

Initial Application Part I

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

RECEIVED: <u>4/30/19</u>	REVIEWER:	TYPE: <u>SWD</u>	APP NO: <u>PLEL 1912862262</u>
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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



2105

ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: Permian Oilfield Partners, LLC.**OGRID Number:** 328259**Well Name:** Deep Thirst Federal SWD #2**API:** 30-025-Pending**Pool:** SWD; Devonian-Silurian**Pool Code:** 97869

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 holdersB. ☐ Royalty, overriding royalty owners, revenue ownersC. ☒ Application requires published noticeD. ☐ Notification and/or concurrent approval by SLOE. ☒ Notification and/or concurrent approval by BLMF. ☒ Surface ownerG. ☒ For all of the above, proof of notification or publication is attached, and/or,H. ☐ No notice required**FOR OCD ONLY**☐

Notice Complete

☐Application
Content
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.

Sean Puryear

Print or Type Name

Signature

04/27/2019

Date

(817) 600-8772

Phone Number

spuryear@popmidstream.com

e-mail Address



Mr. Phillip Goetze
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: C-108 Application for SWD Well
Permian Oilfield Partners, LLC
Deep Thirst Federal SWD #2
Sec. 6, Twp. 26S, Rge. 33E
1326' FSL, 250' FWL
Lea County, NM

Mr. Goetze,

Attached is a C-108 Application for administrative approval of Permian Oilfield Partners LLC's proposed Deep Thirst Federal SWD #2 located in Sec 6, Twp 26S, Rge 33E, Lea County, New Mexico. This well will be completed open hole in the Devonian-Silurian formation and will be operated as a commercial salt water disposal well.

Similar application exhibits were sent to offset operators, mineral owners, lessees and the surface owner. The distribution list and proof of mailing, as well as affidavit of publication are enclosed. A copy of this application has also been sent to NM OCD District 1 in Hobbs.

If you have any questions, please contact us at (817)606-7630.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sean Puryear", is written over a light blue rectangular background.

Sean Puryear
Permian Oilfield Partners, LLC
spuryear@popmidstream.com

Date:

04/27/2019

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: Sean Puryear **PHONE: (817) 600-8772**
- 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: **Sean Puryear** TITLE: **Manager**
SIGNATURE:  DATE: **4/26/2019**
E-MAIL ADDRESS: **spuryear@popmidstream.com**
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted.

III. WELL DATA

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

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

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

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 15,357'

Underlying Potentially Productive Zones:

None

WELL CONSTRUCTION DATA

Permian Oilfield Partners, LLC.
Deep Thirst Federal SWD #2
1326' FSL, 250' FWL
Sec. 6, T26S, R33E, Lea Co. NM
Lat 32.0689368° N, Lon 103.6190327° W
GL 3313', RKB 3343'

Surface - (Conventional)

Hole Size: 26" Casing: 20" - 94# H-40 STC Casing
Depth Top: Surface
Depth Btm: 928'
Cement: 597 sks - Class C + Additives
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)

Hole Size: 17.5" Casing: 13.375" - 54.5# J-55 & 61# J-55 STC Casing
Depth Top: Surface
Depth Btm: 4994'
Cement: 1633 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: 12288' ECP/DV Tool: 5094'
Cement: 2115 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: 12088'
Depth Btm: 17548'
Cement: 260 sks - Lite Class C (60:40:0) + Additives
Cement Top: 12088' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5" Depth: 18966'
Inj. Interval: 17548' - 18966' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 17503' Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80
X/O Depth: 12088' FJ Casing (Fiberglass Lined)
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 17513' Packer: 5.5" - Perma-Pak or Equivalent (Inconel)

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Deep Thirst Federal SWD #2
1326' FSL, 250' FWL
Sec. 6, T26S, R33E, Lea Co. NM
Lat 32.0689368° N, Lon 103.6190327° W
GL 3313', RKB 3343'

Surface - (Conventional)

Hole Size: 26"
Casing: 20" - 94# H-40 STC Casing
Depth Top: Surface
Depth Btm: 928'
Cement: 597 sks - Class C + Additives
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)

Hole Size: 17.5"
Casing: 13.375" - 54.5# J-55 & 61# J-55 STC Casing
Depth Top: Surface
Depth Btm: 4994'
Cement: 1633 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: 12288'
Cement: 2115 sks - Lite Class C (60:40:0) + Additives
Cement Top: Surface - (Circulate)
ECP/DV Tool: 5094'

Intermediate #3 - (Liner)

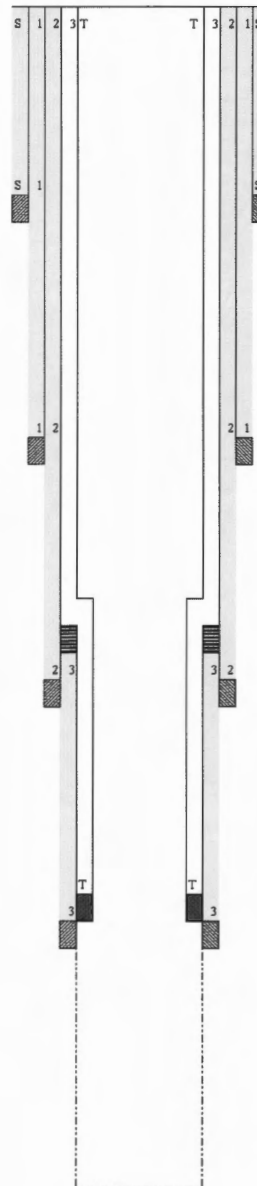
Hole Size: 8.5"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 12088'
Depth Btm: 17548'
Cement: 260 sks - Lite Class C (60:40:0) + Additives
Cement Top: 12088' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5"
Depth: 18966'
Inj. Interval: 17548' - 18966' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 17503'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 12088'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 17513'
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 40,000 BWPd
The maximum injected volume anticipated is 50,000 BWPd
2. Injection will be through a closed system
3. The average injection pressure anticipated is 2,000 psi
The proposed maximum injection pressure is 3,510 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 FEDERAL COM #001H	SALADO DRAW 6 FEDERAL #001H	RATTLESNAKE 13 12 FEDERAL COM #001H	SNAPPING 2 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 the Devonian-Silurian formations. This sequence is bounded above by the Upper Devonian Woodford shale. Underlying the Woodford is the first injection formation, the Devonian, consisting of dolomitic carbonates & chert, followed by the Upper Silurian dolomites, and the Lower Silurian Fusselman dolomite. The lower bound of the injection interval is the limestone of the Upper Ordovician Montoya. 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.

Injection zone porosities are expected to range from 0% to a high of 8%, with the higher ranges being secondary porosity in the form of vugs & fractures due to weathering effects, with occasional interbedded shaly intervals. Permeabilities in the 2-3% porosity grainstone intervals are estimated to be in the 10-15 mD range, with the higher porosity intervals conservatively estimated to be in the 40-50 mD range. It is these intervals of high secondary porosity and associated high permeability that are expected to take the majority of the injected water.

The Devonian-Silurian sequence is well suited for SWD purposes, with a low permeability shale barrier overlying the injection interval to prevent upward fluid migrations to USDW's, sufficient permeabilities and porosities in zone, and multiple formations available over a large depth range. This large injection depth range means there is a large injection surface area available, allowing for low injection pressures at high injection rates.

Permian Oilfield Partners, LLC.
 Deep Thirst Federal SWD #2
 1326' FSL, 250' FWL
 Sec. 6, T26S, R33E, Lea Co. NM
 Lat 32.0689368° N, Lon 103.6190327° W
 GL 3313', RKB 3343'

GEOLOGY PROGNOSIS			
FORMATION	TOP KB TVD (ft)	BOTTOM KB TVD (ft)	THICKNESS (ft)
Salt	1,243	4,693	3,450
Delaware	4,969	8,978	4,009
Bone Spring	8,978	12,238	3,260
Wolfcamp	12,238	13,256	1,018
Lwr. Mississippian	16,905	17,315	410
Woodford	17,315	17,513	198
Devonian	17,513	18,440	927
Fusselman (Silurian)	18,440	18,991	551
Montoya (U. Ordovician)	18,991	19,748	757
Simpson (M. Ordovician)	19,748	20,278	530

2. According to the New Mexico Office of the State Engineer, there are NO fresh water wells within the proposed well's one-mile area of review. Regionally, shallow fresh water is known to exist at depths less than 750'. 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 NO fresh water wells within the proposed well's one-mile area of review. No samples were obtained.
- 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, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-	² Pool Code 97869	³ Pool Name SWD; DEVONIAN-SILURIAN
⁴ Property Code	⁵ Property Name DEEP THIRST FEDERAL SWD	⁶ Well Number 2
⁷ OGRID NO. 328259	⁸ Operator Name PERMIAN OILFIELD PARTNERS, LLC	⁹ Elevation 3313'

¹⁰ Surface Location

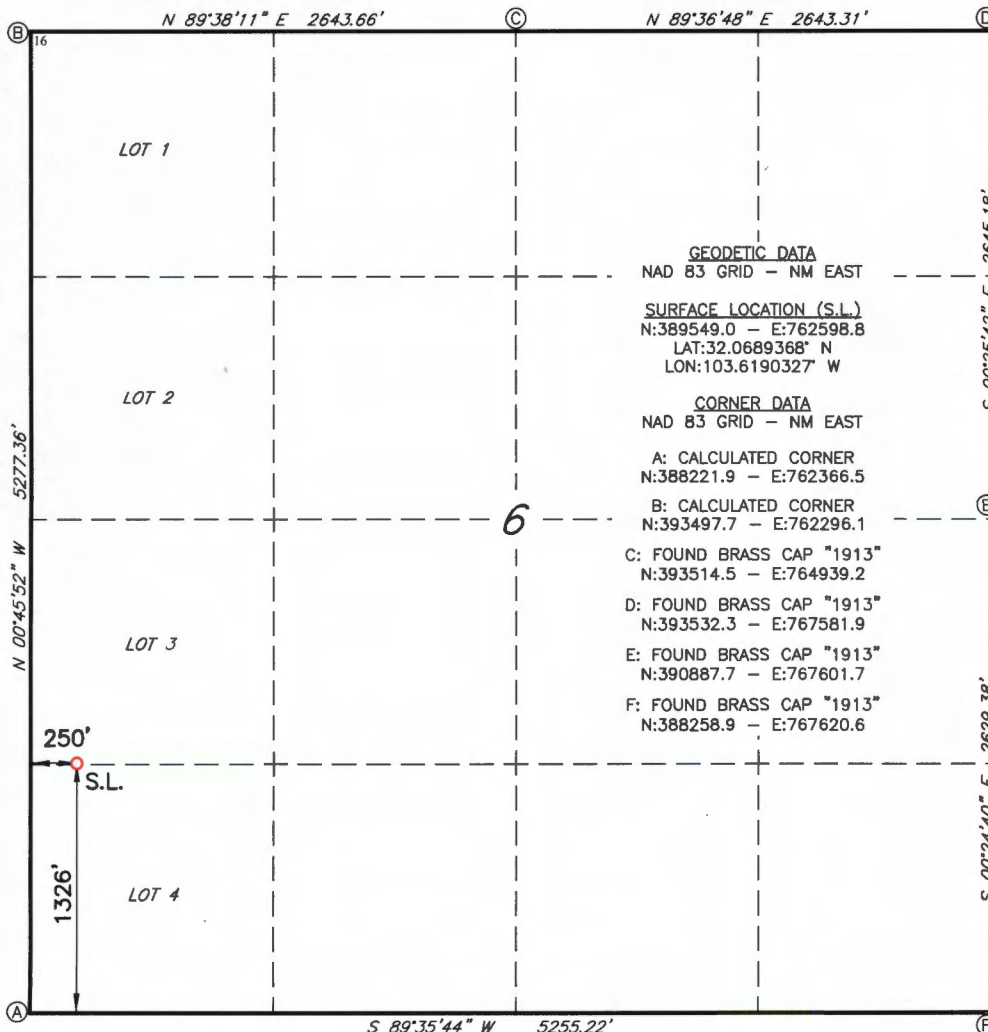
UL or lot no. 3	Section 6	Township 26S	Range 33E	Lot Idn	Feet from the 1326	North/South line SOUTH	Feet From the 250	East/West line WEST	County LEA
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.



¹⁷ OPERATOR CERTIFICATION

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

Gary E Fisher 4-17-2019
Signature Date
Gary E Fisher
Printed Name

gfisher@popmidstream.com
E-mail Address

¹⁸ 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.

3-30-19

Date of Survey

Signature and Seal of Professional Surveyor

10034

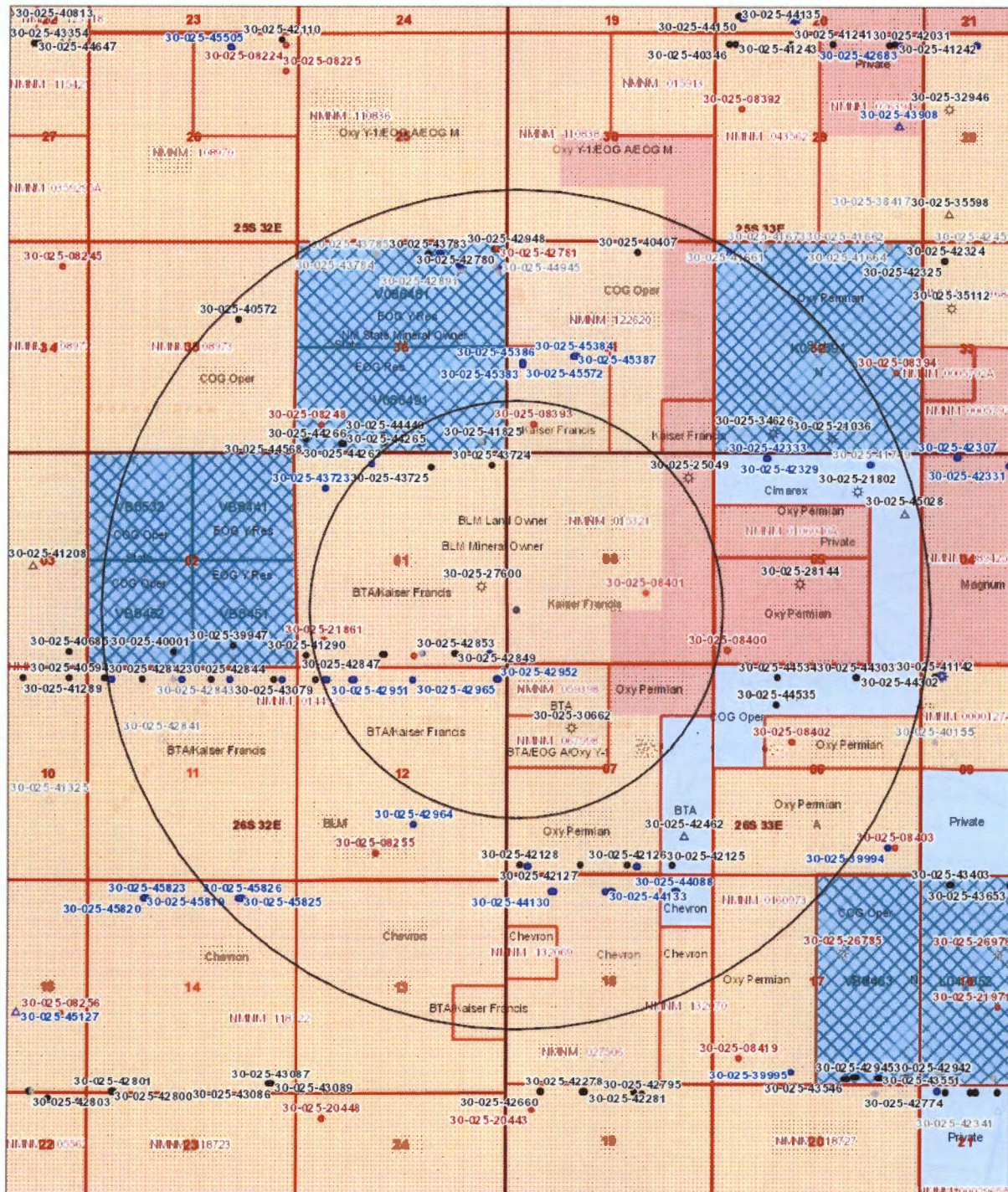
Certificate Number

REVISED: 4/16/2019 RESTAKE

Job No.: LS19030275R



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



4/21/2019, 3:31:46 PM

Override 1

Well Locations - Small Scale

- Active
- New
- Plugged
- Cancelled
- Temporarily Abandoned

Well Locations - Large Scale

- Miscellaneous
- CO2 Active
- CO2 Cancelled
- CO2 New
- CO2 Plugged
- CO2 Temporarily Abandoned

- 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
- PLSS First Division



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 #2 - Wells within 1 Mile Area of Review															
API Number	Current Operator	Well Name	Well Number	Well Type	Well Direction	Well Status	Section	Township	Range	OCD Unit Letter	Surface Location	Bottomhole Location	Formation	MD	TVD
30-025-08393	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	31	T265	R32E	M	M-31-255-32E Lot 4	660 FSL 660 FWL	DELAWARE	5036	5036
30-025-08401	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	06	T265	R32E	J	J-06-265-32E 1750 FSL 1750 FWL	660 FSL 660 FWL	DELAWARE	5010	5010
30-025-12766	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	01	T265	R32E	O	O-01-265-32E 250 FSL 2390 FWL	230 FSL 2390 FWL	N/A	2027	2027
30-025-21861	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	01	T265	R32E	M	M-01-265-32E 660 FSL 660 FWL	660 FSL 660 FWL	DELAWARE	4900	4900
30-025-27600	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#001	Gas	Vertical	Active	01	T265	R32E	I	I-01-265-32E 1980 FSL 660 FWL	660 FSL 660 FWL	MORROW	16100	16100
30-025-30662	BTA OIL PRODUCERS, LLC	MESA B 8115 IV-P	#001	Gas	Vertical	Active	07	T265	R32E	F	F-07-265-32E 1650 FSL 1650 FWL	1650 FSL 1650 FWL	WOLF CAMP	13900	13900
30-025-41825	EOG RESOURCES INC	GEM 36 STATE COM	#001H	Oil	Horizontal	Active	36	T255	R32E	P	P-36-255-32E 220 FSL 632 FWL	230 FSL 380 FWL	BONE SPRING	14006	9176
30-025-41826	EOG RESOURCES INC	GEM 36 STATE COM	#002C	Oil	Horizontal	Cancelled Apd	36	T255	R32E	P	P-36-255-32E 221 FSL 662 FWL	231 FSL 880 FWL	BONE SPRING	13881	9230
30-025-42847	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#011H	Oil	Horizontal	Active	01	T265	R32E	N	N-01-265-32E 310 FSL 2178 FWL	2200 FSL 2200 FWL	BONE SPRING	19452	9824
30-025-42848	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#012C	Oil	Horizontal	Cancelled Apd	01	T265	R32E	O	O-01-265-32E 311 FSL 1334 FWL	2218 FSL 2218 FSL	BONE SPRING	14735	9520
30-025-42849	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#013H	Oil	Horizontal	Active	01	T265	R32E	O	O-01-265-32E 310 FSL 1334 FWL	2231 FSL 2231 FSL	BONE SPRING	14965	9852
30-025-42850	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#014H	Oil	Horizontal	New	01	T265	R32E	P	P-01-265-32E 310 FSL 450 FSL	230 FSL 450 FSL	BONE SPRING	14729	9520
30-025-42851	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#016H	Oil	Horizontal	Active	01	T265	R32E	N	N-01-265-32E 310 FSL 2218 FWL	2178 FSL 2178 FSL	BONE SPRING	14848	9747
30-025-42852	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#017H	Oil	Horizontal	New	01	T265	R32E	O	O-01-265-32E 310 FSL 1294 FSL	2178 FSL 2178 FSL	BONE SPRING	14139	9520
30-025-42853	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#018H	Oil	Horizontal	Active	01	T265	R32E	P	P-01-265-32E 310 FSL 1294 FSL	222 FSL 1299 FSL	BONE SPRING	14645	9788
30-025-42854	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#019H	Oil	Horizontal	New	01	T265	R32E	P	P-01-265-32E 310 FSL 410 FSL	230 FSL 410 FSL	BONE SPRING	14143	9520
30-025-42951	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#024H	Oil	Horizontal	New	12	T265	R32E	B	B-12-265-32E 330 FSL 2390 FSL	230 FSL 2390 FSL	BONE SPRING	16211	11635
30-025-42952	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#025H	Oil	Horizontal	New	12	T265	R32E	A	A-12-265-32E 330 FSL 250 FSL	230 FSL 450 FSL	BONE SPRING	16515	11635
30-025-42960	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#020H	Oil	Horizontal	New	12	T265	R32E	C	C-12-265-32E 330 FSL 1400 FSL	230 FSL 1294 FSL	BONE SPRING	14103	9520
30-025-42961	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#015H	Oil	Horizontal	New	12	T265	R32E	C	C-12-265-32E 330 FSL 1440 FSL	230 FSL 1334 FSL	BONE SPRING	14775	9520
30-025-42962	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#023H	Oil	Horizontal	New	12	T265	R32E	D	D-12-265-32E 330 FSL 710 FSL	230 FSL 950 FSL	BONE SPRING	16222	11635
30-025-42963	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#026H	Oil	Horizontal	New	12	T265	R32E	D	D-12-265-32E 330 FSL 990 FSL	230 FSL 990 FSL	BONE SPRING	16887	11635
30-025-42965	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#028H	Oil	Horizontal	New	12	T265	R32E	A	A-12-265-32E 330 FSL 210 FSL	230 FSL 410 FSL	BONE SPRING	16752	11635
30-025-43724	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#030H	Oil	Horizontal	Active	01	T265	R32E	A	A-01-265-32E 330 FSL 380 FSL	231 FSL 347 FSL	BONE SPRING	20030	9912
30-025-43725	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#031H	Oil	Horizontal	Active	01	T265	R32E	B	B-01-265-32E 383 FSL 1897 FSL	217 FSL 2314 FSL	BONE SPRING	20008	9851
30-025-43726	BTA OIL PRODUCERS, LLC	MESA B105 IV P	#032H	Oil	Horizontal	Active	01	T265	R32E	C	C-01-265-32E 285 FSL 1980 FSL	200 FSL 1980 FSL	BONE SPRING	19492	9520
30-025-43786	EOG RESOURCES INC	GEM 36 STATE COM	#002H	Oil	Horizontal	New	36	T255	R32E	O	O-36-255-32E 220 FSL 2140 FSL	230 FSL 1380 FSL	BONE SPRING	14147	9294
30-025-43787	EOG RESOURCES INC	GEM 36 STATE COM	#003H	Oil	Horizontal	New	36	T255	R32E	O	O-36-255-32E 220 FSL 2175 FSL	230 FSL 2040 FSL	BONE SPRING	14085	9291



Statement of Notifications

Re: C-108 Application for SWD Well
 Permian Oilfield Partners, LLC
 Deep Thirst Federal SWD #2
 Sec. 6, Twp. 26S, Rge. 33E
 1326' FSL, 250' FWL
 Lea County, NM

Permian Oilfield Partners, LLC has mailed notifications to affected persons as per the following list:

Deep Thirst Federal SWD #2 - Affected Persons within 1 Mile Area of Review						
Notified Name	Notified Address	Notified City, State, ZIP Code	Shipper	Tracking No.	Mailing Date	
BTA Oil Producers, LLC	104 S Pecos	Midland, TX 79701	USPS	9414811899561828954284	4/27/2019	
EOG Resources Inc	P.O. Box 2267	Midland, TX 79702	USPS	9414811899561828954871	4/27/2019	
Bureau Of Land Management	620 E Greene St	Carlsbad, NM 88220	USPS	9414811899567828954239	4/27/2019	
New Mexico State Land Office	2827 N Dal Paso St Suite 117	Hobbs, NM 88240	USPS	9414811899561828954796	4/27/2019	
New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe, NM 87501	USPS	9414811899561828954727	4/27/2019	
Kaiser-Francis Oil Co	P.O. Box 21468	Tulsa, OK 74121	USPS	9414811899561828954758	4/27/2019	
Occidental Permian LP	5 Greenway Plaza Suite 110	Houston, TX 77046-0521	USPS	9414811899561828954789	4/27/2019	
COG Operating LLC	600 West Illinois Avenue	Midland, TX 79701	USPS	9414811899561828954819	4/27/2019	
Concho Oil & Gas LLC	550 West Texas Avenue Suite 100	Midland, TX 79701	USPS	9414811899561828954802	4/27/2019	
Cimarex Energy Co	600 N. Marienfeld Street Suite 600	Midland, TX 79701	USPS	9414811899561828954277	4/27/2019	
EOG A Resources Inc	105 South 4th Street	Artesia, NM 88210-2123	USPS	9414811899561828954888	4/27/2019	
Oxy Y-1 Company	5 Greenway Plaza	Houston, TX 77046	USPS	9414811899561828954734	4/27/2019	
Concho Resources, Inc	600 W. Illinois Ave.	Midland, TX 79701	USPS	9414811899561828954840	4/27/2019	

Sean Puryear
 Permian Oilfield Partners, LLC
spuryear@popmidstream.com

Date: 4-27-2019

U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1828 9542 94

ARTICLE ADDRESSED TO:

BTA Oil Producers, LLC
104 S. Pecos St
Midland TX 79701-5021

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

Postmark
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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1828 9548 71

ARTICLE ADDRESSED TO:

EOG Resources, Inc.
PO Box 2267
Midland TX 79702-2267

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

Postmark
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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1828 9542 39

ARTICLE ADDRESSED TO:

Bureau of Land Management
620 E Greene St
Carlsbad NM 88220-6292

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

Postmark
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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1828 9547 96

ARTICLE ADDRESSED TO:

New Mexico State Land Office
2827 N Dal Paso St. Suite 117
Hobbs NM 88240-2062

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

Postmark
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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1828 9547 27

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

Postmark
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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1828 9547 58

ARTICLE ADDRESSED TO:

Kaiser-Francis Oil Co.
PO Box 21468
Tulsa OK 74121-1468

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

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

ARTICLE NUMBER: 9414 8118 9956 1828 9547 89

ARTICLE ADDRESSED TO:

Occidental Permian LP
5 Greenway Plaza, Suite 110
Houston TX 77046-0521

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

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

ARTICLE NUMBER: 9414 8118 9956 1828 9548 19

ARTICLE ADDRESSED TO:

COG Operating LLC
600 W Illinois Ave
Midland TX 79701-4882

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55



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

ARTICLE NUMBER: 9414 8118 9956 1828 9548 02

ARTICLE ADDRESSED TO:

Concho Oil & Gas LLC
550 West Texas Ave. Suite 100
Midland TX 79701-4287

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

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

ARTICLE NUMBER: 9414 8118 9956 1828 9542 77

ARTICLE ADDRESSED TO:

Cimarex Energy Co.
600 N. Marienfeld St., Suite 600
Midland TX 79701-4405

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

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

ARTICLE NUMBER: 9414 8118 9956 1828 9548 88

ARTICLE ADDRESSED TO:

EOG A Resources Inc.
105 South 4th Street
Artesia NM 88210-2177

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

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

ARTICLE NUMBER: 9414 8118 9956 1828 9547 34

ARTICLE ADDRESSED TO:

Oxy Y-1 Company
5 Greenway Plaza
Houston TX 77046-0526

FEES

Postage Per Piece	\$3.05
Certified Fee	3.50
Total Postage & Fees:	6.55

Postmark
Here

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

ARTICLE NUMBER: 9414 8118 9956 1828 9548 40

ARTICLE ADDRESSED TO:

Concho Resources, Inc.
600 W. Illinois Ave.
Midland TX 79701-4882

FEES

Postage Per Piece
Certified Fee
Total Postage & Fees:

\$3.05
3.50
6.55

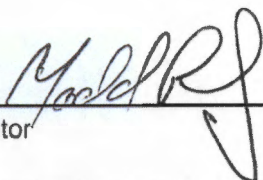


Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

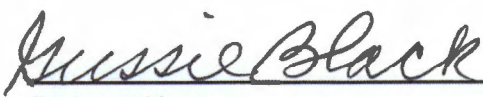
I, Todd Bailey, Editor of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
April 26, 2019
and ending with the issue dated
April 26, 2019.



Editor

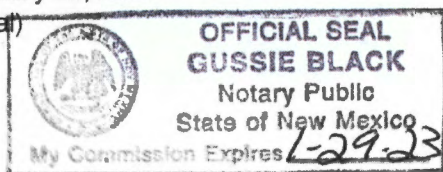
Sworn and subscribed to before me this
26th day of April 2019.



Business Manager

My commission expires
January 29, 2023

(Seal)



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
APRIL 26, 2019

Newspaper Publication
Notice

Permian Oilfield Partners, LLC, PO Box 1220, Stephenville, TX 76401, phone (817)606-7630, attention Sean Puryear, 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 #2, and is located 1326' FSL & 250' FWL, Unit Letter C, Section 6, Township 26 South, Range 33 East, NMPM. The well will dispose of water produced from nearby oil and gas wells into the Devonian formation from a depth of 17,548 feet to 18,966 feet. The maximum expected injection rate is 50,000 BWPD at a maximum surface injection pressure of 3,510 psi.

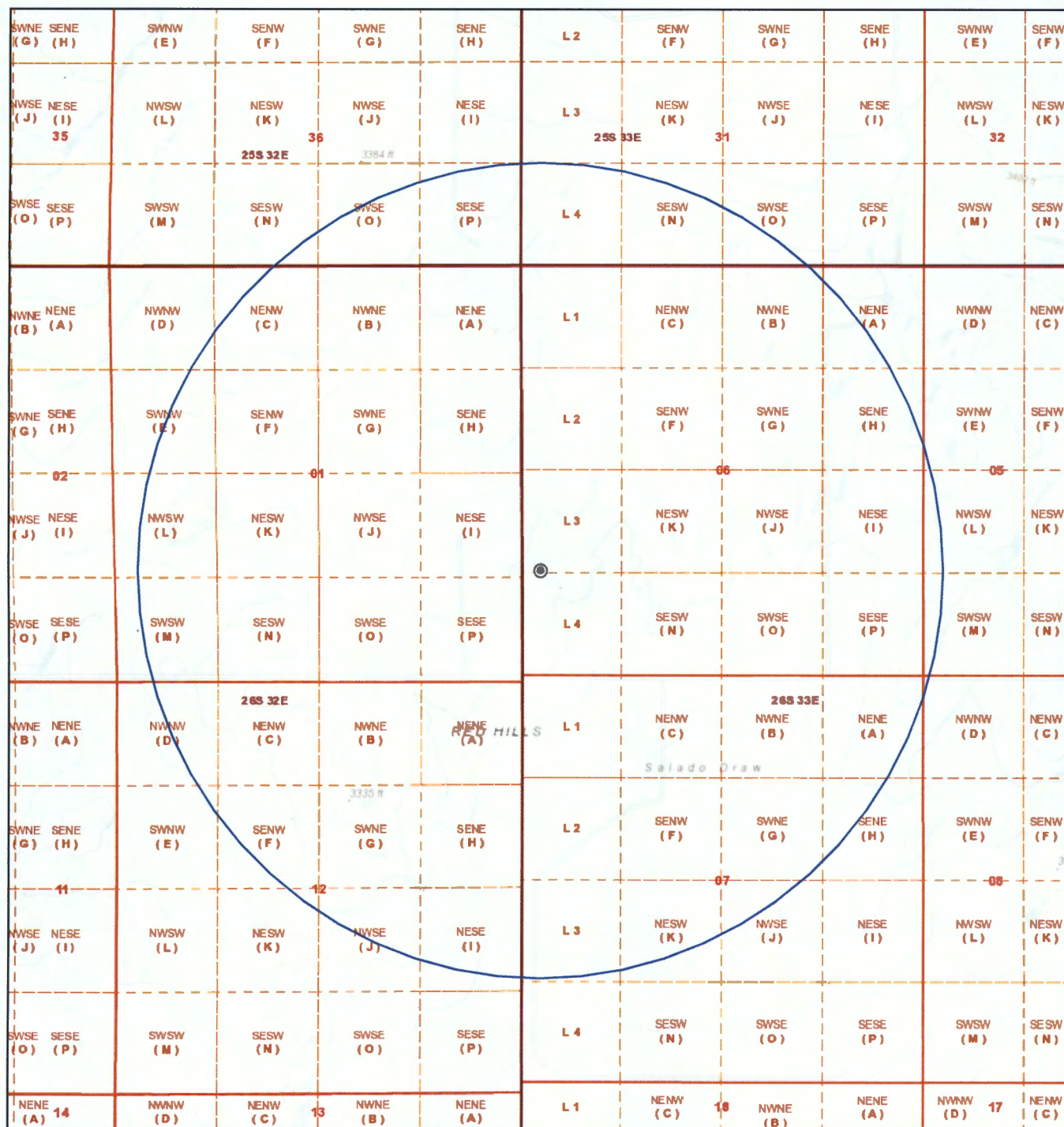
Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505 within 15 days.
#34081

67115647

00227426

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

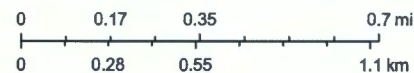
Deep Thirst Federal SWD #2 - Water Wells within 1 Mile AOR



4/17/2019, 10:51:04 AM

- Override 1
- Override 1
- PLSS First Division
- PLSS Second Division
- PLSS Townships

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 6	Q 4	Q 4	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	Water Column
C 02270		CUB	LE	1	1	2	27	26S	33E	636063	3543722	150	125	25
C 02273		CUB	LE		1	2	21	26S	33E	634549	3545134*	160	120	40
C 02285 POD1		CUB	LE	1	4	4	03	26S	33E	636613	3548855	220	220	0
C 02286		CUB	LE	3	4	4	03	26S	33E	636470	3548714	220	175	45
C 02287		C	LE	3	4	4	03	26S	33E	636427	3548708	220		
C 02288		CUB	LE	4	4	4	03	26S	33E	636646	3548758	220	180	40
C 02289		CUB	LE	4	4	4	03	26S	33E	636612	3548675*	200	160	40
C 02290		CUB	LE	4	4	4	03	26S	33E	636538	3548770	200	160	40
C 02293		CUB	LE	2	2	1	14	26S	33E	637501	3546975	200	135	65
C 02294		CUB	LE	4	4	3	11	26S	33E	637465	3547003	200	145	55
C 02295		CUB	LE	2	2	4	12	26S	33E	639850	3547710*	250	200	50
C 03577 POD1		CUB	LE	3	3	3	22	26S	33E	636010	3543771	750	110	640
C 03596 POD1		C	LE	3	3	4	22	26S	33E	636017	3543756	225		

Average Depth to Water: **157 feet**

Minimum Depth: **110 feet**

Maximum Depth: **220 feet**

Record Count: 13

PLSS Search:

Township: 26S **Range:** 33E

*UTM location was derived from PLSS - see Help

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

4/22/19 3:16 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



Item XII. Affirmative Statement

Re: C-108 Application for SWD Well
Permian Oilfield Partners, LLC
Deep Thirst Federal SWD #2
Sec. 6, Twp. 26S, Rge. 33E
1326' FSL, 250' FWL
Lea County, NM

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.

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

Gary Fisher
Manager
Permian Oilfield Partners, LLC.

Date: 4/26/2019

Plugging Risk Assessment
Permian Oilfield Partners, LLC.
Deep Thirst Federal SWD #2
SL: 1326' FSL & 250' FWL
Sec 6, T26S, R33E
Lea County, New Mexico

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Deep Thirst Federal SWD #2
1326' FSL, 250' FWL
Sec. 6, T26S, R33E, Lea Co. NM
Lat 32.0689368° N, Lon 103.6190327° W
GL 3313', RKB 3343'

Surface - (Conventional)

Hole Size: 26"
Casing: 20" - 94# H-40 STC Casing
Depth Top: Surface
Depth Btm: 928'
Cement: 597 sks - Class C + Additives
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)

Hole Size: 17.5"
Casing: 13.375" - 54.5# J-55 & 61# J-55 STC Casing
Depth Top: Surface
Depth Btm: 4994'
Cement: 1633 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: 12288'
Cement: 2115 sks - Lite Class C (60:40:0) + Additives
Cement Top: Surface - (Circulate)
ECP/DV Tool: 5094'

Intermediate #3 - (Liner)

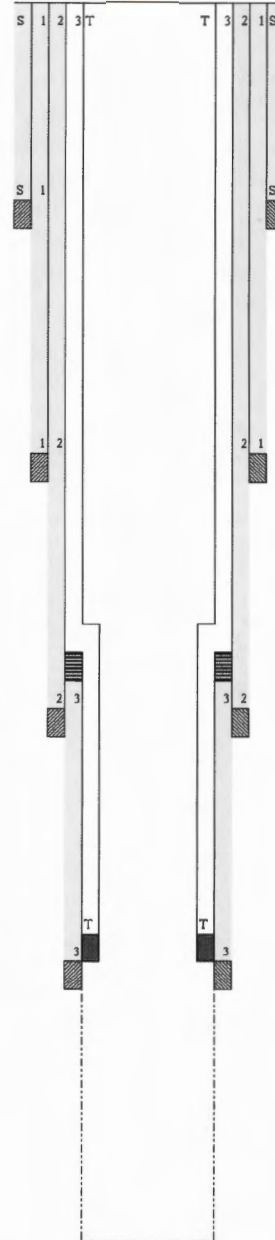
Hole Size: 8.5"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 12088'
Depth Btm: 17548'
Cement: 260 sks - Lite Class C (60:40:0) + Additives
Cement Top: 12088' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5"
Depth: 18966'
Inj. Interval: 17548' - 18966' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 17503'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 12088'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 17513'
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)		6 5/8"	6 3/4"	7"	7 1/4"
Maximum Catch Size (Basket)		5 7/8"	6 1/8"	6 5/8"	6 5/8"
Overshot O.D.		8 3/4"	7 3/4"	8 3/4"	8 3/4"
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	Q219	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-89	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-89	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"	4 7/8"	5"	5 1/4"	5 1/2"
Maximum Catch Size (Basket)		3 3/4"	4 1/4"	4 1/2"	4 3/4"	4 7/8"	5 1/4"	5 1/2"
Overhaul O.D.		5 3/4"	5 1/2"	5 1/4"	5 1/2"	5 3/4"	6 1/4"	6 1/2"
Type		F.S.	S.H.	S.H.	S.F.S.	S.H.	F.S.	S.H.
Complete Assembly	Part No.	5800	5808	C-5108	8075	C-5171	C-4825	8025
(Dressed Spiral Parts)	Weight	130	130	133	138	140	182	185

Replacement Parts

Top Sub	Part No.	5897	5899	A-5100	8076	A-5172	B-4820	8026
Bowl	Part No.	5808	5700	B-5170	8077	B-5173	B-4827	8017
Packer	Part No.	109	1140	B-2190	0114	L-5050	L-4505	8018
Spiral Grapple	Part No.	105	1135	B-2201	0112	B-4360	M-1071	8019
Spiral Grapple Control	Part No.	180	1137	B-2202	0113	B-4370	M-1072	8020
Standard Guide	Part No.	187	1143	B-2203	0121	B-4371	L-1074	8021

Basket Parts

Basket Grapple	Part No.	105	1135	B-2201	0112	B-4360	M-1071	8019
Basket Grapple Control	Part No.	180	1137	B-2202	0113	B-4370	M-1072	8020
Mill Control Packer	Part No.	109-R	1140-R	B-2190-R	0114-R	L-5050-R	M-4505	L-8018-R

A (6.625" turned down to 6.500" O.D.) Bowen Series 150 Overshot will be used to perform this overshoot operation. Details on the overshoot 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.

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 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.
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Inside Diameter Cutting Tool Fishing Procedure

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 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.



Attachment to C-108
Permian Oilfield Partners, LLC
Deep Thirst Federal SWD #2
Sec. 6, Twp. 26S, Rge. 33E
1326' FSL, 250' FWL
Lea County, NM

April 17, 2019

STATEMENT REGARDING SEISMICITY

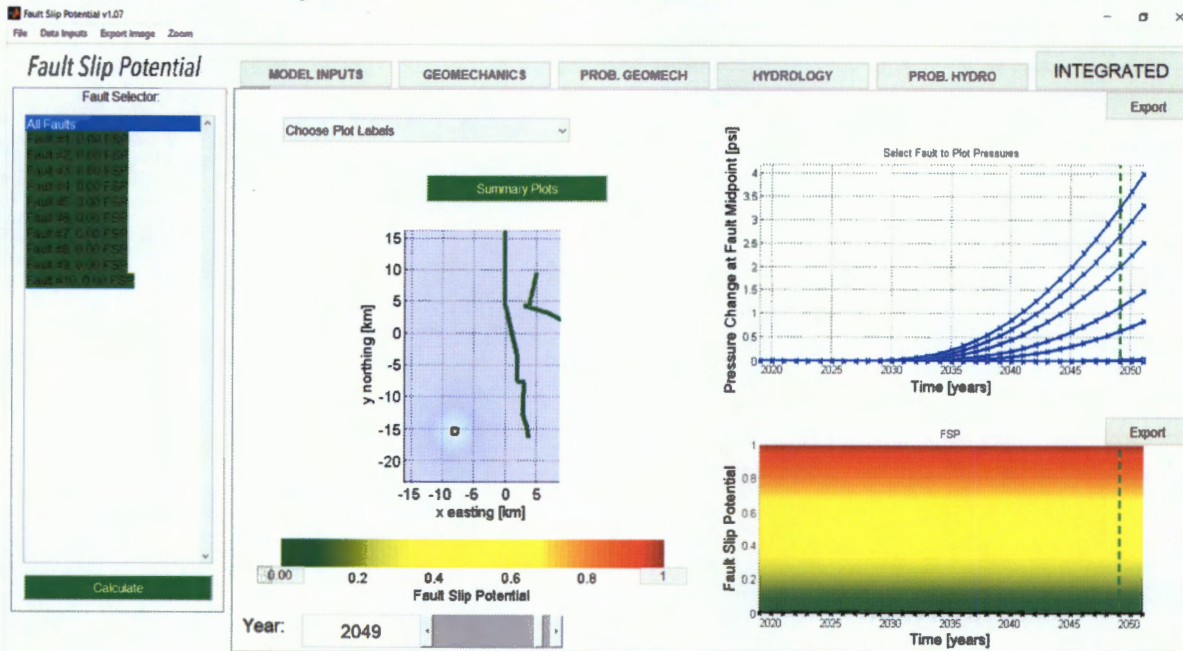
Examination of the USGS and TexNet seismic activity databases has shown minimal historic seismic activity in the area (< 30 miles) of our proposed above referenced SWD well as follows:

1. M2.9, 1984-12-09, 14.11 miles away @ 15.11 deg heading
2. M3.1, 2012-03-18, 21.69 miles away @ 312.67 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 publicly 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. Basement PreCambrian faults are 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 50,000 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. $A\text{-}\phi=0.60$ & 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 as per the FSP results screenshot below.
6. The analysis below assumes an improbable well failure through the Montoya and Simpson zones, 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 known nearby 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 2.47 miles away from the nearest active or permitted Devonian disposal well.

Greg E. Fisher

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