STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

APPLICATION OF PERMIAN OILFIELD PARTNERS, LLC TO APPROVE OF SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO

CASE NO. 20585 (SUPER SIPHON)

Exhibits

Exhibit A: Application, Revised Statement Regarding Seismicity, and Revised Plugging Risk Assessment

Exhibit B: Notice Affidavit

STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

APPLICATION OF PERMIAN OILFIELD PARTNERS, LLC TO APPROVE SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO.

CASE	NO.	
CILOLI	110.	

APPLICATION

Permian Oilfield Partners, LLC ("Permian"), OGRID No. 328259, through its undersigned attorneys, hereby submits this application to the Oil Conservation Division pursuant to the provisions of NMSA 1978, § 70-2-12, Rule No. 19.15.26, and Rule 19.15.4.8 for an order approving drilling of a salt water disposal well in Lea County, New Mexico. In support of this application, Permian states as follows:

- (1) Permian proposes to drill the Super Siphon State SWD Well #2 well at a surface location 1,316 feet from the South line and 250 feet from the West line of Section 36, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a produced water disposal well.
- (2) Permian seeks authority to inject produced water into the Silurian-Devonian formation at a depth of approximately 17,292' to 19,026'.
- (3) Permian further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day.
- (4) Permian anticipates using an average injection pressure of 2,000 psi for this well and it requests approval of a maximum injection pressure of 3,458 psi for the well.



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(5) On or about May 7, 2019, Permian filed an administrative application with the Division seeking administrative approval of the subject well for produced water disposal.

(6) Permian complied with the notice requirements for administrative applications, including mailing and publication in the Hobbs News Sun.

(7) Delaware Energy Services submitted a protest with respect to Permian's administrative application.

(8) To Permian's knowledge, one other protest was submitted but was withdrawn.

(9) A proposed C-108 for the subject well is attached hereto in Attachment A.

(10) The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, Permian requests that this application be set for hearing before an Examiner of the Oil Conservation Division on July 11 2019; and that after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A.

Deana M. Bennett

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Susna.Bisong@modrall.com

Attorneys for Applicant

CASE NO. _____: Application of Permian Oilfield Partners, LLC for approval of a salt water disposal well in Lea County, New Mexico. Permian seeks an order approving disposal into the Silurian-Devonian formation through the Super Siphon State SWD Well #2 well at a surface location 1,316 feet from the South line and 250 feet from the West line of Section 36, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a produced water disposal well. Permian seeks authority to inject produced water into the Silurian-Devonian formation at a depth of approximately 17,292' to 19,026'. Permian further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 14.5 miles west of Jal.

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: Sem tun

DATE: 5-7-2019

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. Please show the date and circumstances of the earlier submittal:

DISTRIBUTION:



Fe with one copy to the appropriate District Office

III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
 - (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
 - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
 - (3) A description of the tubing to be used including its size, lining material, and setting depth.
 - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
 - (1) The name of the injection formation and, if applicable, the field or pool name.
 - (2) The injection interval and whether it is perforated or open-hole.
 - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
 - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
 - (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

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

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

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

Additional Data

1. Is this a new well drilled for injection?
Yes

2. Name of the Injection Formation:

Devonian: Open Hole Completion

3. Name of Field or Pool (if applicable):

SWD; Devonian-Silurian

4. Has the well ever been perforated in any other zone(s)?

No: New Drill for Injection of Produced Water

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed Injection zone in this area:

Overlying Potentially Productive Zones:

Delaware, Bone Spring, Wolfcamp, Strawn, Atoka & Morrow Tops all above 15.033'

Underlying Potentially Productive Zones:

None

WELL CONSTRUCTION DATA

Permian Oilfield Partners, LLC. Super Siphon State SWD #2 1316' FSL, 250' FWL Sec. 36, T24S, R34E, Lea Co. NM Lat 32.1703550° N, Lon 103.4313962° W GL 3395', RKB 3425'

Surface - (Conventional)

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

Depth Top: Surface Depth Btm: 846'

Cement: 534 sks - Class C + Additives
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)

Hole Size: 17.5" Casing: 13.375" - 61# J-55 & 68# J-55 STC Casing

Depth Top: Surface Depth 8tm: 5333'

Cement: 1718 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 8tm: 12486' ECP/DV Tool: 5433'
Cement: 2131 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: 12286' Depth Btm: 17292'

Cement: 248 sks - Lite Class C (60:40:0) + Additives

Cement Top: 12286' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5" Depth: 19026'

Inj. Interval: 17292' - 19026' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 17247' Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80

X/O Depth: 12286' FJ Casing (Fiberglass Lined)

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

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

WELLBORE SCHEMATIC

Permian Offield Partners, LLC.
Super Sipbon State SWD #2
1316' FSL, 250' FWL
Sec. 36, T24S, R34E, Lea Co. NM
Lnt 32.1703850° N, Lon 103.4313962° W
GL 3395', RKB 3425'

Surface - (Conventional)

Hole Size: 26"

Casing: 20" - 94# H-40 STC Casing

Depth Top: Surface Depth Btm: 846'

Cement: 534 sks - Class C + Additives
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)

Hole Size: 17.5"

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

Depth Top: Surface Depth 8tm: 5333'

Cement: 1718 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 8tm: 12486'

Cement: 2131 sks - Lite Class C (60:40:0) + Additives

Cement Top: Surface - (Circulate)

ECP/DV Tool: 5433'

Intermediate #3 - (Liner)

Hole Size: 8.5"

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

Depth Top: 12286'
Depth 8tm: 17292'

Cement: 248 sks - Lite Class C (60:40:0) + Additives

Cement Top: 12286' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5"

Depth: 19026'

Inj. Interval: 17292' - 19026' (Open-Hole Completion)

<u>Tubing - (Tapered)</u> Tubing Depth: 17247'

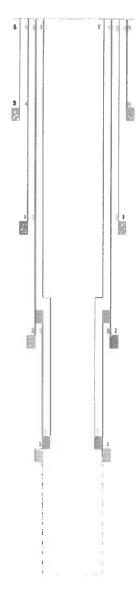
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)

X/O Depth: 12286'

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

Packer Depth: 17257

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



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

VII:

- 1. The average injected volume anticipated is 40,000 BWPD

 The maximum injected volume anticipated is 50,000 BWPD
- 2. Injection will be through a closed system
- 3. The average injection pressure anticipated is 2,000 psi The proposed maximum injection pressure is 3,458 psi
- 4. Disposal Sources will be produced waters from surrounding wells in the Delaware, Avalon, Bone Spring and Wolfcamp formations. These formation waters are known to be compatible with Devonian formation water. Representative area produced water analyses were sourced from Go-Tech's website and are listed below.

WELL NAME	FIGHTING OKRA 18	SALADO DRAW 6	RATTLESNAKE 13 12 FEDERAL	SNAPPING 2
AAEEE JAWIAIE	FEDERAL COM #001H	FEDERAL #001H	COM #001H	STATE #014H
арі	3002540382	3002541293	3002540912	3001542688
latitude	32.0435333	32.0657196	32.0369568	32.06555986
longitude	-103.5164566	-103.5146942	-103.416214	-103.7413815
section	18	6	13	2
township	26\$	26\$	265	265
range	34E	34E	34E	31E
unit	E	M	Р	Р
ftgns	2590N	2005	330S	250S
ftgew	330W	875W	330E	330E
county	Lea	Lea	Lea	EDDY
state	NM	NM	NM	NM
formation	AVALON UPPER	BONE SPRING 3RD SAND	DELAWARE-BRUSHY CANYON	WOLFCAMP
sampledate	42046	41850	41850	42284
ph	8	6.6	6.2	7.3
tds_mgL	201455.9	99401.9	243517.1	81366.4
resistivity_ohm_cm	0.032	0.064	0.026	0.1004
sodium_mgL	66908.6	34493.3	73409.8	26319.4
calcium_mgL	9313	3295	15800	2687.4
iron_mgL	10	0.4	18.8	26.1
magnesium_mgL	1603	396.8	2869	326.7
manganese_mgL	1.6	0.37	3.12	
chloride_mgL	121072.7	59986.5	149966.2	50281.2
bicarbonate_mgL	1024.8	109.8	48.8	
sulfate_mgL	940	710	560	399.7
co2_mgL	1950	70	200	100

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

WELL NAME	ANTELOPE RIDGE UNIT #003	BELL LAKE UNIT #006
api	3002521082	3002508483
latitude	32.2593155	32.3282585
longitude	-103.4610748	-103.507103
sec	34	6
township	235	235
range	34E	34E
unit	K	0
ftgns	1980\$	660S
ftgew	1650W	1980E
county	LEA	LEA
state	NM	NM
field	ANTELOPE RIDGE	BELL LAKE NORTH
formation	DEVONIAN	DEVONIAN
samplesource	UNKNOWN	HEATER TREATER
ph	6.9	7
tds_mgL	80187	71078
chloride_mgL	42200	47900
bicarbonate_mgL	500	476
sulfate_mgL	1000	900

VIII: Injection Zone Geology

Fluid injection will take place in the Devonian-Silurian formations. This sequence is bounded above by the Upper Devonian Woodford shale. Underlying the Woodford is the first injection formation, the Devonian, consisting of dolomitic carbonates & chert, followed by the Upper Silurian dolomites, and the Lower Silurian Fusselman dolomite. The lower bound of the injection interval is the limestone of the Upper Ordovician Montoya. This proposed well will TD above the top of the Montoya, and will not inject fluids into the Montoya itself, in order to provide a sufficient barrier to preclude fluid injection into the Middle Ordovician Simpson, the Lower Ordovician Ellenburger, the Cambrian, and the PreCambrian below.

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

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

Permian Oilfield Partners, LLC.
Super Siphon State SWD #2
1316' FSL, 250' FWL
Sec. 36, T24S, R34E, Lea Co. NM
Lat 32.1703550° N, Lon 103.4313962° W
GL 3395', RKB 3425'

GEOLOGY PROGNOSIS								
FORMATION	TOP	BOTTOM	THICKNESS					
FURWATION	KB TVD (ft)	KB TVD (ft)	(ft)					
Salt	1.289	5.027	3.737					
Delaware	5,309	9.244	3.936					
Bone Spring	9,244	12,437	3.192					
Wolfcamp	12.437	13.315	878					
Lwr. Mississippian	16.731	17.046	314					
Woodford	17,046	17.257	212					
Devonian	17,257	18,347	1.090					
Fusselman (Silurian)	18.347	19.052	705					
Montoya (U. Ordovician)	19.052	19,437	385					
Simpson (M. Ordovician	19.437	20.206	769					

- 2. According to the New Mexico Office of the State Engineer and Permian Oilfield Partners 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. The freshwater depth in this well is not given, as it is an old well that was permitted at a much later date. Regionally, shallow fresh water is known to exist at depths less than <u>610'</u>. There are no underground sources of fresh water present below the injection interval.
- IX: Formation chemical stimulation with 40,000 gals of 15% Hydrochloric Acid is planned after well completion.
- X: A compensated neutron/gamma ray log will be run from surface to TD upon well completion. All logs will be submitted to the NMOCD upon completion.
- XI: According to the New Mexico Office of the State Engineer and Permian Oilfield Partners field exploration, there is 1 fresh water well within the proposed well's one-mile area of review indicating the presence of freshwater. The freshwater depth in this well is not given, as it is an old well that was permitted at a much later date. A sample was obtained and water analysis is attached.

Well Name	Formation Name	Depth Top	Depth Bottom	Thickness	Status
C 04310	None Given	None Given	None Given	N/A	Sample Caught

XII: Hydrologic affirmative statement attached.

XIII: Proof of notice and proof of publication attached.

District 1
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artosia, 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

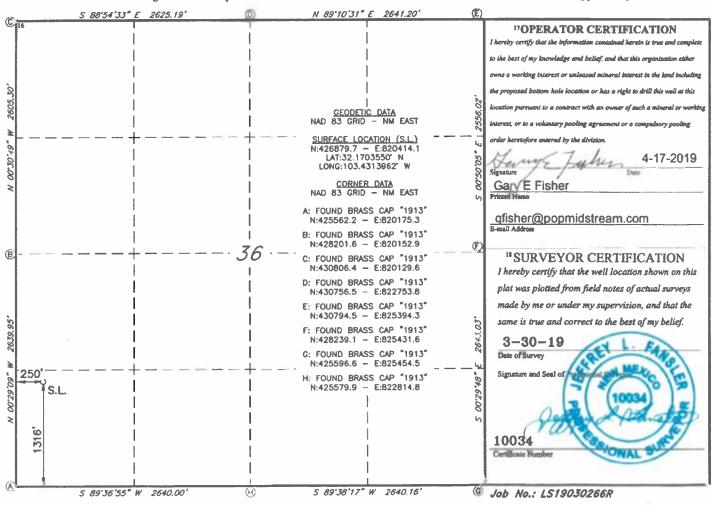
Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

■ AMENDED REPORT

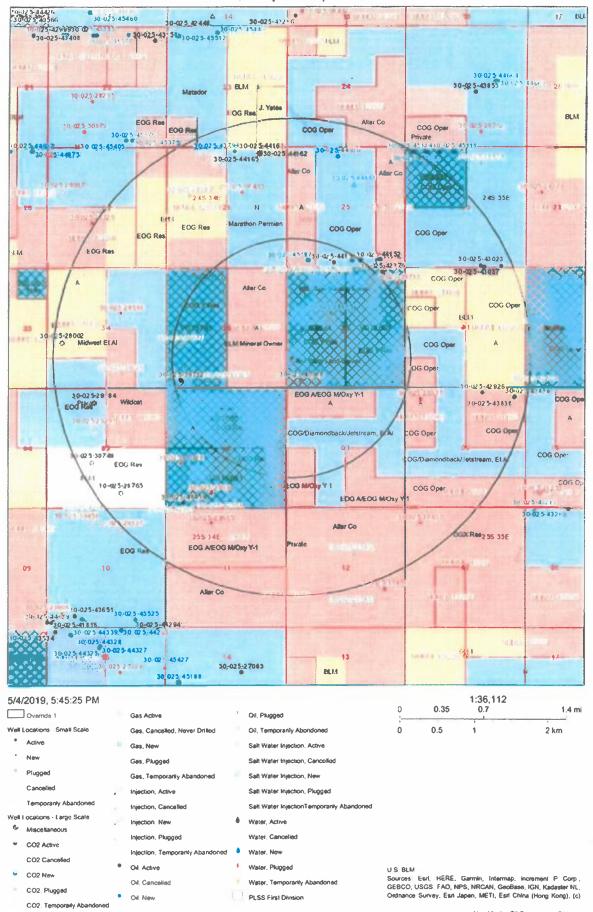
WELL LOCATION AND ACREAGE DEDICATION PLAT

	API Number 025-	?		² Pool Code 97869		3 Pool Name SWD; DEVONIAN-SILURIAN					
⁴ Property Co	de				⁵ Property N	STATE SWD			6 Well Number		
70GRID 3282			P	ERMIAN	OILFIELD	PARTNERS, I	LTC		Elevation 3395'		
					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		
M	36	24S	34E		1316	SOUTH	250	WEST	LEA		
			11]	Bottom H	ole Location	If Different Fro	om Surface				
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County		
² Dedicated Acre	13 Joint	or Infili 14 (Consolidation	Code 15 C	order No.				<u></u>		

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.



1 & 2 Mile AOR, Super Siphon State SWD #2



Well Number Well Type Well Direction We			W	Well Status	Section	Section Township	Range	Range OCD Unit Letter	Surface Location	Sottombole Location	Formation	MD TVD
ITO01 OH Vertical Can	Vertical		Can	Cancelled Apd	35	T245	R34E	_	L-35-245-34E 1980 FSL 660 FWL	L-35-245-34E 1980 FSL 660 FWI.	MORROW	15000 15000
IPO01 Oil Vertical Plugged	Vertical	Ī	Paggur	Plugged, Site Released	36	T245	R34E	L.	F-36-245-34E 1980 FNL 1980 FWL	F-36-245-34E 1980 FNL 1980 FWIL	MORROW	16300 16300
MDD1H OH Honzontal	Н	tonzontal		Active	35	1245	R34E	M	M-35-245-34E 330 FSL 660 FWL	D-35-245-34E 339 FNL 398 FWL	BONE SPRING	13850 9453
#001H ON Horizontal	Н	lonzontal		Active	36	T245	R34E	M	IA-36-245-34E 330 FSL 660 FWL	D-36-245-34E 330 FNL 660 FWL	DELAWARE	13675 9335
I/O01C Oil Horizontal Can	Horizontal		Can	Cancelled Apd	36	T245	R34E	Q	D-36-245-34E 331 FHL 425 FWL	M-36-245-34E 331 FSL 660 FWL	BONE SPRING	13850 N/A
P002C OR Horizontal Can-	Horizontal		Cano	Cancelled Apd	36	1245	R34E	V	C-36-245-34E 331 FNL 1980 FWL	N-36-245-34E 331 FSL 1980 FWL	BONE SPRING	17387 N/A
#004C OW Horizontal Car	Horizontal		Š	Cancelled Apd	35	T245	R34E	N	N-35-245-34E 316 FSL 2165 FWL	N-35-245-34E 316 FSL 2165 FWL	BONE SPRING	\$3900 N/A
#001H Oil Horizontal	Н	-lorizontal		New	25	7245	R34E	2	N-25-245-34E 433 FSL 1930 FWL	C-25-245-34E 380 FNL 1670 FWL	WOLFCAMP	17334 N/A
#001H Oil Horizontal	Н	-lonizontal		New	22	T245	R34E	2	N-25-245-34E 434 FSL 1980 FWL	C-25-245-34E 380 FNL 1980 FWL	WOLFCAMP	16907 N/A
INDADH Oil Horizontal	Horizontal			Active	22	1245	R34E	0	O-25-245-34E 360 FSt. 1980 FEL	B-24-245-34E 203 FNL 2230 FEL	WOUSCAMP	23038 12629
#026H Oil Hortzontal		Hortzontal		Active	25	T245	R34E	N	N-25-245-34E 320 FSL 1980 FWL	C-24-26N-34E 196 FNL 1685 FWL	WOLFCAMP	23024 12615
#603H Oil Horizontal	H	Horizontal		New	22	T245	R34E	0	O-25-245-34E 390 FSL 2305 FEL	B-24-245-34E 200 FN: 1880 FEL	BONE SPRING 22491	2491 12630
#605H OII Hortzontal	Н	Hortzontal		New	22	T245	R34E	0	O-25-245-34E 390 FSL 2365 FEL	C-24-245-34E 200 FML 2310 FWL	BONE SPRING	22461 12607
#607H Oti Hortzontal	Н	Horizontal		New	25	T245	R34E	M	M-25-245-34E 340 FSL 1030 FWL	0-24-245-34E 200 FNL 990 FWL	BONE SPRING	22743 12611
#608H Oil Horizontal	Н	Horizontal		New	22	1245	R34E	M	M-25-245-34E 340 FSL 970 FWL	D-24-245-34E 200 FNL 330 FWL	BONE SPRING	22750 12600
#705H Oil Horizontal	Horizontal			New	22	T245	R34(0	O-25-245-34E 390 FSt 2335 FEL	C-24-245-34E 200 FNL 2310 FWL	WOLFCAMP	2291 12851
F707H OH Horizontal		Horizontal		New	25	T24S	R36E	M	M-25-245-34E 340 FSL 1000 FWL	D-24-245-34E 200 FNL 760 FWL	WOLFCAMP	23035 12904
#708H OW Hortzontal									near new new new new new new	the first and a deal date and all the		

Notified Name	Notifed Address	Notified City, State, ZIP Code
EOG Resources Inc	P.O. Box 2267	Midland, TX 79702
Bureau Of Land Management	620 E Greene St	Carlsbad, NM 88220
New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe, NM 87501
Marathon Oil Permian LLC	5555 San Felipe St.	Houston, TX 77056
Riverbend Oil & Gas IX LLC	500 Dallas St., Suite 1250	Houston, TX 77002
COG Operating LLC	600 West Illinois Avenue	Midland, TX 79701
Jetstream New Mexico LLC	P.O. Box 471396	Fort Worth, TX 76147
MRC Permian Company	5400 LBJ Freeway, Suite 1500	Dallas, TX 75240
One Energy Partners LLC	2929 Allen Parkway, Suite 200	Houston, TX 77019
Diamondback Energy, Inc.	500 West Texas Ave., Suite 1200	Midland, TX 79701
Energen Resources Corporation	3300 N "A" Street, Bldg 4, Suite 100	Midland, TX 79705
The Allar Company	735 Elm Street	Graham, TX 76450
EOG Y Resources Inc	104 South 4th Street	Artesia, NM 88210-2123
EOG A Resources Inc	104 South 4th Street	Artesia, NM 88210-2123
Oxy Y-1 Company	5 Greenway Plaza	Houston, TX 77046
EOG M Resources Inc	P.O. BOX 840	Artesia, NM 88211

Affidavit of Publication

STATE OF NEW MEXICO COUNTY OF LEA

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

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

Editor

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

Business Manager

My commission expires was a commission of the co

January 29, 2023

(Sea)

OFFICIAL SEAL GUSSIE BLACK Notary Public State of New Mexico

My Commission Expires 1-29-13

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



APRIL 26, 2019 Newspaper Publication Notice

Permian Oiltield Partners, LLC, PO Box 1220, Stephenville, TX 76401, phone (817)808-7630, attention Gary Fisher, has filed form C-108 (Application for Authorization for Injection) with the New Mexico Oil Conservation Division seeking approval to drill a commercial salt water disposal well in Lea County, New Mexico. The well name is the Super Siphon State SWD #2, and is located 1316 FSL & 250 FWL, Unit Letter M, Section 36, Township 24 South, Range 34 East, NMPM. The well will dispose of water produced from nearby oil and gas wells into the Devonlan formation from a depth of 17,292 feet to 19,026 feet. The maximum expected injection rate is 50,000 BWPD at a maximum surface injection pressure of 3,458 ps.

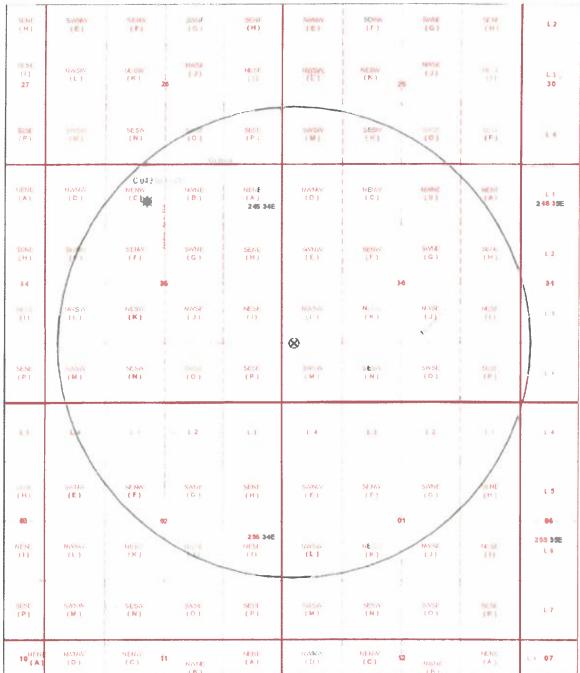
Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505 within 15 days. #34083

67115647

00227460

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

Water Wells in 1 Mile AOR, Super Siphon State SWD #2







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,

closed)

C=the file is (quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

	POD Sub-		Q	Q	a					Denth	Denth	Water
POD Number	Code basin	County		-		c Tws	Rng	X	Y	•		Column
C 02373	CUB	LE		4 1	32	248	34E	641979	356091 6*	600		
C 02386	CUB	LE	4	1 2	2 04	248	34E	643962	3569290*	575	475	100
C 02387	CUB	LE		1	1 11	248	34E	646513	3567613*	62	40	22
C 02397	CUB	LE	4	1 2	2 04	248	34E	643962	3569290*	575	475	100
C 03932 POD13	CUB	LE	4	2 3	3 15	248	34E	645314	3565203	90		
C 03932 POD3	CUB	LE	4	3 2	2 05	248	34E	642442	3568787 🍑	100		
C 03932 POD8	CUB	LE	4	2 4	07	248	34E	641120	3566769	72		
C 03943 POD1	CUB	LE	2	4 2	2 21	24\$	34E	644523	3564266	610	431	179
C 04014 POD1	CUB	LE	1	1 3	3 06	24\$	34E	639811	3568638	91	81	10

Average Depth to Water: 300 feet

Minimum Depth: 40 feet

Maximum Depth: 475 feet

Record Count: 9

PLSS Search:

Township 24S Range: 34E



New Mexico Office of the State Engineer

Water Right Summary

WR File Number:

C 04310

Subbasin: C

Cross Reference:

Primary Purpose:

STK

72-12-1 LIVESTOCK WATERING

Primary Status:

PMT

PERMIT

Header: -

Total Acres:

Subfile:

Transaction Desc.

Total Diversion:

Cause/Case: -

Owner:

OUAIL RANCH

Contact:

DYLAN VAN BRUNT

Documents on File

From/

To

Diversion Consumptive

Trn# File/Act 2019-03-13

Doc

PMT APR C 04310 POD1

T

3

Current Points of Diversion

(NAD83 UTM in meters)

POD Number C 04310 POD1

Well Tag Source 64Q16Q4Sec Tws Rng 4 2 1 35 24S 34E

646845 3561351

Other Location Desc

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.

5/4/19 9:42 PM

WATER RIGHT 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

 \mathbf{X}

22213 C 04310 POD1

2 1 35 24S 34E

646845

3561351

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

5/4/19 9:43 PM

POINT OF DIVERSION SUMMARY

20

Imperative Water Analysis Report

SYSTEM IDENTIFICATION

IMPERATIVE

Company: Permian Oilfield Partners, LLC

Location: Super Syphon
Sample Source: Wellhead
Account Rep: Junior Garcia

Sample ID#:

W-8562

Sample Date:

05-06-2019 05-07-2019

Report Date: 05-07-2

WATER CHEMISTRY

CATIONS	
Calcium(as Ca)	22.54
Magnesium(as Mg)	20.17
Barium(as Ba)	0.00
Strontium(as Sr)	0.56
Sodium(as Na)	282.16
Potassium(as K)	49.71
Iron(as Fe)	0.25
Manganese(as Mn)	0.00

ANIONS

Chloride(as Cl) 300.00
Sulfate(as SO₄) 30.00
Dissolved CO₂(as CO₂) 200.00
Bicarbonate(as HCO₃) 391.00
H₂S (as H₂S) 17.00
Boron(as B) 7.93

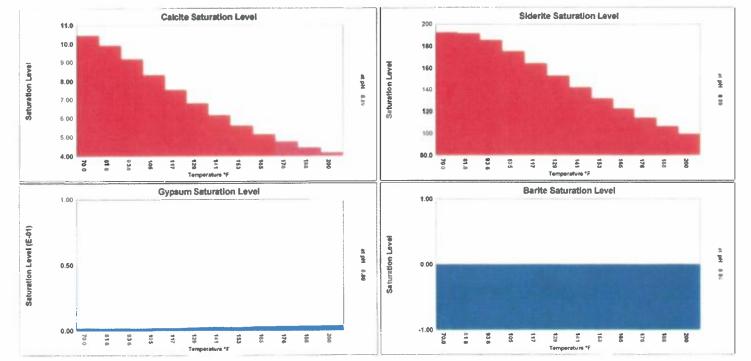
PARAMETERS

AKAPIETEKS	
Temperature(^O F)	77.70
Sample pH	8.82
Conductivity	1533
T.D.S.	1153
Resistivity	652.16
Sp.Gr.(g/mL)	1.00

SCALE AND CORROSION POTENTIAL

Temp.	Press.	Calcite		Anhydrite		Gypsum		Barite		Celestite		Siderite		Mackawenite		co ₂	pCO ₂
(OF)	(atm)	CaCO ₃		CaSO ₄		CaSO ₄ *2H ₂ O		BaSO ₄		SrSO ₄		FeCO ₃		FeS		(mpy)	(atm)
70.00	1.00	10.47	8.07	0.00106	-511.60	0.00181	-438.08	0.00	-0.0730	0.00278	-43.38	192.78	0.150	2146	0.0698	0.00357	0.00113
81.82	1.36	9.92	6.97	0.00110	-498.55	0.00178	-439.82	0.00	-0.0945	0.00282	-42.80	191.68	0.145	1509	0.0673	0.00517	0.00134
93.64	1.73	9.20	5.88	0.00118	-478.51	0.00177	-439.06	0.00	-0.119	0.00291	-41.78	185.70	0.141	1064	0.0648	0.00698	0.00154
105.45	2.09	8.36	4.85	0.00130	-452.92	0.00180	-431.89	0.00	-0.145	0.00304	-40.52	175.47	0.136	750.91	0.0623	0.00872	0.00175
117.27	2.45	7.56	3.97	0.00146	-423.26	0.00201	-405.86	0.00	-0.174	0.00318	-39.30	164.34	0.131	534.13	0.0597	0.00842	0.00195
129.09	2.82	6.83	3.25	0.00168	-390.91	0.00222	-382.54	0.00	-0.209	0.00330	-38.20	152.97	0.126	381.83	0.0571	0.00775	0.00216
140.91	3.18	6.19	2.68	0.00197	-357.12	0.00244	-361.59	0.00	-0.249	0.00342	-37.20	142.19	0.121	275.45	0.0545	0.00680	0.00237
152.73	3.55	5.63	2.22	0.00235	-322.97	0.00266	-342.72	0.00	-0.295	0.00352	-36.30	132.04	0.116	200.45	0.0519	0.00742	0.00257
164.55	3.91	5.18	1.86	0.00286	-289.33	0.00289	-325.67	0.00	-0.349	0.00362	-35.49	122.96	0.111	147.68	0.0491	0.00803	0.00278
176.36	4.27	4.79	1.58	0.00352	-256.91	0.00312	-310.24	0.00	-0.410	0.00371	-34.76	114.54	0.105	109.78	0.0461	0.00848	0.00298
188.18	4.64	4.46	1.35	0.00439	-226.22	0.00335	-296.25	0.00	-0.480	0.00379	-34.10	106.74	0.0993	82.32	0.0431	0.00478	0.00319
200.00	5.00	4.19	1.18	0.00555	-197.61	0.00357	-283.56	0.00	-0.559	0.00386	-33.51	99.59	0.0931	62.28	0.0400	0.00369	0.00339
			Lbs per		Lbs per		Lbs per		Lbs per		Lbs per		Lbs per		Lbs per		
		xSAT	1000	xSAT	1000	xSAT	1000	xSAT	1000	xSAT	1000	xSAT	1000	xSAT	1000		
			Barrels		Barrels		Barrels		Barrels		Barrels		Barrels		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 Super Siphon State SWD #2 Sec. 36, Twp. 24, Rge. 34E 1316' FSL, 250' FWL

Lea County, NM

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

Gary Fisher Manager

Permian Oilfield Partners, LLC.

Date: 5/4/2019



Attachment to C-108
Permian Oilfield Partners, LLC
Super Siphon State SWD #2
Sec. 36, Twp. 24, Rge. 34E
1316' FSL, 250' FWL
Lea County, NM

July 6, 2019

STATEMENT REGARDING SEISMICITY-REVISED

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, 9.89 miles away @ 312.67 deg heading
- 2. M3.3, 2001-06-02, 20.54 miles away @ 55.92 deg heading
- 3. M4.6, 1992-01-02, 22.54 miles away @ 58.88 deg heading
- 4. M3.1, 2012-03-18, 28.08 miles away @ 286.16 deg heading
- 5. M2.6, 2017-05-03, 24.71 miles away @ 103.79 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. Fault data was also correlated to the publicly available USGS GIS geologic units & structural features database and to fault maps as published in the New Mexico Geological Society Special Publication 13A, "Energy and Mineral Resources of New Mexico: Petroleum Geology," by R. F. Broadhead, 2017.
- 5. 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.

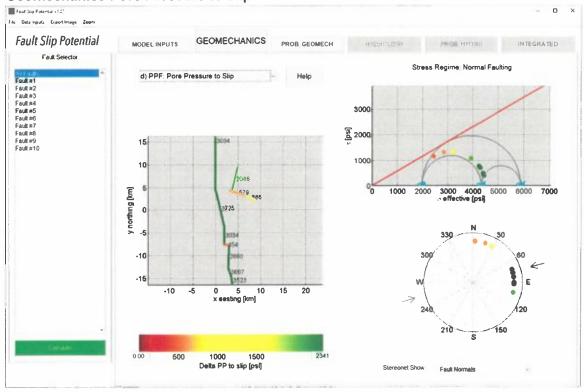
Software as discussed in #3 from the Stanford Center for Induced and Triggered Seismicity, "FSP 1.0: A program for probabilistic estimation of fault slip potential resulting from fluid injection", was used to calculate the probability of the PreCambrian fault being stressed so as to create an induced 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, .47 psi/ft hydrostatic gradient
- c. A-phi=0.60 & Max Horizontal Stress direction 75 deg NW, as per Snee, Zoback paper noted above.
- 6. The distance from the proposed injection well to the nearest basement fault is approximately 6 km. The probability of an induced seismic event in the PreCambrian is calculated to be 0% after 5, 10, 20, & 30 years as per the FSP results screenshots below.
- 7. The analysis below assumes an improbable well failure through the Montoya & Simpson barrier zones, through the Ellenburger & Cambrian permeable 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.

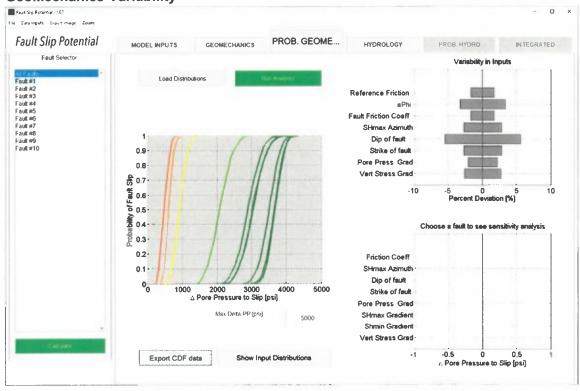
Input assumptions:

Rate (BBL/day)	50000
Interval height (ft)	1500
Average Porosity	0.03
Vert stress gradient (psi/ft)	0.75
Hor stress direction (deg N)	75
Fault dip (deg)	75
Ref depth (ft)	21000
Initial res press gradient (psi/ft)	0.47
A phi	0.6
Friction coefficient	0.58
Weighted average perm	12.5
Fluid density (kg/m3)	1100
Dynamic viscosity	0.0003
Fluid compressibility (/Pa)	4 e-10
Rock compressibility (/Pa)	1.08 e-09

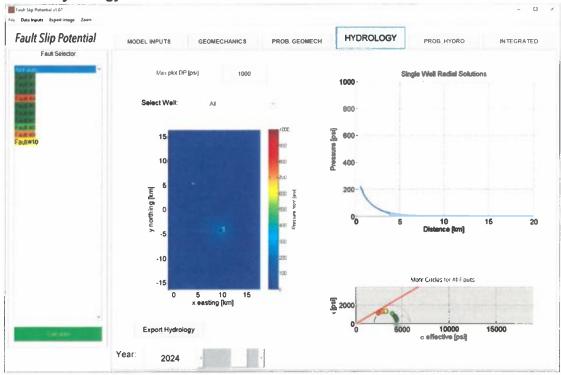
Geomechanics Pore Pressure to Slip



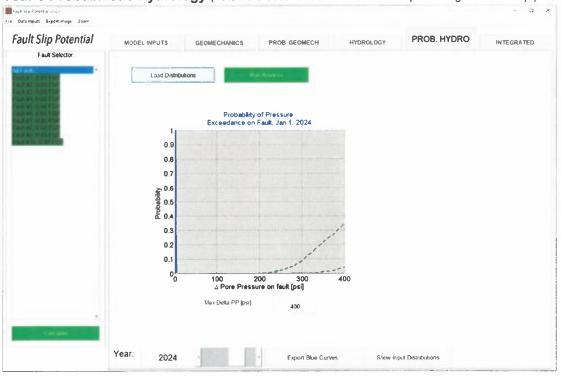
GeoMechanics Variability



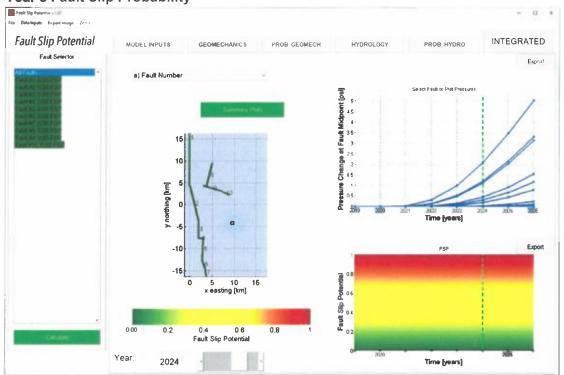
Year 5 Hydrology



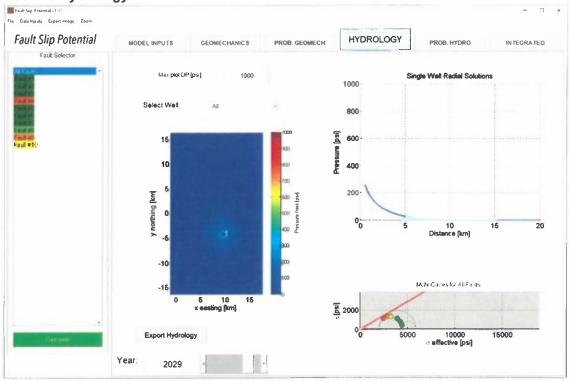
Year 5 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



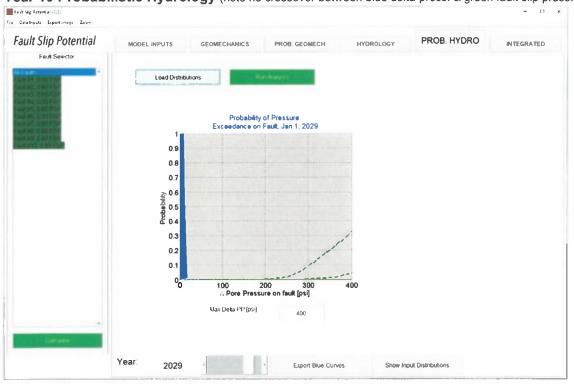
Year 5 Fault Slip Probability

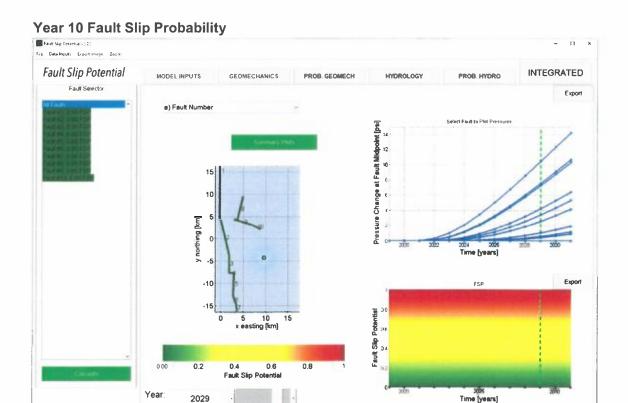


Year 10 Hydrology

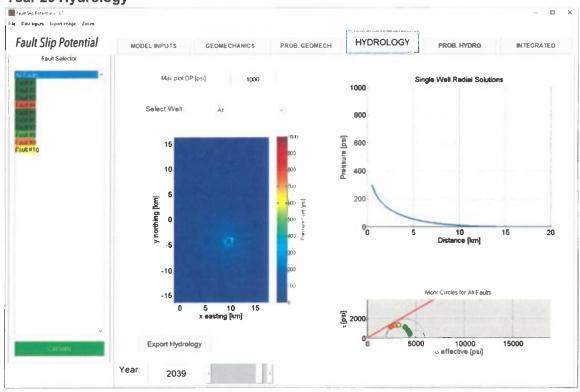


Year 10 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)

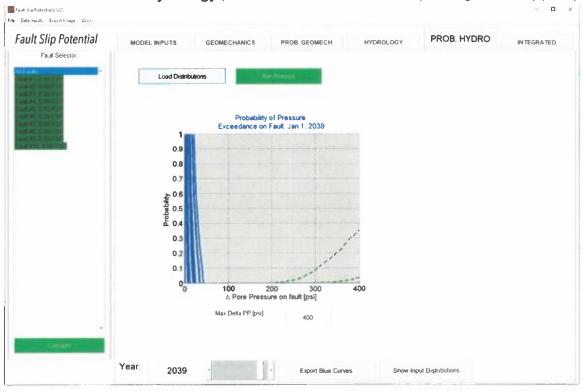


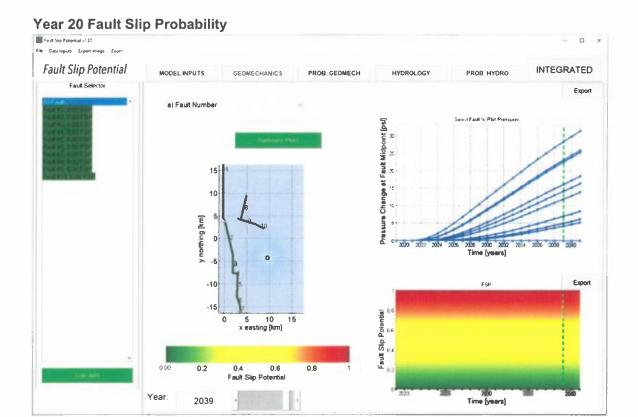


Year 20 Hydrology

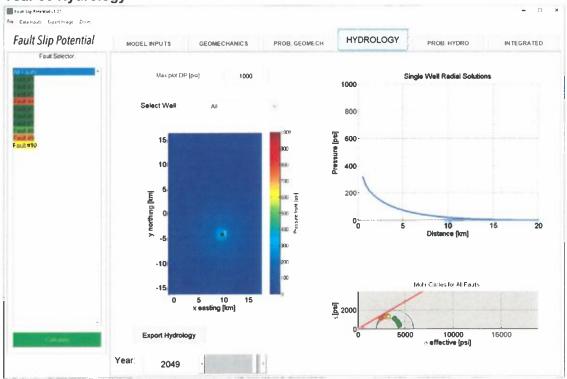


Year 20 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)

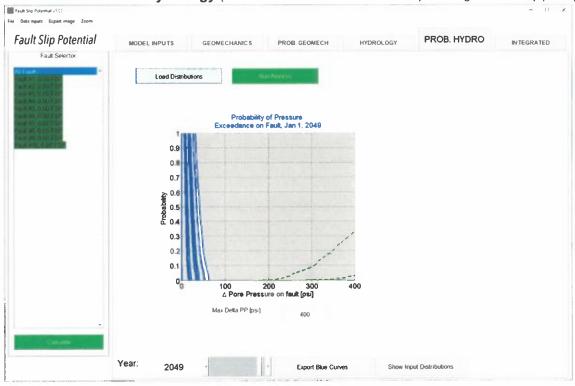


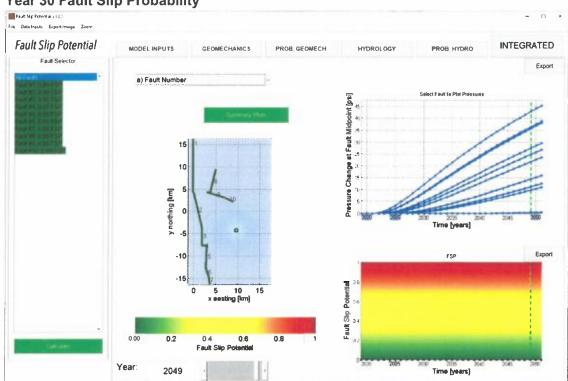


Year 30 Hydrology



Year 30 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)





Year 30 Fault Slip Probability

As per NM OCD requirements (injection well to injection well spacing minimum of 1.5 miles), this proposed above referenced SWD well is located 1.54 miles away from the nearest active or permitted Devonian disposal well.

gfisher@popmidstream.com

(817) 606-7630

Plugging Risk Assessment Permian Oilfield Partners, LLC. Super Siphon State SWD #2 SL: 1316' FSL & 250' FWL Sec 36, T24S, R34E Lea County, New Mexico

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC. Super Siphon State SWD #2 1316' FSL, 250' FWL Sec. 36, 124S, R34E, Lea Co. NM Lat 32.1703550° N, Lon 103.4313962° W GL 3395', RKB 3425'

Surface - (Conventional)

Hole Size: 26"

Casing: 20" - 94# H-40 STC Casing

Depth Top: Surface Depth Btm: 846'

Cement: 534 sks - Class C + Additives
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)

Hole Size: 17.5"

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

Depth Top: Surface Depth Btm: 5333'

Cement: 1718 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: 12486'

Cement: 2131 sks - Lite Class C (60:40:0) + Additives

Cement Top: Surface - (Circulate)

ECP/DV Tool: 5433'

Intermediate #3 - (Liner)

Hole Size: 8.5"

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

Depth Top: 12286'
Depth Btm: 17292'

Cement: 248 sks - Lite Class C (60:40:0) + Additives

Cement Top: 12286' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5"

Depth: 19026'

Inj. Interval: 17292' - 19026' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 17247'

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

X/O Depth: 12286'

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

Packer Depth: 17257'

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



Plugging Risk Assessment Page 2

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

Bowen Series 150 Releasing and Circulation Overshots Maximum Catch Size 6% to 7% notusive

Maximum Calch Size (Spiral)		δ5 i	6%	7	7%
Maximum Gatch Size (Basket)		5%	6%	89%	651
Overshot O.D.		8%	7%	8%	89's
Туре		F.S.	S.H.	S.H.	S.H.
Complete Assembly	Part No.	C-3032	C-5222	9217	C-5354
(Dressed Spiral Parts)	Weight	280	243	251	280
Replacement Parts					
Top Sub	Part No.	A-3033	A-5223	9218	A-5355
Bowl	Part No.	B-3034	B-5224	9219	B-5356
Packer	Part No.	A-1814	B-5225	9224	B-5357
Spiral Grapple	Part No.	N-84	B-5227	9222	B-5359
Spiral Grapple Control	Part No.	M-89	A-5228	9223	B-5360
Standard Guide	Part No.	A-1818	A-5229	9226	A-5361
Basket Parts					
Basket Grapple	Part No.	N-84	B-5227	9222	B-5359
Backet Grapple Control	Part No.	M-89	A-5228	9223	5-5360
Mill Control Packer	Part No.	A-1814-R	8-5225-R	9224-R	B-5357-R

An 8.125" 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	Weight lb/ft	Grade	Conn.	Туре	, ,	Coupling O.D. (in)	I.D. (in)	Drift (in)	Lined Wt.		Flare LD. (in)	Lined Drift (in)
0.940	9 5/8	40.0	L-80	BTC	Casing	9 625	10.625	8 835	8 679	-	-	-	•
0.840	7	26.0	HCP-110	FY	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.

Plugging Risk Assessment Page 4

- 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.

Plugging Risk Assessment

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 Grappies are available upon request.

Bowen Series 150 Releasing and Circulation Overshots

Maximum Oatch Size 4% to 5% inclusive

Maximum Catch Size (Spiral)		43	451	4%	4%	5	5	5%
Maximum Catch Size (Basket)		3154	413	4%	4%	4%	4%	471
Overshot 0.0.		5¥4	5\$i	541	5%	5%	8%	55,
Туре		FS	S.H.	S.H.	S.F.S.	S.H.	F.S.	SH
Complete Assembly	Part No.	5886	5898	C-5168	8975	C-5171	C-4825	8825
(Dressed Spiral Parts)	Weight	130	130	133	138	140	192	185
Replacement Parts								
Top Sub	Part No.	5897	5599	A-5169	8976	A-5172	B-4828	8828
Bowl	Part No.	5893	5700	B-5170	8977	8-5173	B-4827	8817
Packer	Part No.	169	1140	B-2199	6114	L-5950	L-4505	8818
Spiral Grapple	Part No.	185	1135	B-2201	6112	B-4359	M-1071	8819
Spiral Grappie Control	Part No.	185	1137	B-2202	6113	B-4370	M-1072	8820
Standard Guide	Part No.	187	1143	B-2203	6121	B-4371	L-1074	8821
Basket Parts								
Basket Grappie	Part No.	165	1135	8-2201	8112	B-4389	M-1071	8819
Basket Grappie Control	Part No.	186	1137	8-2202	6113	B-4370	M-1072	8520
Mill Control Packer	Part No.	169-R	1140-R	B-2199-R	6114-R	L-5950-R	M-4505	L-8518-F

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.

S 1.70 H	5.5" 17# FJ Casing Inside 7.625" 39# FJ Casing												
Clearance (in)	Pipe Size (in)	Weight lb/ft	Grade	Conn.	Туре	Body O.D. (in)	Coupling O.D. (in)	I.D. (in)	Drift (in)	Lined Wt.	Lined I.D. (in)	Flare L.D. (in)	Lined Drift (in)
0.500	7 5/8	39.0	HCL-80	FJ	Casing	7.625	7.625	6.625	6.500	-		-	-
0.500	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.

Plugging Risk Assessment Page 7

- 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.
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- 3. Pull the insert liner out of the tubing.
- 4. Trip out of hole with insert liner.
- 5. Trip in hole with spear sized to engage the I.D. of the tubing.
- 6. Engage the tubing with spear.
- 7. Pick up 2 points over neutral weight.
- 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

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- 3. Pull the insert liner out of the tubing.
- 4. Trip out of hole with insert liner.
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- 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.

Plugging Risk Assessment

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.
- 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.

STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

APPLICATION OF PERMIAN OILFIELD PARTNERS, LLC TO APPROVE OF SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO

CASE NO. 20585 (SUPER SIPHON)

AFFIDAVIT

STATE OF NEW MEXICO)
COLDIEN OF DEDNALILI) ss.
COUNTY OF BERNALILLO)

Deana M. Bennett, attorney in fact and authorized representative Permian Oilfield Partners, LLC, the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Application was sent under a notice letter and that proof of receipt is attached hereto.

Deana M. Bennett

SUBSCRIBED AND SWORN to before me this 9th day of July, 2019 by Deana M. Bennett.

Karlene Schuman

My Commission Expires: 02-27-

My commission expires:

Vatary Dublic

EXHIBIT

B

Karlene Schuman Modrall Sperling Roehl Harris & Sisk P.A. 500 Fourth Street, Suite 1000 Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED MAIL 06/20/2019



Firm Mailing Book ID: 169569

	Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
	1	9314 8699 0430 0060 4813 48	EOG Resources Inc. P.O. Box 2267 Midland TX 79702	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	2	9314 8699 0430 0060 4813 55	Bureau of Land Management 620 E. Greene St. Carslbad NM 88220	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	3	9314 8699 0430 0060 4813 62	New Mexico State Land Office 310 Old Santa Fe Trail Santa Fe NM 87501	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	4	9314 8699 0430 0060 4813 79	Marathon Oil Permian LLC 5555 San Felipe St. Houston TX 77056	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	5	9314 8699 0430 0060 4813 86	Riverbend Oil & Gas IX LLC 500 Dallas St., Suite 1250 Houston TX 77002	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	6	9314 8699 0430 0060 4813 93	COG Operating LLC 600 West Illinois Ave. Midland TX 79701	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	7	9314 8699 0430 0060 4814 09	Jetstream New Mexico LLC P.O. Box 471396 Fort Worth TX 76147	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	8	9314 8699 0430 0060 4814 16	MRC Permian Company 5400 LBJ Freeway, Suite 1500 Dallas TX 75240	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	9	9314 8699 0430 0060 4814 23	One Energy Partners LLC 2929 Allen Parkway, Suite 200 Houston TX 77019	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	10	9314 8699 0430 0060 4814 30	Diamondback Energy, Inc. 500 West Texas Ave., Suite 1200 Midland TX 79701	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	11	9314 8699 0430 0060 4814 47	Energen Resources Corporation 3300 N "A" Street, Bldg 4, Suite 100 Midland TX 79705	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	12	9314 8699 0430 0060 4814 54	The Allar Company 735 Elm Street Graham TX 76450	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	13	9314 8699 0430 0060 4814 61	EOG Y Resources Inc. 104 South 4th Street Artesia NM 88210	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	14	9314 8699 0430 0060 4814 78	EOG A Resources Inc. 104 South 4th Street Artesia NM 88210	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
	15	9314 8699 0430 0060 4814 85	Oxy Y-1 Company 5 Greenway Plaza Houston TX 77046	\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
-	-							

Karlene Schuman Modrall Sperling Roehl Harris & Sisk P.A. 500 Fourth Street, Suite 1000 Albuquerque NM 87102

16

PS Form 3877

Type of Mailing: CERTIFIED MAIL 06/20/2019



Firm Mailing Book ID: 169569

Line	USPS Article Number	Name, Street, City, State, Zip			Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
16	9314 8699 0430 0060 4814 92	EOG M Resources Inc. P.O. Box 840 Artesia NM 88211			\$1.45	\$3.50	\$1.60	\$0.00	10053.01 S.Siphon Notice
				Totals:	\$23.20	\$56.00	\$25.60	\$0.00	
						Grand	i Total:	\$104.80	
List Number of Listed by Sende			Dated:			<u>-</u>			17





Transaction Report Details - CertifiedPro.net Firm Mail Book ID= 169569 Generated: 7/9/2019 12:22:31 PM

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USPS Article Number	Date Created	Reference Number	Name 1	Addres	City	State	Zìp	Mailing Status	Service Options	Batch ID Mail Delivery Date
9314869904300060481492	2019-06-20 12:36 PM	1 10053.01 S.Siphon	EOG M Resources Inc	P.O. Box 840	Artesia	NM	88211	Malled	Return Receipt - Electronic, Certified Mail	166290
9314869904300060481485	2019-06-20 12.36 PM	1 10053.01 S.Siphon	Oxy Y-1 Company	5 Greenway Plaza	Houston	TX	77046	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-25-2019
9314869904300060481478	2019-06-20 12:36 PM	1 10053.01 S Siphon	EOG A Resources Inc.	104 South 4th Street	Artesia	NM	88210	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-24-2019
9314869904300060481461	2019-06-20 12:36 PM	1 10053.01 S.Siphon	EOG Y Resources Inc.	104 South 4th Street	Artesia	NM	88210	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-24-2019
9314869904300060481454	2019-06-20 12:36 PM	1 10053.01 S.Siphon	The Alfar Company	735 Elm Street	Graham	TX	76450	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-26-2019
9314869904300060481447	2019-06-20 12:36 PM	1 10053.01 S.Siphon	Energen Resources Corporation	3300 N "A" Street, Bldg 4, Suite 100	Midland	TX	79705	Delivered	Return Receipt - Electronic, Certifled Mail	166290 06-25-2019
9314869904300060481430	2019-06-20 12:36 PM	1 10053 01 5 Siphon	Diamondback Energy, Inc.	500 West Texas Ave , Suite 1200	Midland	TX	79701	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-24-2019
9314869904300060481423	2019-06-20 12:36 PM	1 10053.01 S.Siphon	One Energy Partners LLC	2929 Allen Parkway, Suite 200	Houston	TX	77019	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-27-2019
9314869904300060481416	2019-06-20 12:36 PM	1 10053.01 S.Siphon	MRC Permian Company	5400 LBJ Freeway, Suite 1500	Dallas	TX	75240	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-27-2019
9314869904300060481409	2019-06-20 12:36 PM	1 10053.01 S.Siphon	Jetstream New Mexico LLC	P.O. Box 471396	Fort Worth	TX	76147	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-24-2019
9314869904300060481393	2019-06-20 12:36 PM	1 10053.01 S Siphon	COG Operating LLC	600 West Illinois Ave	Midland	TX	79701	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-24-2019
9314869904300060481386	2019-06-20 12:36 PM	1 10053.01 S.Siphon	Riverbend Oil & Gas IX LLC	500 Dallas St , Suite 1250	Houston	TX	77002	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-24-2019
9314869904300060481379	2019-06-20 12:36 PM	1 10053.01 S Siphon	Marathon Oil Permian LLC	SSSS San Felipe St.	Houston	TX	77056	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-24-2019
9314869904300060481362	2019-06-20 12:36 PM	1 10053.01 S.Siphon	New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe	NM	87501	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-24-2019
9314869904300060481355	2019-06-20 12:36 PM	1 10053.01 S.Siphon	Bureau of Land Management	620 E. Greene St	Carsibad	NM	88220	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-24-2019
9314869904300060481348	2019-06-20 12:36 PM	1 10053 01 S Siphon	EOG Resources Inc.	P.O. Box 2267	Midland	TX	79702	Delivered	Return Receipt - Electronic, Certified Mail	166290 06-24-2019

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 June 26, 2019 and ending with the issue dated June 26, 2019.

Publisher

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

Business Manager

My commission expires The not be the state of the sta January 29, 2023

OFFICIAL SEAL **GUSSIE BLACK** Notary Public State of New Mexico My Commission Expires 1-29-2

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

LEGAL NOTICE JUNE 26, 2019

CASE NO. 20585: Notice to all affected parties, as well as the helrs and devisees of EOG Resources Inc., Bureau of Land Management, New Mexico State Land Office, Marathon Oil Permian LLC, Riverbend Oil & Gas IX LLC, COG Operating LLC, Jetstream New Mexico LLC, MRC Permian Company, One Energy Partners LLC, Diamondback Energy Inc., Energen Resources Corporation, The Allar Company, EOG Y Resources Inc., EOG A Resources Inc., Oxy Y-1 Company, EOG M Resources Inc. of Permian Oilfield Partners, LLC application for approval of a salt water disposal well in Lea County, New Mexico. The State of New Mexico, through its Oil Conservation Division, hereby gives notice that the Division will conduct a public hearing at 8:15 a.m. on July 11, 2019, to consider this application. Permian seeks an order approving disposal into the Silurian-Devonian formation through the Super Siphon State SWD Well #2 well at a surface location 1,316 feet from the South Well #2 well at a surface location 1,316 feet from the South line and 250 feet from the West line of Section 36, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a produced water disposal well. Permian seeks authority to inject produced water into the Silurian-Devonian formation at a depth of approximately 17,292' to 19,026'. Permian further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 14.5 miles west of Jal. #34353

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DOLORES SERNA MODRALL, SPERLING, ROEHL, HARRIS & P. O. BOX 2168 ALBUQUERQUE, NM 87103-2168