Initial

Application Part I

Received: 07/09/2019

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

RECEIVED: 07/	09/2019	REVIEWER:	TYPE SWD	APP NO: pMAV	11919128532
	THIS CHECKLIST F	ABOVE NEW MEXICO OIL - Geological & El 220 South St. Francis D ADMINISTRATIVE A I IS MANDATORY FOR ALL ADMINIS REGULATIONS WHICH REQUIRE PRO	CONSERVATION ngineering Bure Drive, Santa Fe, I APPLICATION CI TRATIVE APPLICATIONS FO DESSING AT THE DIVISION	I DIVISION au – NM 87505 HECKLIST DR EXCEPTIONS TO DI I LEVEL IN SANTA FE	VISION RULES AND
Applicant: <u>Pe</u> Well Name:	rmian Oilfield Pa Cascade Federal	rtners, LLC. SWD #1		OGRID N API: 30-025	Number: <u>328259</u> 5-Pending
Pool: <u>SWD; Devo</u>	onian-Silurian			Pool Co	de: 97869
SUBMIT AC 1) TYPE OF A A. Loca B. Che [1] ([1]]	CURATE AN APPLICATIO ation – Spac INSL ck one only Comminglin DHC Injection –	ID COMPLETE INFORMAT INDIC N: Check those which a cing Unit – Simultaneous NSP(PROJECT AREA) y for [1] or [11] ng – Storage – Measurer CTB PLC Disposal – Pressure Incre	TION REQUIRED TO CATED BELOW apply for [A] s Dedication NSP(PRORAT Ment PC DLS ease – Enhanced) PROCESS THE 10N UNIT) SD	TYPE OF APPLICATION
2) NOTIFICA A. ■ C B. ■ R C. ■ A D. ■ N E. ■ N F. ■ S G.■ F H. ■ N	UWFX TION REQU Iffset opera oyalty, ove oplication otification otification urface owr or all of the o notice re	PMX SWD IRED TO: Check those wators or lease holders erriding royalty owners, re- requires published notic and/or concurrent app and/or concurrent app ner e above, proof of notific equired]IPI ☐EOR /hich apply. evenue owners ce proval by SLO proval by BLM ation or publicati	PPR	FOR OCD ONLY Notice Complete Application Content Complete d, and/or,

 CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Gary Fisher

Print or Type Name

aufe Finner

7-9-2019 Date

(817) 606-7630

Phone Number

gfisher@popmidstream.com e-mail Address

Signature

Received by OCD: 7/9/2019 3:45:42 PM



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

Re: Amended C-108 Application for SWD Well Permian Oilfield Partners, LLC Cascade Federal SWD #1 Sec. 34, Twp. 25S, Rge. 32E 1336' FNL, 272' FWL Eddy County, NM

Mr. McMillan,

Permian Oilfield Partners LLC requests to amend our previously submitted C-108 for the Cascade Federal SWD #1, to move the location approximately 2 miles North, to avoid a 1.5 mile distance conflict with a recently approved nearby Devonian SWD permit. Included in this file is the Amended C-108, C-102, 1 & 2 mile area of review map, and list of wells and operators in the 1 mi radius, as well as proof of notice and the affidavit of publication for the Amended location. Also included are a revised fishing assessment and revised seismicity statement. A copy has been mailed to the NMOCD District 2 office in Artesia.

Please let me know if you have any questions or require any other information. Thanks & regards,

Gary Fisher

Permian Oilfield Partners, LLC PO Box 3329 Hobbs, NM 88241 Mobile (817)606-7630 gfisher@popmidstream.com Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

PHONE: (817) 600-8772

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: **Disposal** Application qualifies for administrative approval? **Yes**

II. OPERATOR: Permian Oilfield Partners, LLC.

ADDRESS: P.O. Box 3329, Hobbs, NM 88241

CONTACT PARTY: Sean Puryear

- 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

SIGNATURE: Sem Funz

TITLE: Manager

DATE: 6/27/2019

E-MAIL ADDRESS: spuryear@popmidstream.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Previous submission 5-13-2019, relocation approx. 2 miles North to avoid conflict with offset SWD. Sections V-XIII updated for new location.

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 <u>14,222</u>'

Underlying Potentially Productive Zones: None

WELL CONSTRUCTION DATA

Permian Oilfield Partners, LLC. Cascade Federal SWD #1 1336' FNL, 272' FWL Sec. 34, T25S, R30E, Eddy Co. NM Lat 32.0901130° N, Lon 103.8767589° W GL 3231', RKB 3261'

Surface - (Conventional)

Hole Size: 26" Casing: 20" - 94# H-40 & 106.5# J-55 STC Casing Depth Top: Surface Depth Btm: 1138' Cement: 757 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: 3611' Cement: 1267 sks - Lite Class C (50:50:10) + Additives Cement Top: Surface - (Circulate)

Intermediate #2 - (Conventional)

Hole Size: 12.25" Casing: 9.625" - 40# L-80 & 40# HCL-80 BTC Casing Depth Top: Surface Depth Btm: 10792' ECP/DV Tool: 3711' Cement: 1830 sks - Lite Class C (60:40:0) + Additives Cement Top: Surface - (Circulate)

Intermediate #3 - (Liner)

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

Depth Top: 10592' Depth Btm: 16454' Cement: 270 sks - Lite Class C (60:40:0) + Additives Cement Top: 10592' - (Volumetric)

Hole Size: 8.5"

Intermediate #4 - (Open Hole)

Hole Size: 6.5" Depth: 17922' Inj. Interval: 16454' - 17922' (Open-Hole Completion)

Tubing - (Tapered)

 Tubing Depth:
 16409'
 Tubing:
 7" - 26# HCP-110 FJ Casing & 5.5"
 17# HCL-80

 X/O Depth:
 10592'
 FJ Casing (Fiberglass Lined)

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

 Packer Depth:
 16419'
 Packer:
 5.5" - Perma-Pak or Equivalent (Inconel)

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC. Cascade Federal SWD #1 1336' FNL, 272' FWL Sec. 34, T25S, R30E, Eddy Co. NM Lat 32.0901130° N, Lon 103.8767589° W GL 3231', RKB 3261'

Surface - (Conventional)

Hole Size:	26"
Casing:	20" - 94# H-40 & 106.5# J-55 STC Casing
Depth Top:	Surface
Depth Btm:	1138'
Cement:	757 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:	3611'
Cement:	1267 sks - Lite Class C (50:50:10) + Additives
Cement Top:	Surface - (Circulate)

Intermediate #2 - (Conventional)

 Hole Size:
 12.25"

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

 Depth Top:
 Surface

 Depth Btm:
 10792'

 Cement:
 1830 sks - Lite Class C (60:40:0) + Additives

 Cement Top:
 Surface - (Circulate)

 ECP/DV Tool:
 3711'

Intermediate #3 - (Liner)

 Hole Size:
 8.5"

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

 Depth Top:
 10592'

 Depth Btm:
 16454'

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

 Cement Top:
 10592' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size:	6.5"
Depth:	17922'
Inj. Interval:	16454' - 17922' (Open-Hole Completion)



Tubing - (Tapered)

 Tubing Depth:
 16409'

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

 X/O Depth:
 10592'

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

 Packer Depth:
 16419'

 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 <u>40,000</u> BWPD The maximum injected volume anticipated is <u>50,000</u> BWPD
- 2. Injection will be through a closed system
- 3. The average injection pressure anticipated is <u>2,000</u> psi The proposed maximum injection pressure is <u>3,291</u> 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.

	COOTER 16 STATE	SNAPPING 2 STATE		SNAPPING 2
	COM #006H	#013H	USA #001	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	255	265	265	26S
Range	29E	31E	30E	31E
Unit	0	Ν	E	Р
Ftg NS	330S	2005	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	235	235
Range	34E	34E
Unit	К	0
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
РН	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. Cascade Federal SWD #1 1336' FNL, 272' FWL Sec. 34, T25S, R30E, Eddy Co. NM Lat 32.0901130° N, Lon 103.8767589° W GL 3231', RKB 3261'

GEOLOGY PROGNOSIS											
FORMATION	TOP	BOTTOM	THICKNESS								
FORMATION	KB TVD (ft)	KB TVD (ft)	(ft)								
Salt	1,401	3,442	2,041								
Delaware	3,586	7,440	3,854								
Bone Spring	7,440	10,742	3,302								
Wolfcamp	10,742	12,550	1,808								
Lwr. Mississippian	15,917	16,204	287								
Woodford	16,204	16,419	215								
Devonian	16,419	17,278	859								
Fusselman (Silurian)	17,278	17,947	669								
Montoya (U. Ordovician)	17,947	18,496	549								
Simpson (M. Ordovician)	18,496	19,266	770								

- 2. According to the New Mexico Office of the State Engineer and field exploration, there is <u>1</u> fresh water well within the proposed well's one-mile area of review, indicating the presence of freshwater at depths less than <u>805'</u>. An attempt was made to sample this well, but the wellbore was not located, and no surface equipment exists. Regionally, shallow fresh water is known to exist at depths less than <u>805'</u>.
- **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 is <u>1</u> fresh water well within the proposed well's one-mile area of review. An attempt was made to sample this well, but the wellbore was not located, and no surface equipment exists.

Well Name	Formation Name	Depth Top	Depth Bottom	Thickness	Status
C 03782 POD1	None Given	277'	805'	528'	Inactive-not found

- **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

X AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT														
¹ API Number ² Pool 6							³ Pool Nar	ne						
		97869 SWD; DEVONIAN-SILURIAN												
		•		5 Prope	rty Nam	ne			6 Well Number					
			CA	SCADE F	'EDE	ERAL SWD				1				
				8 Opera	tor Nan	ne			9]	9Elevation				
		P	ERMIAN	OILFIEI	LD F	PARTNERS I	LC			3231'				
				¹⁰ Surfa	ce L	ocation								
Section	Township	Range	Lot Idn	Feet from th	ne	North/South line	Feet From the	East/W	est line	County				
34	25S	30E		1336		NORTH	272	WE	ST	EDDY				
		11	Bottom H	Iole Locat	ion I	f Different Fro	om Surface							
Section	Township	Range	Lot Idn	Feet from th	ne	North/South line	Feet from the	East/W	est line	County				
13 Joint o	or Infill 14 C	onsolidation	Code 15	Order No.	•		•							
	PI Number Section 34	V VI Number Section Township 34 25S Section Township 13 Joint or Infill 14 Co	Section Township Range 34 25S 30E 11 Joint or Infill 14 Consolidation	Section Township Range Lot Idn 34 25S 30E 11 Bottom H Section Township Range Lot Idn 13 Joint or Infill 14 Consolidation Code 15	WELL LOCATION AND A PI Number 2Pool Code 97869 SPrope CASCADE F 8 Opera PERMIAN OILFIEI 10 Surfa Section Township Range Lot Idn Feet from tl 34 25S 30E 11 Bottom Hole Locat Section Township Range Lot Idn Feet from tl 13 Joint or Infill 14 Consolidation Code 15 Order No.	WELL LOCATION AND ACKI 2Pool Code 97869 SProperty Nan CASCADE FEDB © Operator Nar PERMIAN OILFIELD I Bottom Hole Location I 10 Surface L Section Township Range Lot Idn Feet from the 34 25S 30E 11 Bottom Hole Location I Section Township Range Lot Idn Feet from the 11 Bottom Hole Location I Section I Township Range Lot Idn Feet from the 13 Joint or Infill 14 Consolidation Code 15 Order No. 15 Order No.	WELL LOCATION AND ACKEAGE DEDIC PI Number 2Pool Code 97869 S SProperty Name CASCADE FEDERAL SWD ® Operator Name PERMIAN OILFIELD PARTNERS L 0 Surface Location Section Township Range Lot Idn Feet from the North/South line 34 25S 30E 13 Joint or Infill 13 Joint or Infill 14 Consolidation Code 15 Order No.	WELL LOCATION AND ACKEAGE DEDICATION PLA 2Pool Code 3Pool Nar 97869 SWD; DEVONI/ SProperty Name CASCADE FEDERAL SWD * Operator Name PERMIAN OILFIELD PARTNERS LLC * Operator Name PERMIAN OILFIELD PARTNERS LLC * Operator Name * Operator	WELL LOCATION AND ACKEAGE DEDICATION PLAT ³ Pool Name ³ Pool Name SWD; DEVONIAN-SILU ⁵ Property Name CASCADE FEDERAL SWD ⁸ Operator Name PERMIAN OILFIELD PARTNERS LLC ¹⁰ Surface Location Section Township Range Lot Idn Feet from the North/South line Feet From the East/We 11 Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the North/South line Feet from the East/We 11 Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the North/South line Feet from the East/We 13 Joint or Infill 14 Consolidation Code 15 Order No.	WELL LOCATION AND ACREAGE DEDICATION PLAT Provest Color 2 Pool Code 3 Pool Name 97869 SWD; DEVONIAN-SILURIAN SProperty Name CASCADE FEDERAL SWD Operator Name PERMIAN OILFIELD PARTNERS LLC Operator Name PERMIAN OILFIELD PARTNERS LLC Operator Name Soperator Name Operator Name Soperator Name PERMIAN OILFIELD PARTNERS LLC Operator Name Soperator Name Soperator Name Operator Name PERMIAN OILFIELD PARTNERS LLC Operator Name Soperator Name <th <="" colspan="4" td=""></th>				

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.

©_		S 89°26'50" W	2657.60'	D	S 89°25'56" M	/ 2657.83'	E	
Ī	6	1						¹⁷ OPERATOR CERTIFICATION
		I		1				I hereby certify that the information contained herein is true and complete
				I				to the best of my knowledge and belief, and that this organization either
	36			I				owns a working interest or unleased mineral interest in the land including
51'	- (4			I			53'	the proposed bottom hole location or has a right to drill this well at this
663.					<u>GEODETIC</u> NAD 83 GRID	<u>; data</u> — NM FAST	672.	location pursuant to a contract with an owner of such a mineral or working
\sim					SURFACE I		\sim	interest, or to a voluntary pooling agreement or a compulsory pooling
3" E					N 396819.3 -	E 682732.2 -	. — . ₹	order heretofore entered by the division.
3,3	0.20	I		1	LONG: 103.8	767589° W	14.5	July 7-10/10 6-27-2019
2.00	-272	I					2.00	Signature Date
<		l			<u>CORNER</u> NAD 83 GRID	<u>DATA</u> – NM EAST	>	Gary E Fisher
				1		S CAR "1940"		Printed Name
		l			N 392828.4 -	E 682455.8		gfisher@popmidstream.com
		l		I	B: FOUND BRASS	S CAP "1940"		E-mail Address
B				34 -	N 395489.5 -	E 682459.1 –	Đ	¹⁸ SUDVEVOD CEDTIEICATION
		I		<u> </u>	C: FOUND BRAS	S CAP "1940"		I hereby certify that the well location shown on this
					N 330132.4 -	2 002401.9		plat was plotted from field notes of actual surveys
					N 398178.0 -	E 685118.8		made by me or under my supervision and that the
Ň					E: FOUND BRASS	S CAP "1940"	, M	same is true and correct to the best of my belief
1.6					N 398204.4 -	E 687775.9	33.2.	same is the and correct to the best of my benej.
266		I			F: FOUND BRASS	S CAP "1940"	266	
Ч					N 395532.4 -	E 68///2.1	ź _	Date of Survey
10"		I			G: FOUND BRAS	S CAP "1940" F 687776.3	27"	Signature and Seal of Profesional Surveyor
.04						C CAD "1040"	.02	
00		l			N 392849.1 -	E 685116.2	00	A RANGE
<							<	All the first of the
		I		1				10034
								Certificate Number
							ଭ	REV 6/21/19: COUNTY
A		S 89°33'17" W	2661.05'	θ	S 89°33'14" W	V 2660.76'	Job	No.: LS19050535R



1 & 2 Mile AOR, Cascade Federal SWD #1-Amended

6/27/2019, 3:00:15 PM

Gas Active

🌣 Gas, New

Gas, Plugged

Injection, Active

Injection, New

Oil. Active

Oil, New

Oil, Cancelled

Injection, Plugged

Injection, Cancelled

44

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Gas, Cancelled, Never Drilled

Gas, Temporarily Abandoned

Injection, Temporarily Abandoned

Override 1

- Well Locations Small Scale
- Active
- New
- Plugged
- Cancelled
- Temporarily Abandoned
- Well Locations Large Scale
- Miscellaneous
 CO2 Active
- CO2 Active
- * CO2 Can
 - CO2 New
- CO2, Plugged
- CO2, Temporaily Abandoned

- Oil, Plugged
- Oil, Temporarily Abondoned
- A Salt Water Injection, Active
- A Salt Water Injection, Cancelled
- Salt Water Injection, New
- △ Salt Water Injection, Plugged
- Salt Water InjectionTemporarily 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)

1:36,112

1.4 mi

2 km

0.7

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0.35

05

	Cascade 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	OCD Unit Letter	Surface Location	Bottomhole Location	Formation	MD	TVD
30-015-40762	XTO PERMIAN OPERATING LLC.	POKER LAKE CVX JV RR	#007H	Oil	Horizontal	Active	33	T25S	R30E	D	D-33-25S-30E 150 FNL 660 FWL	M-33-25S-30E 330 FSL 660 FWL	Bone Spring	13448	8862
30-015-40765	XTO PERMIAN OPERATING LLC.	POKER LAKE CVX JV RR	#008H	Oil	Horizontal	Active	28	T25S	R30E	м	M-28-25S-30E 150 FSL 660 FWL	D-28-25S-30E 130 FNL 627 FWL	Bone Spring	13792	8937
30-015-41033	XTO PERMIAN OPERATING LLC.	POKER LAKE UNIT	#421H	Oil	Horizontal	Active	27	T25S	R30E	Р	P-27-25S-30E 600 FSL 950 FEL	M-25-25S-30E 1000 FSL 1350 FEL	Delaware	14184	7772
30-015-42112	XTO PERMIAN OPERATING LLC.	POKER LAKE UNIT	#457	Oil	Horizontal	Active	27	T25S	R30E	Р	P-27-25S-30E 560 FSL 950 FEL	M-28-25S-30E 660 FSL 10 FWL	Delaware	17019	7367
30-015-43431	XTO PERMIAN OPERATING LLC.	POKER LAKE UNIT	#470H	Oil	Horizontal	New	34	T25S	R30E	A	A-34-25S-30E 900 FNL 900 FEL	D-33-25S-30E 900 FNL 50 FWL	Delaware	17003	7521
30-015-43435	XTO PERMIAN OPERATING LLC.	POKER LAKE UNIT CVX JV PB	#021H	Oil	Horizontal	New	34	T25S	R30E	A	A-34-25S-30E 900 FNL 860 FEL	B-36-25S-30E 900 FNL 1850 FEL	Bone Spring	19100	9829



Statement of Notifications

Re: Amended C-108 Application for SWD Well Permian Oilfield Partners, LLC Cascade Federal SWD #1 Sec. 34, Twp. 25S, Rge. 30E 1336' FNL, 272' FWL Eddy County, NM

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

Cascade Federal SWD #1 - Affected Persons within 1 Mile Area of Review													
Notified Name	Notifed Address	Notified City, State, ZIP Code	Shipper	Tracking No.	Mailing Date								
Bureau Of Land Management	620 E Greene St.	Carlsbad, NM 88220	USPS	9414811899561457568562	7/9/2019								
New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe, NM 87501	USPS	9414811899561457567299	7/9/2019								
XTO Permian Operating, LLC	6401 Holiday Hill Road Building 5	Midland, TX 79707	USPS	9414811899561457582841	7/9/2019								
EOG Y Resources Inc.	104 South 4th Street	Artesia, NM 88210-2123	USPS	9414811899561457582230	7/9/2019								
EOG A Resources Inc.	104 South 4th Street	Artesia, NM 88210-2123	USPS	9414811899561457580304	7/9/2019								
EOG M Resources Inc.	104 South 4th Street	Artesia, NM 88210-2123	USPS	9414811899561457580007	7/9/2019								
801 LLC	P.O. Box 900	Artesia, NM 88211	USPS	9414811899561457719797	7/9/2019								
OXY Y-1 Company	5 Greenway Plaza	Houston, TX 77046	USPS	9414811899561457719100	7/9/2019								
CTV OG NM LLC	201 Main Street	Fort Worth, TX 76102	USPS	9414811899561457719957	7/9/2019								
KEYSTONE OG NM LLC	201 Main Street	Fort Worth, TX 76102	USPS	9414811899561457719971	7/9/2019								
LMBI OG NM LLC	201 Main Street	Fort Worth, TX 76102	USPS	9414811899561457719698	7/9/2019								
SRBI OG NM LLC	201 Main Street	Fort Worth, TX 76102	USPS	9414811899561457719346	7/9/2019								
THRU LINE OG NM LLC	201 Main Street	Fort Worth, TX 76102	USPS	9414811899561457719087	7/9/2019								
PRB II 1993C OG NM LLC	201 Main Street	Fort Worth, TX 76102	USPS	9414811899561457719315	7/9/2019								

Semfung

Sean Puryear Permian Oilfield Partners, LLC <u>spuryear@popmidstream.com</u>

Date: 7-9-2019

U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1457 5685 62

ARTICLE ADDRESSED TO:

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

FEES Postage Per Piece Certified Fee Total Postage & Fees:

Postmark Here

JUL - 9 2019

U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1457 5672 99

ARTICLE ADDRESSED TO:

New Mexico State Land Office JUL - 9 2019 310 Old Santa Fe Trail Santa Fe NM 87501-2708

FEES Postage Per Piece Certified Fee Total Postage & Fees:

Postmark Here

U.S. Postal Service Certified Mail Receipt

\$3.05

3.50

6.55

ARTICLE NUMBER: 9414 8118 9956 1457 5828 41

ARTICLE ADDRESSED TO:

XTO Permian Operating, LLC 6401 Holiday Hill Rd, Bldg #5 Midland TX 79707-2157

FEES Postage Per Piece Certified Fee Total Postage & Fees:

Postmark Here

JUL - 9 2019

U.S. Postal Service Certified Mail Receipt

\$3.05

3.50

6.55

ARTICLE NUMBER: 9414 8118 9956 1457 5822 30

ARTICLE ADDRESSED TO:

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

FEES Postage Per Piece Certified Fee Total Postage & Fees:



U.S. Postal Service Certified Mail Receipt

\$3.05

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ARTICLE NUMBER: 9414 8118 9956 1457 5803 04

ARTICLE ADDRESSED TO:

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

FEES Postage Per Piece Certified Fee Total Postage & Fees:

JUL - 9 2019 \$3.05 3.50 6.55 Postmark

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U.S. Postal Service Certified Mail Receipt

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ARTICLE NUMBER: 9414 8118 9956 1457 5800 07

ARTICLE ADDRESSED TO:

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

FEES Postage Per Piece Certified Fee Total Postage & Fees: JUL - 9 2019 Postmark Here

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U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1457 7197 97

ARTICLE ADDRESSED TO:

801 LLC PO Box 900 Artesia NM 88211-0900

FEES Postage Per Piece Certified Fee Total Postage & Fees: Postmark Here

111-92019

U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1457 7191 00

ARTICLE ADDRESSED TO:

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

FEES Postage Per Piece Certified Fee Total Postage & Fees:



U.S. Postal Service Certified Mail Receipt

\$3.05

3.50

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ARTICLE NUMBER: 9414 8118 9956 1457 7199 57

ARTICLE ADDRESSED TO:

CTV OG NM LLC 201 Main Street Fort Worth TX 76102-3105

FEES Postage Per Piece Certified Fee Total Postage & Fees:

\$3.05 3.50 6.55 **Postmark** Here

JUL - 9 2019

U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1457 7199 71

ARTICLE ADDRESSED TO:

Keystone OG NM LLC 201 Main Street Fort Worth TX 76102-3105

FEES Postage Per Piece Certified Fee Total Postage & Fees:



U.S. Postal Service Certified Mail Receipt

\$3.05

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ARTICLE NUMBER: 9414 8118 9956 1457 7196 98

ARTICLE ADDRESSED TO:

LMBI OG NM LLC 201 Main Street Fort Worth TX 76102-3105

FEES Postage Per Piece Certified Fee Total Postage & Fees:



Postmark Here

U.S. Postal Service Certified Mail Receipt

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ARTICLE NUMBER: 9414 8118 9956 1457 7193 46

ARTICLE ADDRESSED TO:

SRBI OG NM LLC 201 Main Street Fort Worth TX 76102-3105

FEES Postage Per Piece Certified Fee Total Postage & Fees:



Postmark Here

U.S. Postal Service Certified Mail Receipt

\$3.05 3.50 6.55

ARTICLE NUMBER: 9414 8118 9956 1457 7190 87

ARTICLE ADDRESSED TO:

Thru Line OG NM LLC 201 Main Street Fort Worth TX 76102-3105

FEES Postage Per Piece Certified Fee Total Postage & Fees:



U.S. Postal Service Certified Mail Receipt

ARTICLE NUMBER: 9414 8118 9956 1457 7193 15

ARTICLE ADDRESSED TO:

PRB II 1993C OG NM LLC 201 Main Street Fort Worth TX 76102-3105

FEES Postage Per Piece Certified Fee Total Postage & Fees: \$3.05 3.50 6.55 **Postmark** Here



RRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Ad No. 0001289304

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 gualified 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:

06/25/19 egal Clerk

Subscribed and sworn before me this 27th of June 2019.

State of WI. County of Brown NOTARY PUBLIC

My Commission Expires



Newspaper Publication Notice Permian Oilfield Partners, LLC, PO Box 1220, Stephenville, TX 76401, phone (817)606-7630, attention Gary Fisher, has filed an Amended 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 Cascade Federal SWD #1, and the amended application seeks to relocate the well to 1336' FNL & 272' FWL, Unit Letter E, Section 34, Township 25 South, Range 30 East, NMPM, approximately 14.8 miles southeast of Malaga, NM. The well will dispose of water produced from nearby oil and gas wells into the Devonian formation from a depth of 16,454 feet to 17,922 feet. The maximum expected injection rate is 50,000 BWPD at a maximum surface injection pressure of 3,291 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 davs.

Published: June 25, 2019

Ad#:0001289304 P O : Cascade Federal # of Affidavits :0.00

Water Wells in 1 Mile, Cascade Federal SWD #1-Amended

20 ^{SESE}	SWSW	SESW	1 SWSE	SESE	SWSW	SESW	2 SWSE	SESE	SWSW
(P)	(M)	(N)	(0)	(P)	(M)	(N) 2	(0)	(P)	(M)23
NENE	NWNW	NENW	NWNE	NENE	NWNW	NENW	NWNE	NENE	NWNW
(A)	(D)	(C)	(B)	(A)	(D)	(C)	(B)	(A)	(D)
SENE (H)	SWNW (E)	SENW (F)	SHATE (G)	SENE (H)	SWNW (E)	SENW (F)	SWNE (G) Hedgehot Rd	SENE (H)	SWNW (E)
- - 29 NESE (1)	NWSW (L)	NESW (K)	NWSE (J)	NESE (1)	NWSW (L)	NESW (K)	NWSE (J)	NESE (1)	NWSW (L)
SESE (P)	Swgw (M) C0378	SESW (N) 2 POD1 (NO WELLBOR	SWSE (O) RE, NO PUMP)	SESE (P) 2	SWSW (M) 55 30E	SESW (N)	SWSE (0)	SESE (P)	SWSW (M)
NENE	NWNW	NENW	NWNE	NENE	NWNW	NENW	NWNE	NENE	NWNW
(A)	(D)	(C)	(B)	(A)	(D)	(C)	(B)	(A)	(D)
SENE (H)	SWNW (E)	SENW (F)	SWNE (G)	SENE (H)	SWNW (E) 3232 ff	SENW (F)	SWNE (G)	SENE (H)	SWNW (E)
NESE	NWGW	NESW	NWSE	NESE	NWSW	NESW	NWSE	NESE	NWSW
(1)	(L)	(K)	(J)	(1)	(L)	(K)	(J)	(1)	(L)
SESE	swsw	SESW	SWSE	SESE	SWSW	SESW	SWSE	SESE	swsw
(P)	(M)	(N)	(0)	(P)	(M)	(N)	KO)	(P)	(M)
NENE	NWNW	NENW	NWNE	NENE	NWNW	NENW	NWNE	NENE	NWNW
(A)	(D)	(C)	(B)	(A)	(D)	(C)	(B)	(A)	(D)
05 SENE (H)	26S 30E SWNW (E)	SENW (F)	4 SWNE (G)	SENE (H)	SWNW (E)	SENW (F)	3 SWNE (G)	SENE (H)	_{SWNW} 02 (E)
NESE	NWSW	NESW	NWSE	NESE	NWSW	NESW	NWSE	NESE	NWSW
(1)	(L)	(K)	(J)	(1)	(L)	(K)	(J)	(1)	(L)

6/27/2019, 12:21:09 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) OpenStreetWap contributors, and the GIS User Community

1:18,056

0.7 mi

1.1 km

0.35

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0.17

0.28



New Mexico Office of the State Engineer Point of Diversion Summary

			(quart	TM in motors)							
Well Tag	POD	Number	(qua)		4 S	ec Tws	Rna	unai u	X	V	
tion rug	C 03	3782 POD1	4	3 3	3 2	.8 25S	30E	604	526	3551444 🌍	
Driller License: 331 Driller Name:			Driller	. Comb	any	: SB CO	SBQ2, LLC DBA CO.			WART BROTH	ERS DRILLING
Drill Start Date: 01/16/2015			Drill F	'inish E	ate:	0	01/17/2015		Plug Date:		
Log File Date: 02/19/2015		PCW	Rcv Da	te:				So	urce:	Artesian	
Pump Type:			Pipe D	ischar	ge Si	ize:			Est	timated Yield:	
Casing Size: 8.63		8.63	Depth	Well:		8	805 feet			pth Water:	277 feet
x	Wate	r Bearing Stratific	cations:	ŗ	Гор	Bottom	n De	escription			
					260	320) Sa	ndstone/G	ravel	/Conglomerate	
					320	380) Sa	ndstone/G	ravel	/Conglomerate	
					380	41() Sa	ndstone/G	ravel	/Conglomerate	
					410	53() Sh	ale/Mudst	one/S	Siltstone	
					530	590) Sh	ale/Mudst	one/S	Siltstone	
					590	600) Sh	ale/Mudst	one/S	Siltstone	
					600	630) Sh	ale/Mudst	one/S	Siltstone	
					630	650) Sh	ale/Mudst	one/S	Siltstone	
					650	700) Sh	ale/Mudst	one/S	Siltstone	
					700	710) Sh	ale/Mudst	one/S	Siltstone	
					710	760) Sh	ale/Mudst	one/S	Siltstone	
					760	770) Sh	ale/Mudst	one/S	siltstone	
					770	780) Sh	ale/Mudst	one/S	Siltstone	
					780	790) Sh	ale/Mudst	one/S	siltstone	
					790	805	5 Sh	ale/Mudst	one/S	Siltstone	
X		Casing Perfo	rations:	r	Гор	Bottom	1				
				:	270	805	5				

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.

6/27/19 11:15 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD replaced, O=orpha C=the fil closed)	1 (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	DepthWellD	epthWater	Water Column
<u>C 01379</u>		С	ED	4	4	3	10	25S	30E	606571	3556355* 🌍	400		
<u>C 03716 POD1</u>		CUB	ED	4	2	2	02	25S	30E	609069	3559211 🌍	600	425	175
<u>C 03781 POD1</u>		CUB	ED	3	3	3	13	25S	30E	609306	3554761 🌍	720	325	395
<u>C 03782 POD1</u>		CUB	ED	4	3	3	28	25S	30E	604526	3551444 🌍	805	277	528
<u>C 03891 POD1</u>		CUB	ED	4	4	2	01	25S	30E	610608	3558890 🌍	635	429	206
										1	Average Depth to	o Water:	364	feet
											Minimu	ım Depth:	277	feet
											Maximu	m Depth:	429	feet
Record Count: 5														

PLSS Search:

Township: 258 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.

6/27/19 2:23 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



Item XII. Affirmative Statement

Re: C-108 Application for SWD Well Permian Oilfield Partners, LLC Cascade Federal SWD #1 Sec. 34, Twp. 25S, Rge. 30E 1336' FNL, 272' FWL 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.

tay Ertihan

Gary Fisher Manager Permian Oilfield Partners, LLC.

Date: 6/27/2019