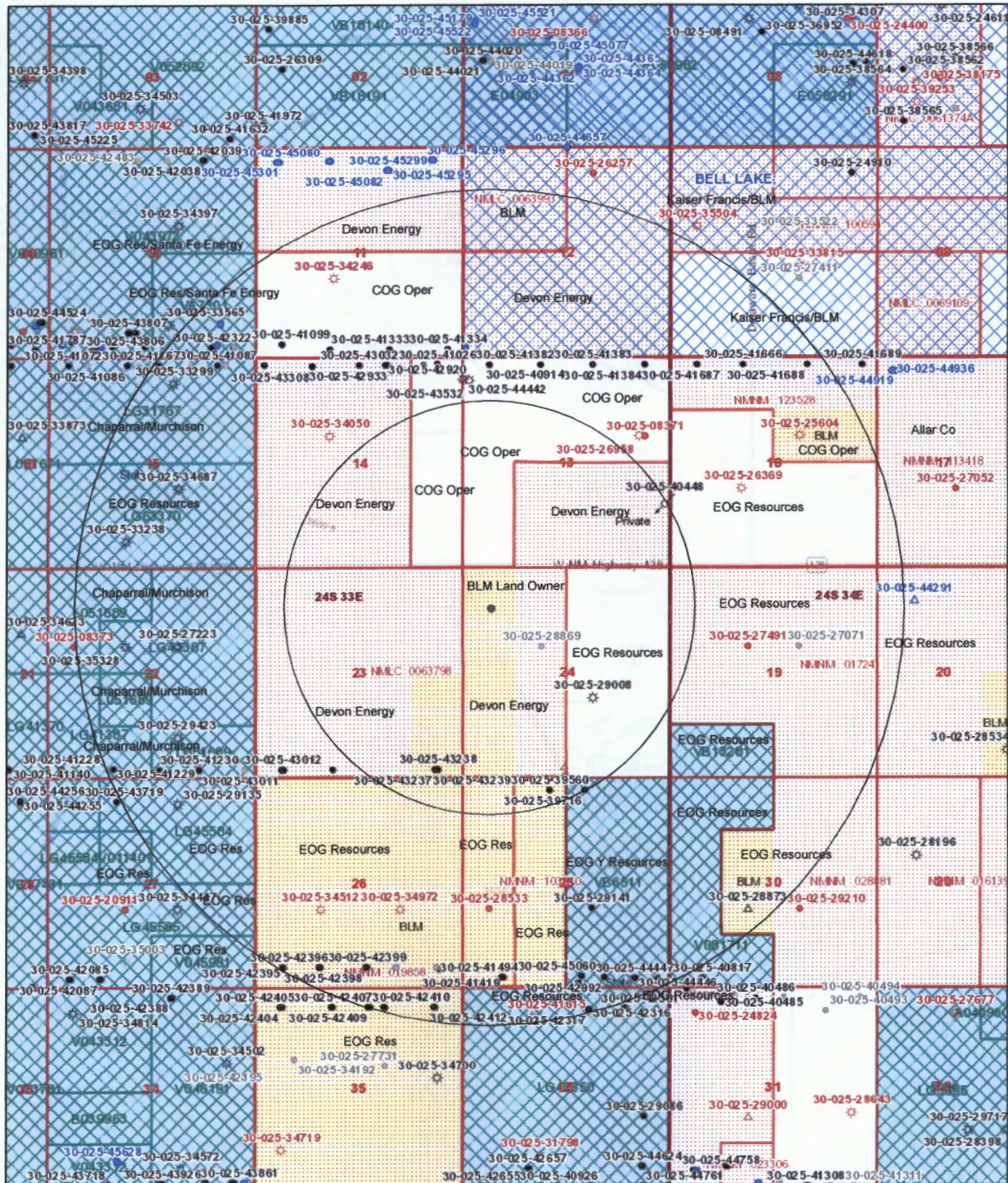
Scale: 1"=2000'

## ACK

JWSC W.O.: 19.11.0091

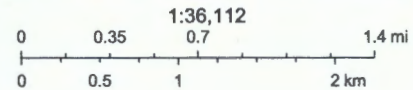


# Deep Thirst Federal SWD #1, 1 & 2 Mile AOI



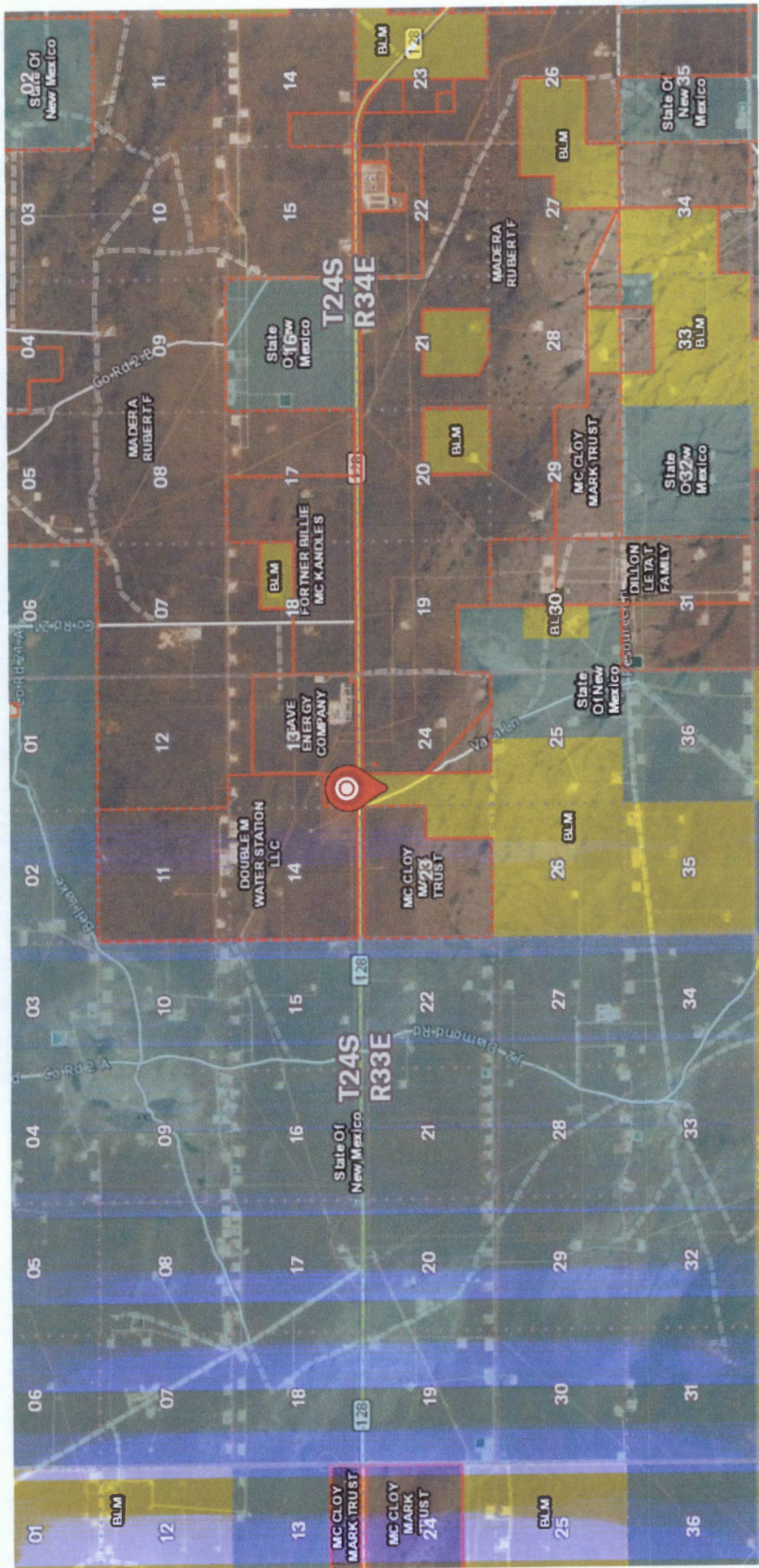
3/9/2019, 10:11:51 AM

- Override 1
- Gas Active
- Gas, Cancelled, Never Drilled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active
- Injection, Cancelled
- Injection, New
- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled
- Oil, New
- Oil, Plugged
- Oil, Temporarily Abandoned
- ▲ Salt Water Injection, Active
- Salt Water Injection, Cancelled
- ▲ Salt Water Injection, New
- ▲ Salt Water Injection, Plugged
- Salt Water Injection Temporarily Abandoned
- Water, Active
- Water, Cancelled
- Water, New
- Water, Plugged
- Water, Temporarily Abandoned
- CO2 Active
- CO2 Cancelled
- CO2 New
- CO2, Plugged
- CO2, Temporarily Abandoned



U.S. BLM  
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong),





| Deep Thirst Federal SWD #1 - Wells within 1 Mile Area of Review |                                     |                       |             |           |                |             |         |          |       |                 |                  |                     |           |          |       |
|-----------------------------------------------------------------|-------------------------------------|-----------------------|-------------|-----------|----------------|-------------|---------|----------|-------|-----------------|------------------|---------------------|-----------|----------|-------|
| API Number                                                      | Current Operator                    | Well Name             | Well Number | Well Type | Well Direction | Well Status | Section | Township | Range | OCB Unit Letter | Surface Location | Bottomhole Location | Formation | MD       | TVD   |
| 30-025-28869                                                    | PRI ONGARO WEL OPERATOR             | PRI ONGARO WELL       | #001        | Oil       | Vertical       | Cancelled   | Apd     | 24       | T24S  | R33E            | F                | F-24-24S-33E        | 1980 FWL  | 1980 FWL | 15700 |
| 30-025-29008                                                    | EOG RESOURCES INC                   | WADERA RIDGE 24       | #001        | Gas       | Vertical       | Active      |         | 24       | T24S  | R33E            | F                | J-24-24S-33E        | 1980 FWL  | 1980 FWL | 15660 |
| 30-025-39560                                                    | EOG RESOURCES INC                   | FALCON 25 FEDERAL     | #001        | Oil       | Horizontal     | Active      |         | 25       | T24S  | R33E            | C                | C-25-24S-33E        | 2022 FWL  | 2022 FWL | 13879 |
| 30-025-39716                                                    | COG OPERATING LLC                   | RED RAIDER WIS STATE  | #002H       | Oil       | Horizontal     | Active      |         | 25       | T24S  | R33E            | B                | B-25-24S-33E        | 2180 FWL  | 2180 FWL | 9445  |
| 30-025-40448                                                    | LUCID ENERGY DELAWARE, LLC          | RED HILLS API         | #001        | Injection | Vertical       | Active      |         | 23       | T24S  | R33E            | C                | O-25-24S-33E        | 2131 FWL  | 2131 FWL | 9445  |
| 30-025-43237                                                    | DEVON ENERGY PRODUCTION COMPANY, LP | BLUE KRAIT 23 FEDERAL | #003H       | Oil       | Horizontal     | Active      |         | 23       | T24S  | R33E            | P                | P-23-24S-33E        | 1600 FWL  | 150 FEF  | 6650  |
| 30-025-43238                                                    | DEVON ENERGY PRODUCTION COMPANY, LP | BLUE KRAIT 23 FEDERAL | #004H       | Oil       | Horizontal     | Active      |         | 23       | T24S  | R33E            | P                | P-23-24S-33E        | 200 FWL   | 210 FEF  | 9399  |
| 30-025-43239                                                    | DEVON ENERGY PRODUCTION COMPANY, LP | BLUE KRAIT 23 FEDERAL | #005H       | Oil       | Horizontal     | Active      |         | 23       | T24S  | R33E            | P                | P-23-24S-33E        | 200 FWL   | 205 FEF  | 9399  |
| 30-025-43248                                                    | DEVON ENERGY PRODUCTION COMPANY, LP | BLUE KRAIT 23 FEDERAL | #006H       | Oil       | Horizontal     | Active      |         | 23       | T24S  | R33E            | P                | A-23-24S-33E        | 289 FWL   | 385 FEF  | 11130 |
| 30-025-43249                                                    | DEVON ENERGY PRODUCTION COMPANY, LP | BLUE KRAIT 23 FEDERAL | #007H       | Oil       | Horizontal     | Active      |         | 23       | T24S  | R33E            | P                | A-23-24S-33E        | 205 FWL   | 405 FEF  | 9408  |



# Permian Oilfield Partners, LLC.

P.O. Box 1220, Stephenville, TX. 76401 | (817) 606-7630 | gfisher@permianoilfieldpartners.com

## Statement of Notifications

C-108 Application for Authorization to inject

Deep Thirst Federal SWD #1

1044' FNL & 717' FWL

Section 24, T24S, R33E

Lea County, New Mexico

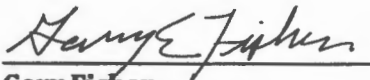
Permian Oilfield Partners, LLC. has mailed notifications to offset operators & leaseholders as per the following list.

### Deep Thirst Federal SWD #1 - List of Operators Notified

| Operator Name                       | Operator Address        | Operator City, State, ZIP Code | Shipper | Tracking Number      | Date of Mailing |
|-------------------------------------|-------------------------|--------------------------------|---------|----------------------|-----------------|
| EOG RESOURCES INC                   | P.O. Box 2267           | Midland, TX 79702              | USPS    | 70182290000160713225 | 3/11/2019       |
| COG OPERATING LLC                   | 600 W Illinois Ave      | Midland, TX 79701              | USPS    | 70182290000160713218 | 3/11/2019       |
| LUCID ENERGY DELAWARE, LLC          | 3100 McKinnon Suite 800 | Dallas, TX 75201               | USPS    | 70182290000160713201 | 3/11/2019       |
| DEVON ENERGY PRODUCTION COMPANY, LP | 20 N Broadway           | Oklahoma City, OK 73102        | USPS    | 70182290000160713195 | 3/11/2019       |

### Deep Thirst Federal SWD #1 - List of Leaseholders Notified

| Leaseholder Name                    | Leaseholder Address         | Leaseholder City, State, ZIP Code | Shipper | Tracking Number        | Date of Mailing |
|-------------------------------------|-----------------------------|-----------------------------------|---------|------------------------|-----------------|
| COG OPERATING LLC                   | 600 W Illinois Ave          | Midland, TX 79701                 | USPS    | 70182290000160713218   | 3/11/2019       |
| DEVON ENERGY PRODUCTION COMPANY, LP | 20 N Broadway               | Oklahoma City, OK 73102           | USPS    | 70182290000160713195   | 3/11/2019       |
| EOG RESOURCES INC                   | P.O. Box 2267               | Midland, TX 79702                 | USPS    | 70182290000160713225   | 3/11/2019       |
| NEW MEXICO STATE LAND OFFICE        | 2827 N Dal Paso St Suite 11 | Hobbs, NM 88240                   | USPS    | 70182290000160713232   | 3/11/2019       |
| BUREAU OF LAND MANAGEMENT           | 620 E Greene St             | Carlsbad, NM 88220                | USPS    | 70182290000160713249   | 3/11/2019       |
| NEW MEXICO STATE LAND OFFICE        | 310 Old Santa Fe Trail      | Santa Fe, NM 87501                | USPS    | 9414811899560604665307 | 3/19/2019       |

  
**Gary Fisher**  
Manager  
Permian Oilfield Partners, LLC.

03/19/2019  
Date



7018 2290 0001 6071 3218

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| MIDLAND, TX 79701                                                                                |               |
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| Extra Services & Fees (check box, add fee as appropriate)                                        | Postmark Here |
| <input type="checkbox"/> Return Receipt (hardcopy) \$1.60                                        |               |
| <input type="checkbox"/> Return Receipt (electronic) \$0.00                                      |               |
| <input type="checkbox"/> Certified Mail Restricted Delivery \$0.00                               |               |
| <input type="checkbox"/> Adult Signature Required \$0.00                                         |               |
| <input type="checkbox"/> Adult Signature Restricted Delivery \$0.00                              |               |
| Postage \$1.75                                                                                   | 03/11/2019    |
| Total Postage and Fees \$6.85                                                                    |               |
| Sent To <i>COG Oper</i>                                                                          |               |
| Street and Apt. No., or PO Box No. <i>600 W. Illinois</i>                                        |               |
| City, State, ZIP+4® <i>Midland, TX 79701 DT</i>                                                  |               |
| PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions                       |               |

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| Certified Mail Fee \$3.50                                                                        | 0334 08       |
| Extra Services & Fees (check box, add fee as appropriate)                                        | Postmark Here |
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| <input type="checkbox"/> Return Receipt (electronic) \$0.00                                      |               |
| <input type="checkbox"/> Certified Mail Restricted Delivery \$0.00                               |               |
| <input type="checkbox"/> Adult Signature Required \$0.00                                         |               |
| <input type="checkbox"/> Adult Signature Restricted Delivery \$0.00                              |               |
| Postage \$1.75                                                                                   | 03/11/2019    |
| Total Postage and Fees \$6.85                                                                    |               |
| Sent To <i>EOG Res.</i>                                                                          |               |
| Street and Apt. No., or PO Box No. <i>PO Box 2267</i>                                            |               |
| City, State, ZIP+4® <i>Midland, TX 79702 DT</i>                                                  |               |
| PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions                       |               |

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| DALLAS, TX 75201                                                                                 |               |
| Certified Mail Fee \$3.50                                                                        | 0334 08       |
| Extra Services & Fees (check box, add fee as appropriate)                                        | Postmark Here |
| <input type="checkbox"/> Return Receipt (hardcopy) \$1.60                                        |               |
| <input type="checkbox"/> Return Receipt (electronic) \$0.00                                      |               |
| <input type="checkbox"/> Certified Mail Restricted Delivery \$0.00                               |               |
| <input type="checkbox"/> Adult Signature Required \$0.00                                         |               |
| <input type="checkbox"/> Adult Signature Restricted Delivery \$0.00                              |               |
| Postage \$1.75                                                                                   | 03/11/2019    |
| Total Postage and Fees \$6.85                                                                    |               |
| Sent To <i>Lucid Energy Del.</i>                                                                 |               |
| Street and Apt. No., or PO Box No. <i>3100 McKinnon #300</i>                                     |               |
| City, State, ZIP+4® <i>Dallas, TX 75201</i>                                                      |               |
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| HOBBS, NM 88240                                                                                  |               |
| Certified Mail Fee \$3.50                                                                        | 0334 08       |
| Extra Services & Fees (check box, add fee as appropriate)                                        | Postmark Here |
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| <input type="checkbox"/> Return Receipt (electronic) \$0.00                                      |               |
| <input type="checkbox"/> Certified Mail Restricted Delivery \$0.00                               |               |
| <input type="checkbox"/> Adult Signature Required \$0.00                                         |               |
| <input type="checkbox"/> Adult Signature Restricted Delivery \$0.00                              |               |
| Postage \$1.75                                                                                   | 03/11/2019    |
| Total Postage and Fees \$6.85                                                                    |               |
| Sent To <i>NM SLD</i>                                                                            |               |
| Street and Apt. No., or PO Box No. <i>2827 Del Paso #117</i>                                     |               |
| City, State, ZIP+4® <i>Hobbs, NM 88240</i>                                                       |               |
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| CARLSBAD, NM 88220                                                                               |               |
| Certified Mail Fee \$3.50                                                                        | 0334 08       |
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| <input type="checkbox"/> Return Receipt (hardcopy) \$1.60                                        |               |
| <input type="checkbox"/> Return Receipt (electronic) \$0.00                                      |               |
| <input type="checkbox"/> Certified Mail Restricted Delivery \$0.00                               |               |
| <input type="checkbox"/> Adult Signature Required \$0.00                                         |               |
| <input type="checkbox"/> Adult Signature Restricted Delivery \$0.00                              |               |
| Postage \$1.75                                                                                   | 03/11/2019    |
| Total Postage and Fees \$6.85                                                                    |               |
| Sent To <i>BLM</i>                                                                               |               |
| Street and Apt. No., or PO Box No. <i>620 E. Greave St.</i>                                      |               |
| City, State, ZIP+4® <i>Carlsbad, NM 88220 DT</i>                                                 |               |
| PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions                       |               |



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**Certified Mail Fee** \$3.50  
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☐ Return Receipt (electronic) \$0.00  
☐ Certified Mail Restricted Delivery \$0.00  
☐ Adult Signature Required \$0.00  
☐ Adult Signature Restricted Delivery \$0.00

**Postage** \$1.75

**Total Postage and Fees** \$6.85

**Sent To**

**Street and Apt. No., or PO Box No.**

**City, State, ZIP+4®**

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

0334  
08

Postmark  
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03/11/2019

*Devon Energy*  
*20 N. Broadway*  
*OKC, OK 73102*

DT

**U.S. Postal Service Certified Mail Receipt**

ARTICLE NUMBER: 9414 8118 9956 0604 6653 07

**ARTICLE ADDRESSED TO:**

New Mexico State Land Office  
 310 Old Santa Fe Trail  
 Santa Fe NM 87501-2708

**FEES**

Postage Per Piece \$3.350  
 Certified Fee 3.500  
 Total Postage & Fees: 6.850

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3/19/19

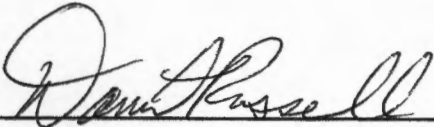
DT

# Affidavit of Publication

STATE OF NEW MEXICO  
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

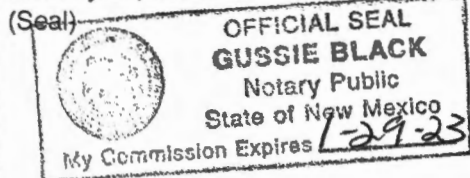
Beginning with the issue dated  
March 12, 2019  
and ending with the issue dated  
March 12, 2019.

  
\_\_\_\_\_  
Publisher

Sworn and subscribed to before me this  
12th day of March 2019.

  
\_\_\_\_\_  
Business Manager

My commission expires  
January 29, 2023



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

## LEGALS

### LEGAL NOTICE MARCH 12, 2019

Permian Oilfield Partners, LLC, PO Box 1220, Stephenville, TX 76401, phone (817) 606-7630, attention, Gary Fisher, has filed form C-108 (Application for Authorization for Injection) with the New Mexico Oil Conservation Division seeking approval to drill a commercial salt water disposal well in Lea County, New Mexico. The well name is the Deep Thirst Federal SWD #1, and is located 1044' FNL & 717' FWL, Unit Letter D, Section 24, Township 24 South, Range 33 East, NMNM. The well will dispose of water produced from nearby oil and gas wells into the Devonian formation from a depth of 16,250-18,513. The maximum expected injection rate is 66,500 BWPD at a maximum surface injection pressure of 3,250 psi.

Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505 within 15 days.  
#33876

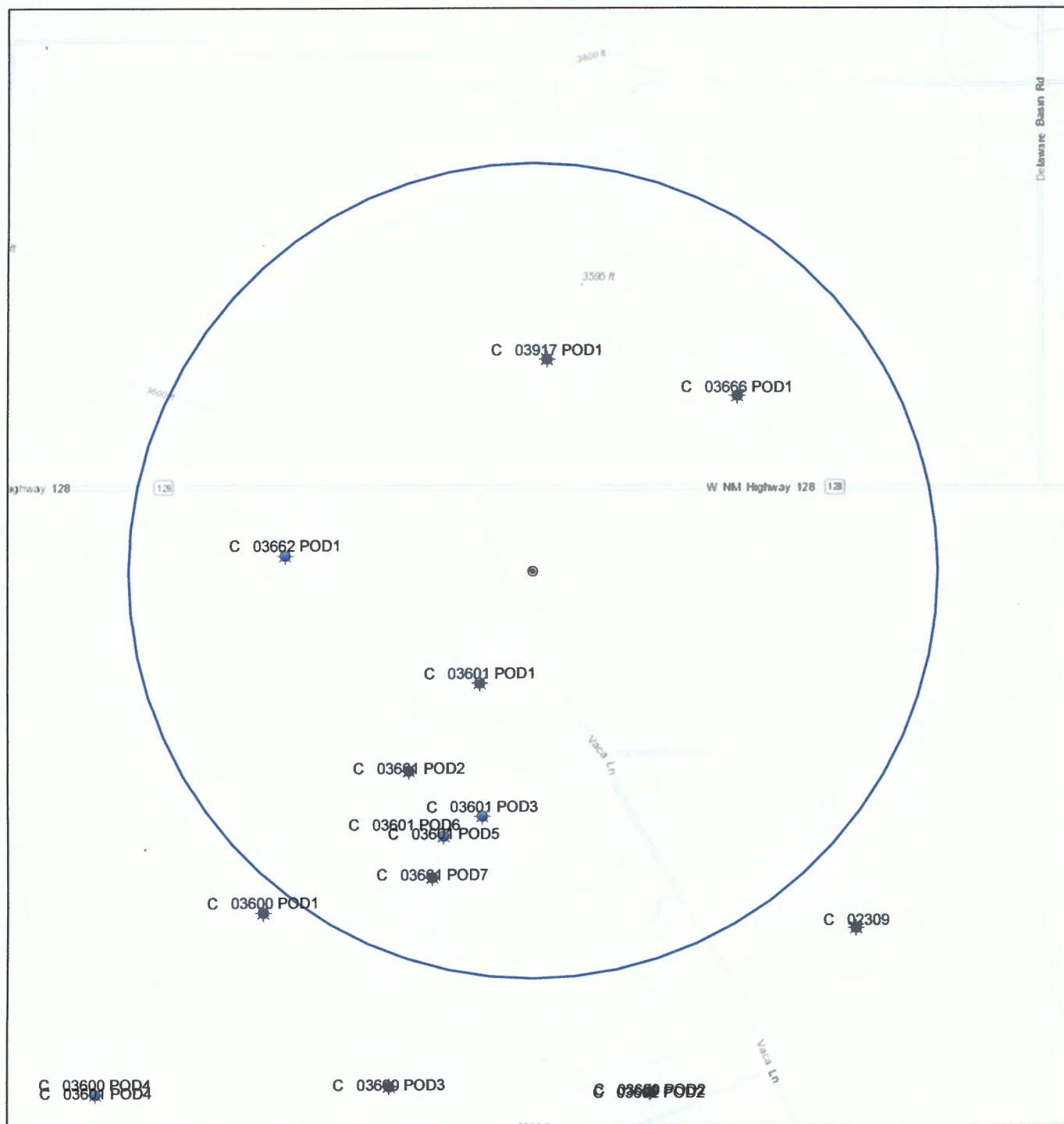
67115647

00225781

GARY FISHER  
PERMIAN OILFIELD PARTNERS, LLC  
PO BOX 1220  
STEPHENVILLE, TX 76401



# Deep Thirst Federal SWD #1 - Water Wells within 1 Mile AOR



3/9/2019, 5:30:49 PM

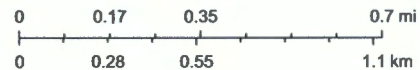
Override 1

Points

Override 2

Override 3

1:18,056



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User



# 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          | Code | POD Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng    | X       | Y | DepthWell | DepthWater | Water Column |
|---------------------|------|---------------|--------|------|------|-----|-----|-----|--------|---------|---|-----------|------------|--------------|
| <u>C 03666 POD1</u> | C    | LE            | 2      | 3    | 4    | 13  | 24S | 33E | 639132 | 3565078 |   | 650       | 390        | 260          |
| <u>C 03917 POD1</u> | C    | LE            | 4      | 1    | 3    | 13  | 24S | 33E | 638374 | 3565212 |   | 600       | 420        | 180          |

Average Depth to Water: 405 feet

Minimum Depth: 390 feet

Maximum Depth: 420 feet

**Record Count:** 2

**PLSS Search:**

Section(s): 13

Township: 24S

Range: 33E

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.

3/7/19 1:01 AM

WATER COLUMN/ AVERAGE DEPTH  
TO WATER





# New Mexico Office of the State Engineer

## Point of Diversion Summary

|                 |                   |                                    |            |                       |            |            |            |          |                                  |
|-----------------|-------------------|------------------------------------|------------|-----------------------|------------|------------|------------|----------|----------------------------------|
|                 |                   | (quarters are 1=NW 2=NE 3=SW 4=SE) |            |                       |            |            |            |          |                                  |
|                 |                   | (quarters are smallest to largest) |            | (NAD83 UTM in meters) |            |            |            |          |                                  |
| <b>Well Tag</b> | <b>POD Number</b> | <b>Q64</b>                         | <b>Q16</b> | <b>Q4</b>             | <b>Sec</b> | <b>Tws</b> | <b>Rng</b> | <b>X</b> | <b>Y</b>                         |
| C 03666         | POD1              | 2                                  | 3          | 4                     | 13         | 24S        | 33E        | 639132   | 3565078 <input type="checkbox"/> |

---

|                          |            |                             |                              |                                |
|--------------------------|------------|-----------------------------|------------------------------|--------------------------------|
| <b>Driller License:</b>  | 1058       | <b>Driller Company:</b>     | KEYS DRILLING & PUMP SERVICE |                                |
| <b>Driller Name:</b>     | CASEY KEYS |                             |                              |                                |
| <b>Drill Start Date:</b> | 10/18/2013 | <b>Drill Finish Date:</b>   | 10/26/2013                   | <b>Plug Date:</b>              |
| <b>Log File Date:</b>    | 11/14/2013 | <b>PCW Rcv Date:</b>        |                              | <b>Source:</b> Shallow         |
| <b>Pump Type:</b>        |            | <b>Pipe Discharge Size:</b> |                              | <b>Estimated Yield:</b> 38 GPM |
| <b>Casing Size:</b>      | 8.00       | <b>Depth Well:</b>          | 650 feet                     | <b>Depth Water:</b> 390 feet   |

---

|                                       |            |               |                               |
|---------------------------------------|------------|---------------|-------------------------------|
| <b>Water Bearing Stratifications:</b> | <b>Top</b> | <b>Bottom</b> | <b>Description</b>            |
|                                       | 460        | 465           | Sandstone/Gravel/Conglomerate |
|                                       | 490        | 535           | Sandstone/Gravel/Conglomerate |

---

|                             |            |               |
|-----------------------------|------------|---------------|
| <b>Casing Perforations:</b> | <b>Top</b> | <b>Bottom</b> |
|                             | 485        | 650           |

---

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.

3/7/19 1:00 AM

POINT OF DIVERSION SUMMARY



# New Mexico Office of the State Engineer

## Point of Diversion Summary

|                 |                   |                                    |                                         |
|-----------------|-------------------|------------------------------------|-----------------------------------------|
|                 |                   | (quarters are 1=NW 2=NE 3=SW 4=SE) |                                         |
|                 |                   | (quarters are smallest to largest) |                                         |
|                 |                   | (NAD83 UTM in meters)              |                                         |
| <b>Well Tag</b> | <b>POD Number</b> | <b>Q64 Q16 Q4 Sec Tws Rng</b>      | <b>X Y</b>                              |
| NA              | C 03917 POD1      | 4 1 3 13 24S 33E                   | 638374 3565212 <input type="checkbox"/> |

---

|                          |            |                             |                              |                                |
|--------------------------|------------|-----------------------------|------------------------------|--------------------------------|
| <b>Driller License:</b>  | 1058       | <b>Driller Company:</b>     | KEYS DRILLING & PUMP SERVICE |                                |
| <b>Driller Name:</b>     | CASE KEY   |                             |                              |                                |
| <b>Drill Start Date:</b> | 03/01/2016 | <b>Drill Finish Date:</b>   | 03/04/2016                   | <b>Plug Date:</b>              |
| <b>Log File Date:</b>    | 03/11/2016 | <b>PCW Rcv Date:</b>        |                              | <b>Source:</b> Shallow         |
| <b>Pump Type:</b>        |            | <b>Pipe Discharge Size:</b> |                              | <b>Estimated Yield:</b> 30 GPM |
| <b>Casing Size:</b>      | 6.00       | <b>Depth Well:</b>          | 600 feet                     | <b>Depth Water:</b> 420 feet   |

---

|                                       |            |               |                               |
|---------------------------------------|------------|---------------|-------------------------------|
| <b>Water Bearing Stratifications:</b> | <b>Top</b> | <b>Bottom</b> | <b>Description</b>            |
|                                       | 520        | 600           | Sandstone/Gravel/Conglomerate |

---

|                             |            |               |
|-----------------------------|------------|---------------|
| <b>Casing Perforations:</b> | <b>Top</b> | <b>Bottom</b> |
|                             | 300        | 600           |

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3/7/19 1:01 AM

POINT OF DIVERSION SUMMARY





# New Mexico Office of the State Engineer

## Point of Diversion Summary

|                 |                   |                                    |            |           |            |            |            |          |          |                          |  |
|-----------------|-------------------|------------------------------------|------------|-----------|------------|------------|------------|----------|----------|--------------------------|--|
|                 |                   | (quarters are 1=NW 2=NE 3=SW 4=SE) |            |           |            |            |            |          |          |                          |  |
|                 |                   | (quarters are smallest to largest) |            |           |            |            |            |          |          |                          |  |
|                 |                   | (NAD83 UTM in meters)              |            |           |            |            |            |          |          |                          |  |
| <b>Well Tag</b> | <b>POD Number</b> | <b>Q64</b>                         | <b>Q16</b> | <b>Q4</b> | <b>Sec</b> | <b>Tws</b> | <b>Rng</b> | <b>X</b> | <b>Y</b> |                          |  |
| C 03601         | POD1              | 4                                  | 4          | 2         | 23         | 24S        | 33E        | 638124   | 3563937  | <input type="checkbox"/> |  |

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|                          |               |                             |                    |                         |         |
|--------------------------|---------------|-----------------------------|--------------------|-------------------------|---------|
| <b>Driller License:</b>  | 1186          | <b>Driller Company:</b>     | ENVIRO-DRILL, INC. |                         |         |
| <b>Driller Name:</b>     | RODNEY HAMMER |                             |                    |                         |         |
| <b>Drill Start Date:</b> | 12/21/2012    | <b>Drill Finish Date:</b>   | 12/21/2012         | <b>Plug Date:</b>       |         |
| <b>Log File Date:</b>    | 01/08/2013    | <b>PCW Rcv Date:</b>        |                    | <b>Source:</b>          | Shallow |
| <b>Pump Type:</b>        |               | <b>Pipe Discharge Size:</b> |                    | <b>Estimated Yield:</b> |         |
| <b>Casing Size:</b>      |               | <b>Depth Well:</b>          |                    | <b>Depth Water:</b>     |         |

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3/7/19 1:02 AM

POINT OF DIVERSION SUMMARY



## New Mexico Office of the State Engineer

# Point of Diversion Summary

|                 |                   |                                    |            |                       |            |            |            |          |                                  |
|-----------------|-------------------|------------------------------------|------------|-----------------------|------------|------------|------------|----------|----------------------------------|
|                 |                   | (quarters are 1=NW 2=NE 3=SW 4=SE) |            |                       |            |            |            |          |                                  |
|                 |                   | (quarters are smallest to largest) |            | (NAD83 UTM in meters) |            |            |            |          |                                  |
| <b>Well Tag</b> | <b>POD Number</b> | <b>Q64</b>                         | <b>Q16</b> | <b>Q4</b>             | <b>Sec</b> | <b>Tws</b> | <b>Rng</b> | <b>X</b> | <b>Y</b>                         |
|                 | C 03601 POD2      | 3                                  | 2          | 4                     | 23         | 24S        | 33E        | 637846   | 3563588 <input type="checkbox"/> |

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|                          |               |                             |                    |                         |         |
|--------------------------|---------------|-----------------------------|--------------------|-------------------------|---------|
| <b>Driller License:</b>  | 1186          | <b>Driller Company:</b>     | ENVIRO-DRILL, INC. |                         |         |
| <b>Driller Name:</b>     | RODNEY HAMMER |                             |                    |                         |         |
| <b>Drill Start Date:</b> | 01/06/2013    | <b>Drill Finish Date:</b>   | 01/07/2013         | <b>Plug Date:</b>       |         |
| <b>Log File Date:</b>    | 01/30/2013    | <b>PCW Rcv Date:</b>        |                    | <b>Source:</b>          | Shallow |
| <b>Pump Type:</b>        |               | <b>Pipe Discharge Size:</b> |                    | <b>Estimated Yield:</b> |         |
| <b>Casing Size:</b>      |               | <b>Depth Well:</b>          |                    | <b>Depth Water:</b>     |         |

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POINT OF DIVERSION SUMMARY





# New Mexico Office of the State Engineer

## Point of Diversion Summary

|                 |                   |                                    |            |           |            |            |            |          |                                  |
|-----------------|-------------------|------------------------------------|------------|-----------|------------|------------|------------|----------|----------------------------------|
|                 |                   | (quarters are 1=NW 2=NE 3=SW 4=SE) |            |           |            |            |            |          |                                  |
|                 |                   | (quarters are smallest to largest) |            |           |            |            |            |          |                                  |
|                 |                   | (NAD83 UTM in meters)              |            |           |            |            |            |          |                                  |
| <b>Well Tag</b> | <b>POD Number</b> | <b>Q64</b>                         | <b>Q16</b> | <b>Q4</b> | <b>Sec</b> | <b>Tws</b> | <b>Rng</b> | <b>X</b> | <b>Y</b>                         |
| C 03601         | POD5              | 2                                  | 4          | 4         | 23         | 24S        | 33E        | 637988   | 3563334 <input type="checkbox"/> |

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|                          |               |                             |                    |  |                         |         |  |  |  |
|--------------------------|---------------|-----------------------------|--------------------|--|-------------------------|---------|--|--|--|
| <b>Driller License:</b>  | 1186          | <b>Driller Company:</b>     | ENVIRO-DRILL, INC. |  |                         |         |  |  |  |
| <b>Driller Name:</b>     | RODNEY HAMMER |                             |                    |  |                         |         |  |  |  |
| <b>Drill Start Date:</b> | 01/06/2013    | <b>Drill Finish Date:</b>   | 01/06/2013         |  | <b>Plug Date:</b>       |         |  |  |  |
| <b>Log File Date:</b>    | 01/30/2013    | <b>PCW Rcv Date:</b>        |                    |  | <b>Source:</b>          | Shallow |  |  |  |
| <b>Pump Type:</b>        |               | <b>Pipe Discharge Size:</b> |                    |  | <b>Estimated Yield:</b> |         |  |  |  |
| <b>Casing Size:</b>      |               | <b>Depth Well:</b>          |                    |  | <b>Depth Water:</b>     |         |  |  |  |

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POINT OF DIVERSION SUMMARY



# New Mexico Office of the State Engineer

## Point of Diversion Summary

|                 |                   |                                    |            |                                    |            |                       |            |          |                                  |
|-----------------|-------------------|------------------------------------|------------|------------------------------------|------------|-----------------------|------------|----------|----------------------------------|
| <b>Well Tag</b> | <b>POD Number</b> | (quarters are 1=NW 2=NE 3=SW 4=SE) |            | (quarters are smallest to largest) |            | (NAD83 UTM in meters) |            |          |                                  |
|                 |                   | <b>Q64</b>                         | <b>Q16</b> | <b>Q4</b>                          | <b>Sec</b> | <b>Tws</b>            | <b>Rng</b> | <b>X</b> | <b>Y</b>                         |
|                 | C 03601 POD6      | 1                                  | 4          | 4                                  | 23         | 24S                   | 33E        | 637834   | 3563338 <input type="checkbox"/> |

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|                          |               |                             |                    |                         |
|--------------------------|---------------|-----------------------------|--------------------|-------------------------|
| <b>Driller License:</b>  | 1186          | <b>Driller Company:</b>     | ENVIRO-DRILL, INC. |                         |
| <b>Driller Name:</b>     | RODNEY HAMMER |                             |                    |                         |
| <b>Drill Start Date:</b> | 01/05/2013    | <b>Drill Finish Date:</b>   | 01/05/2013         | <b>Plug Date:</b>       |
| <b>Log File Date:</b>    | 01/30/2013    | <b>PCW Rcv Date:</b>        |                    | <b>Source:</b> Shallow  |
| <b>Pump Type:</b>        |               | <b>Pipe Discharge Size:</b> |                    | <b>Estimated Yield:</b> |
| <b>Casing Size:</b>      |               | <b>Depth Well:</b>          |                    | <b>Depth Water:</b>     |

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POINT OF DIVERSION SUMMARY





# New Mexico Office of the State Engineer

## Point of Diversion Summary

|                 |                   |                                    |            |                       |            |            |            |          |                                  |
|-----------------|-------------------|------------------------------------|------------|-----------------------|------------|------------|------------|----------|----------------------------------|
|                 |                   | (quarters are 1=NW 2=NE 3=SW 4=SE) |            |                       |            |            |            |          |                                  |
|                 |                   | (quarters are smallest to largest) |            | (NAD83 UTM in meters) |            |            |            |          |                                  |
| <b>Well Tag</b> | <b>POD Number</b> | <b>Q64</b>                         | <b>Q16</b> | <b>Q4</b>             | <b>Sec</b> | <b>Tws</b> | <b>Rng</b> | <b>X</b> | <b>Y</b>                         |
| C 03601         | POD7              | 4                                  | 4          | 4                     | 23         | 24S        | 33E        | 637946   | 3563170 <input type="checkbox"/> |

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|                          |               |                             |                    |                         |         |
|--------------------------|---------------|-----------------------------|--------------------|-------------------------|---------|
| <b>Driller License:</b>  | 1186          | <b>Driller Company:</b>     | ENVIRO-DRILL, INC. |                         |         |
| <b>Driller Name:</b>     | RODNEY HAMMER |                             |                    |                         |         |
| <b>Drill Start Date:</b> | 01/05/2013    | <b>Drill Finish Date:</b>   | 01/05/2013         | <b>Plug Date:</b>       |         |
| <b>Log File Date:</b>    | 01/30/2013    | <b>PCW Rcv Date:</b>        |                    | <b>Source:</b>          | Shallow |
| <b>Pump Type:</b>        |               | <b>Pipe Discharge Size:</b> |                    | <b>Estimated Yield:</b> |         |
| <b>Casing Size:</b>      |               | <b>Depth Well:</b>          |                    | <b>Depth Water:</b>     |         |

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3/7/19 1:04 AM

POINT OF DIVERSION SUMMARY



# New Mexico Office of the State Engineer

## Point of Diversion Summary

|                 |                   |                                    |            |                       |            |            |            |          |                                  |
|-----------------|-------------------|------------------------------------|------------|-----------------------|------------|------------|------------|----------|----------------------------------|
|                 |                   | (quarters are 1=NW 2=NE 3=SW 4=SE) |            |                       |            |            |            |          |                                  |
|                 |                   | (quarters are smallest to largest) |            | (NAD83 UTM in meters) |            |            |            |          |                                  |
| <b>Well Tag</b> | <b>POD Number</b> | <b>Q64</b>                         | <b>Q16</b> | <b>Q4</b>             | <b>Sec</b> | <b>Tws</b> | <b>Rng</b> | <b>X</b> | <b>Y</b>                         |
| C 03662         | POD1              | 3                                  | 1          | 2                     | 23         | 24S        | 33E        | 637342   | 3564428 <input type="checkbox"/> |

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|                          |            |                             |                                                   |                                |
|--------------------------|------------|-----------------------------|---------------------------------------------------|--------------------------------|
| <b>Driller License:</b>  | 1654       | <b>Driller Company:</b>     | NOT WORKING FOR HIRE-SIRMAN DRILLING AND CONSTRUC |                                |
| <b>Driller Name:</b>     |            |                             |                                                   |                                |
| <b>Drill Start Date:</b> | 08/19/2013 | <b>Drill Finish Date:</b>   | 08/20/2013                                        | <b>Plug Date:</b>              |
| <b>Log File Date:</b>    | 09/16/2013 | <b>PCW Rcv Date:</b>        |                                                   | <b>Source:</b> Shallow         |
| <b>Pump Type:</b>        |            | <b>Pipe Discharge Size:</b> |                                                   | <b>Estimated Yield:</b> 10 GPM |
| <b>Casing Size:</b>      | 6.00       | <b>Depth Well:</b>          | 550 feet                                          | <b>Depth Water:</b> 110 feet   |

---

|                                       |            |               |                               |
|---------------------------------------|------------|---------------|-------------------------------|
| <b>Water Bearing Stratifications:</b> | <b>Top</b> | <b>Bottom</b> | <b>Description</b>            |
|                                       | 250        | 275           | Sandstone/Gravel/Conglomerate |

---

|                             |            |               |
|-----------------------------|------------|---------------|
| <b>Casing Perforations:</b> | <b>Top</b> | <b>Bottom</b> |
|                             | 280        | 360           |

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POINT OF DIVERSION SUMMARY





# 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          | Code | POD<br>Sub-<br>basin | County | Q 6 | Q 16 | Q 4 | Sec | Tw  | Rng | X      | Y       | DepthWell | DepthWater | Water<br>Column |
|---------------------|------|----------------------|--------|-----|------|-----|-----|-----|-----|--------|---------|-----------|------------|-----------------|
| <u>C 03601 POD1</u> |      | CUB                  | LE     | 4   | 4    | 2   | 23  | 24S | 33E | 638124 | 3563937 |           |            |                 |
| <u>C 03601 POD2</u> |      | CUB                  | LE     | 3   | 2    | 4   | 23  | 24S | 33E | 637846 | 3563588 |           |            |                 |
| <u>C 03601 POD5</u> |      | CUB                  | LE     | 2   | 4    | 4   | 23  | 24S | 33E | 637988 | 3563334 |           |            |                 |
| <u>C 03601 POD6</u> |      | CUB                  | LE     | 1   | 4    | 4   | 23  | 24S | 33E | 637834 | 3563338 |           |            |                 |
| <u>C 03601 POD7</u> |      | CUB                  | LE     | 4   | 4    | 4   | 23  | 24S | 33E | 637946 | 3563170 |           |            |                 |
| <u>C 03662 POD1</u> |      | C                    | LE     | 3   | 1    | 2   | 23  | 24S | 33E | 637342 | 3564428 | 550       | 110        | 440             |

Average Depth to Water: 110 feet

Minimum Depth: 110 feet

Maximum Depth: 110 feet

Record Count: 6

PLSS Search:

Section(s): 23

Township: 24S

Range: 33E

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3/7/19 1:02 AM

WATER COLUMN/ AVERAGE DEPTH  
TO WATER



## New Mexico Office of the State Engineer

# Point of Diversion Summary

|          |              |                                    |                                         |
|----------|--------------|------------------------------------|-----------------------------------------|
|          |              | (quarters are 1=NW 2=NE 3=SW 4=SE) |                                         |
|          |              | (quarters are smallest to largest) |                                         |
|          |              | (NAD83 UTM in meters)              |                                         |
| Well Tag | POD Number   | Q64 Q16 Q4 Sec Tws Rng             | X Y                                     |
|          | C 03601 POD3 | 1 3 3 24 24S 33E                   | 638142 3563413 <input type="checkbox"/> |

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|                   |               |                      |                    |
|-------------------|---------------|----------------------|--------------------|
| Driller License:  | 1186          | Driller Company:     | ENVIRO-DRILL, INC. |
| Driller Name:     | RODNEY HAMMER |                      |                    |
| Drill Start Date: | 01/06/2013    | Drill Finish Date:   | 01/06/2013         |
| Log File Date:    | 01/30/2013    | PCW Rev Date:        |                    |
| Pump Type:        |               | Pipe Discharge Size: |                    |
| Casing Size:      |               | Depth Well:          |                    |
|                   |               | Plug Date:           |                    |
|                   |               | Source:              | Shallow            |
|                   |               | Estimated Yield:     |                    |
|                   |               | Depth Water:         |                    |

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POINT OF DIVERSION SUMMARY



## New Mexico Office of the State Engineer

# Point of Diversion Summary

|                 |                   |                                    |            |                       |            |            |            |          |                              |
|-----------------|-------------------|------------------------------------|------------|-----------------------|------------|------------|------------|----------|------------------------------|
|                 |                   | (quarters are 1=NW 2=NE 3=SW 4=SE) |            |                       |            |            |            |          |                              |
|                 |                   | (quarters are smallest to largest) |            | (NAD83 UTM in meters) |            |            |            |          |                              |
| <b>Well Tag</b> | <b>POD Number</b> | <b>Q64</b>                         | <b>Q16</b> | <b>Q4</b>             | <b>Sec</b> | <b>Tws</b> | <b>Rng</b> | <b>X</b> | <b>Y</b>                     |
|                 | C 03601 POD4      | 3                                  | 3          | 3                     | 24         | 24S        | 33E        | 638162   | 3561375 <input type="text"/> |

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|                          |               |                             |                    |                         |         |
|--------------------------|---------------|-----------------------------|--------------------|-------------------------|---------|
| <b>Driller License:</b>  | 1186          | <b>Driller Company:</b>     | ENVIRO-DRILL, INC. |                         |         |
| <b>Driller Name:</b>     | RODNEY HAMMER |                             |                    |                         |         |
| <b>Drill Start Date:</b> | 01/03/2013    | <b>Drill Finish Date:</b>   | 01/04/2013         | <b>Plug Date:</b>       |         |
| <b>Log File Date:</b>    | 01/30/2013    | <b>PCW Rcv Date:</b>        |                    | <b>Source:</b>          | Shallow |
| <b>Pump Type:</b>        |               | <b>Pipe Discharge Size:</b> |                    | <b>Estimated Yield:</b> |         |
| <b>Casing Size:</b>      |               | <b>Depth Well:</b>          |                    | <b>Depth Water:</b>     |         |

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3/7/19 1:05 AM

POINT OF DIVERSION SUMMARY





## 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          | Code | POD<br>Sub-<br>basin | County | Q Q Q<br>64 16 4 | Sec | Tws | Rng | X      | Y       | DepthWell | DepthWater | Water<br>Column |
|---------------------|------|----------------------|--------|------------------|-----|-----|-----|--------|---------|-----------|------------|-----------------|
| <u>C 03601 POD3</u> |      | CUB                  | LE     | 1 3 3            | 24  | 24S | 33E | 638142 | 3563413 |           |            |                 |
| <u>C 03601 POD4</u> |      | CUB                  | LE     | 3 3 3            | 24  | 24S | 33E | 638162 | 3561375 |           |            |                 |

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

**Record Count:** 2

**PLSS Search:**

Section(s): 24

Township: 24S

Range: 33E

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3/7/19 1:04 AM

WATER COLUMN/ AVERAGE DEPTH  
TO WATER

# Permian Oilfield Partners, LLC.

---

P.O. Box 1220, Stephenville, TX. 76401 | (817) 606-7630 | gfisher@permianoilfieldpartners.com

## **Item XII. Affirmative Statement**

C-108 Application for Authorization to inject

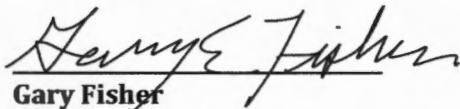
Deep Thirst Federal SWD #1

1044' FNL & 717' FWL

Section 24, T24S, R33E

Lea County, New Mexico

Permian Oilfield Partners, LLC. has examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.



**Gary Fisher**  
**Manager**

**Permian Oilfield Partners, LLC.**

**03/14/2019**

**Date**

**Plugging Risk Assessment**  
**Permian Oilfield Partners, LLC.**  
**Deep Thirst Federal SWD #1**  
**SL: 1044' FNL & 717' FWL**  
**Sec 24, T24S, R33E**  
**Lea County, New Mexico**



## WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.  
Deep Thirst Federal SWD #1  
1044' FNL, 717' FWL  
Sec. 24, T24S, R33E, Lea Co. NM  
Lat 32.207490° N, Lon 103.532274° W  
GL 3581', RKB 3611'

### Surface - (Conventional)

Hole Size: 26"  
Casing: 20" - 94# H-40 & 106.5# J-55 STC Casing  
Depth Top: Surface  
Depth Btm: 1312'  
Cement: 890 sks - Class C + Additives  
Cement Top: Surface - (Circulate)

### Intermediate #1 - (Conventional)

Hole Size: 17.5"  
Casing: 13.375" - 61# J-55 & 68# J-55 STC Casing  
Depth Top: Surface  
Depth Btm: 5377'  
Cement: 1789 sks - Lite Class C (50:50:10) + Additives  
Cement Top: Surface - (Circulate)

### Intermediate #2 - (Conventional)

Hole Size: 12.25"  
Casing: 9.625" - 40# L-80 & 40# HCL-80 BTC Casing  
Depth Top: Surface  
Depth Btm: 12138'  
Cement: 2117 sks - Lite Class C (60:40:0) + Additives  
Cement Top: Surface - (Circulate)  
ECP/DV Tool: 5477'

### Intermediate #3 - (Liner)

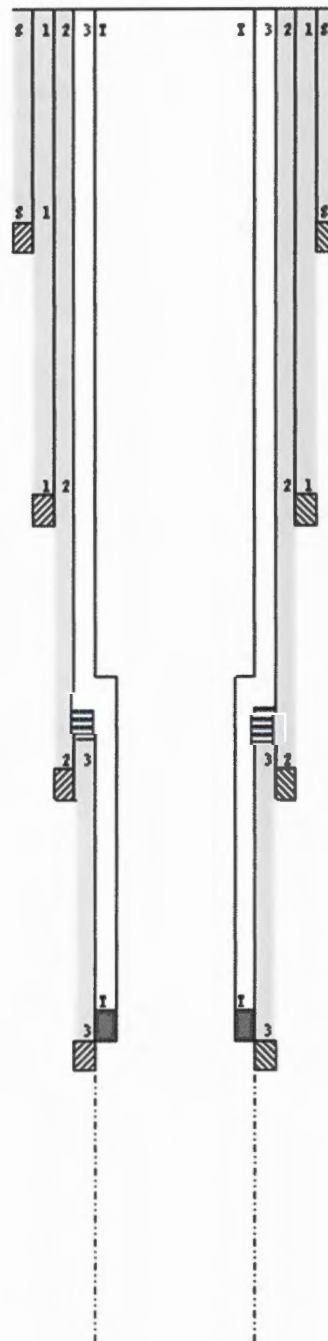
Hole Size: 8.5"  
Casing: 7.625" - 39# HCL-80 FJ Casing  
Depth Top: 12138'  
Depth Btm: 16250'  
Cement: 225 sks - Lite Class C (60:40:0) + Additives  
Cement Top: 12138' - (Volumetric)

### Intermediate #4 - (Open Hole)

Hole Size: 6.5"  
Depth: 18513'  
Inj. Interval: 16250' - 18513' (Open-Hole Completion)

### Tubing - (Tapered)

Tubing Depth: 16205'  
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)  
X/O Depth: 12138'  
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)  
Packer Depth: 16215'  
Packer: 5.5" - Perma-Pak or Equivalent (Inconel)



Plugging Risk Assessment

## 7" UFJ Tubing Inside of 9 5/8" 40# Casing

### Bowen Series 150 Releasing and Circulation Overshots

Maximum Catch Size 6 5/8" to 7 1/4" Inclusive

| Maximum Catch Size (Spiral) |          | 5 1/2" | 6 1/4" | 7"     | 7 1/2" |
|-----------------------------|----------|--------|--------|--------|--------|
| Maximum Catch Size (Basket) |          | 5 1/2" | 6 1/4" | 6 5/8" | 6 5/8" |
| Overshot O.D.               |          | 8 1/4" | 7 1/2" | 8 1/2" | 8 1/2" |
| Type                        |          | F.S.   | S.H.   | S.H.   | S.H.   |
| Complete Assembly           | Part No. | C-3032 | C-5222 | Q217   | C-5354 |
| (Dressed Spiral Parts)      | Weight   | 280    | 243    | 251    | 260    |

### Replacement Parts

|                        |          |        |        |      |        |
|------------------------|----------|--------|--------|------|--------|
| Top Sub                | Part No. | A-3033 | A-5223 | Q218 | A-5355 |
| Bowl                   | Part No. | B-3034 | B-5224 | Q210 | B-5356 |
| Packer                 | Part No. | A-1814 | B-5225 | Q224 | B-5357 |
| Spiral Grapple         | Part No. | N-84   | B-5227 | Q222 | B-5359 |
| Spiral Grapple Control | Part No. | M-80   | A-5228 | Q223 | B-5360 |
| Standard Guide         | Part No. | A-1818 | A-5229 | Q226 | A-5361 |

### Basket Parts

|                        |          |          |          |        |          |
|------------------------|----------|----------|----------|--------|----------|
| Basket Grapple         | Part No. | N-84     | B-5227   | Q222   | B-5359   |
| Basket Grapple Control | Part No. | M-80     | A-5228   | Q223   | B-5360   |
| Mill Control Packer    | Part No. | A-1814-R | B-5225-R | Q224-R | B-5357-R |

A 6.375" O.D. Bowen Series 150 Overshot will be used to perform this overshot operation. Details on the overshot are listed above. Casing to tubing clearance dimensions are listed below.

| 7" 26# FJ Casing Inside 9.625" 40# BTC Casing |                |              |         |       |        |                |                    |           |            |                 |                 |                 |                  |
|-----------------------------------------------|----------------|--------------|---------|-------|--------|----------------|--------------------|-----------|------------|-----------------|-----------------|-----------------|------------------|
| Clearance (in)                                | Pipe Size (in) | Weight lb/ft | Grade   | Conn. | Type   | Body O.D. (in) | Coupling O.D. (in) | I.D. (in) | Drift (in) | Lined Wt. lb/ft | Lined I.D. (in) | Flare I.D. (in) | Lined Drift (in) |
| 0.840                                         | 9 5/8          | 40.0         | L-80    | BTC   | Casing | 9.625          | 10.625             | 8.835     | 8.679      | -               | -               | -               | -                |
|                                               | 7              | 26.0         | HCP-110 | FJ    | Casing | 7.000          | 7.000              | 6.276     | 6.151      | 28.500          | 6.080           | 5.940           | 5.815            |

\*Red Indicates Tubing

# **Fishing Procedure**

## **Overshot Fishing Procedure**

### **In the Event of a Connection Break**

#### **- If fishing neck is clean**

1. Trip in hole with overshot and engage fish.
2. Pick up 2 points over neutral weight.
3. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
4. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

#### **- If dressing fishing neck is required**

1. Trip in hole with mill and dress fishing neck to allow for overshot to engage tubing.
2. Trip out of hole with mill.
3. Trip in hole with overshot and engage fish.
4. Pick up 2 points over neutral weight.
5. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
6. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

### **In the Event of a Body Break**

#### **- If fishing neck is clean**

1. Trip in hole with overshot and engage fish.
2. Pick up 2 points over neutral weight.
3. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
4. Once released from packer, trip out of hole with fish.

#### **- If dressing fishing neck is required**

1. Trip in hole with mill and dress fishing neck to allow for overshot to engage tubing.
2. Trip out of hole with mill.
3. Trip in hole with overshot and engage fish.
4. Pick up 2 points over neutral weight.



5. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
6. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

### **Spear Fishing Procedure**

**If an overshot cannot be used to retrieve the fish, a spear may be used.**

- Due to the use of insert lined tubing, the composite liner must be removed from the tubing before engaging the fish with a spear.
1. Trip in hole with spear sized to engage the I.D. of the insert liner.
  2. Engage the insert liner inside the tubing with spear.
  3. Pull the insert liner out of the tubing.
  4. Trip out of hole with insert liner.
  5. Trip in hole with spear sized to engage the I.D. of the tubing.
  6. Engage the tubing with spear.
  7. Pick up 2 points over neutral weight.
  8. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
  9. Once released from packer, trip out of hole with fish.

### **Inside Diameter Cutting Tool Fishing Procedure**

**If an overshot is required but a mill cannot be used to dress off a fishing neck, an inside diameter cutting tool may be used.**

- Due to the use of insert lined tubing, the composite liner must be removed from the tubing before engaging the fish with a spear.
1. Trip in hole with spear sized to engage the I.D. of the insert liner.
  2. Engage the insert liner inside the tubing with spear.
  3. Pull the insert liner out of the tubing.
  4. Trip out of hole with insert liner.
  5. Trip in hole with inside diameter cutting tool and cut the tubing below the damaged fishing neck.
  6. Trip out hole with cutting tool.
  7. Trip in hole with spear sized to engage the I.D. of the tubing.
  8. Engage the previously cut tubing segment with spear.
  9. Trip out hole with cut tubing segment and spear.
  10. Trip in hole with overshot and engage fish.
  11. Pick up 2 points over neutral weight.
  12. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
  13. Once released from packer, trip out of hole with fish.

## 5 1/2" UFJ Tubing Inside of 7 5/8" 39# Casing

### Series 150 Overshots

Tools are listed in order of maximum catch size.

The following table shows only a partial listing of available NOV Dowhole Bowen® overshots.

NOTE: Nitralloy Grapples are available upon request.

#### Bowen Series 150 Releasing and Circulation Overshots

Maximum Catch Size 4 1/4" to 5 1/2" Inclusive

| Maximum Catch Size (Spiral) |          | 4 1/4" | 4 1/2" | 4 3/4"   | 5"     | 5 1/4"   | 5 1/2" |
|-----------------------------|----------|--------|--------|----------|--------|----------|--------|
| Maximum Catch Size (Basket) |          | 3 1/4" | 4"     | 4 1/4"   | 4 1/2" | 4 3/4"   | 5"     |
| Overshot O.D.               |          | 5 1/4" | 5 1/2" | 5 3/4"   | 6"     | 6 1/4"   | 6 1/2" |
| Type                        |          | F.S.   | S.H.   | S.H.     | S.F.S. | S.H.     | F.S.   |
| Complete Assembly           | Part No. | 5800   | 5808   | C-5108   | 8875   | C-5171   | C-4825 |
| (Dressed Spiral Parts)      | Weight   | 130    | 130    | 133      | 138    | 140      | 185    |
| <b>Replacement Parts</b>    |          |        |        |          |        |          |        |
| Top Sub                     | Part No. | 5807   | 5809   | A-5109   | 8878   | A-5172   | B-4828 |
| Bowl                        | Part No. | 5808   | 5700   | B-5170   | 8877   | B-5173   | B-4827 |
| Packer                      | Part No. | 100    | 1140   | B-2100   | 6114   | L-5050   | L-4505 |
| Spiral Grapple              | Part No. | 185    | 1135   | B-2201   | 6112   | B-4300   | M-1071 |
| Spiral Grapple Control      | Part No. | 186    | 1137   | B-2202   | 6113   | B-4370   | M-1072 |
| Standard Guide              | Part No. | 187    | 1143   | B-2203   | 6121   | B-4371   | L-1074 |
| <b>Basket Parts</b>         |          |        |        |          |        |          |        |
| Basket Grapple              | Part No. | 185    | 1135   | B-2201   | 6112   | B-4300   | M-1071 |
| Basket Grapple Control      | Part No. | 186    | 1137   | B-2202   | 6113   | B-4370   | M-1072 |
| Mill Control Packer         | Part No. | 100-R  | 1140-R | B-2100-R | 6114-R | L-5050-R | M-4505 |

A (6.625" turned down to 6.500" O.D.) Bowen Series 150 Overshot will be used to perform this overshot operation. Details on the overshot are listed above. Casing to tubing clearance dimensions are listed below.

| 5.5" 17# FJ Casing Inside 7.625" 39# FJ Casing |                |              |        |       |        |                |                    |           |            |                 |                 |                 |                  |
|------------------------------------------------|----------------|--------------|--------|-------|--------|----------------|--------------------|-----------|------------|-----------------|-----------------|-----------------|------------------|
| Clearance (in)                                 | Pipe Size (in) | Weight lb/ft | Grade  | Conn. | Type   | Body O.D. (in) | Coupling O.D. (in) | I.D. (in) | Drift (in) | Lined Wt. lb/ft | Lined I.D. (in) | Flare I.D. (in) | Lined Drift (in) |
| 0.500                                          | 7 5/8          | 39.0         | HCL-80 | FJ    | Casing | 7.625          | 7.625              | 6.625     | 6.500      | -               | -               | -               | -                |
|                                                | 5 1/2          | 17.0         | HCL-80 | FJ    | Casing | 5.500          | 5.500              | 4.892     | 4.767      | 18.500          | 4.520           | 4.400           | 4.275            |

\*Red Indicates Tubing

# **Fishing Procedure**

## **Overshot Fishing Procedure**

### **In the Event of a Connection Break**

#### **- If fishing neck is clean**

1. Trip in hole with overshot and engage fish.
2. Pick up 2 points over neutral weight.
3. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
4. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

#### **- If dressing fishing neck is required**

1. Trip in hole with mill and dress fishing neck to allow for overshot to engage tubing.
2. Trip out of hole with mill.
3. Trip in hole with overshot and engage fish.
4. Pick up 2 points over neutral weight.
5. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
6. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

### **In the Event of a Body Break**

#### **- If fishing neck is clean**

1. Trip in hole with overshot and engage fish.
2. Pick up 2 points over neutral weight.
3. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
4. Once released from packer, trip out of hole with fish.

#### **- If dressing fishing neck is required**

1. Trip in hole with mill and dress fishing neck to allow for overshot to engage tubing.
2. Trip out of hole with mill.
3. Trip in hole with overshot and engage fish.
4. Pick up 2 points over neutral weight.



5. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
6. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

### **Spear Fishing Procedure**

**If an overshot cannot be used to retrieve the fish, a spear may be used.**

- Due to the use of insert lined tubing, the composite liner must be removed from the tubing before engaging the fish with a spear.
1. Trip in hole with spear sized to engage the I.D. of the insert liner.
  2. Engage the insert liner inside the tubing with spear.
  3. Pull the insert liner out of the tubing.
  4. Trip out of hole with insert liner.
  5. Trip in hole with spear sized to engage the I.D. of the tubing.
  6. Engage the tubing with spear.
  7. Pick up 2 points over neutral weight.
  8. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
  9. Once released from packer, trip out of hole with fish.

### **Inside Diameter Cutting Tool Fishing Procedure**

**If an overshot is required but a mill cannot be used to dress off a fishing neck, an inside diameter cutting tool may be used.**

- Due to the use of insert lined tubing, the composite liner must be removed from the tubing before engaging the fish with a spear.
1. Trip in hole with spear sized to engage the I.D. of the insert liner.
  2. Engage the insert liner inside the tubing with spear.
  3. Pull the insert liner out of the tubing.
  4. Trip out of hole with insert liner.
  5. Trip in hole with inside diameter cutting tool and cut the tubing below the damaged fishing neck.
  6. Trip out hole with cutting tool.
  7. Trip in hole with spear sized to engage the I.D. of the tubing.
  8. Engage the previously cut tubing segment with spear.
  9. Trip out hole with cut tubing segment and spear.
  10. Trip in hole with overshot and engage fish.
  11. Pick up 2 points over neutral weight.
  12. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
  13. Once released from packer, trip out of hole with fish.

## **Abandonment Procedure**

**If the tubing cannot be recovered and the well is to be abandoned.**

- The operator will ensure that all geologic formations are properly isolated.
- 1. Confirm the I.D. of the injection tubing is free from obstructions.
- 2. Run in hole with wireline set profile plug.
- 3. Set plug inside of packer assembly.  
(Plug will allow cement to fill the I.D. of the injection tubing and the tubing to casing annulus)
- 4. Run in hole with wireline conveyed perforating guns and perforate the tubing immediately above the packer.
- 5. Trip in hole with an overshot, spear, cement retainer or isolation tool that will provide a work string-to- injection tubing seal.
- 6. Engage the fish with sealing tool.
- 7. Confirm circulation down the tubing and up the tubing-to-casing annulus.
- 8. Cement the work string, injection tubing, injection tubing-to-casing annulus and work string-to-casing annulus to surface.
- 9. Confirm the entirety of the wellbore is cemented to surface and all zones are isolated.
- 10. ND wellhead and install permanent capping flange.



**PERMIAN OILFIELD  
PARTNERS**

**Attachment to C-108  
Permian Oilfield Partners, LLC  
Deep Thirst Federal SWD #1  
Sec. 24, Twp. 24S, Rge. 33E  
1044' FNL, 717' FWL  
Lea County, NM**

March 8, 2019

#### **STATEMENT REGARDING SEISMICITY**

Examination of the USGS and TexNet seismic activity databases has shown minimal historic seismic activity in the area of our proposed above referenced SWD well as follows:

1. M2.9, 1984-12-09, 4.3 miles away @ 341 deg heading
2. M3.3, 2001-06-02, 24.5 miles away @ 69 deg heading
3. M4.6, 1992-01-02, 26.7 miles away @ 70 deg heading
4. M2.6, 2017-05-03, 31.1 miles away @ 106 deg heading
5. M3.1, 2012-03-18, 21.9 miles away @ 284 deg heading

Permian Oilfield Partners does not own any 2D or 3D seismic data in the area of this proposed SWD well. Our fault interpretations are based on well to well correlations and publically available data and software as follows:

1. USGS Quaternary Fault & Fold database shows no quaternary faults in the nearby area.
2. Based on offset well log data, we have not interpreted any faults in the immediate area.
3. A basement PreCambrian fault is documented in the Snee & Zoback paper, "State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity", published in the February 2018 issue of the SEG journal, The Leading Edge, along with a method for determining the probability of fault slip in the area.

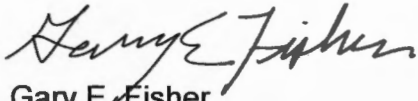


4. Even though we do not propose to inject into the PreCambrian, Permian Oilfield Partners ran modeling to check for fault slip assuming the improbable occurrence of a total downhole well failure that would allow 100% of injected fluids to enter the PreCambrian. Software as discussed in #3 from the Stanford Center for Induced and Triggered Seismicity, "FSP 1.0: A program for probabilistic estimation of fault slip potential resulting from fluid injection", was used to calculate the probability of the PreCambrian fault being stressed so as to create an induced seismic event, with the following assumptions:
  - a. Full proposed capacity of 66,500 BBL/day for 30 years
  - b. 12.5 mD average permeability, 3% average porosity, .75 psi/ft frac gradient, .45 psi/ft hydrostatic gradient
  - c. A-phi=0.60 & Max Horizontal Stress direction 75 deg NW, as per Snee, Zoback paper noted above.
5. The probability of an induced seismic event in the PreCambrian is calculated to be 0% after 30 years at the midpoint of the fault as per the FSP results screenshot below, with a calculated 120 psi pressure change at that point, although the portion of the fault closest to the proposed well could potentially see approximately 300 psi over a short length. However, due to the direction of the fault vs. the direction of maximum horizontal stress, the localized probability of an induced seismic event still remains less than 10%:



6. The above analysis assumes an improbable catastrophic well failure through the Montoya and Simpson into the PreCambrian. When the injected fluids stay in the Devonian-Silurian zone as per design, there will be very low probability of fault slip, since there are no nearby known faults within the Devonian-Silurian.

As per NM OCD requirements (injection well to injection well spacing minimum of 1.5 miles), this proposed above referenced SWD well is located in approximately 2.1 miles away from the nearest active, permitted or pending disposal well.

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

Gary E. Fisher

[gfisher@permianoilfieldpartners.com](mailto:gfisher@permianoilfieldpartners.com)

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