

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: 05/22/2019	REVIEWER:	TYPE: SWD	APP NO: PMAM19143 43593
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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

**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: 328259Well Name: Abyss Federal SWD #1API: 30-025-PendingPool: SWD; Devonian-SilurianPool 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☐ PPR2) **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

Date

05/20/2019

(817) 600-8772

Phone Number

spuryear@popmidstream.com

e-mail Address

MAY 22 2018 PM03:55



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
Abyss Federal SWD #1
Sec. 7, T26S, R30E
1319' FNL, 272' FEL
Eddy County, NM

Mr. Goetze,
Attached is a C-108 Application for administrative approval of Permian Oilfield Partners LLC's proposed Abyss Federal SWD #1 located in Sec 7, Twp 26S, Rge 30E, Eddy 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 all Affected Persons. 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 2 in Artesia.

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

Sincerely,



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

Date:

05/20/2019

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: **05/13/19**
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 13,838'

Underlying Potentially Productive Zones:
None

WELL CONSTRUCTION DATA

Permian Oilfield Partners, LLC.

Abyss Federal SWD #1

1319' FNL, 272' FEL

Sec. 7, T26S, R30E, Eddy Co. NM

Lat 32.0608035° N, Lon 103.9128853° W

GL 3067', RKB 3097'

Surface - (Conventional)

Hole Size: 26" Casing: 20" - 94# H-40 STC Casing

Depth Top: Surface

Depth Btm: 825'

Cement: 518 sks - Class C + Additives

Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)

Hole Size: 17.5" Casing: 13.375" - 48# H-40 & 54.5# J-55 STC Casing

Depth Top: Surface

Depth Btm: 3445'

Cement: 1180 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 BTC Casing

Depth Top: Surface

Depth Btm: 10474'

ECP/DV Tool: 3545'

Cement: 1774 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: 10274'

Depth Btm: 15978'

Cement: 266 sks - Lite Class C (60:40:0) + Additives

Cement Top: 10274' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5" Depth: 17648'

Inj. Interval: 15978' - 17648' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 15933'

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

X/O Depth: 10274'

FJ Casing (Fiberglass Lined)

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

Packer Depth: 15943'

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

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Abyss Federal SWD #1
1319' FNL, 272' FEL
Sec. 7, T26S, R30E, Eddy Co. NM
Lat 32.0608035° N, Lon 103.9128853° W
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Depth Top: Surface
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Intermediate #1 - (Conventional)

Hole Size: 17.5"
Casing: 13.375" - 48# H-40 & 54.5# J-55 STC Casing
Depth Top: Surface
Depth Btm: 3445'
Cement: 1180 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 BTC Casing
Depth Top: Surface
Depth Btm: 10474'
Cement: 1774 sks - Lite Class C (60:40:0) + Additives
Cement Top: Surface - (Circulate)
ECP/DV Tool: 3545'

Intermediate #3 - (Liner)

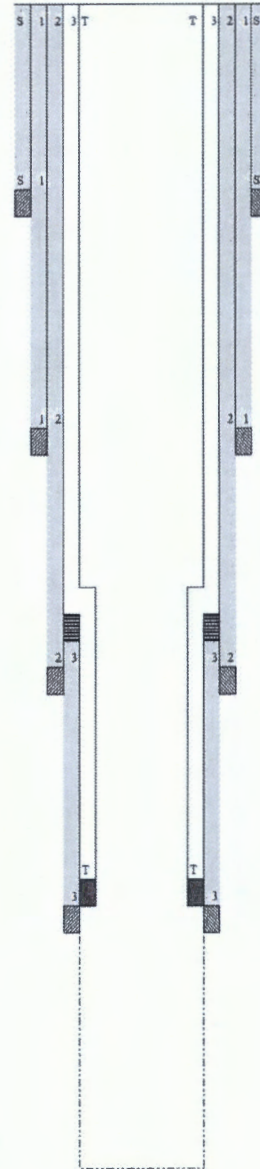
Hole Size: 8.5"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 10274'
Depth Btm: 15978'
Cement: 266 sks - Lite Class C (60:40:0) + Additives
Cement Top: 10274' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5"
Depth: 17648'
Inj. Interval: 15978' - 17648' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 15933'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 10274'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 15943'
Packer: 5.5" - Perma-Pak or Equivalent (Inconel)



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

VII:

1. The average injected volume anticipated is 40,000 BWP
The maximum injected volume anticipated is 50,000 BWP
2. Injection will be through a closed system
3. The average injection pressure anticipated is 2,000 psi
The proposed maximum injection pressure is 3,196 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	COOTER 16 STATE COM #006H	SNAPPING 2 STATE #013H	USA #001	SNAPPING 2 STATE #014H
API	3001537876	3001542113	3001504776	3001542688
Latitude	32.123642	32.0654	32.0288582	32.06555986
Longitude	-103.9862061	-103.7498165	-103.9109955	-103.7413815
Section	16	2	20	2
Township	25S	26S	26S	26S
Range	29E	31E	30E	31E
Unit	O	N	E	P
Ftg NS	330S	200S	2310N	250S
Ftg EW	1650E	2375W	330W	330E
County	EDDY	EDDY	EDDY	EDDY
State	NM	NM	NM	NM
Formation	AVALON UPPER	BONE SPRING 3RD SAND	DELAWARE	WOLFCAMP
Sample Date	7/22/2011	12/14/2015		42284
PH	7	6.8		7.3
TDS mgL	193732.3	91289.1	176882	81366.4
Resistivity Ohm-cm		0.089		0.1004
Sodium_mgL	74027.8	28721.3		26319.4
Calcium_mgL	513	3441		2687.4
Iron_mgL	104	16.3		26.1
Magnesium_mgL	118	437.4		326.7
Manganese_mgL	1			
Chloride_mgL	113441	56957.4	108700	50281.2
Bicarbonate_mgL	1830		139	
Sulfate_mgL	2665	327.9	1332	399.7
CO2_mgL	700	150		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
Ftg NS	1980S	660S
Ftg EW	1650W	1980E
County	LEA	LEA
State	NM	NM
Field	ANTELOPE RIDGE	BELL LAKE NORTH
Formation	DEVONIAN	DEVONIAN
Sample Source	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.
 Abyss Federal SWD #1
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 GL 3067', RKB 3097'

GEOLOGY PROGNOSIS			
FORMATION	TOP	BOTTOM	THICKNESS
	KB TVD (ft)	KB TVD (ft)	(ft)
Salt	1,005	3,410	2,405
Delaware	3,420	7,210	3,790
Bone Spring	7,210	10,424	3,214
Wolfcamp	10,424	12,249	1,825
Lwr. Mississippian	15,539	15,803	264
Woodford	15,803	15,943	140
Devonian	15,943	16,920	977
Fusselman (Silurian)	16,920	17,673	753
Montoya (U. Ordovician)	17,673	18,251	578
Simpson (M. Ordovician)	18,251	19,166	915

2. According to the New Mexico Office of the State Engineer and field exploration, there are 2 fresh water wells within the proposed well's one-mile area of review indicating the presence of freshwater at depths less than 775'. Regionally, shallow fresh water is known to exist at depths less than 800'.

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 and field exploration, there are 2 fresh water wells within the proposed well's one-mile area of review. Samples were obtained from both wells, and water analysis results are attached.

Well Name	Formation Name	Depth Top	Depth Bottom	Thickness	Status
C 01360	None Given	173'	770'	597'	Active-Sampled
C 01361	None Given	184'	775'	591'	Active-Sampled

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 30-015-	² Pool Code 97869	³ Pool Name SWD; DEVONIAN-SILURIAN
⁴ Property Code	⁵ Property Name ABYSS FEDERAL SWD	⁶ Well Number 1
⁷ OGRID NO. 328259	⁸ Operator Name PERMIAN OILFIELD PARTNERS, LLC	⁹ Elevation 3067'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
A	7	26S	30E		1319	NORTH	272	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

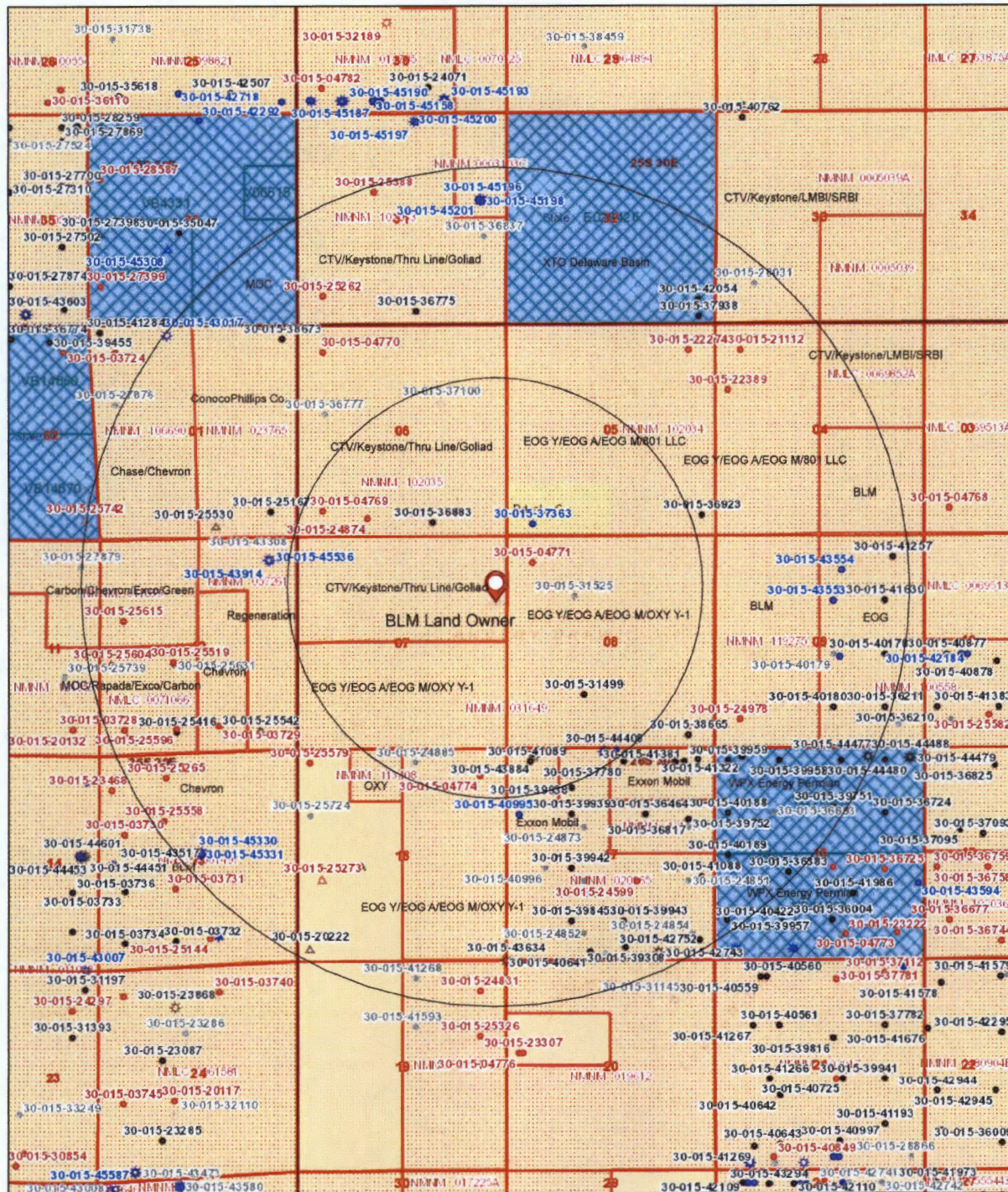
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

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.

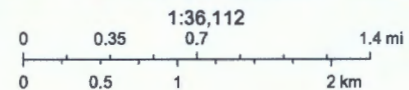
16 S 89°34'10" W 5338.82' LOT 1 <u>GEODETTIC DATA</u> NAD 83 GRID - NM EAST <u>SURFACE LOCATION (S.L.)</u> N: 386111.7 - E: 671585.8 LAT: 32.0608035° N LON: 103.9128853° W <u>CORNER DATA</u> NAD 83 GRID - NM EAST A: FOUND BRASS CAP "1940" N: 382074.4 - E: 666537.7 B: FOUND BRASS CAP "1940" N: 384735.7 - E: 666527.5 LOT 2 C: FOUND 1/2" REBAR N: 387392.8 - E: 666515.9 D: FOUND 1/2" REBAR N: 387432.9 - E: 671853.4 E: FOUND BRASS CAP "1940" N: 382117.1 - E: 671870.4 F: FOUND BRASS CAP "1940" N: 382095.8 - E: 669210.3 LOT 3 LOT 4 S 89°32'30" W 2673.25' S 89°32'32" W 2660.70'	1319' S.L. 272' S 00°15'08" E 2657.71' S 00°11'00" E 5317.05' S 00°13'11" E 2661.88'	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. <i>Gary Fisher</i> 5-9-2019 Signature Date Gary 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. 5-3-2019 Date of Survey <i>Jeffrey L. Fansler</i> Signature and Seal of Professional Surveyor 10034 Certificate Number 10034 Job No.: LS19050536
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1&2 Mile AOR, Abyss Federal SWD #1



5/7/2019, 2:32:45 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), (c)

New Mexico Oil Conservation Division



Statement of Notifications

Re: C-108 Application for SWD Well
Permian Oilfield Partners, LLC
Abyss Federal SWD #1
Sec. 7, T26S, R30E
1319' FNL, 272' FEL
Eddy County, NM

Permian Oilfield Partners, LLC has mailed notifications to Affected Persons as per the following list:

Abyss Federal SWD #1 - Affected Persons Within 1 Mile Area of Review					
Notified Name	Notified Address	Notified City, State, ZIP Code	Shipper	Tracking No.	Mailing Date
Bureau Of Land Management	620 E Greene St.	Carlsbad, NM 88220	USPS	9414811899561844454560	5/20/2019
New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe, NM 87501	USPS	9414811899561844452863	5/20/2019
CTV O&G NM, LLC	201 Main Street	Fort Worth, TX 76102	USPS	9414811899561844455918	5/20/2019
Keystone O&G NM LLC	201 Main Street	Fort Worth, TX 76102	USPS	9414811899561844452269	5/20/2019
Thru Line O&G NM LLC	201 Main Street	Fort Worth, TX 76102	USPS	9414811899561844452191	5/20/2019
Goliad O&G NM LLC	201 Main Street	Fort Worth, TX 76102	USPS	9414811899561844455529	5/20/2019
Regeneration Energy Corporation	324 W. Main St., #107	Artesia, NM 88210	USPS	9414811899561844452627	5/20/2019
EOG Y Resources Inc.	104 South 4th Street	Artesia, NM 88210	USPS	9414811899561844455079	5/20/2019
EOG A Resources Inc.	104 South 4th Street	Artesia, NM 88210	USPS	9414811899561844455659	5/20/2019
EOG M Resources Inc.	104 South 4th Street	Artesia, NM 88210	USPS	9414811899561844455123	5/20/2019
Oxy Y-1 Company	5 Greenway Plaza	Houston, TX 77046	USPS	9414811899561844452931	5/20/2019
OXY USA Inc.	5 Greenway Plaza, Suite 110	Houston, Texas 77046-0521	USPS	9414811899561844452757	5/20/2019
ExxonMobil Oil Corp.	5959 Las Colinas Boulevard	Irving, TX 75039	USPS	9414811899561844455482	5/20/2019
EOG Resources Inc.	P.O. Box 2267	Midland, TX 79702	USPS	9414811899561844455390	5/20/2019
801 LLC	P.O. Box 900	Artesia, NM 88211	USPS	9414811899561844454348	5/20/2019
ConocoPhillips Company	P.O.Box 2197 Office EC3-10-W285	Houston, TX 77252	USPS	9414811899561844455758	5/20/2019
XTO Energy, Inc.	22777 Springwoods Village Pkwy.	Midland, TX 79707	USPS	9414811899561844452559	5/20/2019
Chevron U S A Inc.	6301 Deauville Blvd	Midland, TX 79706	USPS	9414811899561844455277	5/20/2019
XTO Permian Operating LLC	6401 N. Holiday Hill Road, Suite 200	Midland, TX 79707	USPS	9414811899561844450227	5/20/2019
BOPCO, LP	6401 Holiday Hill Rd, Bldg 5	Midland, TX 79707	USPS	9414811899561844454003	5/20/2019
WPX Energy Permian, LLC	3500 One Williams Center	Tulsa, OK 74172	USPS	9414811899561844452085	5/20/2019

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

Date: 5-20-2019

U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 4545 60

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4528 63

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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MAY 20 2019

U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 4559 18

ARTICLE ADDRESSED TO:

CTV O&G NM, LLC
201 Main Street
Fort Worth TX 76102-3105

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 4522 69

ARTICLE ADDRESSED TO:

Keystone O&G NM LLC
201 Main Street
Fort Worth TX 76102-3105

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 4521 91

ARTICLE ADDRESSED TO:

Thru Line O&G NM LLC
201 Main Street
Fort Worth TX 76102-3105

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

Postmark
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MAY 20 2019

U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 4555 29

ARTICLE ADDRESSED TO:

Goliad O&G NM LLC
201 Main Street
Fort Worth TX 76102-3105

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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MAY 20 2019

U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 4526 27

ARTICLE ADDRESSED TO:

Regeneration Energy Corporation
324 W. Main St. Ste 107
Artesia NM 88210-2189

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4550 79

ARTICLE ADDRESSED TO:

EOG Y Resources, Inc.
104 South 4th Street
Artesia NM 88210-2123

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4556 59

ARTICLE ADDRESSED TO:

EOG A Resources Inc.
104 South 4th Street
Artesia NM 88210-2123

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4551 23

ARTICLE ADDRESSED TO:

EOG M Resources Inc.
104 South 4th Street
Artesia NM 88210-2123

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4529 31

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4527 57

ARTICLE ADDRESSED TO:

Oxy USA Inc
5 Greenway Plaza, Suite 110
Houston TX 77046-0521

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4554 82

ARTICLE ADDRESSED TO:

ExxonMobil Oil Corp
5959 Las Colinas Blvd
Irving TX 75039-4202

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4553 90

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 4543 48

ARTICLE ADDRESSED TO:

801 LLC
PO Box 900
Artesia NM 88211-0900

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4557 58

ARTICLE ADDRESSED TO:

ConocoPhillips Company
PO Box 2197
Houston TX 77252-2197

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 4525 59

ARTICLE ADDRESSED TO:

XTO Energy Inc.
22777 Springwoods Village Pkwy.
Spring TX 77389-1425

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4552 77

ARTICLE ADDRESSED TO:

Chevron USA
6301 Deauville
Midland TX 79706-2964

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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ARTICLE NUMBER: 9414 8118 9956 1844 4502 27

ARTICLE ADDRESSED TO:

XTO Permian Operating LLC
6401 Holiday Hill Road, Suite 200
Midland TX 79707-2156

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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

ARTICLE NUMBER: 9414 8118 9956 1844 4540 03

ARTICLE ADDRESSED TO:

BOPCO, LP
6401 Holiday Hill Rd, Bldg 5
Midland TX 79707-2157

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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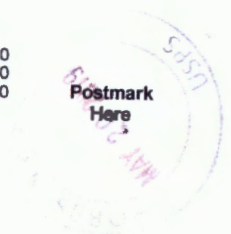
ARTICLE ADDRESSED TO:

WPX Energy Permian, LLC
3500 One Williams Center
Tulsa OK 74172-0135

FEES

Postage Per Piece	\$3.20
Certified Fee	3.50
Total Postage & Fees:	6.70

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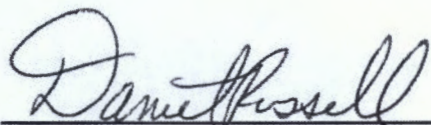


Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

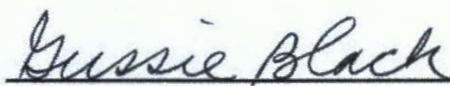
I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
May 14, 2019
and ending with the issue dated
May 14, 2019.



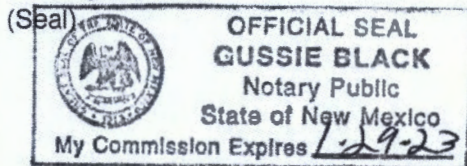
Publisher

Sworn and subscribed to before me this
14th day of May 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
MAY 14, 2019

Newspaper Publication
Notice

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 Eddy County, New Mexico. The well name is the Abyss Federal SWD #1, and is located 1319' FNL & 272' FEL, Unit Letter A, Section 7, Township 26 South, Range 30 East, NMPM. The well will dispose of water produced from nearby oil and gas wells into the Devonian formation from a depth of 15,978 feet to 17,848 feet. The maximum expected injection rate is 50,000 BWPd at a maximum surface injection pressure of 3,196 psi.

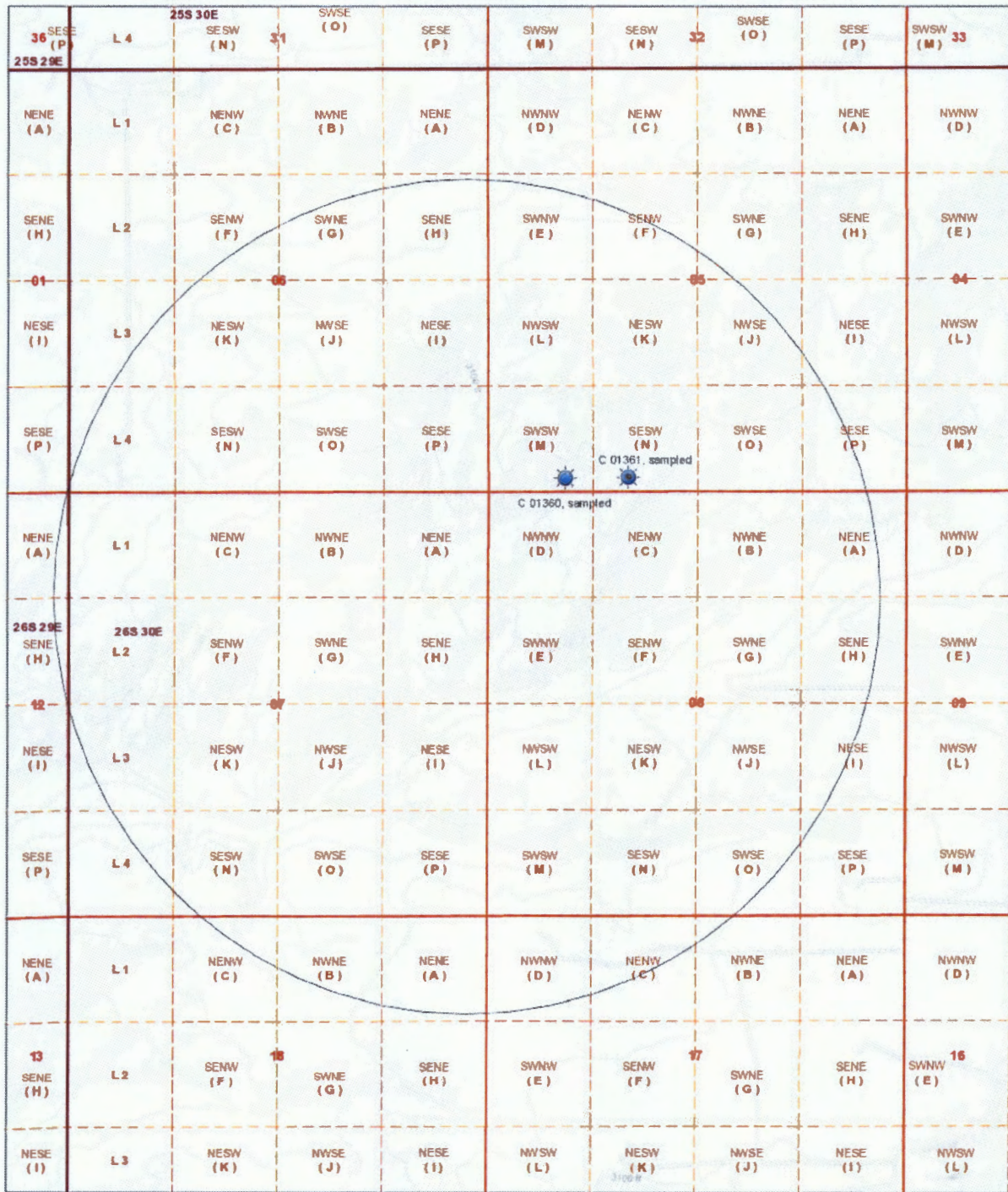
Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505 within 15 days.
#34143

67115647

00228369

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

Water Wells within 1 Mile, Abyss Federal SWD #1



5/11/2019, 7:44:46 PM



Override 1

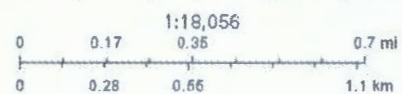


Override 1

PLSS First Division

PLSS Second Division

PLSS Townships



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), (c) OpenStreetMap contributors, and the GIS User Community

New Mexico Oil Conservation Division



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 01360		4 3 3 05 26S 30E	602997	3548152

Driller License: 95**Driller Company:** FOLK DRILLING CO.**Driller Name:****Drill Start Date:** 04/26/1952**Drill Finish Date:** 05/15/1952**Plug Date:****Log File Date:** 11/17/1953**PCW Rcv Date:****Source:** Shallow**Pump Type:****Pipe Discharge Size:****Estimated Yield:****Casing Size:** 12.75**Depth Well:** 770 feet**Depth Water:** 173 feet**Water Bearing Stratifications:**

Top	Bottom	Description
210	220	Sandstone/Gravel/Conglomerate
580	585	Sandstone/Gravel/Conglomerate
665	710	Sandstone/Gravel/Conglomerate
725	770	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
180	289
538	770

Meter Number: 16557**Meter Make:** MASTERMETER**Meter Serial Number:** 32530406**Meter Multiplier:** 1.0000**Number of Dials:** 9**Meter Type:** Diversion**Unit of Measure:** Gallons**Return Flow Percent:****Usage Multiplier:****Reading Frequency:** Quarterly**Meter Readings (in Acre-Feet)**

Read Date	Year	Mtr Reading	Flag	Rdr Comment	Mtr Amount
07/01/2014	2014	234997	A	RPT	0
09/30/2014	2014	354169	A	RPT	36.573
11/20/2014	2014	7281000	A	RPT	0
12/31/2014	2014	11430100	A	RPT	12.733
04/01/2015	2015	22535200	A	RPT	34.080
07/01/2015	2015	35821800	A	RPT	40.775
10/05/2015	2015	46631200	A	RPT	33.173
12/31/2015	2015	55653200	A	RPT	27.688
01/31/2016	2016	58047600	A	RPT	7.348
02/29/2016	2016	61081100	A	RPT	9.309
03/31/2016	2016	62593100	A	RPT	4.640
06/30/2016	2016	71642600	A	RPT	27.772
10/03/2016	2016	81998399	A	RPT	31.781
12/31/2016	2016	90558600	A	RPT	26.270

****YTD Meter Amounts: Year Amount**

2014	49.306
2015	135.716
2016	107.120

Meter Number:	16558	Meter Make:	MASTERMETER
Meter Serial Number:	32530403	Meter Multiplier:	100.0000
Number of Dials:	6	Meter Type:	Diversion
Unit of Measure:	Gallons	Return Flow Percent:	
Usage Multiplier:		Reading Frequency:	Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr Comment	Mtr Amount
10/01/2014	2014	354169	A	RPT	0
11/20/2014	2014	415555	A	RPT	18.839
11/21/2014	2014	72810	A	RPT	0
12/31/2014	2014	112178	A	RPT	12.082
02/01/2015	2015	147039	A	RPT	10.698
03/02/2015	2015	188133	A	RPT	12.611
04/01/2015	2015	224102	A	RPT	11.038
04/30/2015	2015	270723	A	RPT	14.307
05/31/2015	2015	315628	A	tw	13.781
07/01/2015	2015	369075	A	tw	16.402
08/01/2015	2015	395528	A	tw	8.118
08/31/2015	2015	455361	A	tw	18.362
10/01/2015	2015	466312	A	RPT	3.361

**YTD Meter Amounts:	Year	Amount
	2014	30.921
	2015	108.678

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.

5/9/19 7:17 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)

Well Tag **POD Number**
C 01361

Q64 Q16 Q4 Sec Tws Rng **X** **Y**
3 4 3 05 26S 30E 603240 3548157

Driller License: 95**Driller Company:** FOLK DRILLING CO.**Driller Name:****Drill Start Date:** 05/16/1952**Drill Finish Date:** 06/01/1952**Plug Date:****Log File Date:** 11/17/1953**PCW Rcv Date:****Source:** Shallow**Pump Type:****Pipe Discharge Size:****Estimated Yield:****Casing Size:** 12.75**Depth Well:** 775 feet**Depth Water:** 184 feet**Water Bearing Stratifications:****Top Bottom Description**

195	230	Sandstone/Gravel/Conglomerate
255	295	Sandstone/Gravel/Conglomerate
535	570	Sandstone/Gravel/Conglomerate
695	735	Sandstone/Gravel/Conglomerate
740	750	Sandstone/Gravel/Conglomerate

Casing Perforations:**Top Bottom**

145	353
418	555
530	755

Meter Number: 16559**Meter Make:** MASTERMETER**Meter Serial Number:** 425026402**Meter Multiplier:** 1.0000**Number of Dials:** 9**Meter Type:** Diversion**Unit of Measure:** Gallons**Return Flow Percent:****Usage Multiplier:****Reading Frequency:** Quarterly**Meter Readings (in Acre-Feet)**

Read Date	Year	Mtr Reading	Flag	Rdr Comment	Mtr Amount
07/01/2014	2014	432977	A	RPT	0
09/30/2014	2014	542020	A	RPT	33.464
11/20/2014	2014	71523	A	RPT	0
12/31/2014	2014	10869200	A	RPT	33.137
04/01/2015	2015	20528000	A	RPT	29.642
07/01/2015	2015	32166600	A	RPT	35.718

**YTD Meter Amounts:	Year	Amount
	2014	66.601
	2015	65.360

Meter Number: 16560**Meter Make:** MASTERMETER**Meter Serial Number:** 425026402**Meter Multiplier:** 1.0000**Number of Dials:** 9**Meter Type:** Diversion

Unit of Measure: Gallons Return Flow Percent:
Usage Multiplier: Reading Frequency: Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr Comment	Mtr Amount
01/03/2012	2012	796624	A	RPT	0
04/01/2014	2014	322335	R	RPT Meter Rollover	161.335
07/01/2014	2014	422977	A	RPT	30.886
10/01/2014	2014	542008	A	RPT	36.529
11/20/2014	2014	597747	A	RPT	17.106
11/21/2014	2014	71523	A	RPT	0
12/31/2014	2014	108692	A	RPT	11.407
02/01/2015	2015	144071	A	RPT	10.857
03/02/2015	2015	177073	A	RPT	10.128
04/01/2015	2015	204100	A	RPT	8.294
04/30/2015	2015	246672	A	RPT	13.065
05/31/2015	2015	286863	A	RPT	12.334
07/01/2015	2015	329411	A	RPT	13.058
08/01/2015	2015	350757	A	RPT	6.551
08/31/2015	2015	384122	A	RPT	10.239
10/01/2015	2015	413202	A	RPT	8.924
10/01/2015	2015	0	A	RPT Meter Change	0
10/31/2015	2015	2767800	A	RPT	8.494
11/30/2015	2015	5636900	A	RPT	8.805
12/31/2015	2015	7565000	A	RPT	5.917
01/31/2016	2016	9247200	A	RPT	5.162
02/29/2016	2016	12569900	A	RPT	10.197
03/31/2016	2016	14698800	A	RPT	6.533
04/30/2016	2016	16601309	A	RPT	5.839
05/30/2016	2016	19235300	A	RPT	8.083
06/30/2016	2016	22955800	A	RPT	11.418
07/31/2016	2016	26437114	A	RPT	10.684
08/30/2016	2016	30077563	A	RPT	11.172
09/30/2016	2016	32631836	A	RPT	7.839
10/31/2016	2016	35193200	A	RPT	7.861
11/30/2016	2016	37896100	A	RPT	8.295
12/31/2016	2016	41023100	A	RPT	9.596

**YTD Meter Amounts:	Year	Amount
	2012	0
	2014	257.263
	2015	116.666
	2016	102.679

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.

5/9/19 7:20 AM

POINT OF DIVERSION SUMMARY

Imperative Water Analysis Report

IMPERATIVE
CHEMICAL PARTNERS

SYSTEM IDENTIFICATION

Company: Permian Oilfield Partners, LLC
Location: Abyss Federal SWD 1 Well 1
Sample Source: Wellhead
Account Rep: David McCormick

Sample ID#: W-8805

Sample Date: 05-10-2019

Report Date: 05-13-2019

WATER CHEMISTRY

CATIONS

Calcium(as Ca)	103.20
Magnesium(as Mg)	35.49
Barium(as Ba)	0.06
Strontium(as Sr)	2.06
Sodium(as Na)	262.49
Potassium(as K)	42.25
Iron(as Fe)	0.67
Manganese(as Mn)	0.05

ANIONS

Chloride(as Cl)	700.00
Sulfate(as SO ₄)	5.00
Dissolved CO ₂ (as CO ₂)	10.00
Bicarbonate(as HCO ₃)	48.80
H ₂ S (as H ₂ S)	1.71
Boron(as B)	6.49

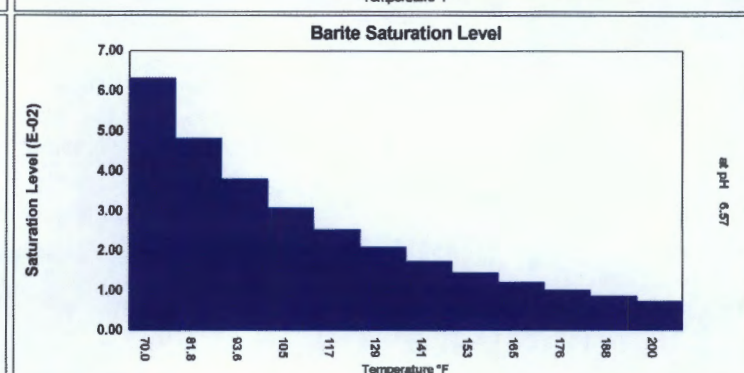
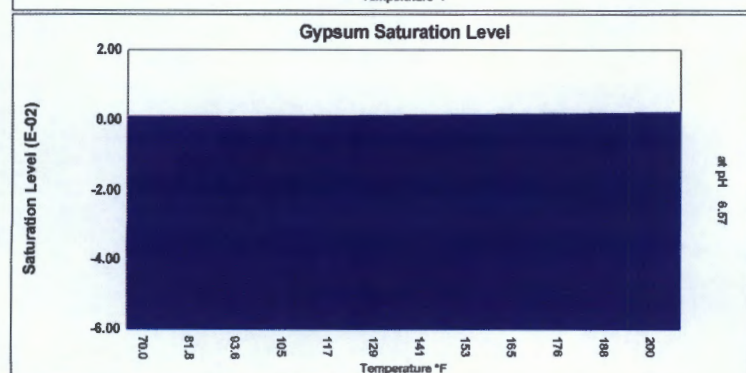
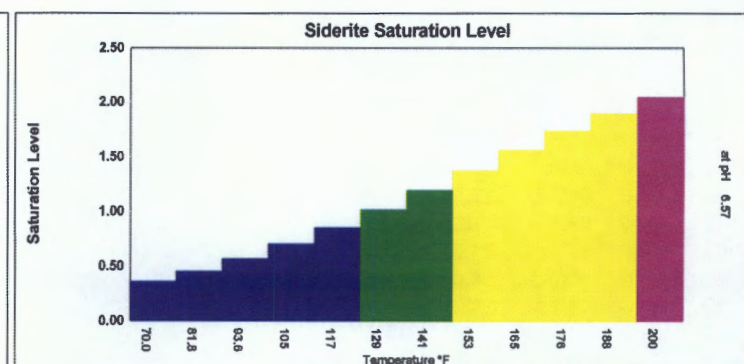
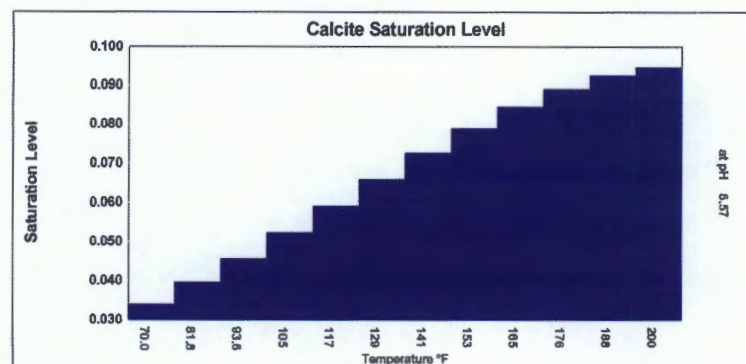
PARAMETERS

Temperature(°F)	88.60
Sample pH	6.55
Conductivity	2137
T.D.S.	1253
Resistivity	468.02
Sp.Gr.(g/mL)	1.00

SCALE AND CORROSION POTENTIAL

Temp. (°F)	Press. (atm)	Calcite CaCO ₃		Anhydrite CaSO ₄		Gypsum CaSO ₄ *2H ₂ O		Barite BaSO ₄		Celestite SrSO ₄		Siderite FeCO ₃		Mackawenite FeS		CO ₂ (mpy)	pCO ₂ (atm)
70.00	1.00	0.0341	-0.190	< 0.001	-510.26	0.00127	-427.12	0.0633	-0.473	0.00129	-53.81	0.364	-0.0131	0.882	-0.0153	0.0565	0.0171
81.82	1.36	0.0397	-0.170	< 0.001	-496.96	0.00124	-429.54	0.0483	-0.607	0.00130	-53.19	0.460	-0.00927	0.859	-0.0191	0.0817	0.0202
93.64	1.73	0.0458	-0.153	< 0.001	-476.13	0.00122	-429.29	0.0381	-0.749	0.00133	-52.07	0.573	-0.00617	0.844	-0.0220	0.110	0.0233
105.45	2.09	0.0523	-0.138	< 0.001	-449.31	0.00123	-422.17	0.0308	-0.895	0.00137	-50.69	0.705	-0.00362	0.834	-0.0240	0.144	0.0264
117.27	2.45	0.0591	-0.126	< 0.001	-418.08	0.00135	-394.87	0.0253	-1.05	0.00142	-49.33	0.854	-0.00153	0.820	-0.0269	0.146	0.0295
129.09	2.82	0.0660	-0.115	0.00112	-383.92	0.00148	-370.44	0.0209	-1.22	0.00146	-48.10	1.02	< 0.001	0.797	-0.0313	0.140	0.0327
140.91	3.18	0.0727	-0.105	0.00130	-348.19	0.00160	-348.51	0.0173	-1.41	0.00149	-46.98	1.20	0.00154	0.766	-0.0374	0.115	0.0358
152.73	3.55	0.0790	-0.0967	0.00153	-312.05	0.00173	-328.78	0.0144	-1.61	0.00152	-45.97	1.38	0.00260	0.727	-0.0457	0.112	0.0389
164.55	3.91	0.0845	-0.0895	0.00184	-276.48	0.00186	-311.00	0.0120	-1.83	0.00155	-45.04	1.56	0.00340	0.681	-0.0561	0.106	0.0420
176.36	4.27	0.0891	-0.0832	0.00224	-242.24	0.00199	-294.94	0.0101	-2.06	0.00157	-44.21	1.74	0.00397	0.630	-0.0689	0.0944	0.0451
188.18	4.64	0.0926	-0.0778	0.00277	-209.91	0.00211	-280.41	0.00851	-2.31	0.00159	-43.45	1.90	0.00432	0.576	-0.0843	0.0441	0.0482
200.00	5.00	0.0949	-0.0731	0.00347	-179.88	0.00223	-267.25	0.00719	-2.57	0.00160	-42.77	2.05	0.00450	0.520	-0.102	0.0274	0.0513
		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels			

Saturation Levels (xSAT) are the ratio of ion activity to solubility, e.g. {Ca}{CO₃}/K_{sp}. pCO₂ (atm) is the partial pressure of CO₂ in the gas phase.
Lbs/1000 Barrels scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.



Imperative Water Analysis Report

IMPERATIVE
CHEMICAL PARTNERS

SYSTEM IDENTIFICATION

Company: Permian Oilfield Partners, LLC
Location: Abyss Federal SWD 1 Well 2
Sample Source: Wellhead
Account Rep: David McCormick

Sample ID#: W-8804

Sample Date: 05-10-2019

Report Date: 05-13-2019

WATER CHEMISTRY

CATIONS

Calcium(as Ca) 134.20
Magnesium(as Mg) 48.29
Barium(as Ba) 0.02
Strontium(as Sr) 3.20
Sodium(as Na) 201.65
Potassium(as K) 44.30
Iron(as Fe) 2.35
Manganese(as Mn) 0.04

ANIONS

Chloride(as Cl) 700.00
Sulfate(as SO₄) 8.00
Dissolved CO₂(as CO₂) 10.00
Bicarbonate(as HCO₃) 36.60
H₂S (as H₂S) 1.71
Boron(as B) 6.86

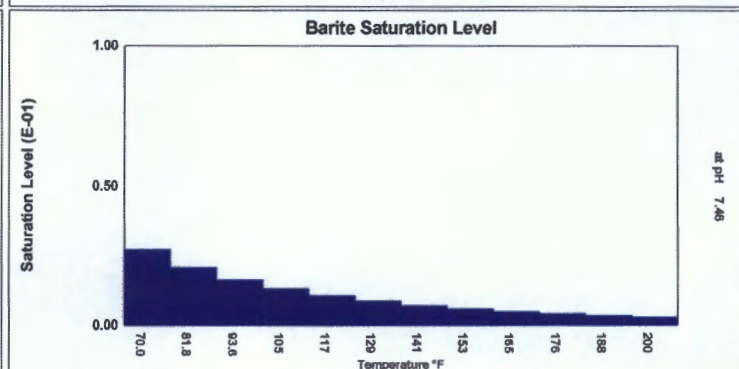
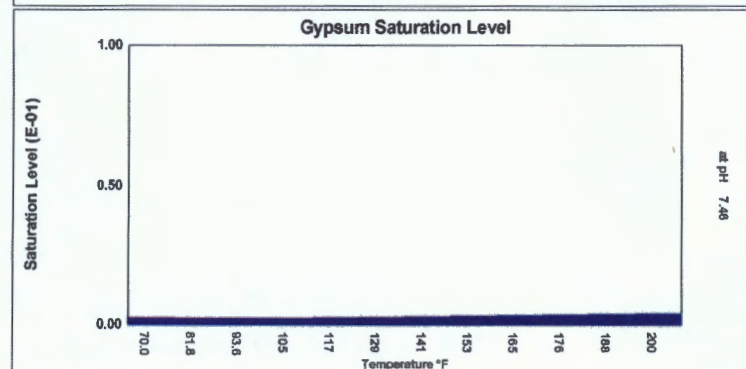
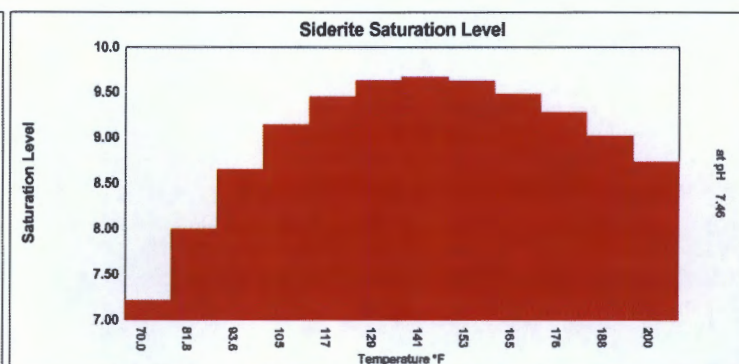
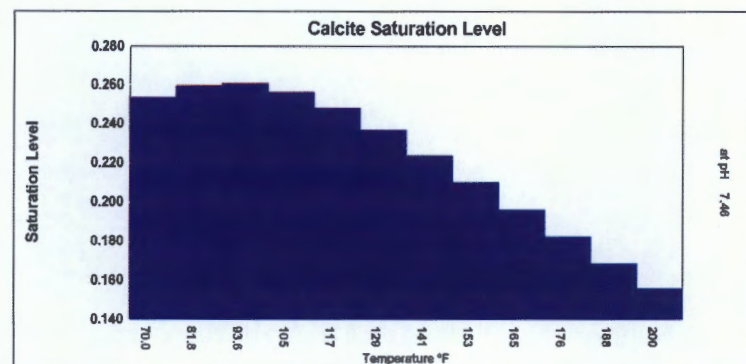
PARAMETERS

Temperature(°F) 68.40
Sample pH 7.42
Conductivity 2105
T.D.S. 1222
Resistivity 475.10
Sp.Gr.(g/mL) 1.00

SCALE AND CORROSION POTENTIAL

Temp. (°F)	Press. (atm)	Calcite CaCO ₃		Anhydrite CaSO ₄		Gypsum CaSO ₄ *2H ₂ O		Barite BaSO ₄		Celestite SrSO ₄		Siderite FeCO ₃		Mackawenite FeS		CO ₂ (mpy)	pCO ₂ (atm)
70.00	1.00	0.253	-0.116	0.00144	-500.52	0.00246	-414.93	0.0273	-0.355	0.00297	-53.39	7.22	0.0392	57.62	0.593	0.00598	0.00253
81.82	1.36	0.260	-0.103	0.00147	-487.18	0.00238	-417.43	0.0207	-0.461	0.00298	-52.78	8.00	0.0367	45.80	0.579	0.00865	0.00299
93.64	1.73	0.261	-0.0935	0.00155	-466.25	0.00233	-417.25	0.0163	-0.577	0.00303	-51.68	8.65	0.0337	36.47	0.563	0.0117	0.00345
105.45	2.09	0.257	-0.0856	0.00168	-439.29	0.00234	-410.16	0.0131	-0.699	0.00312	-50.30	9.14	0.0304	29.08	0.544	0.0146	0.00391
117.27	2.45	0.248	-0.0791	0.00186	-407.88	0.00256	-382.77	0.0107	-0.834	0.00321	-48.96	9.45	0.0270	23.03	0.522	0.0141	0.00437
129.09	2.82	0.237	-0.0738	0.00211	-373.54	0.00279	-358.28	0.00880	-0.987	0.00329	-47.74	9.62	0.0237	18.15	0.497	0.0130	0.00483
140.91	3.18	0.224	-0.0693	0.00244	-337.65	0.00302	-336.32	0.00726	-1.16	0.00335	-46.63	9.67	0.0207	14.27	0.470	0.0114	0.00529
152.73	3.55	0.210	-0.0654	0.00287	-301.38	0.00324	-316.58	0.00601	-1.34	0.00341	-45.63	9.62	0.0180	11.23	0.441	0.0124	0.00575
164.55	3.91	0.196	-0.0619	0.00343	-265.72	0.00347	-298.80	0.00500	-1.55	0.00345	-44.72	9.48	0.0156	8.85	0.410	0.0134	0.00621
176.36	4.27	0.182	-0.0589	0.00416	-231.47	0.00369	-282.77	0.00418	-1.77	0.00348	-43.90	9.28	0.0136	6.99	0.376	0.0142	0.00667
188.18	4.64	0.169	-0.0562	0.00512	-199.21	0.00390	-268.28	0.00350	-2.01	0.00350	-43.16	9.02	0.0117	5.55	0.341	0.00800	0.00712
200.00	5.00	0.156	-0.0538	0.00638	-169.35	0.00411	-255.17	0.00295	-2.27	0.00351	-42.49	8.73	0.0102	4.42	0.305	0.00618	0.00758
		xSAT		xSAT		xSAT		xSAT		xSAT		xSAT		xSAT			
		Lbs per 1000 Barrels		Lbs per 1000 Barrels		Lbs per 1000 Barrels		Lbs per 1000 Barrels		Lbs per 1000 Barrels		Lbs per 1000 Barrels		Lbs per 1000 Barrels			

Saturation Levels (xSAT) are the ratio of ion activity to solubility, e.g. {Ca}{CO₃}/K_{sp}. pCO₂ (atm) is the partial pressure of CO₂ in the gas phase.
Lbs/1000 Barrels scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01360	CUB	ED		4	3	3	05	26S	30E	602997	3548152	770	173	597
C 01361	CUB	ED		3	4	3	05	26S	30E	603240	3548157	775	184	591
C 02165	C	ED					24	26S	30E	610036	3544121*	440	180	260
C 03483	C	ED		4	4	4	05	26S	30E	604296	3548251	700	200	500
C 03581 POD1	CUB	ED		4	4	4	05	26S	30E	604298	3548291	800	320	480
C 04068 POD1	CUB	ED		1	3	1	16	26S	30E	604397	3546018			

Average Depth to Water: **211 feet**

Minimum Depth: **173 feet**

Maximum Depth: **320 feet**

Record Count: 6

PLSS Search:

Township: 26S

Range: 30E

*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.



Item XII. Affirmative Statement

Re: C-108 Application for SWD Well
Permian Oilfield Partners, LLC
Abyss Federal SWD #1
Sec. 7, T26S, R30E
1319' FNL, 272' FEL
Eddy 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.

Gary Fisher
Manager
Permian Oilfield Partners, LLC.

Date: 5/11/2019

Plugging Risk Assessment
Permian Oilfield Partners, LLC.
Abyss Federal SWD #1
SL: 1319' FNL & 272' FEL
Sec 7, T26S, R30E
Eddy County, New Mexico

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Abyss Federal SWD #1
1319' FNL, 272' FEL
Sec. 7, T26S, R30E, Eddy Co. NM
Lat 32.0608035° N, Lon 103.9128853° W
GL 3067', RKB 3097'

Surface - (Conventional)

Hole Size: 26"
Casing: 20" - 94# H-40 STC Casing
Depth Top: Surface
Depth Btm: 825'
Cement: 518 sks - Class C + Additives
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)

Hole Size: 17.5"
Casing: 13.375" - 48# H-40 & 54.5# J-55 STC Casing
Depth Top: Surface
Depth Btm: 3445'
Cement: 1180 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 BTC Casing
Depth Top: Surface
Depth Btm: 10474'
Cement: 1774 sks - Lite Class C (60:40:0) + Additives
Cement Top: Surface - (Circulate)
ECP/DV Tool: 3545'

Intermediate #3 - (Liner)

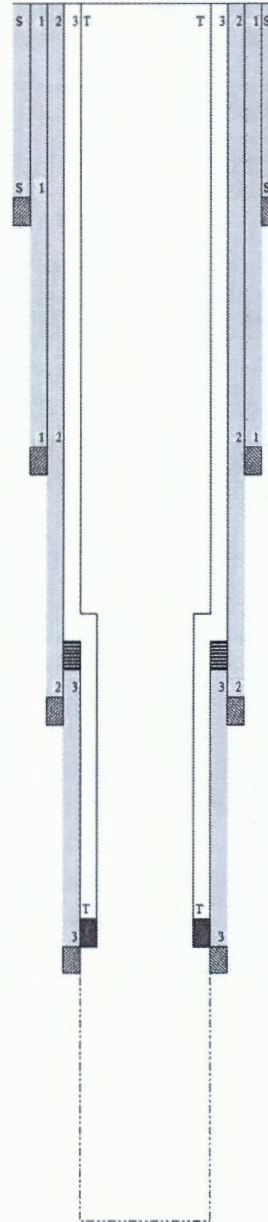
Hole Size: 8.5"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 10274'
Depth Btm: 15978'
Cement: 266 sks - Lite Class C (60:40:0) + Additives
Cement Top: 10274' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5"
Depth: 17648'
Inj. Interval: 15978' - 17648' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 15933'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 10274'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 15943'
Packer: 5.5" - Perma-Pak or Equivalent (Inconel)



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

Bowen Series 150 Releasing and Circulation Overshots

Maximum Catch Size 6 3/4" to 7 1/2" Inclusive

Maximum Catch Size (Spiral)		6 3/4"	6 7/8"	7"	7 1/2"
Maximum Catch Size (Basket)		5 1/2"	6 1/4"	6 3/4"	6 7/8"
Overshot O.D.		8 1/4"	7 1/2"	8 1/2"	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	280

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-1813	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 1/4"	4"	4 1/4"	4 1/2"	4 3/4"	4 7/8"	5"
Overshot O.D.		5 3/4"	5 7/8"	5 7/8"	5 7/8"	5 7/8"	5 7/8"	5 7/8"
Type		F.S.	S.H.	S.H.	S.F.S.	S.H.	F.S.	S.H.
Complete Assembly	Part No.	5808	5808	C-5168	8875	C-5171	C-4825	8825
(Dressed Spiral Parts)	Weight	130	130	133	138	140	102	185
Replacement Parts								
Top Sub	Part No.	5807	5809	A-5168	8876	A-5172	B-4826	8826
Bowl	Part No.	5806	5700	B-5170	8877	B-5173	B-4827	8817
Packer	Part No.	189	1140	B-2190	8114	L-5050	L-4505	8818
Spiral Grapple	Part No.	165	1135	B-2201	8112	B-4369	M-1071	8819
Spiral Grapple Control	Part No.	188	1137	B-2202	8113	B-4370	M-1072	8820
Standard Guide	Part No.	187	1143	B-2203	8121	B-4371	L-1074	8821
Basket Parts								
Basket Grapple	Part No.	165	1135	B-2201	8112	B-4369	M-1071	8819
Basket Grapple Control	Part No.	188	1137	B-2202	8113	B-4370	M-1072	8820
Mill Control Packer	Part No.	189-R	1140-R	B-2190-R	8114-R	L-5050-R	M-4505	L-8818-R

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.



Attachment to C-108
Permian Oilfield Partners, LLC
Abyss Federal SWD #1
Sec. 7, T26S, R30E
1319' FNL, 272' FEL
Eddy County, NM

May 16, 2019

STATEMENT REGARDING SEISMICITY

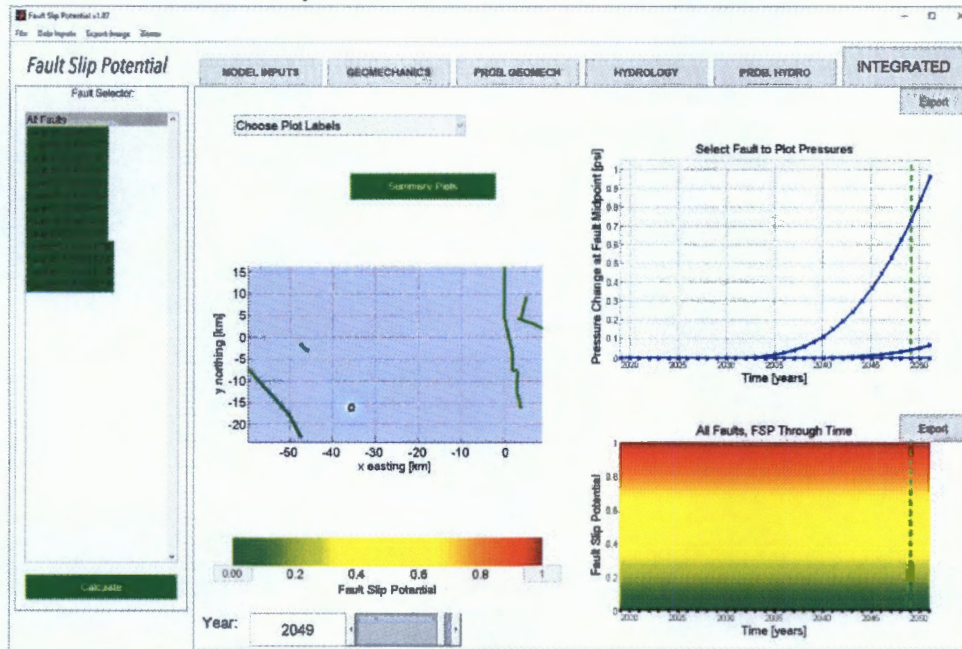
Examination of the USGS and TexNet seismic activity databases has shown minimal historic seismic activity in the area (< 30 miles) of our proposed above referenced SWD well as follows:

1. M2.9, 1984-12-09, 25.29 miles away @ 55.72 deg heading
2. M3.1, 2012-03-18, 15.25 miles away @ 4.62 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% in any of the documented faults after 30 years as per the FSP results screenshot below. The nearest distance from any of the faults to this well is approximately 13 km.
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 1.53 miles away from the nearest active or permitted Devonian disposal well.

gfisher@popmidstream.com

(817) 606-7630

McMillan, Michael, EMNRD

From: McMillan, Michael, EMNRD
Sent: Thursday, May 23, 2019 12:12 PM
To: spuryear@popmidstream.com
Cc: Goetze, Phillip, EMNRD; Jones, William V, EMNRD
Subject: Permian Oilfield Partners, LLC Abyss Federal SWD Well No. 1

Sean:

Your application for the Permian Oilfield Partners, LLC Abyss Federal SWD Well No. 1 has been suspended.

Your affidavit of publication was published in the Hobbs News-Sun (Lea County)

It should have been published either in the Artesia or Carlsbad newspaper

Mike

Michael McMillan
1220 South St. Francis
Santa Fe, New Mexico
505-476-3448
Michael.mcmillan@state.nm.us

McMillan, Michael, EMNRD

From: spuryear@popmidstream.com
Sent: Friday, May 31, 2019 5:46 PM
To: McMillan, Michael, EMNRD
Cc: Goetze, Phillip, EMNRD; Jones, William V, EMNRD
Subject: [EXT] RE: Permian Oilfield Partners, LLC Abyss Federal SWD Well No. 1
Attachments: Permian Oilfield Ptrs Abyss Federal SWD #1 Affidavit of Publication-Eddy County.pdf

Mike,

Please see attached affidavit of publication for the below listed well in the Carlsbad newspaper. Permian Oilfield Partners request the below listed application be returned to the administrative process.

Thanks,

From: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Sent: Thursday, May 23, 2019 12:12 PM
To: spuryear@popmidstream.com
Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>
Subject: Permian Oilfield Partners, LLC Abyss Federal SWD Well No. 1

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Mike

Michael McMillan
1220 South St. Francis
Santa Fe, New Mexico
505-476-3448
Michael.mcmillan@state.nm.us

CARLSBAD
CURRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Newspaper Publication Notice

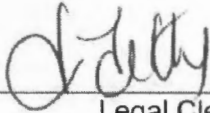
Ad No.
0001286962

PERMIAN OILFIELD PARTNERS, LLC
PO BOX 3329

HOBBS NM 88241

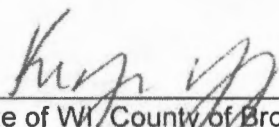
I, a legal clerk of the **Carlsbad Current-Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

05/25/19



Legal Clerk

Subscribed and sworn before me this
28th of May 2019.


State of WI County of Brown
NOTARY PUBLIC

11/9/21
My Commission Expires



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 Eddy County, New Mexico. The well name is the Abyss Federal SWD #1, and is located 1319' FNL & 272' FEL, Unit Letter A, Section 7, Township 26 South, Range 30 East, NMPM. The well will dispose of water produced from nearby oil and gas wells into the Devonian formation from a depth of 15,978 feet to 17,648 feet. The maximum expected injection rate is 50,000 BWPD at a maximum surface injection pressure of 3,196 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.
May 25, 2019

McMillan, Michael, EMNRD

From: McMillan, Michael, EMNRD
Sent: Monday, June 3, 2019 9:58 AM
To: 'spuryear@popmidstream.com'
Cc: Goetze, Phillip, EMNRD; Jones, William V, EMNRD
Subject: RE: [EXT] RE: Permian Oilfield Partners, LLC Abyss Federal SWD Well No. 1

Sean:

The OCD received your affidavit of publication after the close of business on May 31, 2019.

Therefore the 15-day clock will start on June 3, 2019

Mike

From: spuryear@popmidstream.com <spuryear@popmidstream.com>
Sent: Friday, May 31, 2019 5:48 PM
To: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>
Subject: [EXT] RE: Permian Oilfield Partners, LLC Abyss Federal SWD Well No. 1

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Sent: Thursday, May 23, 2019 12:12 PM
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Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>
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