

mm 06/03/2019
mm 05/24/2019

RECEIVED:	REVIEWER:	TYPE:	APP NO:
		SWD	PMAM 19143 44437

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: Raindrop 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

05/20/2019

Date

(817) 600-8772

Phone Number

spuryear@popmidstream.com

e-mail Address

MAY 22 2018 PM03:53



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
Raindrop Federal SWD #1
Sec. 22, T25S, R29E
1719' FNL, 254' FEL
Eddy County, NM

Mr. Goetze,
Attached is a C-108 Application for administrative approval of Permian Oilfield Partners LLC's proposed Raindrop Federal SWD #1 located in Sec 22, Twp 25S, Rge 29E, 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 13,415'

Underlying Potentially Productive Zones:
None

WELL CONSTRUCTION DATA

Permian Oilfield Partners, LLC.
Raindrop Federal SWD #1
1719' FNL, 254' FEL
Sec. 22, T25S, R29E, Eddy Co. NM
Lat 32.1180472° N, Lon 103.9645388° W
GL 3098', RKB 3128'

Surface - (Conventional)

Hole Size: 26" Casing: 20" - 94# H-40 STC Casing
Depth Top: Surface
Depth Btm: 777'
Cement: 482 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: 3426'
Cement: 1168 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: 10303' ECP/DV Tool: 3526'
Cement: 1751 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: 10103'
Depth Btm: 15413'
Cement: 256 sks - Lite Class C (60:40:0) + Additives
Cement Top: 10103' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5" Depth: 16803'
Inj. Interval: 15413' - 16803' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 15368' Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80
X/O Depth: 10103' FJ Casing (Fiberglass Lined)
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 15378' Packer: 5.5" - Perma-Pak or Equivalent (Inconel)

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Raindrop Federal SWD #1
1719' FNL, 254' FEL
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Cement: 1168 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: 10303'
Cement: 1751 sks - Lite Class C (60:40:0) + Additives
Cement Top: Surface - (Circulate)
ECP/DV Tool: 3526'

Intermediate #3 - (Liner)

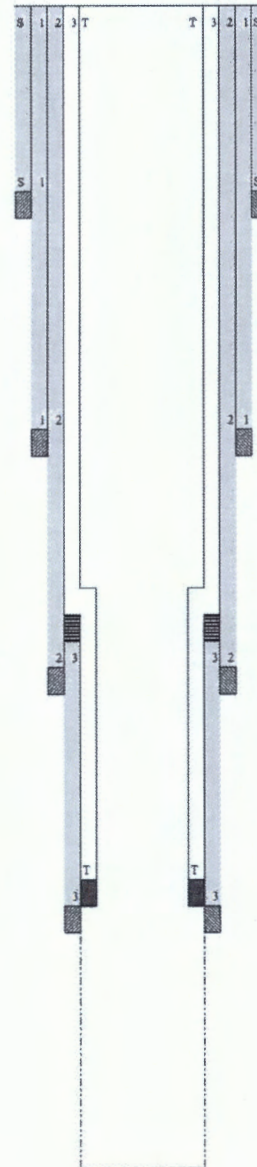
Hole Size: 8.5"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 10103'
Depth Btm: 15413'
Cement: 256 sks - Lite Class C (60:40:0) + Additives
Cement Top: 10103' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5"
Depth: 16803'
Inj. Interval: 15413' - 16803' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 15368'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 10103'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 15378'
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 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 3,083 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	CHIMAYO 16 STATE #003	SNAPPING 2 STATE #014H
API	3001537876	3001542113	3001538105	3001542688
Latitude	32.123642	32.0654	32.1329002	32.06555986
Longitude	-103.9862061	-103.7498165	-103.9933624	-103.7413815
Section	16	2	16	2
Township	25S	26S	25S	26S
Range	29E	31E	29E	31E
Unit	O	N	F	P
Ftg NS	330S	200S	1610N	250S
Ftg EW	1650E	2375W	1455W	330E
County	EDDY	EDDY	EDDY	EDDY
State	NM	NM	NM	NM
Formation	AVALON UPPER	BONE SPRING 3RD SAND	DELAWARE-BRUSHY	WOLFCAMP
Sample Date	7/22/2011	12/14/2015	2/7/2011	42284
PH	7	6.8	7	7.3
TDS mgL	193732.3	91289.1	192950.9	81366.4
Resistivity Ohm-cm		0.089		0.1004
Sodium_mgL	74027.8	28721.3	73057.6	26319.4
Calcium_mgL	513	3441	776	2687.4
Iron_mgL	104	16.3	94	26.1
Magnesium_mgL	118	437.4	177	326.7
Manganese_mgL	1		1.5	
Chloride_mgL	113441	56957.4	112506	50281.2
Bicarbonate_mgL	1830		3123.2	
Sulfate_mgL	2665	327.9	1981	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.
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 GL 3098', RKB 3128'

GEOLOGY PROGNOSIS			
FORMATION	TOP	BOTTOM	THICKNESS
	KB TVD (ft)	KB TVD (ft)	(ft)
Salt	1,484	3,104	1,620
Delaware	3,401	6,866	3,465
Bone Spring	6,866	10,253	3,387
Wolfcamp	10,253	12,164	1,911
Lwr. Mississippian	14,996	15,187	191
Woodford	15,187	15,378	191
Devonian	15,378	16,021	643
Fusselman (Silurian)	16,021	16,828	807
Montoya (U. Ordovician)	16,828	17,236	408
Simpson (M. Ordovician)	17,236	17,810	574

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 200'. Regionally, shallow fresh water is known to exist at depths less than 462'.

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, as POD's C02317 & C02680 appear to be the same well. Samples were obtained from both wells and water analyses are attached.

Well Name	Formation Name	Depth Top	Depth Bottom	Thickness	Status
C 02371	None Given	162'	200'	38'	Sample obtained from tank
C 02680	None Given	N/A	N/A	N/A	Same well as C02317
C 03617 POD1	None Given	Unknown	Unknown	Unknown	Expired Permit, sample obtained from tank

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 RAINDROP FEDERAL SWD	⁶ Well Number 1
⁷ OGRID NO. 328259	⁸ Operator Name PERMIAN OILFIELD PARTNERS, LLC	⁹ Elevation 3098'

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
H	22	25S	29E		1719	NORTH	254	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

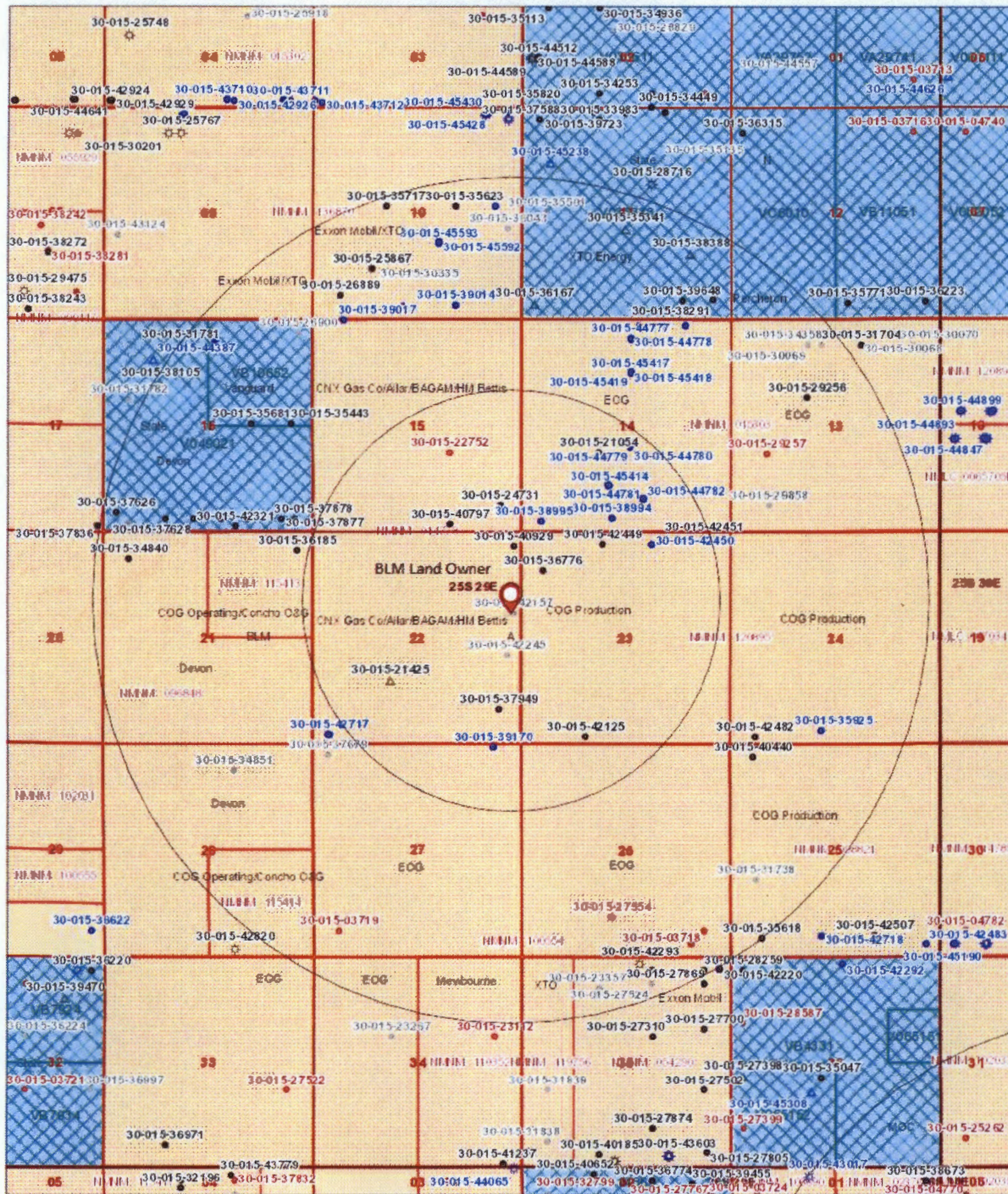
¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

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.

GEODETIC DATA NAD 83 GRID - NM EAST SURFACE LOCATION (S.L.) N: 406877.1 - E: 655513.0 LAT: 32.1180472° N LON: 103.9645388° W CORNER DATA NAD 83 GRID - NM EAST A: FOUND BRASS CAP "1940" N: 403259.7 - E: 650482.7 B: FOUND BRASS CAP "1940" N: 405912.6 - E: 650469.2 C: FOUND 1/2" REBAR W/ AC N: 408561.0 - E: 650435.0 D: FOUND BRASS CAP "1940" N: 408582.0 - E: 653105.8 E: FOUND BRASS CAP "1940" N: 408596.9 - E: 655756.6 F: FOUND BRASS CAP "1940" N: 405940.5 - E: 655772.5 G: CALCULATED CORNER N: 403294.2 - E: 655803.1 H: FOUND BRASS CAP "1940" N: 403272.7 - E: 653137.4	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. Signature: <u>Gary Fisher</u> Date: <u>5-9-2019</u> Printed Name: <u>Gary Fisher</u> E-mail Address: <u>gfisher@popmidstream.com</u>
	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. <u>5-5-2019</u> Date of Survey Signature and Seal of Professional Surveyor: <u>Jeffrey L. Fansler</u> 10034 Certificate Number

Job No.: LS19050532

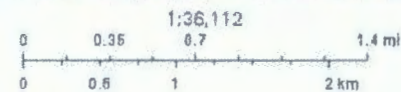
1&2 Mile AOR, Raindrop Federal SWD #1



5/7/2019, 2:53:36 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

Raindrop Federal SWD #1 - Wells Within 1 Mile Area of Review

API Number	Current Operator	Well Name	Well Number	Well Type	Well Direction	Well Status	Section	Township	Range	OC Unit Letter	Surface Location	Bottomhole Location	Formation	MD	TVD
30-015-03717	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	15	T2S5	R29E	M	M-15-25S-29E 660 FSL 660 FWL	M-15-25S-29E 660 FSL 660 FWL	DELAWARE	3185	3185
30-015-21054	ENDEAVOR ENERGY RESOURCES, LP	CORRAL DRAW UNIT	#001	Oil	Vertical	Active	14	T2S5	R29E	K	K-14-25S-29E 1980 FSL 1980 FWL	K-14-25S-29E 1980 FSL 1980 FWL	DELAWARE	5260	5260
30-015-21425	OXY USA INC	CORRAL DRAW	#002	Salt Water Disposal	Vertical	Active	22	T2S5	R29E	K	K-22-25S-29E 1580 FSL 1980 FWL	K-22-25S-29E 1580 FSL 1980 FWL	DELAWARE	3220	3220
30-015-22752	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#002	Oil	Vertical	Plugged, Site Released	15	T2S5	R29E	J	J-15-25S-29E 1980 FSL 1800 FWL	J-15-25S-29E 1980 FSL 1800 FWL	DELAWARE	5300	5300
30-015-24731	BETTS BOYLE & STOWALL INC.	LATHAM FEDERAL	#002	Oil	Vertical	Active	15	T2S5	R29E	P	P-15-25S-29E 660 FSL 530 FWL	P-15-25S-29E 660 FSL 530 FWL	DELAWARE	5500	5500
30-015-36776	XTD ENERGY, INC	PATRON 23 FEDERAL	#001H	Oil	Horizontal	Active	23	T2S5	R29E	D	D-23-25S-29E 990 FSL 560 FWL	D-23-25S-29E 990 FSL 560 FWL	BONE SPRING	11471	7741
30-015-37949	XTD ENERGY, INC	MESCAL 22 FEDERAL	#002H	Oil	Horizontal	Active	22	T2S5	R29E	P	P-22-25S-29E 880 FSL 560 FWL	P-22-25S-29E 880 FSL 560 FWL	BONE SPRING	11193	7337
30-015-38994	EOG RESOURCES INC	HERD BULL 14 FEDERAL	#003H	Oil	Horizontal	New	14	T2S5	R29E	N	N-14-25S-29E 330 FSL 2310 FWL	N-14-25S-29E 330 FSL 2310 FWL	BONE SPRING	11869	7410
30-015-38995	EOG RESOURCES INC	HERD BULL 14 FEDERAL	#004H	Oil	Horizontal	New	14	T2S5	R29E	M	M-14-25S-29E 270 FSL 515 FWL	M-14-25S-29E 270 FSL 515 FWL	BONE SPRING	11509	7400
30-015-39170	EOG RESOURCES INC	WBD 27 FEDERAL	#001	Oil	Vertical	New	27	T2S5	R29E	A	A-27-25S-29E 95 FSL 710 FWL	A-27-25S-29E 95 FSL 710 FWL	DELAWARE	6018	6000
30-015-40929	XTD ENERGY, INC	BLACKBART 15 FEDERAL	#002H	Oil	Horizontal	Active	15	T2S5	R29E	O	O-15-25S-29E 130 FSL 1800 FWL	O-15-25S-29E 130 FSL 1800 FWL	BONE SPRING	12330	7714
30-015-42125	COG PRODUCTION, LLC	MESCAL 22 FEDERAL	#003H	Oil	Horizontal	Active	22	T2S5	R29E	A	A-22-25S-29E 380 FSL 190 FWL	A-22-25S-29E 380 FSL 190 FWL	BONE SPRING	12242	7676
30-015-42245	XTD ENERGY, INC	EL JIMADOR FEDERAL	#003H	Oil	Horizontal	Active	23	T2S5	R29E	N	N-23-25S-29E 190 FSL 1650 FWL	N-23-25S-29E 190 FSL 1650 FWL	DELAWARE	11468	6953
30-015-42450	COG PRODUCTION, LLC	MESCAL 22 FEDERAL	#004H	Oil	Horizontal	Cancelled Apd	22	T2S5	R29E	H	H-22-25S-29E 2050 FSL 190 FWL	H-22-25S-29E 2050 FSL 190 FWL	BONE SPRING	12318	7660
30-015-42451	COG PRODUCTION, LLC	MESCAL 22 FEDERAL	#002H	Oil	Horizontal	Cancelled Apd	22	T2S5	R29E	I	I-22-25S-29E 2220 FSL 360 FWL	I-22-25S-29E 2220 FSL 360 FWL	BONE SPRING	12139	7660
30-015-44779	OXY USA INC	PATRON 23 FEDERAL	#002H	Oil	Horizontal	Active	23	T2S5	R29E	C	C-23-25S-29E 322 FSL 2085 FWL	C-23-25S-29E 322 FSL 2085 FWL	BONE SPRING	12139	7660
30-015-44780	OXY USA INC	PATRON 23 FEDERAL	#004H	Gas	Horizontal	New	23	T2S5	R29E	B	B-23-25S-29E 320 FSL 1980 FWL	B-23-25S-29E 320 FSL 1980 FWL	BONE SPRING	12284	7830
30-015-44781	OXY USA INC	CORRAL DRAW 14 13 FEDERAL	#023H	Oil	Horizontal	Active	23	T2S5	R29E	A	A-23-25S-29E 190 FSL 660 FWL	A-23-25S-29E 190 FSL 660 FWL	WOLF CAMP	14865	10574
30-015-44782	OXY USA INC	CORRAL DRAW 14 13 FEDERAL	#024H	Oil	Horizontal	New	14	T2S5	R29E	J	J-14-25S-29E 2143 FSL 2540 FWL	J-14-25S-29E 2143 FSL 2540 FWL	BONE SPRING	16580	9110
30-015-44782	OXY USA INC	CORRAL DRAW 14 13 FEDERAL	#025H	Oil	Horizontal	New	14	T2S5	R29E	O	O-14-25S-29E 850 FSL 2200 FWL	O-14-25S-29E 850 FSL 2200 FWL	BONE SPRING	16490	9125
30-015-44782	OXY USA INC	CORRAL DRAW 14 13 FEDERAL	#026H	Oil	Horizontal	New	14	T2S5	R29E	O	O-14-25S-29E 850 FSL 2200 FWL	O-14-25S-29E 850 FSL 2200 FWL	BONE SPRING	16549	9125
30-015-45414	OXY USA INC	CORRAL DRAW 14 13 FEDERAL	#056H	Oil	Horizontal	New	14	T2S5	R29E	O	O-14-25S-29E 1126 FSL 2244 FWL	O-14-25S-29E 1126 FSL 2244 FWL	BONE SPRING	17720	10270
30-015-45415	OXY USA INC	CORRAL DRAW 14 13 FEDERAL	#057H	Oil	Horizontal	New	14	T2S5	R29E	N	N-14-25S-29E 1154 FSL 2223 FWL	N-14-25S-29E 1154 FSL 2223 FWL	BONE SPRING	17690	10270
30-015-45416	OXY USA INC	CORRAL DRAW 14 13 FEDERAL	#058H	Oil	Horizontal	New	14	T2S5	R29E	N	N-14-25S-29E 1182 FSL 2202 FWL	N-14-25S-29E 1182 FSL 2202 FWL	BONE SPRING	17757	10270



Statement of Notifications

Re: C-108 Application for SWD Well
Permian Oilfield Partners, LLC
Raindrop Federal SWD #1
Sec. 22, T25S, R29E
1719' FNL, 254' FEL
Eddy County, NM

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

Raindrop 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	9414811899561844911766	5/20/2019
New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe, NM 87501	USPS	9414811899561844949561	5/20/2019
CNX Gas Company, LLC	200 Evergreen Drive	Waynesburg, PA 15370	USPS	9414811899561847874518	5/20/2019
CNX Gas Company, LLC	1000 Consol Energy Dr.	Canonsburg, PA, 15317-6506	USPS	9414811899561844911995	5/20/2019
The Allar Co.	735 Elm St.	Graham, TX 76450	USPS	9414811899561844943781	5/20/2019
Bagam LTD	P.O. Box 900	Graham, TX 76450	USPS	9414811899561844916495	5/20/2019
Bagam LTD	901 4th St.	Graham, TX 76450	USPS	9414811899561844916099	5/20/2019
H.M. Bettis Inc.	P.O. Box 1240	Graham, TX 76450	USPS	9414811899561844949493	5/20/2019
COG Operating, LLC	600 West Illinois Avenue	Midland, TX 79701	USPS	9414811899561844911186	5/20/2019
Concho Oil & Gas, LLC	550 West Texas Avenue, Suite 100	Midland, TX 79701	USPS	9414811899561844911032	5/20/2019
Devon Energy Production Company, LP	333 West Sheridan Avenue	Oklahoma City, OK 73102	USPS	9414811899561844949196	5/20/2019
EOG Resources Inc.	P.O. Box 2267	Midland, TX 79702	USPS	9414811899561844949028	5/20/2019
COG Production, LLC	400 North Marienfeld Street, Suite 200	Midland, TX 79701	USPS	9414811899561844911377	5/20/2019
Endeavor Energy Resources, LP	110 North Marienfeld Suite 200	Midland, TX 79701	USPS	9414811899561844949349	5/20/2019
OXY USA Inc.	5 Greenway Plaza, Suite 110	Houston, Texas 77046-0521	USPS	9414811899561844943286	5/20/2019
Bettis, Boyle & Stovall, Inc.	P.O. Box 1240	Graham, TX 76450	USPS	9414811899561844916549	5/20/2019
XTO Energy Inc.	6401 Holiday Hill Road Building #5	Midland, TX 79707	USPS	9414811899561844943699	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 9117 66

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

Postmark
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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 9485 61

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1847 8745 18

ARTICLE ADDRESSED TO:

CNX Gas Company, LLC
200 Evergreene Drive
Waynesburg PA 15370-6002

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

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ARTICLE NUMBER: 9414 8118 9956 1844 9119 95

ARTICLE ADDRESSED TO:

CNX Gas Company
1000 Consol Energy Dr.
Canonsburg PA 15317-6506

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

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ARTICLE NUMBER: 9414 8118 9956 1844 9437 81

ARTICLE ADDRESSED TO:

The Allar Co.
735 Elm Street
Graham TX 76450-3018

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

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ARTICLE NUMBER: 9414 8118 9956 1844 9184 85

ARTICLE ADDRESSED TO:

Bagam LTD
PO Box 900
Graham TX 76450-0900

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

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ARTICLE NUMBER: 9414 8118 9956 1844 9160 99

ARTICLE ADDRESSED TO:

Bagam LTD
901 4th Street
Graham TX 76450-3115

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 9111 86

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

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ARTICLE NUMBER: 9414 8118 9956 1844 9491 96

ARTICLE ADDRESSED TO:

Devon Energy Operating Co, LP
333 West Sheridan Ave
Oklahoma City OK 73102-5010

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

Postmark
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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1844 9494 93

ARTICLE ADDRESSED TO:

H.M. Bettis Inc
PO Box 1240
Graham TX 76450-1240

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

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ARTICLE NUMBER: 9414 8118 9956 1844 9110 32

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

Postmark
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ARTICLE NUMBER: 9414 8118 9956 1844 9490 28

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

Postmark
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ARTICLE NUMBER: 9414 8118 9856 1844 9113 77

ARTICLE ADDRESSED TO:

COG Production
400 North Marienfeld Street, Suite 200
Midland TX 79701-4559

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

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ARTICLE NUMBER: 9414 8118 9856 1844 9483 49

ARTICLE ADDRESSED TO:

Endeavor Energy Resources, LP
110 North Marienfeld St Suite 200
Midland TX 79701-4412

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

Postmark
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ARTICLE NUMBER: 9414 8118 9856 1844 9432 86

ARTICLE ADDRESSED TO:

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

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

Postmark
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ARTICLE NUMBER: 9414 8118 9856 1844 9165 49

ARTICLE ADDRESSED TO:

Bettis, Boyle & Stovall, Ilc
PO Box 1240
Graham TX 76450-1240

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

Postmark
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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9856 1844 9438 99

ARTICLE ADDRESSED TO:

XTO Energy, Inc.
6401 Holiday Hill Road Bldg #5
Midland TX 79707-2157

FEES

Postage Per Piece	\$3.50
Certified Fee	3.50
Total Postage & Fees:	7.00

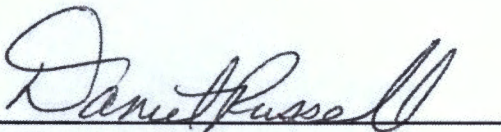
Postmark
Here

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

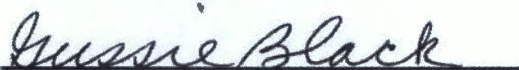
I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

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



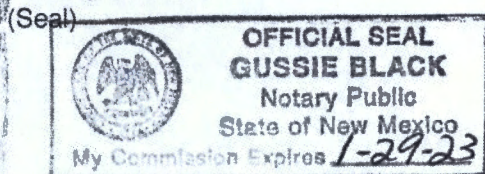
Publisher

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 Raindrop Federal SWD #1, and is located 1719' FNL & 254' FEL, Unit Letter H, Section 22, Township 25 South, Range 29 East, NMPM. The well will dispose of water produced from nearby oil and gas wells into the Devonian formation from a depth of 15,413 feet to 16,803 feet. The maximum expected injection rate is 50,000 BWPD at a maximum surface injection pressure of 3,083 psi.

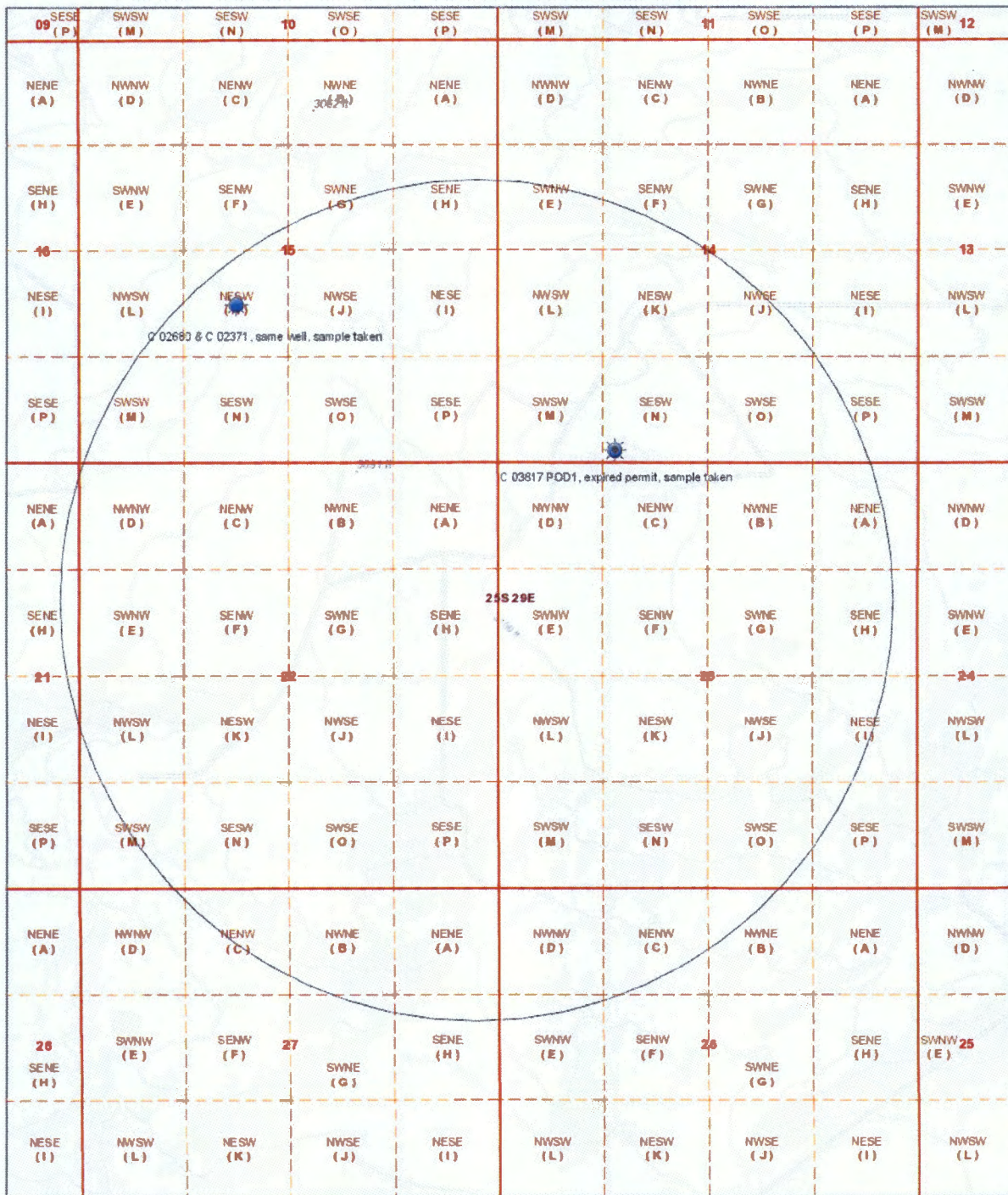
Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505 within 15 days.
#34138

67115647

00228361

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

Water Wells within 1 Mile, Raindrop Federal SWD #1



5/11/2019, 7:03:10 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 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	Sub-basin	County	Q 6	Q 4	Q 16	Sec	Tw	Rng	X	Y	DepthWell	DepthWater	Water Column
C 01337	C	ED		2	1	30	25S	29E		591926	3552642*	180	30	150
C 01880	C	ED		3	3	2	06	25S	29E	592161	3558605*	85	40	45
C 02371	C	ED		2	3	15	25S	29E		596741	3555106*	200	60	140
C 02459	C	ED		4	4	1	02	25S	29E	598422	3558663*	150		
C 02518	C	ED		3	4	08	25S	29E		593895	3556300*	462		
C 02680	CUB	ED		2	3	15	25S	29E		596741	3555106*	200		

Average Depth to Water: **43 feet**

Minimum Depth: **30 feet**

Maximum Depth: **60 feet**

Record Count: 6

PLSS Search:

Township: 25S **Range:** 29E

*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.

5/9/19 8:07 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	Water Column
C 01354 X-3		CUB	ED	2	1	3	23	26S	29E	598323	3543837	170		
C 02038		C	ED	3	2	4	26	26S	29E	599204	3541992*	200		
C 03507 POD1		C	ED	1	3	3	05	26S	29E	593064	3548313	140	78	62
C 03508 POD1		C	ED	1	3	3	05	26S	29E	593063	3548361	140	75	65
C 03605 POD1		CUB	ED	4	2	3	27	26S	29E	596990	3541983	45	0	45

Average Depth to Water: **51 feet**

Minimum Depth: **0 feet**

Maximum Depth: **78 feet**

Record Count: 5

PLSS Search:

Township: 26S **Range:** 29E

*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.

5/9/19 8:25 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)			
		(quarters are smallest to largest)							
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 02371	2	3	15	25S	29E		596741	3555106* 
Driller License: 1259		Driller Company:				CAMPBELL DRILLING			
Driller Name:		CAMPBELL, MICHAEL R.							
Drill Start Date: 01/12/1995		Drill Finish Date:				01/24/1995		Plug Date:	
Log File Date: 02/01/1995		PCW Rcv Date:						Source: Shallow	
Pump Type:		Pipe Discharge Size:						Estimated Yield: 20 GPM	
Casing Size: 7.00		Depth Well:				200 feet		Depth Water: 60 feet	
Water Bearing Stratifications:		Top	Bottom	Description					
		162	200	Sandstone/Gravel/Conglomerate					
Casing Perforations:		Top	Bottom						
		140	200						

*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.

5/9/19 8:13 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	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 02680	2	3	15	25S	29E	596741	3555106*	

Driller License:**Driller Company:****Driller Name:****Drill Start Date:****Drill Finish Date:**

04/30/1964

Plug Date:**Log File Date:****PCW Rcv Date:****Source:****Pump Type:****Pipe Discharge Size:****Estimated Yield:****Casing Size:** 6.00**Depth Well:**

200 feet

Depth Water:

*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.

5/9/19 8:12 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
		Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 03617 POD1	3	4	3	14	25S	29E	598208	3554566 

Driller License:

Driller Company:

Driller Name:

Drill Start Date:

Drill Finish Date:

Plug Date:

Log File Date:

PCW Rcv Date:

Source:

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size:

Depth Well:

Depth Water:

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.

5/11/19 3:41 PM

POINT OF DIVERSION SUMMARY

Imperative Water Analysis Report

IMPERATIVE
CHEMICAL PARTNERS

SYSTEM IDENTIFICATION

Company: Permian Oilfield Partners, LLC
Location: Raindrop Federal SWD 1 Well 3
Sample Source: Tank Fresh Water
Account Rep: Danny Gonzales

Sample ID#: W-8780

Sample Date: 05-10-2019

Report Date: 05-13-2019

WATER CHEMISTRY

CATIONS

Calcium(as Ca)	61.35
Magnesium(as Mg)	19.15
Barium(as Ba)	0.01
Strontium(as Sr)	1.12
Sodium(as Na)	168.08
Potassium(as K)	40.33
Iron(as Fe)	0.62
Manganese(as Mn)	0.03

ANIONS

Chloride(as Cl)	400.00
Sulfate(as SO ₄)	4.00
Dissolved CO ₂ (as CO ₂)	0.00
Bicarbonate(as HCO ₃)	60.00
H ₂ S (as H ₂ S)	8.55
Boron(as B)	7.96

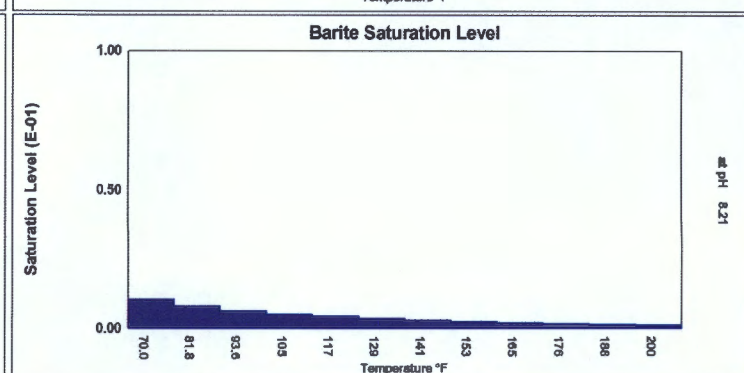
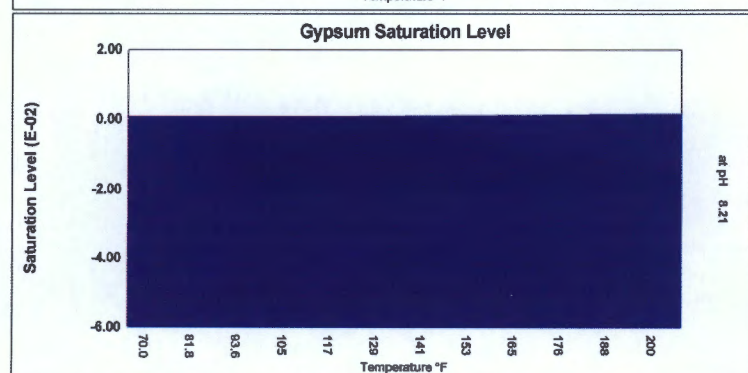
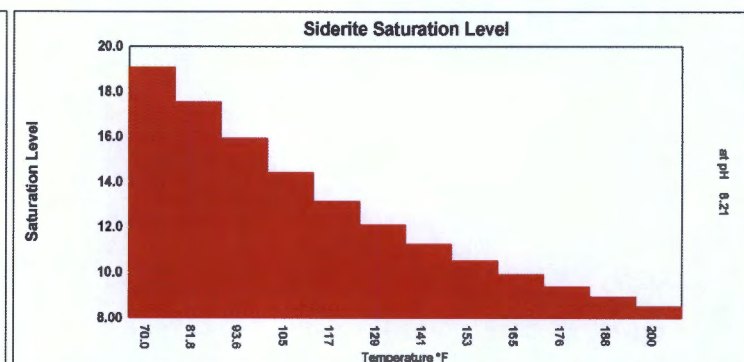
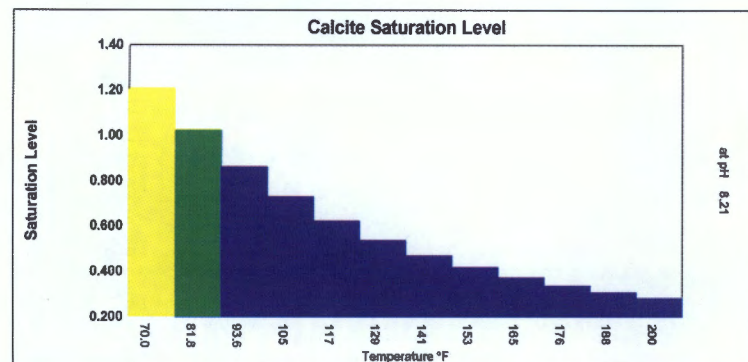
PARAMETERS

Temperature(°F)	77.00
Sample pH	8.14
Conductivity	1355
T.D.S.	806.56
Resistivity	737.81
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	1.20	0.0550	< 0.001	-477.12	< 0.001	-403.82	0.0107	-0.470	< 0.001
81.82	1.36	1.02	0.00521	< 0.001	-464.56	< 0.001	-405.52	0.00822	-0.591	< 0.001
93.64	1.73	0.862	-0.0304	< 0.001	-445.20	< 0.001	-404.79	0.00652	-0.718	< 0.001
105.45	2.09	0.728	-0.0543	< 0.001	-420.46	< 0.001	-397.83	0.00532	-0.847	< 0.001
117.27	2.45	0.622	-0.0689	< 0.001	-391.75	< 0.001	-372.66	0.00440	-0.984	< 0.001
129.09	2.82	0.538	-0.0772	< 0.001	-360.44	< 0.001	-350.09	0.00365	-1.13	< 0.001
140.91	3.18	0.471	-0.0812	< 0.001	-327.74	0.00103	-329.80	0.00305	-1.30	< 0.001
152.73	3.55	0.418	-0.0827	< 0.001	-294.71	0.00112	-311.51	0.00256	-1.47	< 0.001
164.55	3.91	0.375	-0.0825	0.00120	-262.22	0.00122	-294.98	0.00215	-1.66	< 0.001
176.36	4.27	0.338	-0.0813	0.00148	-230.95	0.00131	-280.02	0.00182	-1.86	< 0.001
188.18	4.64	0.308	-0.0796	0.00184	-201.40	0.00140	-266.44	0.00155	-2.07	< 0.001
200.00	5.00	0.283	-0.0775	0.00232	-173.92	0.00150	-254.11	0.00132	-2.29	< 0.001
		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: Raindrop Federal SWD 1 Well 3
Sample Source: Tank Fresh Water
Account Rep: Danny Gonzales

Sample ID#: W-8781

Sample Date: 05-10-2019
Report Date: 05-13-2019

WATER CHEMISTRY

CATIONS

Calcium(as Ca)	103.90
Magnesium(as Mg)	33.66
Barium(as Ba)	0.05
Strontium(as Sr)	2.16
Sodium(as Na)	84.08
Potassium(as K)	39.84
Iron(as Fe)	0.06
Manganese(as Mn)	0.02

ANIONS

Chloride(as Cl)	400.00
Sulfate(as SO ₄)	11.00
Dissolved CO ₂ (as CO ₂)	20.00
Bicarbonate(as HCO ₃)	61.00
H ₂ S (as H ₂ S)	4.27
Boron(as B)	7.12

PARAMETERS

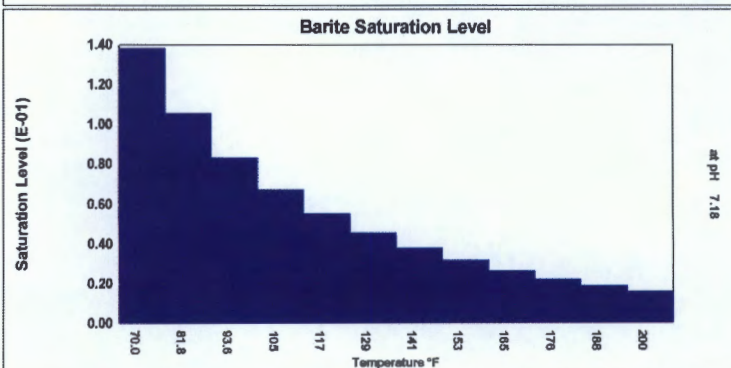
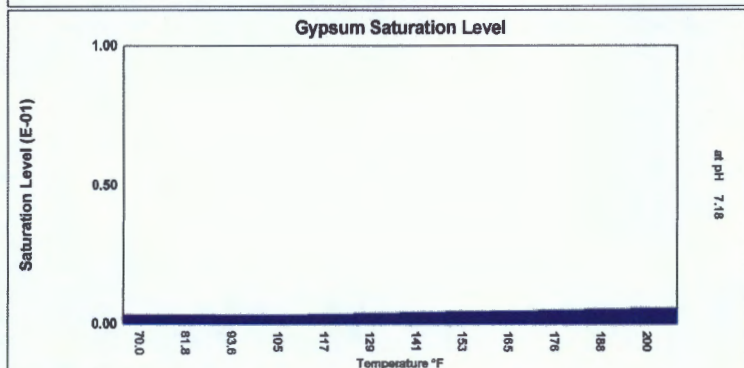
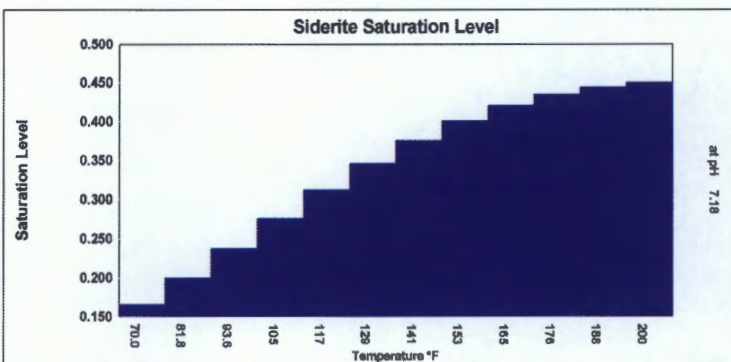
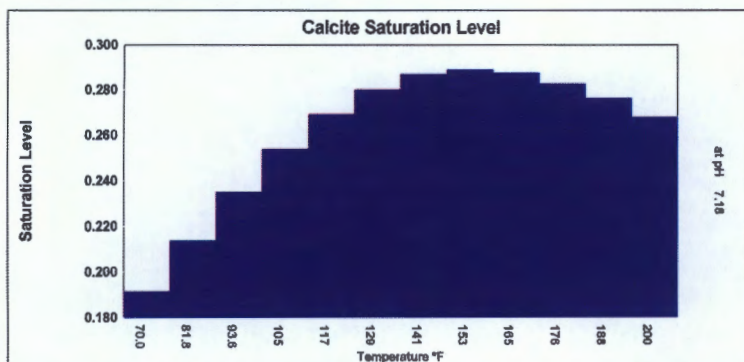
Temperature(°F)	104.40
Sample pH	7.16
Conductivity	1297
T.D.S.	784.74
Resistivity	771.06
Sp.Gr.(g/mL)	1.00

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	0.192	-0.135	0.00190	-462.72	0.00325	-385.62	0.138	-0.190	0.00345	-47.66	0.165	-0.0557	1.88	0.00861	0.0155	0.00739
81.82	1.36	0.214	-0.118	0.00195	-450.09	0.00315	-387.48	0.105	-0.256	0.00347	-47.08	0.200	-0.0472	1.68	0.00735	0.0284	0.00874
93.64	1.73	0.235	-0.103	0.00207	-430.56	0.00310	-386.86	0.0831	-0.329	0.00355	-46.04	0.237	-0.0401	1.50	0.00601	0.0452	0.0101
105.45	2.09	0.254	-0.0916	0.00225	-405.58	0.00313	-379.93	0.0674	-0.408	0.00367	-44.75	0.275	-0.0341	1.34	0.00454	0.0641	0.0114
117.27	2.45	0.269	-0.0819	0.00250	-376.59	0.00344	-354.59	0.0553	-0.497	0.00379	-43.50	0.312	-0.0292	1.19	0.00278	0.0691	0.0128
129.09	2.82	0.280	-0.0740	0.00284	-344.98	0.00376	-331.89	0.0456	-0.599	0.00390	-42.36	0.346	-0.0251	1.03	< 0.001	0.0701	0.0141
140.91	3.18	0.287	-0.0675	0.00330	-311.99	0.00409	-311.51	0.0378	-0.716	0.00400	-41.32	0.376	-0.0219	0.891	-0.00211	0.0629	0.0155
152.73	3.55	0.289	-0.0623	0.00390	-278.71	0.00441	-293.16	0.0315	-0.847	0.00408	-40.38	0.401	-0.0193	0.760	-0.00538	0.0686	0.0168
164.55	3.91	0.287	-0.0580	0.00468	-246.02	0.00474	-276.61	0.0263	-0.995	0.00415	-39.52	0.420	-0.0172	0.642	-0.00931	0.0742	0.0181
176.36	4.27	0.283	-0.0544	0.00571	-214.63	0.00506	-261.64	0.0221	-1.16	0.00421	-38.74	0.435	-0.0156	0.540	-0.0140	0.0784	0.0195
188.18	4.64	0.276	-0.0514	0.00705	-185.06	0.00538	-248.09	0.0186	-1.34	0.00425	-38.03	0.445	-0.0142	0.453	-0.0194	0.0442	0.0208
200.00	5.00	0.268	-0.0488	0.00883	-157.67	0.00569	-235.80	0.0157	-1.54	0.00428	-37.39	0.450	-0.0132	0.379	-0.0256	0.0341	0.0222
		xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels	xSAT	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.





Item XII. Affirmative Statement

Re: C-108 Application for SWD Well
Permian Oilfield Partners, LLC
Raindrop Federal SWD #1
Sec. 22, T25S, R29E
1719' FNL, 254' 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.

A handwritten signature in black ink, appearing to read "Gary Fisher".

Gary Fisher
Manager
Permian Oilfield Partners, LLC.

Date: 5/11/2019

Plugging Risk Assessment
Permian Oilfield Partners, LLC.
Raindrop Federal SWD #1
SL: 1719' FNL & 254' FEL
Sec 22, T25S, R29E
Eddy County, New Mexico

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Raindrop Federal SWD #1
1719' FNL, 254' FEL
Sec. 22, T2SS, R29E, Eddy Co. NM
Lat 32.1180472° N, Lon 103.9645388° W
GL 3098', RKB 3128'

Surface - (Conventional)

Hole Size: 26"
Casing: 20" - 94# H-40 STC Casing
Depth Top: Surface
Depth Btm: 777'
Cement: 482 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: 3426'
Cement: 1168 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: 10303'
Cement: 1751 sks - Lite Class C (60:40:0) + Additives
Cement Top: Surface - (Circulate)
ECP/DV Tool: 3526'

Intermediate #3 - (Liner)

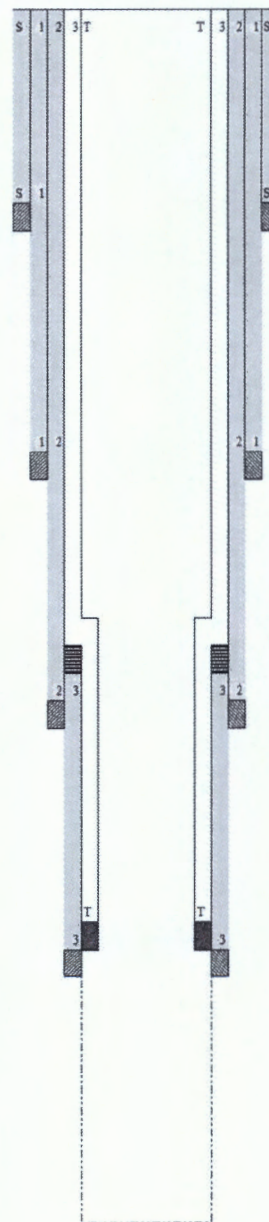
Hole Size: 8.5"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 10103'
Depth Btm: 15413'
Cement: 256 sks - Lite Class C (60:40:0) + Additives
Cement Top: 10103' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5"
Depth: 16803'
Inj. Interval: 15413' - 16803' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 15368'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 10103'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 15378'
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 1/8" to 7 1/8" Inclusive

Maximum Catch Size (Spiral)		6 1/8"	6 3/4"	7"	7 1/8"
Maximum Catch Size (Basket)		5 1/8"	6 1/8"	6 3/4"	6 5/8"
Overshot O.D.		8 1/4"	7 7/8"	8 1/8"	8 1/4"
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-1818	A-5229	Q228	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 1/8" to 5 1/8" Inclusive

Maximum Catch Size (Spiral)		4 1/8"	4 3/8"	4 1/2"	4 7/8"	5"	5 1/8"	5 1/4"
Maximum Catch Size (Basket)		3 1/4"	4"	4 1/8"	4 1/2"	4 7/8"	5"	5 1/8"
Overshot O.D.		5 1/8"	5 3/8"	5 1/2"	5 7/8"	6"	6 1/8"	6 1/4"
Type		E.S.	S.H.	S.H.	S.F.S.	S.H.	F.S.	S.H.
Complete Assembly	Part No.	5888	5888	C-5108	8875	C-5171	C-4825	8825
(Dressed Spiral Parts)	Weight	130	130	133	138	140	182	185

Replacement Parts

Top Sub	Part No.	5887	5888	A-5168	8876	A-5172	B-4828	8828
Bowl	Part No.	5888	5700	B-5170	8877	B-5173	B-4827	8817
Packer	Part No.	189	1140	B-2188	8114	L-5050	L-4505	8818
Spiral Grapple	Part No.	185	1135	B-2201	8112	B-4388	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.	185	1135	B-2201	8112	B-4388	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-2188-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
Raindrop Federal SWD #1
Sec. 22, T25S, R29E
1719' FNL, 254' FEL
Eddy County, NM

May 16, 2019

STATEMENT REGARDING SEISMICITY

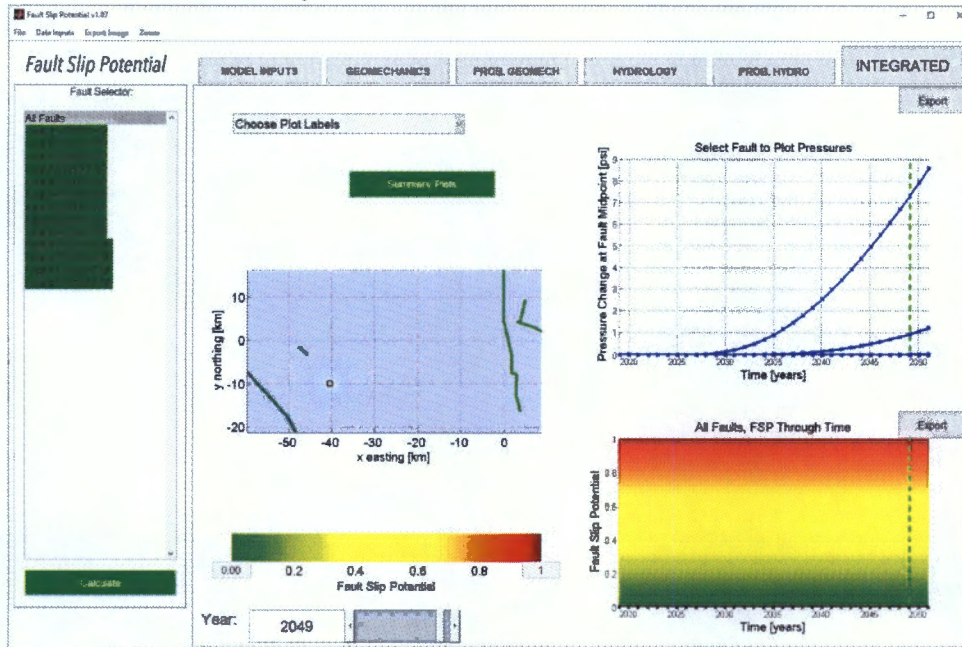
Examination of the USGS and TexNet seismic activity databases has shown minimal historic seismic activity in the area (< 30 miles) of our proposed above referenced SWD well as follows:

1. M2.9, 1984-12-09, 25.98 miles away @ 66.65 deg heading
2. M3.1, 2012-03-18, 11.98 miles away @ 20.44 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 8 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 2.02 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 12:27 PM
To: 'spuryear@popmidstream.com'
Cc: Goetze, Phillip, EMNRD; Jones, William V, EMNRD
Subject: Permian Oilfield Partners, LLC Raindrop Federal SWD Well No. 1

Sean:

Your application for the Permian Oilfield Partners, LLC Raindrop 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: McMillan, Michael, EMNRD
Sent: Monday, June 3, 2019 9:42 AM
To: 'spuryear@popmidstream.com'
Cc: Goetze, Phillip, EMNRD; Jones, William V, EMNRD; Brooks, David K, EMNRD
Subject: RE: [EXT] RE: Permian Oilfield Partners, LLC Raindrop 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 5:46 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 Raindrop Federal SWD Well No. 1

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 12:27 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 Raindrop Federal SWD Well No. 1

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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 Raindrop Federal SWD Well No. 1
Attachments: Permian Oilfield Ptrs Raindrop 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 12:27 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 Raindrop 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

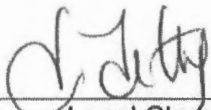
Ad No.
0001286967

PERMIAN OILFIELD PARTNERS, LLC
PO BOX 3329

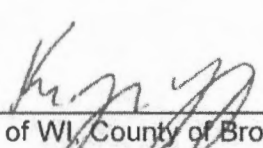
HOBBS NM 88241

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

11/9/22
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 Raindrop Federal SWD #1, and is located 1719' FNL & 254' FEL, Unit Letter H, Section 22, Township 25 South, Range 29 East, NMPM. The well will dispose of water produced from nearby oil and gas wells into the Devonian formation from a depth of 15,413 feet to 16,803 feet. The maximum expected injection rate is 50,000 BWPD at a maximum surface injection pressure of 3,083 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.



Ad#:0001286967
P O : Raindrop Federal SWD #1
of Affidavits :0.00