

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

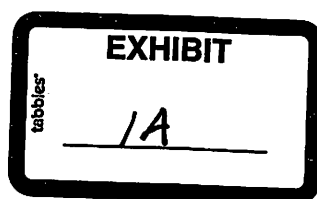
**APPLICATION OF PERMIAN OILFIELD PARTNERS, LLC
FOR APPROVAL OF SALT WATER DISPOSAL WELL
IN LEA COUNTY, NEW MEXICO**

Case No. 20684

AMENDED 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, 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 Big Suck Federal SWD #1 well at a surface location 1397 feet from the North line and 212 feet from the East line of Section 30, Township 26 South, Range 33 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well.
2. Permian seeks authority to inject salt water into the Devonian-Silurian formation at a depth of 17,935' to 19,475'.
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 pressure of 1,696 psi for this well, and it requests that a maximum pressure of 3,587 psi be approved for the well.



5. On or about March 18, 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. Chevron USA submitted a protest with respect to Permian's administrative application.

8. To Permian's knowledge, no other protests were submitted.

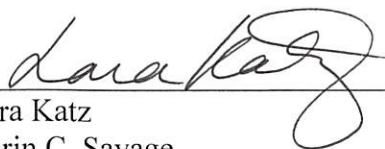
9. A proposed C-108 for the subject well is attached hereto in Exhibit A.

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

WHEREFORE, NGL requests that this application be set for hearing before an Examiner of the Oil Conservation Division on August 8, 2019; and that after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

ABADIE & SCHILL, P.C.

A handwritten signature in dark ink, appearing to read 'Lara Katz', is written over a horizontal line.

Lara Katz

Darin C. Savage

214 McKenzie Street

Santa Fe, New Mexico 87501

(970) 385-4401

lara@abadieschill.com

darin@abadieschill.com

Attorneys for Permian Oilfield Partners, LLC

CASE NO. 20684: Application of Permian Oilfield Partners, LLC for approval of saltwater disposal well in Lea County, New Mexico. Applicant seeks an order approving disposal into the Devonian-Silurian formation through the Big Suck Federal SWD #1 well at a surface location 1397 feet from the North line and 212 feet from the East line of Section 30, Township 26 South, Range 33 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. Applicant seeks authority to inject salt water into the Devonian-Silurian formation at a depth of 17,935' to 19,475'. Applicant further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5½ 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.

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505

**ADMINISTRATIVE APPLICATION CHECKLIST**

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

Applicant: Permian Oilfield Partners, LLC.**OGRID Number:** 328259**Well Name:** Big Suck Federal SWD #1**API:** 30-025-Pending**Pool:** SWD; Devonian-Silurian**Pool Code:** 97869

**SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION
 INDICATED BELOW**

1) TYPE OF APPLICATION: Check those which apply for [A]

A. Location – Spacing Unit – Simultaneous Dedication

☐ NSL☐ NSP (PROJECT AREA)☐ NSP (PRORATION UNIT)☐ SD

B. Check one only for [I] or [II]

[I] Commingling – Storage – Measurement

☐ DHC☐ CTB☐ PLC☐ PC☐ OLS☐ OLM

[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery

☐ WFX☐ PMX☒ SWD☐ IPI☐ EOR☐ PPR**2) NOTIFICATION REQUIRED TO:** Check those which apply.A. ☒ Offset operators or lease holdersB. ☐ Royalty, overriding royalty owners, revenue ownersC. ☒ Application requires published noticeD. ☐ Notification and/or concurrent approval by SLOE. ☒ Notification and/or concurrent approval by BLMF. ☒ Surface ownerG. ☒ For all of the above, proof of notification or publication is attached, and/or,H. ☐ No notice required**FOR OCD ONLY**☐ Notice Complete
☐ Application
 Content
 Complete

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

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

Gary Fisher

Print or Type Name

Signature

3/18/2019

Date

817-606-7630

Phone Number

gfisher@permianoilfieldpartners.com

e-mail Address

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: **Gary Fisher** **PHONE:** **(817) 606-7630**
- 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: Gary E. Fisher

TITLE: Manager

SIGNATURE: 

DATE: 08/06/2019

E-MAIL ADDRESS: gfisher@permianoilfieldpartners.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: 7/05/2019, change max injection rate

This C-108 changed to reflect changed depths of formation tops, due to new data available.

DISTRIBUTION: Original and one copy to Santa 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 16,081'

Underlying Potentially Productive Zones:

None

WELL CONSTRUCTION DATA

Permian Oilfield Partners, LLC.
Big Suck Federal SWD #1
1397' FNL, 212' FEL
Sec. 30, T26S, R33E, Lea Co. NM
Lat 32.017923° N, Lon 103.603485° W
GL 3174', RKB 3204'

Surface - (Conventional)

Hole Size: 26" Casing: 20" - 94# H-40 STC Casing
Depth Top: Surface
Depth Btm: 740'
Cement: 453 sks - Class C + Additives
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)

Hole Size: 17.5" Casing: 13.375" - 61# J-55 STC Casing
Depth Top: Surface
Depth Btm: 4727'
Cement: 1532 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: 12072' ECP/DV Tool: 4827'
Cement: 2047 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: 11872'
Depth Btm: 17935'
Cement: 275 sks - Lite Class C (60:40:0) + Additives
Cement Top: 11872' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5" Depth: 19475'
Inj. Interval: 17935' - 19475' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 17890' Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80
X/O Depth: 11872' FJ Casing (Fiberglass Lined)
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 17900' Packer: 5.5" - Perma-Pak or Equivalent (Inconel)

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Big Suck Federal SWD #1
1397' FNL, 212' FEL
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Cement: 2047 sks - Lite Class C (60:40:0) + Additives
Cement Top: Surface - (Circulate)
ECP/DV Tool: 4827'

Intermediate #3 - (Liner)

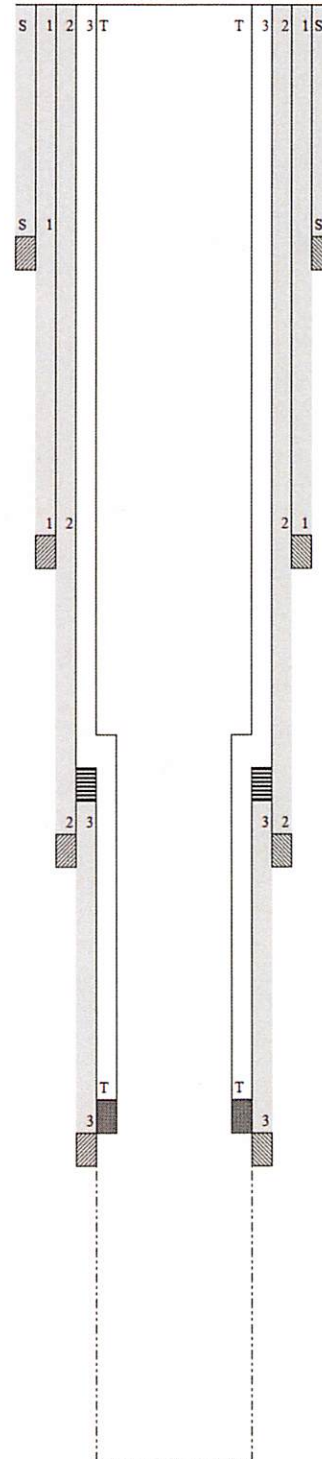
Hole Size: 8.5"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 11872'
Depth Btm: 17935'
Cement: 275 sks - Lite Class C (60:40:0) + Additives
Cement Top: 11872' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5"
Depth: 19475'
Inj. Interval: 17935' - 19475' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 17890'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 11872'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 17900'
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 49,875 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 1,696 psi
The proposed maximum injection pressure is 3,587 psi
4. Disposal Sources will be produced waters from surrounding wells in the Delaware, Avalon, Bone Spring and Wolfcamp formations. These formation waters are known to be compatible with Devonian formation water. Representative area produced water analyses were sourced from Go-Tech's website and are listed below.

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

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

WELL NAME	ANTELOPE RIDGE UNIT #003	BELL LAKE UNIT #006
api	3002521082	3002508483
latitude	32.2593155	32.3282585
longitude	-103.4610748	-103.507103
sec	34	6
township	23S	23S
range	34E	34E
unit	K	O
ftgns	1980S	660S
ftgew	1650W	1980E
county	LEA	LEA
state	NM	NM
field	ANTELOPE RIDGE	BELL LAKE NORTH
formation	DEVONIAN	DEVONIAN
samplesource	UNKNOWN	HEATER TREATER
ph	6.9	7
tds_mgL	80187	71078
chloride_mgL	42200	47900
bicarbonate_mgL	500	476
sulfate_mgL	1000	900

VIII: Injection Zone Geology

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

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

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

Permian Oilfield Partners, LLC.
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 1397' FNL, 212' FEL
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 Lat 32.017923° N, Lon 103.603485° W
 GL 3174', RKB 3204'

GEOLOGY PROGNOSIS			
FORMATION	TOP	BOTTOM	THICKNESS
	KB TVD (ft)	KB TVD (ft)	(ft)
Salt	1,071	4,565	3,494
Delaware	4,702	8,943	4,241
Bone Spring	8,943	12,022	3,079
Wolfcamp	12,022	13,388	1,366
Lwr. Mississippian	17,400	17,700	300
Woodford	17,700	17,900	200
Devonian	17,900	18,650	750
Fusselman (Silurian)	18,650	19,500	850
Montoya (U. Ordovician)	19,500	19,850	350
Simpson (M. Ordovician)	19,850	20,400	550

2. According to the NM State Engineer's website, there are no underground sources of fresh water present within the proposed injection wells area of review. There are no underground sources of fresh water present below the injection interval.
- IX:** Formation chemical stimulation with 40,000 gals of 15% Hydrochloric Acid is planned after well completion.
- X:** A compensated neutron/gamma ray log will be run from surface to TD upon well completion. All logs will be submitted to the NMOCD upon completion.
- XI:** According to the New Mexico Office of the State Engineer, there are no water wells within the proposed well's one-mile area of review. There are no fresh water sources present below the proposed injection interval.
- 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, New Mexico 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	Pool Code	Pool Name
Property Code	Property Name BIG SUCK FEDERAL SWD	Well Number 1
OGRID No.	Operator Name PERMIAN OILFIELD PARTNERS, LLC	Elevation 3174'

Surface Location

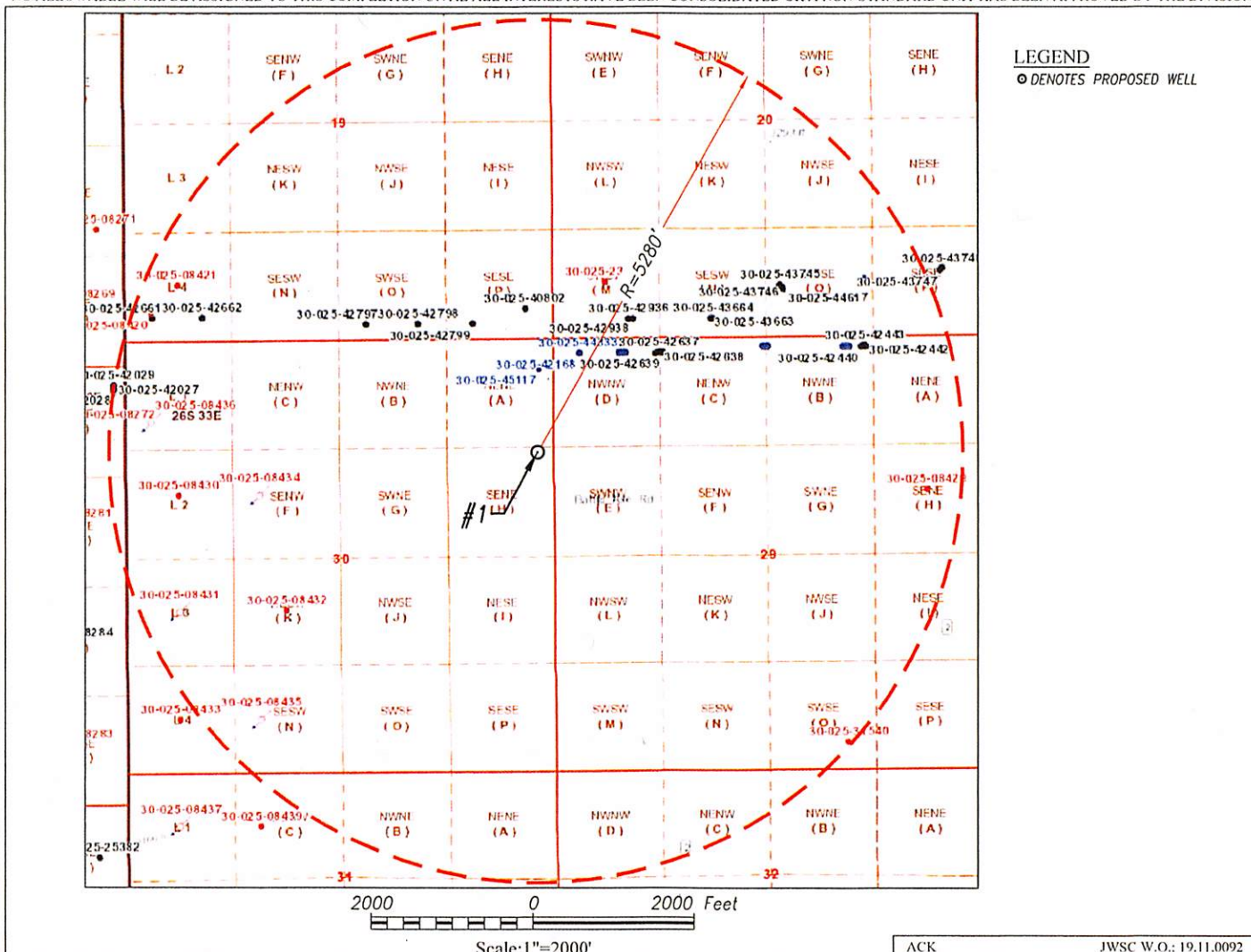
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	30	26-S	33-E		1397	NORTH	212	EAST	LEA

Bottom Hole Location If Different From Surface

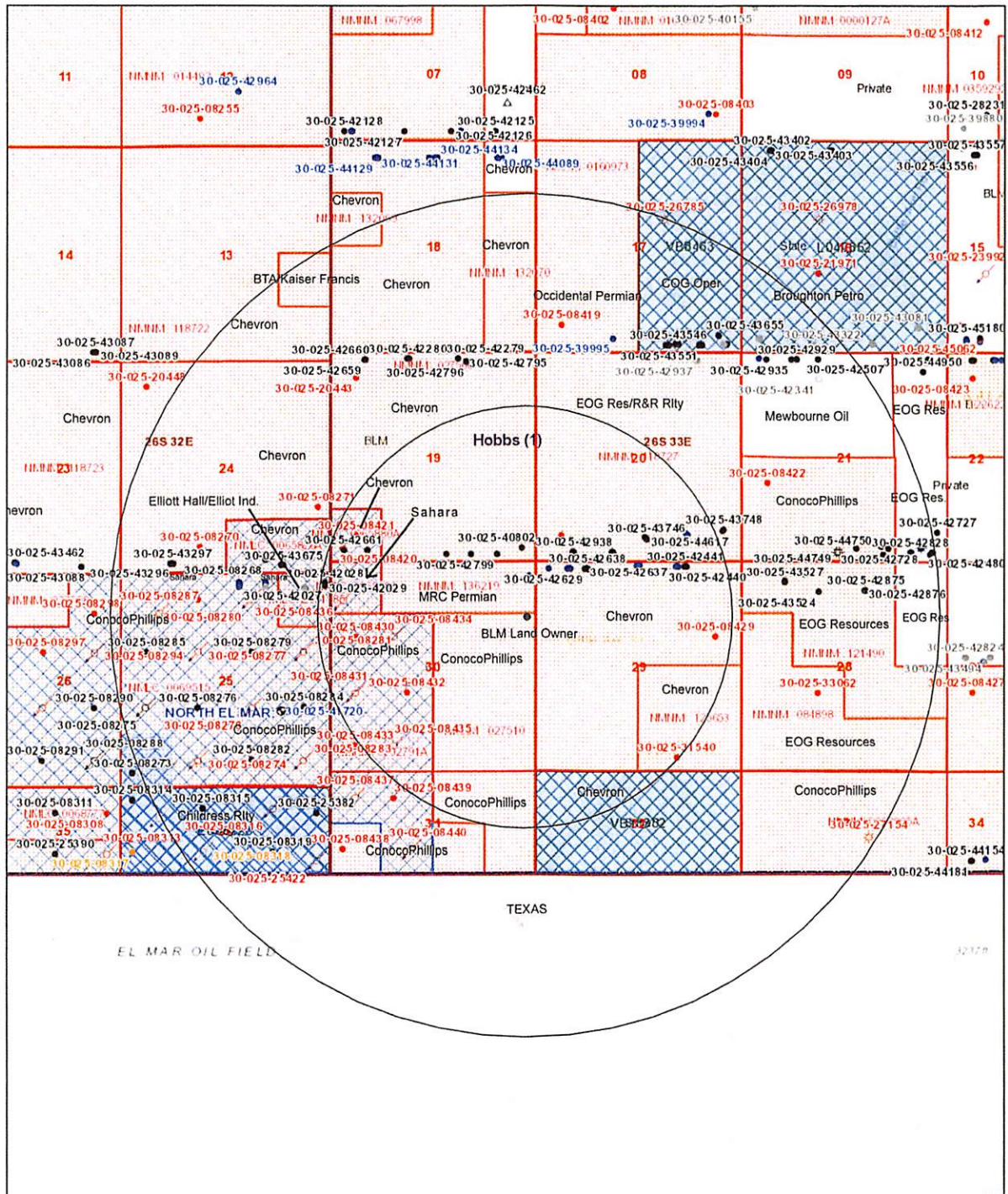
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.






































NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



Big Suck Federal SWD #1, 1 & 2 Mile AOI

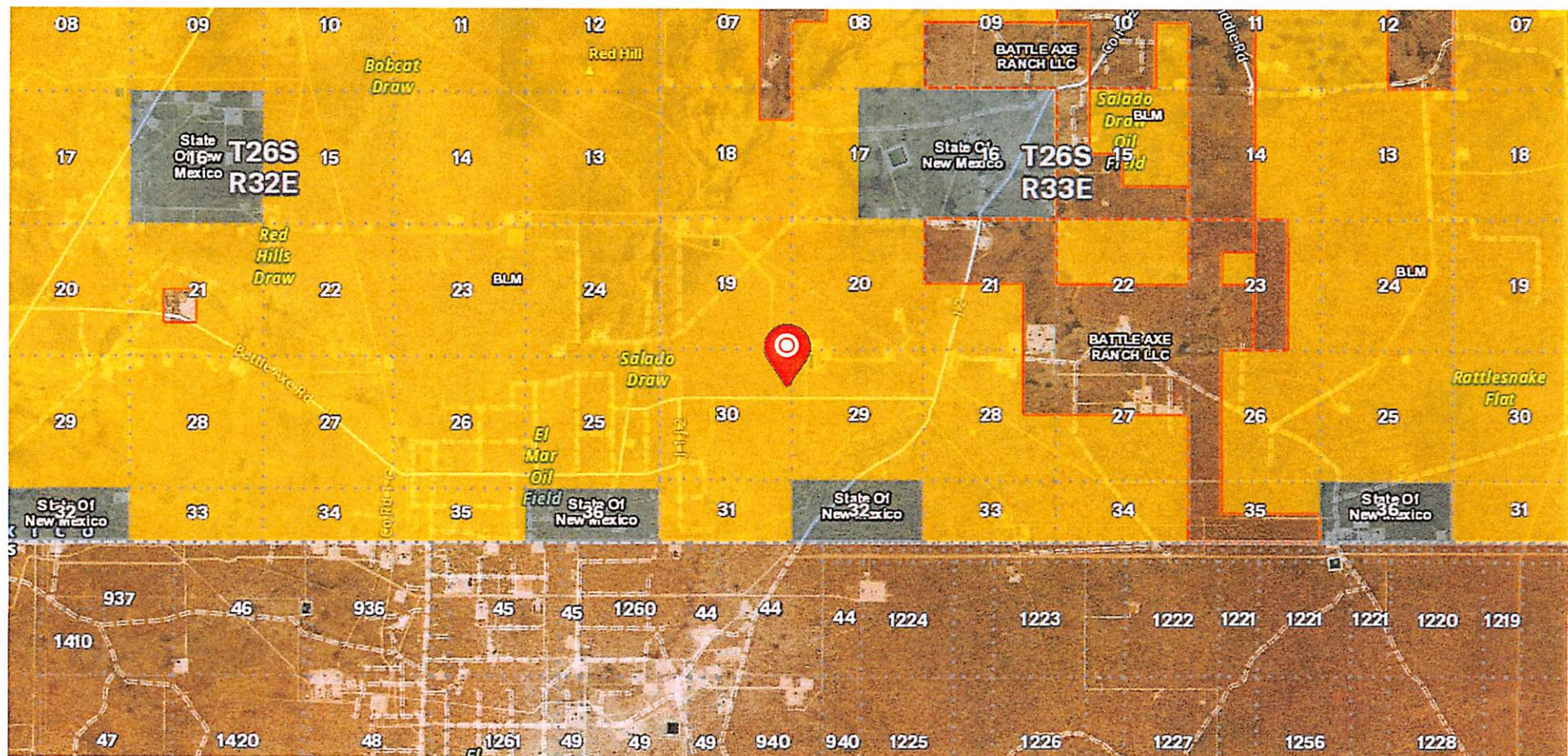


3/9/2019, 9:38:49 AM

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|---|--|--|
| Lines |  CO2 New |  Oil, Active |
|  Override 1 |  CO2, Plugged |  Oil, Cancelled |
|  Override 2 |  CO2, Temporarily Abandoned |  Oil, New |
|  Override 1 |  Gas Active |  Oil, Plugged |
| Well Locations - Small Scale |  Gas, Cancelled, Never Drilled |  Oil, Temporarily Abandoned |
|  Active |  Gas, New |  Salt Water Injection, Active |
|  New |  Gas, Plugged |  Salt Water Injection, Cancelled |
|  Plugged |  Gas, Temporarily Abandoned |  Salt Water Injection, New |
|  Cancelled |  Injection, Active |  Salt Water Injection, Plugged |
|  Temporarily Abandoned |  Injection, Cancelled |  Salt Water Injection Temporarily Abandoned |
| Well Locations - Large Scale |  Injection, New |  Water, Active |
|  Miscellaneous |  Injection, Plugged |  Water, Cancelled |
|  CO2 Active |  Injection, Temporarily Abandoned |  Water, New |
|  CO2 Cancelled | | |

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),

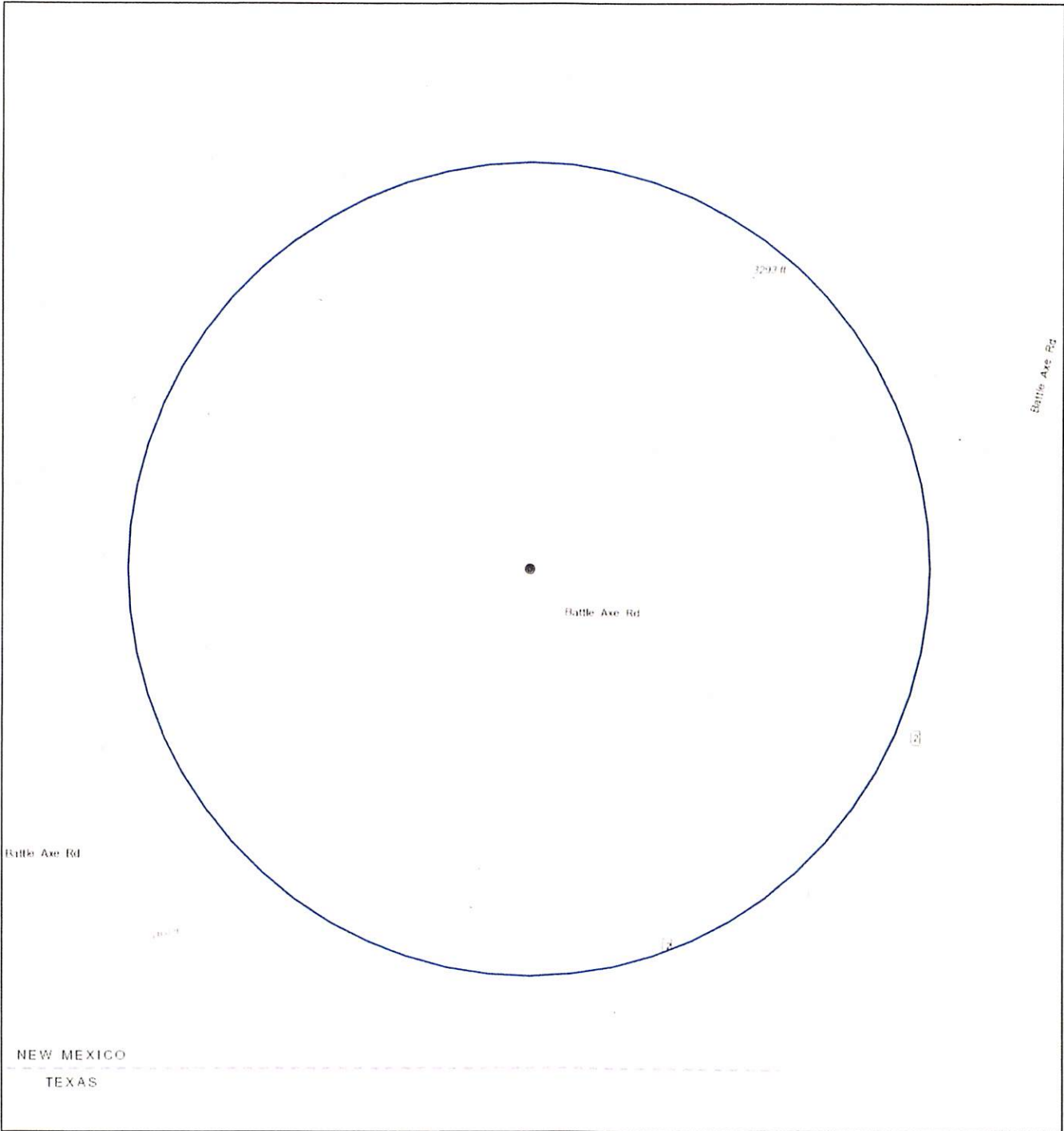
New Mexico Oil Conservation Division



Big Suck 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	CD Unit Letter	Surface Location	Bottomhole Location	Formation	APD	TVD
30-025-08420	SAHARA OPERATING CO	NORTH EL MAR UNIT	#003	Oil	Vertical	Plugged, Site Released	19	T265	R33E	M	M-19-265-33E Lot: 4 330 FSL 330 FWL	M-19-265-33E Lot: 4 330 FSL 330 FWL	DELAWARE	4710	4710
30-025-08421	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	19	T265	R33E	M	M-19-265-33E Lot: 4 660 FSL 660 FWL	M-19-265-33E Lot: 4 0 FS 660 FWL	DELAWARE	4790	4790
30-025-08429	CURTIS HANHAMER	GULF FEDERAL	#001	Oil	Vertical	Plugged, Site Released	29	T265	R33E	H	H-29-265-33E 1880 FNL 660 FWL	H-29-265-33E 1880 FNL 660 FWL	DELAWARE	4991	4991
30-025-08430	QUAT VALLEY INC	NORTH EL MAR UNIT	#017	Oil	Vertical	Plugged, Site Released	30	T265	R33E	E	E-30-265-33E Lot: 2 1880 FNL 660 FWL	E-30-265-33E Lot: 2 1880 FNL 660 FWL	DELAWARE	4742	4742
30-025-08431	SAHARA OPERATING CO	NORTH EL MAR UNIT	#020	Injection	Vertical	Plugged, Site Released	30	T265	R33E	L	L-30-265-33E Lot: 3 1980 FSL 660 FWL	L-30-265-33E Lot: 3 1980 FSL 660 FWL	DELAWARE	4719	4719
30-025-08432	SAHARA OPERATING CO	NORTH EL MAR UNIT	#019	Oil	Vertical	Plugged, Site Released	30	T265	R33E	K	K-30-265-33E 1980 FSL 1980 FWL	K-30-265-33E 1980 FSL 1980 FWL	DELAWARE	4749	4749
30-025-08434	SAHARA OPERATING CO	NORTH EL MAR UNIT	#018	Injection	Vertical	Plugged, Site Released	30	T265	R33E	F	F-30-265-33E 1880 FNL 1650 FWL	F-30-265-33E 1880 FNL 1650 FWL	DELAWARE	4830	4830
30-025-08435	SAHARA OPERATING CO	NORTH EL MAR UNIT	#039	Injection	Vertical	Plugged, Site Released	30	T265	R33E	N	N-30-265-33E 660 FSL 1650 FWL	N-30-265-33E 660 FSL 1650 FWL	DELAWARE	4786	4786
30-025-08436	SAHARA OPERATING CO	NORTH EL MAR UNIT	#004	Injection	Vertical	Plugged, Site Released	30	T265	R33E	D	D-30-265-33E Lot: 1 990 FNL 330 FWL	D-30-265-33E Lot: 1 990 FNL 330 FWL	DELAWARE	4704	4704
30-025-23957	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	Vertical	Plugged, Site Released	20	T265	R33E	M	M-20-265-33E 660 FSL 660 FWL	M-20-265-33E 660 FSL 660 FWL	DELAWARE	5000	5000
30-025-31540	UME ROCK RESOURCES A, L.P.	ARAPAHO AXP FEDERAL	#001	Oil	Vertical	Plugged, Site Released	29	T265	R33E	O	O-29-265-33E 330 FSL 1650 FWL	O-29-265-33E 330 FSL 1650 FWL	DELAWARE	6815	6815
30-025-40802	CHEVRON U S A INC	PORTER BROWN	#001H	Oil	Horizontal	Active	19	T265	R33E	P	P-19-265-33E 340 FSL 340 FWL	A-19-265-33E 342 FSL 415 FWL	BONE SPRING	13468	9171
30-025-42027	CONOCO PHILLIPS COMPANY	WAR HAMMER 25 FEDERAL COM W1	#003H	Oil	Horizontal	Active	25	T265	R32E	A	A-25-265-32E 315 FNL 125 FWL	H-35-265-32E Lot: 1 273 FSL 413 FWL	WOLFCAMP	18902	12250
30-025-42028	CONOCO PHILLIPS COMPANY	WAR HAMMER 25 FEDERAL COM W2	#002H	Oil	Horizontal	Active	25	T265	R32E	A	A-25-265-32E 283 FNL 125 FWL	H-36-265-32E Lot: 1 282 FSL 440 FWL	WOLFCAMP	19670	12688
30-025-42029	CONOCO PHILLIPS COMPANY	WAR HAMMER 25 FEDERAL COM W3	#001H	Oil	Horizontal	Active	25	T265	R32E	A	A-25-265-32E 250 FNL 125 FWL	H-36-265-32E Lot: 1 281 FSL 383 FWL	WOLFCAMP	20027	13145
30-025-42058	CONOCO PHILLIPS COMPANY	WAR HAMMER 25 FEDERAL COM TC	#004C	Oil	Horizontal	Cancelled Apd	25	T265	R32E	A	A-25-265-32E 350 FNL 125 FWL	H-36-265-32E Lot: 1 331 FSL 380 FWL	BONE SPRING	17583	11249
30-025-42168	CHEVRON U S A INC	MOOSSES TOOTH 29 26 33 FEDERAL COM	#001H	Oil	Horizontal	New	29	T265	R33E	D	D-29-265-33E 200 FNL 330 FWL	D-32-265-33E 1239 FNL 389 FWL	BONE SPRING	16901	10406
30-025-42440	CHEVRON U S A INC	SALADO DRAW 29 26 33 FEDERAL COM	#005H	Oil	Horizontal	Active	29	T265	R33E	B	B-29-265-33E 136 FNL 1457 FWL	G-32-265-33E Lot: 2 280 FSL 2997 FWL	BONE SPRING	16621	9264
30-025-42441	CHEVRON U S A INC	SALADO DRAW 29 26 33 FEDERAL COM	#006H	Oil	Horizontal	Active	29	T265	R33E	B	B-29-265-33E 136 FNL 1432 FWL	G-32-265-33E Lot: 2 280 FSL 1651 FWL	BONE SPRING	16577	9312
30-025-42442	CHEVRON U S A INC	SALADO DRAW 29 26 33 FEDERAL COM	#007H	Oil	Horizontal	Active	29	T265	R33E	B	B-29-265-33E 136 FNL 1407 FWL	H-32-265-33E Lot: 1 280 FSL 991 FWL	BONE SPRING	16689	9281
30-025-42443	CHEVRON U S A INC	SALADO DRAW 29 26 33 FEDERAL COM	#008H	Oil	Horizontal	Active	29	T265	R33E	B	B-29-265-33E 136 FNL 1382 FWL	H-32-265-33E Lot: 1 280 FSL 1382 FWL	BONE SPRING	16727	9343
30-025-42629	CHEVRON U S A INC	SALADO DRAW 29 26 33 FEDERAL COM	#001H	Oil	Horizontal	Active	29	T265	R33E	D	D-29-265-33E 200 FNL 1283 FWL	E-32-265-33E Lot: 4 365 FSL 525 FWL	BONE SPRING	16535	9202
30-025-42637	CHEVRON U S A INC	SALADO DRAW 29 26 33 FEDERAL COM	#002H	Oil	Horizontal	Active	29	T265	R33E	D	D-29-265-33E 200 FNL 1308 FWL	E-32-265-33E Lot: 4 353 FSL 1015 FWL	BONE SPRING	16535	9202
30-025-42638	CHEVRON U S A INC	SALADO DRAW 29 26 33 FEDERAL COM	#003H	Oil	Horizontal	Active	29	T265	R33E	C	C-29-265-33E 200 FNL 1333 FWL	F-32-265-33E Lot: 3 479 FSL 1755 FWL	BONE SPRING	16489	9249
30-025-42639	CHEVRON U S A INC	SALADO DRAW 29 26 33 FEDERAL COM	#004H	Oil	Horizontal	Active	29	T265	R33E	C	C-29-265-33E 200 FNL 1358 FWL	F-32-265-33E Lot: 3 383 FSL 2317 FWL	BONE SPRING	16619	9303
30-025-42661	CHEVRON U S A INC	SALADO DRAW 29 26 33 FEDERAL COM	#001H	Oil	Horizontal	Active	19	T265	R33E	D	D-19-265-33E Lot: 1 200 FNL 898 FWL	M-19-265-33E Lot: 4 280 FSL 355 FWL	BONE SPRING	13830	9081
30-025-42662	CHEVRON U S A INC	SALADO DRAW 29 26 33 FEDERAL COM	#002H	Oil	Horizontal	Active	19	T265	R33E	D	D-19-265-33E Lot: 1 200 FNL 948 FWL	M-19-265-33E Lot: 4 280 FSL 964 FWL	BONE SPRING	13547	9213
30-025-42797	CHEVRON U S A INC	SD EA 19 FEDERAL P 5	#005H	Oil	Horizontal	Active	19	T265	R33E	B	B-19-265-33E 227 FNL 1747 FWL	D-19-265-33E 404 FSL 2249 FWL	BONE SPRING	13928	9195
30-025-42798	CHEVRON U S A INC	SD EA 19 FEDERAL P 6	#005H	Oil	Horizontal	Active	19	T265	R33E	B	B-19-265-33E 207 FNL 1732 FWL	D-19-265-33E 180 FSL 1659 FWL	BONE SPRING	13742	9198
30-025-42799	CHEVRON U S A INC	SD EA 19 FEDERAL P 6	#007H	Oil	Horizontal	Active	19	T265	R33E	B	B-19-265-33E 188 FNL 1716 FWL	P-19-265-33E 387 FSL 931 FWL	BONE SPRING	13846	9270
30-025-42936	EOG RESOURCES INC	ORRTANNA 20 FEDERAL	#701H	Oil	Horizontal	Active	20	T265	R33E	M	M-20-265-33E 220 FSL 950 FWL	D-20-265-33E 206 FNL 331 FWL	WOLFCAMP	17136	12278
30-025-42938	EOG RESOURCES INC	ORRTANNA 20 FEDERAL	#702H	Oil	Horizontal	Active	20	T265	R33E	M	M-20-265-33E 220 FSL 995 FWL	D-20-265-33E 232 FNL 969 FWL	WOLFCAMP	17142	12281
30-025-43268	CHEVRON U S A INC	SD EA 29 FEDERAL COM P8	#009H	Oil	Horizontal	New	29	T265	R33E	B	B-29-265-33E 136 FNL 1682 FWL	G-32-265-33E Lot: 2 180 FSL 2312 FWL	BONE SPRING	17701	10525
30-025-43269	CHEVRON U S A INC	SD EA 29 FEDERAL COM P8	#010H	Oil	Horizontal	New	29	T265	R33E	B	B-29-265-33E 136 FNL 1657 FWL	H-32-265-33E Lot: 1 180 FSL 1170 FWL	BONE SPRING	17686	10520
30-025-43270	CHEVRON U S A INC	SD EA 29 FEDERAL COM P8	#011H	Oil	Horizontal	New	29	T265	R33E	B	B-29-265-33E 136 FNL 1632 FWL	H-32-265-33E Lot: 1 180 FSL 991 FWL	BONE SPRING	17677	10525
30-025-43271	CHEVRON U S A INC	SD EA 29 FEDERAL COM P8	#012H	Oil	Horizontal	New	29	T265	R33E	B	B-29-265-33E 136 FNL 1607 FWL	H-32-265-33E Lot: 1 170 FSL 400 FWL	WOLFCAMP	17738	10520
30-025-43663	EOG RESOURCES INC	ORRTANNA 20 FEDERAL	#703H	Oil	Horizontal	Active	20	T265	R33E	N	N-20-265-33E 221 FSL 1969 FWL	C-20-265-33E 217 FNL 1680 FWL	WOLFCAMP	17137	12320
30-025-43664	EOG RESOURCES INC	ORRTANNA 20 FEDERAL	#704H	Oil	Horizontal	Active	20	T265	R33E	N	N-20-265-33E 221 FSL 1999 FWL	C-20-265-33E 147 FNL 2367 FWL	WOLFCAMP	17160	12300
30-025-43745	EOG RESOURCES INC	ORRTANNA 20 FEDERAL	#705H	Oil	Horizontal	Active	20	T265	R33E	O	O-20-265-33E 610 FSL 2455 FWL	B-20-265-33E 250 FNL 2194 FWL	WOLFCAMP	17153	12290
30-025-43746	EOG RESOURCES INC	ORRTANNA 20 FEDERAL	#706H	Oil	Horizontal	Active	20	T265	R33E	O	O-20-265-33E 583 FSL 2432 FWL	B-20-265-33E 246 FNL 1785 FWL	WOLFCAMP	17220	12332
30-025-44333	CHEVRON U S A INC	SD EA 29 32 FEDERAL COM P11	#013H	Oil	Horizontal	New	29	T265	R33E	D	D-29-265-33E 195 FNL 828 FWL	E-32-265-33E Lot: 4 180 FSL 330 FWL	WOLFCAMP	23000	12213
30-025-44334	CHEVRON U S A INC	SD EA 29 32 FEDERAL COM P11	#014H	Oil	Horizontal	New	29	T265	R33E	D	D-29-265-33E 195 FNL 853 FWL	D-29-265-33E 180 FSL 750 FWL	WOLFCAMP	23000	12523
30-025-44335	CHEVRON U S A INC	SD EA 29 32 FEDERAL COM P11	#015H	Oil	Horizontal	New	29	T265	R33E	D	D-29-265-33E 195 FNL 878 FWL	E-29-265-33E 195 FNL 878 FWL	WOLFCAMP	23000	12523
30-025-44336	CHEVRON U S A INC	SD EA 29 32 FEDERAL COM P11	#016H	Oil	Horizontal	New	29	T265	R33E	D	D-29-265-33E 195 FNL 903 FWL	F-32-265-33E Lot: 3 180 FSL 1590 FWL	WOLFCAMP	23000	12523
30-025-44485	CHEVRON U S A INC	SD EA 29 32 FEDERAL COM P10	#017H	Oil	Horizontal	New	29	T265	R33E	C	C-29-265-33E 120 FNL 2605 FWL	F-32-265-33E Lot: 3 180 FSL 2010 FWL	WOLFCAMP	23000	12213
30-025-44486	CHEVRON U S A INC	SD EA 29 32 FEDERAL COM P10	#018H	Oil	Horizontal	New	29	T265	R33E	C	C-29-265-33E 120 FNL 2630 FWL	F-32-265-33E Lot: 3 180 FSL 2430 FWL	WOLFCAMP	23000	12213
30-025-44487	CHEVRON U S A INC	SD EA 29 32 FEDERAL COM P10	#019H	Oil	Horizontal	New	29	T265	R33E	B	B-29-265-33E 120 FNL 2633 FWL	G-32-265-33E Lot: 2 180 FSL 2430 FWL	WOLFCAMP	22300	12213
30-025-44488	CHEVRON U S A INC	SD EA 29 32 FEDERAL COM P10	#020H	Oil	Horizontal	New	29	T265	R33E	B	B-29-265-33E 120 FNL 2608 FWL	G-32-265-33E Lot: 2 180 FSL 2010 FWL	WOLFCAMP	23000	12523
30-025-44617	EOG RESOURCES INC	ORRTANNA 20 FEDERAL	#710H	Oil	Horizontal	Active	20	T265	R33E	O	O-20-265-33E 557 FSL 2405 FWL	B-20-265-33E 126 FNL 1440 FWL	WOLFCAMP	17267	12307
30-025-44835	EOG RESOURCES INC	ORRTANNA 20 FEDERAL	#709H	Oil	Horizontal	New	20	T265	R33E	O	O-20-265-33E 658 FSL 1374 FWL	A-20-265-33E 230 FNL 992 FWL	WOLFCAMP	17149	12330
30-025-44836	EOG RESOURCES INC	ORRTANNA 20 FEDERAL	#711H	Oil	Horizontal	New	20	T265	R33E	O	O-20-265-33E 667 FSL 1403 FWL	A-20-265-33E 230 FNL 1272 FWL	WOLFCAMP	17142	12330
30-025-45117	MATADOR PRODUCTION COMPANY	NIGHT KING FEDERAL	#121H	Oil	Horizontal	New	30	T265	R33E	A	A-30-265-33E 375 FNL 170 FWL	C-30-265-33E 659 FNL 1555 FWL	BONE SPRING	13500	10624

Big Suck Federal SWD #1 - Water Wells within 1 Mile AOR

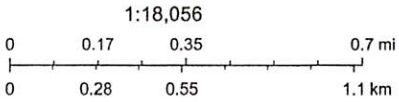


3/9/2019, 7:02:47 AM

Override 1

Points

Override 3



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 631888

Northing (Y): 3543275

Radius: 3218

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.

8/6/19 9:28 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Section(s): 19 Township: 26S Range: 33E

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3/7/19 1:14 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Section(s): 20 Township: 26S Range: 33E

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3/7/19 1:14 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



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

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

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

No records found.

PLSS Search:

Section(s): 24

Township: 26S

Range: 32E

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3/7/19 1:12 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

No records found.

PLSS Search:

Section(s): 25

Township: 26S

Range: 32E

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3/7/19 1:13 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

No records found.

PLSS Search:

Section(s): 29

Township: 26S

Range: 33E

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3/7/19 1:15 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Section(s): 30

Township: 26S

Range: 33E

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3/7/19 1:15 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Section(s): 31 Township: 26S Range: 33E

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3/7/19 1:16 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Section(s): 32 Township: 26S Range: 33E

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.

3/7/19 1:16 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER

Permian Oilfield Partners, LLC.

P.O. Box 1220, Stephenville, TX. 76401 | (817) 606-7630 | gfisher@permianoilfieldpartners.com

Item XII. Affirmative Statement

C-108 Application for Authorization to inject

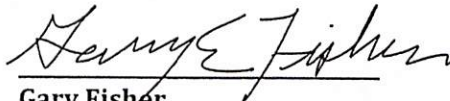
Big Suck Federal SWD #1

1397' FNL & 212' FEL

Section 30, T26S, R33E

Lea County, New Mexico

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.

03/14/2019

Date

Permian Oilfield Partners, LLC.

P.O. Box 1220, Stephenville, TX. 76401 | (817) 606-7630 | gfisher@permianoilfieldpartners.com

Statement of Notifications

C-108 Application for Authorization to inject

Big Suck Federal SWD #1

1397' FNL & 212' FEL

Section 30, T26S, R33E

Lea County, New Mexico

Permian Oilfield Partners, LLC. has mailed notifications to offset operators & leaseholders as per the following list.

Big Suck Federal SWD #1 - List of Operators Notified					
Operator Name	Operator Address	Operator City, State, ZIP Code	Shipper	Tracking Number	Date Mailed
SAHARA OPERATING CO	P.O. Box 4130	Midland, TX 79704	USPS	70182290000160712914	3/11/2019
CURTIS HANKAMER	9039 Katy Freeway Ste 430	Houston, TX 77024	USPS	70182290000160713027	3/11/2019
QUAY VALLEY INC.	P.O. Box 10280	Midland, TX 79702	USPS	70182290000160713034	3/11/2019
LIME ROCK RESOURCES A, L.P.	1111 Bagby Street Suite 4600	Houston, TX 77002	USPS	70182290000160713010	3/11/2019
CHEVRON U S A INC	6301 Deauville Blvd	Midland, TX 79706	USPS	70182290000160712990	3/11/2019
CONOCOPHILLIPS COMPANY	P.O.Box 2197 Office EC3-10-W285	Houston, TX 77252	USPS	70182290000160713003	3/11/2019
EOG RESOURCES INC	P.O. Box 2267	Midland, TX 79702	USPS	70182290000160712969	3/11/2019
MATADOR PRODUCTION COMPANY	One Lincoln Centre 5400 LBJ Freeway, Ste 1500	Dallas, TX 75240	USPS	70182290000160712976	3/11/2019

Big Suck Federal SWD #1 - List of Leaseholders Notified					
Leaseholder Name	Leaseholder Address	Leaseholder City, State, ZIP Code	Shipper	Tracking Number	Date Mailed
CHEVRON U S A INC	6301 Deauville Blvd	Midland, TX 79706	USPS	70182290000160712990	3/11/2019
CONOCOPHILLIPS COMPANY	P.O.Box 2197 Office EC3-10-W285	Houston, TX 77252	USPS	70182290000160713003	3/11/2019
EOG RESOURCES INC	P.O. Box 2267	Midland, TX 79702	USPS	70182290000160712969	3/11/2019
MRC Permian	5400 LBJ Freeway, Suite 1500	Dallas, TX 75240	USPS	70182290000160712983	3/11/2019
R&R Royalty, Ltd	500 N. Shoreline Boulevard, Suite 322	Corpus Christi, Texas 78401	USPS	70182290000160712938	3/11/2019
Elliott Industries, LP	500 North Kentucky Avenue	Roswell, NM 88201	USPS	70182290000160712952	3/11/2019
Elliott Hall Co UT, LP	2668 Grant Avenue, Suite 104	Ogden, UT 84401	USPS	70182290000160712945	3/11/2019
SAHARA OPERATING CO	P.O. Box 4130	Midland, TX 79704	USPS	70182290000160712914	3/11/2019
New Mexico State Land Office	2827 N Dal Paso St Suite 117	Hobbs, NM 88240	USPS	70182290000160713041	3/11/2019
Bureau of Land Management	620 E Greene St	Carlsbad, NM 88220	USPS	70182290000160713058	3/11/2019
New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe, NM 87501	USPS	9414811899560604668964	3/19/2019


Gary Fisher
Manager
Permian Oilfield Partners, LLC.

03/19/2019
Date

7018 0360 0000 3089 6533

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☐ Adult Signature Required \$
☐ Adult Signature Restricted Delivery \$

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Total Postage and Fees

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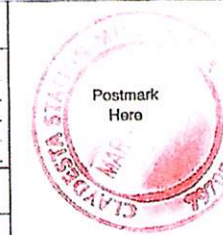
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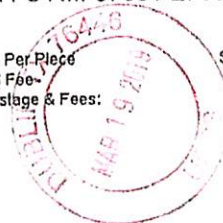
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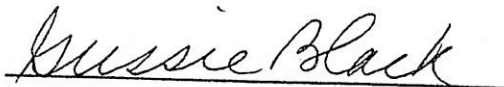
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COUNTY OF LEA

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
March 12, 2019
and ending with the issue dated
March 12, 2019.

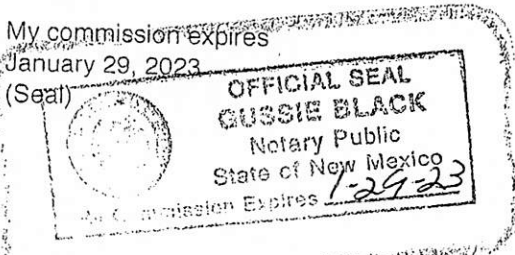

Publisher

Sworn and subscribed to before me this
12th day of March 2019.


Business Manager

My commission expires
January 29, 2023

(Seal)



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGALS

LEGAL NOTICE
MARCH 12, 2019

Permian Oilfield Partners, LLC, P.O. Box 1220, Stephenville, TX 76401, phone (817)606-7630, attention Gary Fisher, has filed form C-108 (Application for Authorization for Injection) with the New Mexico Oil Conservation Division seeking approval to drill a commercial salt water disposal well in Lea County, New Mexico. The well name is the Big Suck Federal SWD #1, and is located 1397' FNL & 212' FEL, Unit Letter H, Section 30, Township 26 South, Range 33 East, NMNM. The well will dispose of water produced from nearby oil and gas wells into the Devonian formation from a depth of 17,366-18,972. The maximum expected injection rate is 66,500 BWPD at a maximum surface injection pressure of 3,473 psi.

Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505 within 15 days.
#33875

67115647

00225778

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

**Plugging Risk Assessment
Permian Oilfield Partners, LLC.
Big Suck Federal SWD #1
SL: 1397' FNL & 212' FEL
Sec 30, T26S, R33E
Lea County, New Mexico**

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Big Suck Federal SWD #1
1397' FNL, 212' FEL
Sec. 30, T26S, R33E, Lea Co. NM
Lat 32.017923° N, Lon 103.603485° W
GL 3174', RKB 3204'

Surface - (Conventional)

Hole Size: 26"
Casing: 20" - 94# H-40 STC Casing
Depth Top: Surface
Depth Btm: 740'
Cement: 453 sks - Class C + Additives
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)

Hole Size: 17.5"
Casing: 13.375" - 61# J-55 STC Casing
Depth Top: Surface
Depth Btm: 4727'
Cement: 1532 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: 12072'
Cement: 2047 sks - Lite Class C (60:40:0) + Additives
Cement Top: Surface - (Circulate)
ECP/DV Tool: 4827'

Intermediate #3 - (Liner)

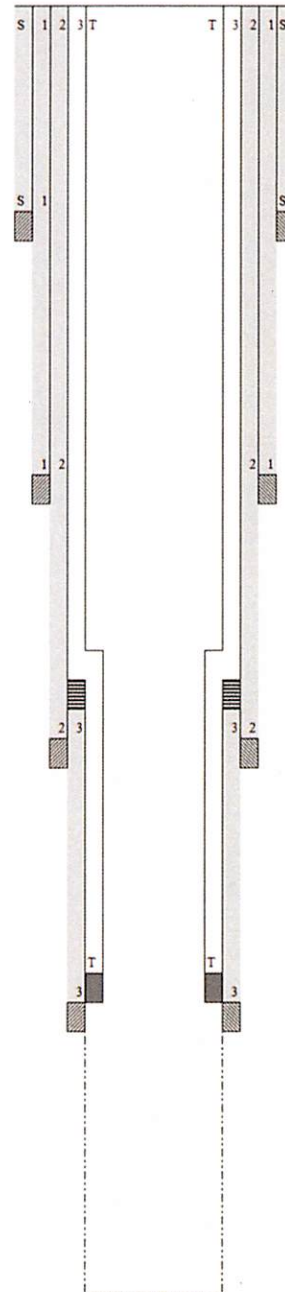
Hole Size: 8.5"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 11872'
Depth Btm: 17935'
Cement: 275 sks - Lite Class C (60:40:0) + Additives
Cement Top: 11872' - (Volumetric)

Intermediate #4 - (Open Hole)

Hole Size: 6.5"
Depth: 19475'
Inj. Interval: 17935' - 19475' (Open-Hole Completion)

Tubing - (Tapered)

Tubing Depth: 17890'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 11872'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 17900'
Packer: 5.5" - Perma-Pak or Equivalent (Inconel)



Plugging Risk Assessment

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

Bowen Series 150 Releasing and Circulation Overshots

Maximum Catch Size 6 5/8" to 7 1/4" Inclusive

Maximum Catch Size (Spiral)		6 5/8"	6 3/4"	7"	7 1/4"
Maximum Catch Size (Basket)		5 7/8"	6 1/8"	6 3/8"	6 5/8"
Overshot O.D.		8 1/4"	7 7/8"	8 3/8"	8 1/2"
Type		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	260

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
Basket Grapple Control	Part No.	M-89	A-5228	9223	B-5360
Mill Control Packer	Part No.	A-1814-R	B-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 (in)	Weight lb/ft	Grade	Conn.	Type	Body O.D. (in)	Coupling O.D. (in)	I.D. (in)	Drift (in)	Lined Wt. lb/ft	Lined I.D. (in)	Flare I.D. (in)	Lined Drift (in)
0.840	9 5/8	40.0	L-80	BTC	Casing	9.625	10.625	8.835	8.679	-	-	-	-
	7	26.0	HCP-110	FJ	Casing	7.000	7.000	6.276	6.151	28.500	6.080	5.940	5.815

*Red Indicates Tubing

Fishing Procedure

Overshot Fishing Procedure

In the Event of a Connection Break

- If fishing neck is clean

1. Trip in hole with overshot and engage fish.
2. Pick up 2 points over neutral weight.
3. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
4. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

- If dressing fishing neck is required

1. Trip in hole with mill and dress fishing neck to allow for overshot to engage tubing.
2. Trip out of hole with mill.
3. Trip in hole with overshot and engage fish.
4. Pick up 2 points over neutral weight.
5. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
6. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

In the Event of a Body Break

- If fishing neck is clean

1. Trip in hole with overshot and engage fish.
2. Pick up 2 points over neutral weight.
3. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
4. Once released from packer, trip out of hole with fish.

- If dressing fishing neck is required

1. Trip in hole with mill and dress fishing neck to allow for overshot to engage tubing.
2. Trip out of hole with mill.
3. Trip in hole with overshot and engage fish.
4. Pick up 2 points over neutral weight.

5. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
6. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

Spear Fishing Procedure

If an overshot cannot be used to retrieve the fish, a spear may be used.

- Due to the use of insert lined tubing, the composite liner must be removed from the tubing before engaging the fish with a spear.
1. Trip in hole with spear sized to engage the I.D. of the insert liner.
 2. Engage the insert liner inside the tubing with spear.
 3. Pull the insert liner out of the tubing.
 4. Trip out of hole with insert liner.
 5. Trip in hole with spear sized to engage the I.D. of the tubing.
 6. Engage the tubing with spear.
 7. Pick up 2 points over neutral weight.
 8. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
 9. Once released from packer, trip out of hole with fish.

Inside Diameter Cutting Tool Fishing Procedure

If an overshot is required but a mill cannot be used to dress off a fishing neck, an inside diameter cutting tool may be used.

- Due to the use of insert lined tubing, the composite liner must be removed from the tubing before engaging the fish with a spear.
1. Trip in hole with spear sized to engage the I.D. of the insert liner.
 2. Engage the insert liner inside the tubing with spear.
 3. Pull the insert liner out of the tubing.
 4. Trip out of hole with insert liner.
 5. Trip in hole with inside diameter cutting tool and cut the tubing below the damaged fishing neck.
 6. Trip out hole with cutting tool.
 7. Trip in hole with spear sized to engage the I.D. of the tubing.
 8. Engage the previously cut tubing segment with spear.
 9. Trip out hole with cut tubing segment and spear.
 10. Trip in hole with overshot and engage fish.
 11. Pick up 2 points over neutral weight.
 12. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
 13. Once released from packer, trip out of hole with fish.

5 1/2" UFJ Tubing Inside of 7 5/8" 39# Casing

Series 150 Overshots

Tools are listed in order of maximum catch size.

The following table shows only a partial listing of available NOV Dowhole Bowen® overshots.

NOTE: Nitralloy Grapples are available upon request.

Bowen Series 150 Releasing and Circulation Overshots

Maximum Catch Size 4 1/4" to 5 1/2" Inclusive

Maximum Catch Size (Spiral)		4 1/4"	4 1/2"	4 3/4"	4 7/8"	5"	5 1/8"	5 1/2"
Maximum Catch Size (Basket)		3 1/4"	4"	4 1/4"	4 1/2"	4 3/4"	4 7/8"	4 7/8"
Overshot O.D.		5 1/4"	5 1/2"	5 3/4"	5 7/8"	5 7/8"	6 1/8"	6 1/8"
Type		F.S.	S.H.	S.H.	S.F.S.	S.H.	F.S.	S.H.
Complete Assembly	Part No.	5898	5898	C-5188	8875	C-5171	C-4825	8825
(Dressed Spiral Parts)	Weight	130	130	133	138	140	182	185

Replacement Parts

Top Sub	Part No.	5897	5899	A-5189	8876	A-5172	B-4826	8826
Bowl	Part No.	5898	5700	B-5170	8877	B-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-4389	M-1071	8819
Spiral Grapple Control	Part No.	186	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 Grapple	Part No.	185	1135	B-2201	6112	B-4389	M-1071	8819
Basket Grapple Control	Part No.	186	1137	B-2202	6113	B-4370	M-1072	8820
Mill Control Packer	Part No.	169-R	1140-R	B-2199-R	6114-R	L-5950-R	M-4505	L-8818-R

A (6.625" turned down to 6.500" O.D.) Bowen Series 150 Overshot will be used to perform this overshot operation. Details on the overshot are listed above. Casing to tubing clearance dimensions are listed below.

5.5" 17# FJ Casing Inside 7.625" 39# FJ Casing													
Clearance (in)	Pipe Size (in)	Weight lb/ft	Grade	Conn.	Type	Body O.D. (in)	Coupling O.D. (in)	I.D. (in)	Drift (in)	Lined Wt. lb/ft	Lined I.D. (in)	Flare I.D. (in)	Lined Drift (in)
0.500	7 5/8	39.0	HCL-80	FJ	Casing	7.625	7.625	6.625	6.500	-	-	-	-
	5 1/2	17.0	HCL-80	FJ	Casing	5.500	5.500	4.892	4.767	18.500	4.520	4.400	4.275

*Red Indicates Tubing

Fishing Procedure

Overshot Fishing Procedure

In the Event of a Connection Break

- If fishing neck is clean

1. Trip in hole with overshot and engage fish.
2. Pick up 2 points over neutral weight.
3. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
4. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

- If dressing fishing neck is required

1. Trip in hole with mill and dress fishing neck to allow for overshot to engage tubing.
2. Trip out of hole with mill.
3. Trip in hole with overshot and engage fish.
4. Pick up 2 points over neutral weight.
5. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
6. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

In the Event of a Body Break

- If fishing neck is clean

1. Trip in hole with overshot and engage fish.
2. Pick up 2 points over neutral weight.
3. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
4. Once released from packer, trip out of hole with fish.

- If dressing fishing neck is required

1. Trip in hole with mill and dress fishing neck to allow for overshot to engage tubing.
2. Trip out of hole with mill.
3. Trip in hole with overshot and engage fish.
4. Pick up 2 points over neutral weight.

5. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
6. Once released from packer, trip out of hole with fish.

A skirted mill may be substituted for a standard mill to ensure pipe stabilization and the casing is not damaged while milling

Spear Fishing Procedure

If an overshot cannot be used to retrieve the fish, a spear may be used.

- Due to the use of insert lined tubing, the composite liner must be removed from the tubing before engaging the fish with a spear.
1. Trip in hole with spear sized to engage the I.D. of the insert liner.
 2. Engage the insert liner inside the tubing with spear.
 3. Pull the insert liner out of the tubing.
 4. Trip out of hole with insert liner.
 5. Trip in hole with spear sized to engage the I.D. of the tubing.
 6. Engage the tubing with spear.
 7. Pick up 2 points over neutral weight.
 8. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
 9. Once released from packer, trip out of hole with fish.

Inside Diameter Cutting Tool Fishing Procedure

If an overshot is required but a mill cannot be used to dress off a fishing neck, an inside diameter cutting tool may be used.

- Due to the use of insert lined tubing, the composite liner must be removed from the tubing before engaging the fish with a spear.
1. Trip in hole with spear sized to engage the I.D. of the insert liner.
 2. Engage the insert liner inside the tubing with spear.
 3. Pull the insert liner out of the tubing.
 4. Trip out of hole with insert liner.
 5. Trip in hole with inside diameter cutting tool and cut the tubing below the damaged fishing neck.
 6. Trip out hole with cutting tool.
 7. Trip in hole with spear sized to engage the I.D. of the tubing.
 8. Engage the previously cut tubing segment with spear.
 9. Trip out hole with cut tubing segment and spear.
 10. Trip in hole with overshot and engage fish.
 11. Pick up 2 points over neutral weight.
 12. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
 13. Once released from packer, trip out of hole with fish.

Plugging Risk Assessment

Page 8

Abandonment Procedure

If the tubing cannot be recovered and the well is to be abandoned.

- The operator will ensure that all geologic formations are properly isolated.
- 1. Confirm the I.D. of the injection tubing is free from obstructions.
- 2. Run in hole with wireline set profile plug.
- 3. Set plug inside of packer assembly.
(Plug will allow cement to fill the I.D. of the injection tubing and the tubing to casing annulus)
- 4. Run in hole with wireline conveyed perforating guns and perforate the tubing immediately above the packer.
- 5. Trip in hole with an overshot, spear, cement retainer or isolation tool that will provide a work string-to- injection tubing seal.
- 6. Engage the fish with sealing tool.
- 7. Confirm circulation down the tubing and up the tubing-to-casing annulus.
- 8. Cement the work string, injection tubing, injection tubing-to-casing annulus and work string-to-casing annulus to surface.
- 9. Confirm the entirety of the wellbore is cemented to surface and all zones are isolated.
- 10. ND wellhead and install permanent capping flange.

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


**APPLICATION OF PERMIAN OILFIELD
PARTNERS, LLC FOR APPROVAL OF SALT WATER
DISPOSAL WELL IN LEA COUNTY, NEW MEXICO**

Case No. 20684

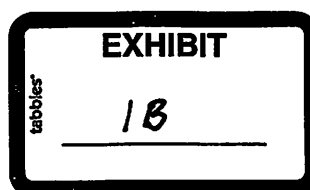
AFFIDAVIT

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

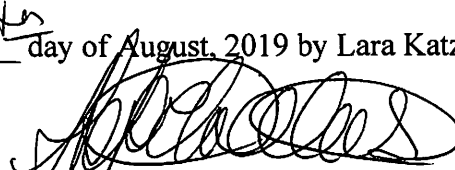
Lara Katz, attorney in fact and authorized representative of Permian Oilfield Partners, LLC, the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Application was provided under a notice letter and that proof of receipt is attached hereto.



Lara Katz

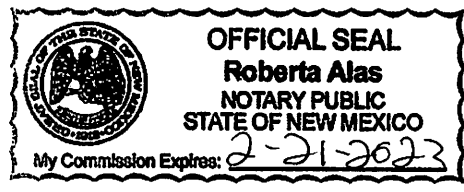


SUBSCRIBED AND SWORN to before me this 6th day of August, 2019 by Lara Katz.



Notary Public

My commission expires: 2-21-2023



Transaction Report Details - CertifiedPro.net

Date Created= 6/23/2019 - 7/23/2019

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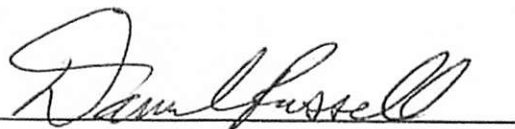
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9314869904300061175161	New Mexico State Land Of 310 Old Santa Fe Trail		Santa Fe	NM	87501	Delivered	Return Receipt - Electronic, Certified Mail
9314869904300061175116	BUREAU OF LAND MANAG 620 E GREENE ST		CARLSBAD	NM	88220-6292	Delivered	Return Receipt - Electronic, Certified Mail
9314869904300061175055	Elliott Hall CO UT, LP	2668 Grant Ave	Ogden	UT	84401	To be Returned	Return Receipt - Electronic, Certified Mail
9314869904300061175000	R&R Royalty, Ltd.	500 N. Shoreline Blvd.	Corpus Christi	TX	78401	Delivered	Return Receipt - Electronic, Certified Mail
9314869904300061174973	M R C PERMIAN, LLC	5400 LYNDON B JOHNSON FWY STE 1500	DALLAS	TX	75240-1017	Delivered	Return Receipt - Electronic, Certified Mail
9314869904300061174928	Matador Production Comp	One Lincoln Centre	Dallas	TX	75240	Delivered	Return Receipt - Electronic, Certified Mail
9314869904300061174850	EOG RESOURCES INC	PO BOX 2267	MIDLAND	TX	79702-2267	Delivered	Return Receipt - Electronic, Certified Mail
9314869904300061174805	ConocoPhillips Company	PO Box 2197	Houston	TX	77252	Delivered	Return Receipt - Electronic, Certified Mail
9314869904300061174744	CHEVON USA INC.	6301 DEAUVILLE	MIDLAND	TX	79706-2964	Delivered	Return Receipt - Electronic, Certified Mail
9314869904300061174683	Lime Rock Resources A, L.F	1111 Bagby Street	Houston	TX	77002	Mailed	Return Receipt - Electronic, Certified Mail
9314869904300061174591	Quay Valley Inc.	PO Box 10280	Midland	NM	79702	To be Returned	Return Receipt - Electronic, Certified Mail
9314869904300061174485	Curtis Hankamer	9039 Kay Freeway	Houston	TX	77024	Delivered	Return Receipt - Electronic, Certified Mail
9314869904300061174362	Sahara Operating Co.	PO Box 4130	Midland	TX	79704	Delivered	Return Receipt - Electronic, Certified Mail

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
July 19, 2019
and ending with the issue dated
July 19, 2019.



Publisher

Sworn and subscribed to before me this
19th day of July 2019.

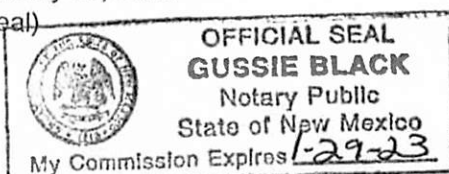


Business Manager

My commission expires

January 29, 2023

(Seal)



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGAL NOTICE
JULY 19, 2019
Case No. 20684: Notice to all affected parties, as well as the heirs and devisees of SAHARA OPERATING CO.; CURTIS HANKAMER; QUAY VALLEY INC.; LIME ROCK RESOURCES A, L.P.; CHEVRON USA INC.; CONOCOPHILLIPS COMPANY; EOG RESOURCES NC.; MATADOR PRODUCTION COMPANY; MRC PERMIAN; R&R ROYALTY, LTD.; ELLIOTT HALL CO UT, L.P.; BUREAU OF LAND MANAGEMENT; NEW MEXICO STATE LAND OFFICE; Permian Oilfield Partners, LLC, PO Box 1220, Stephenville, Texas 76401, has filed an application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division 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 August 8, 2019, to consider this application. Applicant seeks an order approving disposal into the Silurian-Devonian formation through the Big Suck Federal SWD #1 well at a surface location 1397 feet from the North line and 212 feet from the East line of Section 30, Township 26 South, Range 33 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. Permian seeks authority to inject salt water into the Devonian-Silurian formation at a depth of 17,386' to 18,972'. NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 1/2 inch tubing inside the liner and requests that the Division approve a maximum injection rate for the well of 50,000 bbls per day.
#34453

67115820

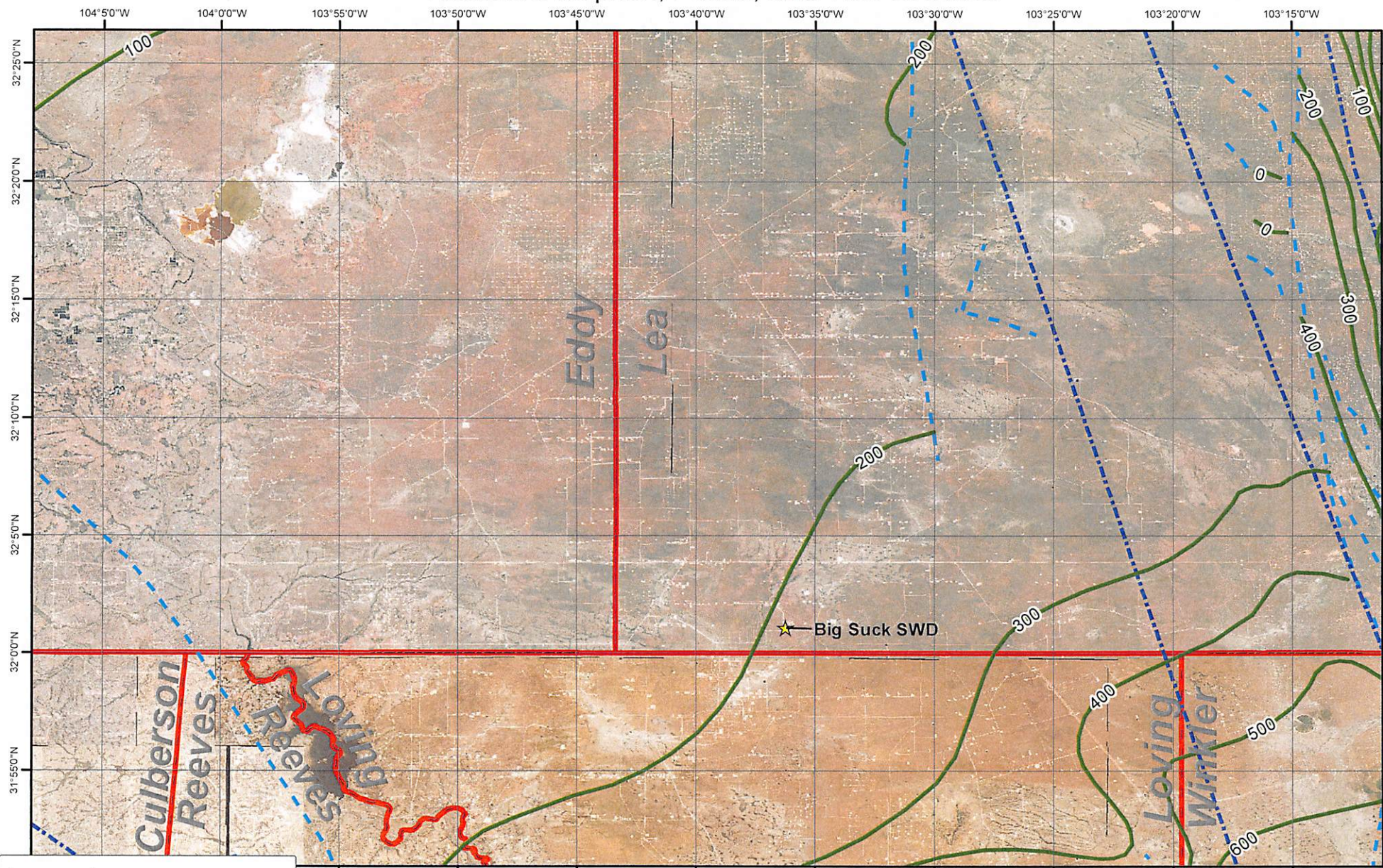
00230949

KAIYA TOOP
ABADIE SCHILL
214 McKENZIE
SANTA FA
NM, NM 87501

Age		Stratigraphic Unit		Key Feature	Estimated Depth BLS	
Triassic		Chinle		Freshwater resources		
		Santa Rosa				
Permian	Ochoan	Dewey Lake				
		Rustler				
		Salado				
		Castile				
	Guadalupian	Delaware Mtn. Grp.	Bell Canyon			
			Cherry Canyon			
			Brushy Canyon			
	Bone Spring					
	Leonardian					
Wolfcamp						
Wolfcampian						
Pennsylvanian	Virgilian	Cisco				
	Missourian	Canyon				
	Des Moinesian	Strawn				
	Atokan	Atoka				
	Morrowan	Morrow				
Mississ.	Upper	Barnett				
	Lower	limestones				
Devon.	Upper	Woodford		Shale: permeability barrier	----- ~17,670'	
	Middle					
	Lower	Thirtyone		Target injection interval	----- ~17,860'	
Silur.	Upper	Wristen				
	Middle					
	Lower	Fusselman			----- ~18,610'	
Ordov.	Upper	Montoya			----- ~19,460'	
	Middle	Simpson		Shale: permeability barrier	----- ~19,800'	
	Lower	Ellenburger				
Cambrian		Bliss				
Precambrian		basement				

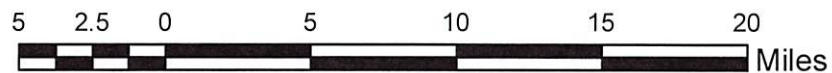
Stratigraphic chart for the Delaware Basin from Broadhead (2017).
 * Based on data from 30-025-42354 Salado Draw 13 SWD (13-26S-32E).

Woodford Isopach, Faults, and Well Location



Legend

- ★ Proposed Well
- Late Devonian (Woodford) Isopach
- - - Precambrian Faults
- Basement Faults
- ▭ County Boundaries, NM
- ▭ County Boundaries, TX



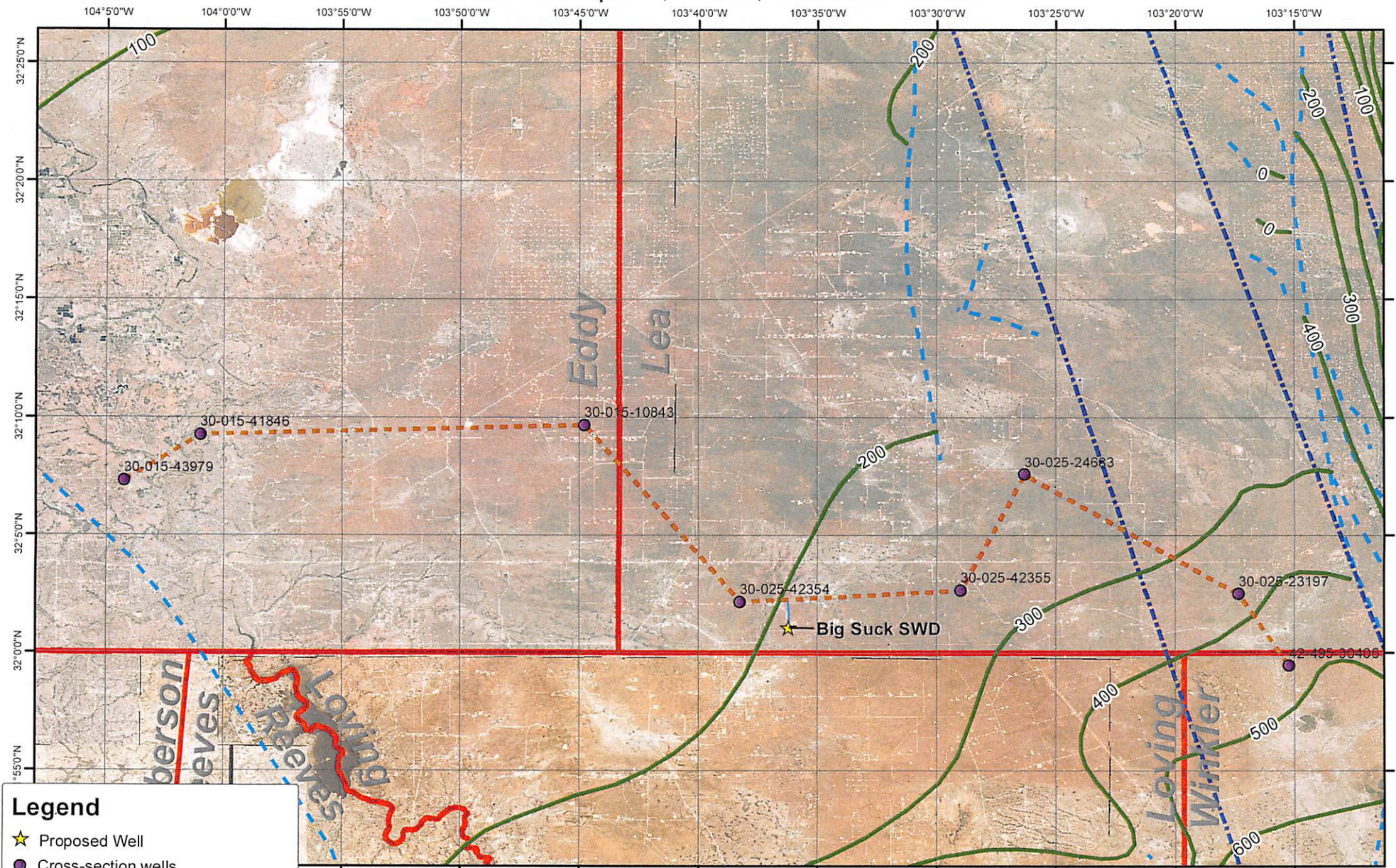
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 Datum: North American 1983
 Units: Degree
 Basement faults (if shown) were digitized from Tectonic Map of Texas (Ewing, 1990)
 Precambrian faults were digitized from Frenzel et al (1998) Figure 6.

EXHIBIT

28



Woodford Isopach, Faults, and Well Location



Legend

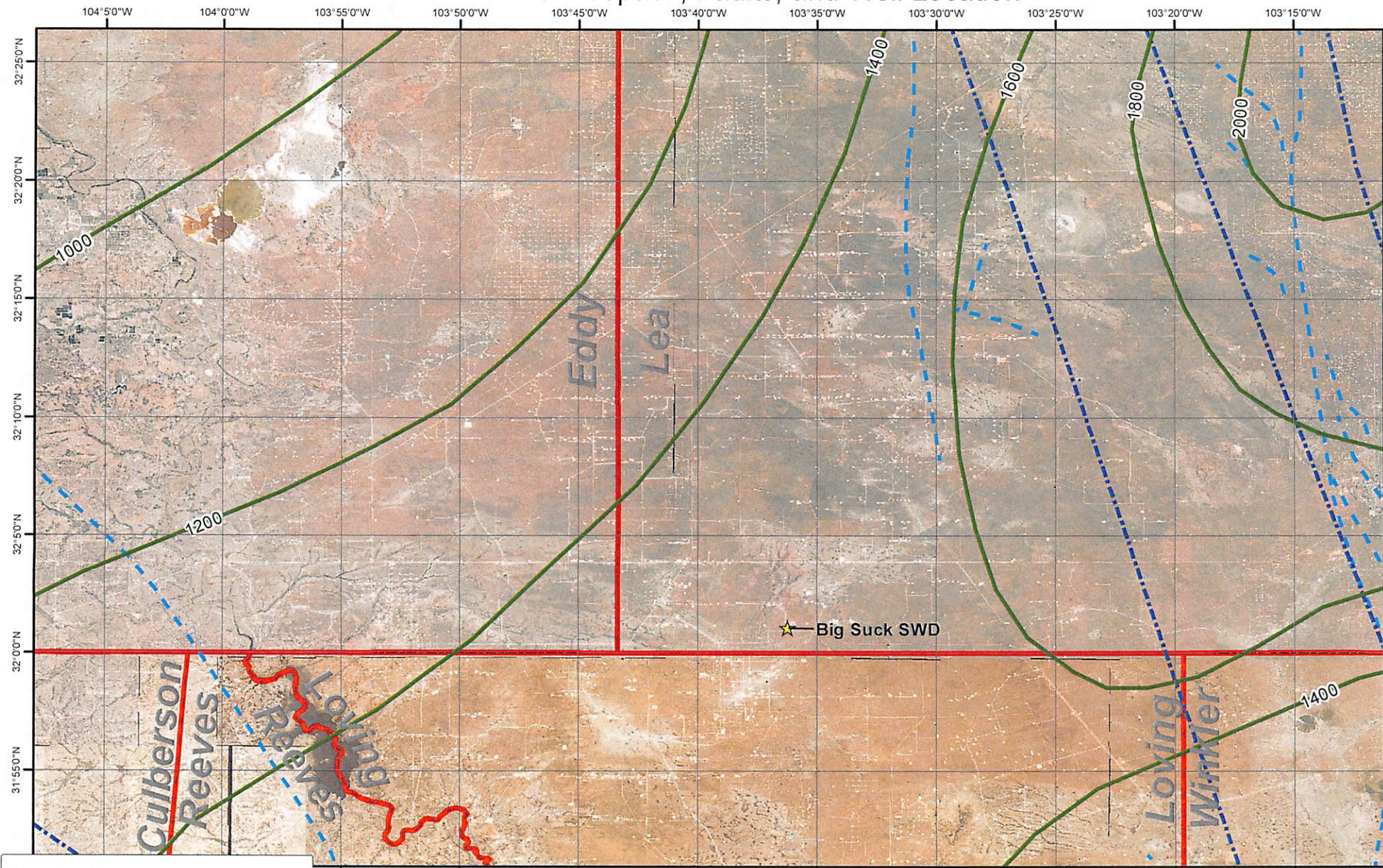
- ★ Proposed Well
- Cross-section wells
- - - Cross-section Line
- - - Cross-section Tie Line
- Late Devonian (Woodford) Isopach
- - - Precambrian Faults
- - - Basement Faults
- ▭ County Boundaries, NM
- ▭ County Boundaries, TX



Coordinate System: GCS North American 1983
 Datum: North American 1983
 Units: Degree
 Basement faults (if shown) were digitized from Tectonic Map of Texas (Ewing, 1990)
 Precambrian faults were digitized from Frenzel et al (1998) Figure 6.



Wristen/Fusselman Isopach, Faults, and Well Location



Legend

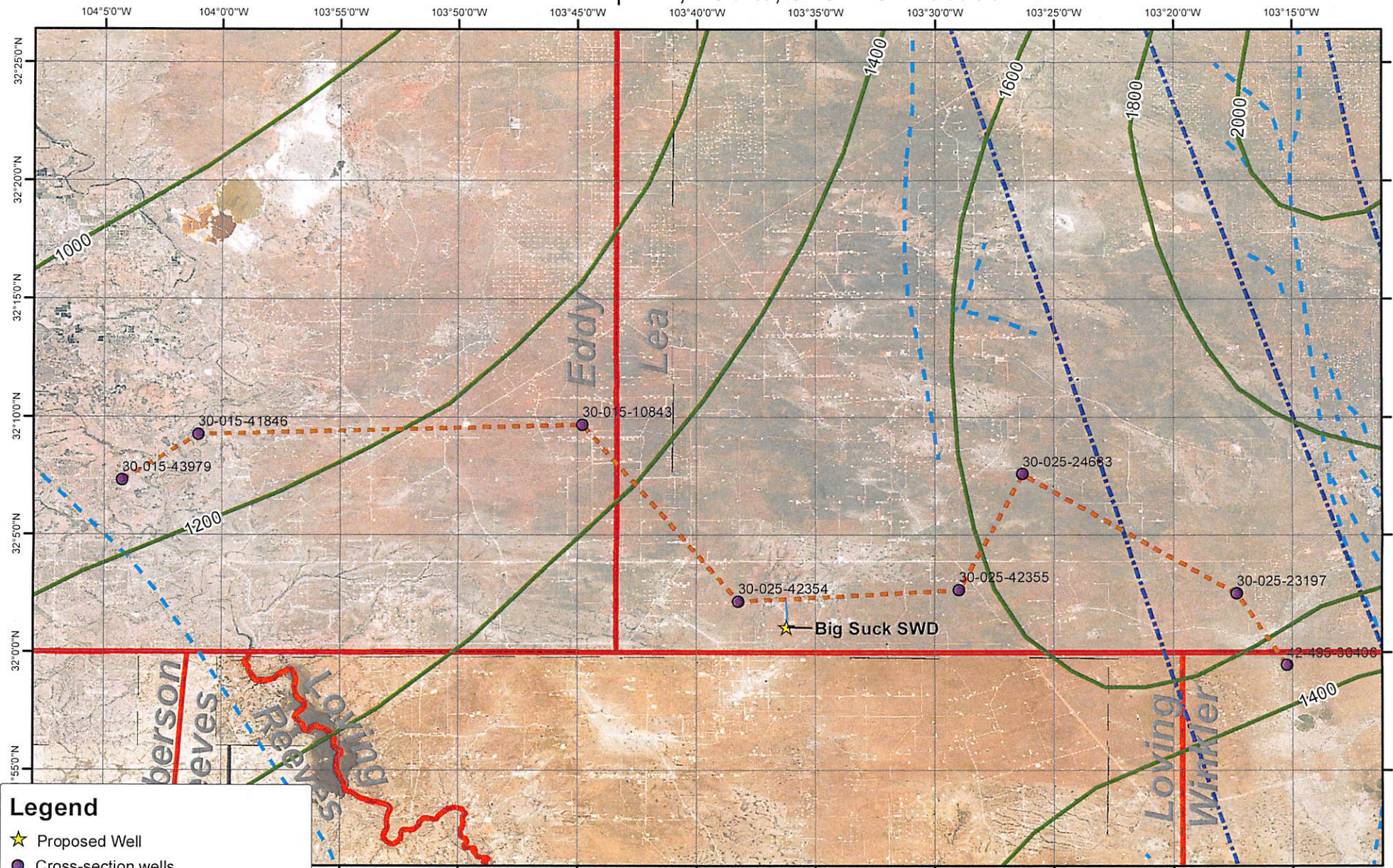
- ★ Proposed Well
- Sil/Dev (Wristen/Fusselman) Isopach
- - - Precambrian Faults
- - - Basement Faults
- ▭ County Boundaries, NM
- ▭ County Boundaries, TX



Coordinate System: GCS North American 1983
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 Precambrian faults were digitized from Frenzel et al (1998) Figure 6.

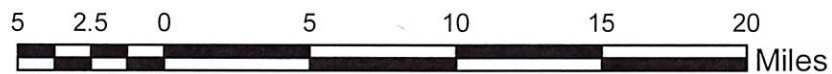


Wristen/Fusselman Isopach, Faults, and Well Location



Legend

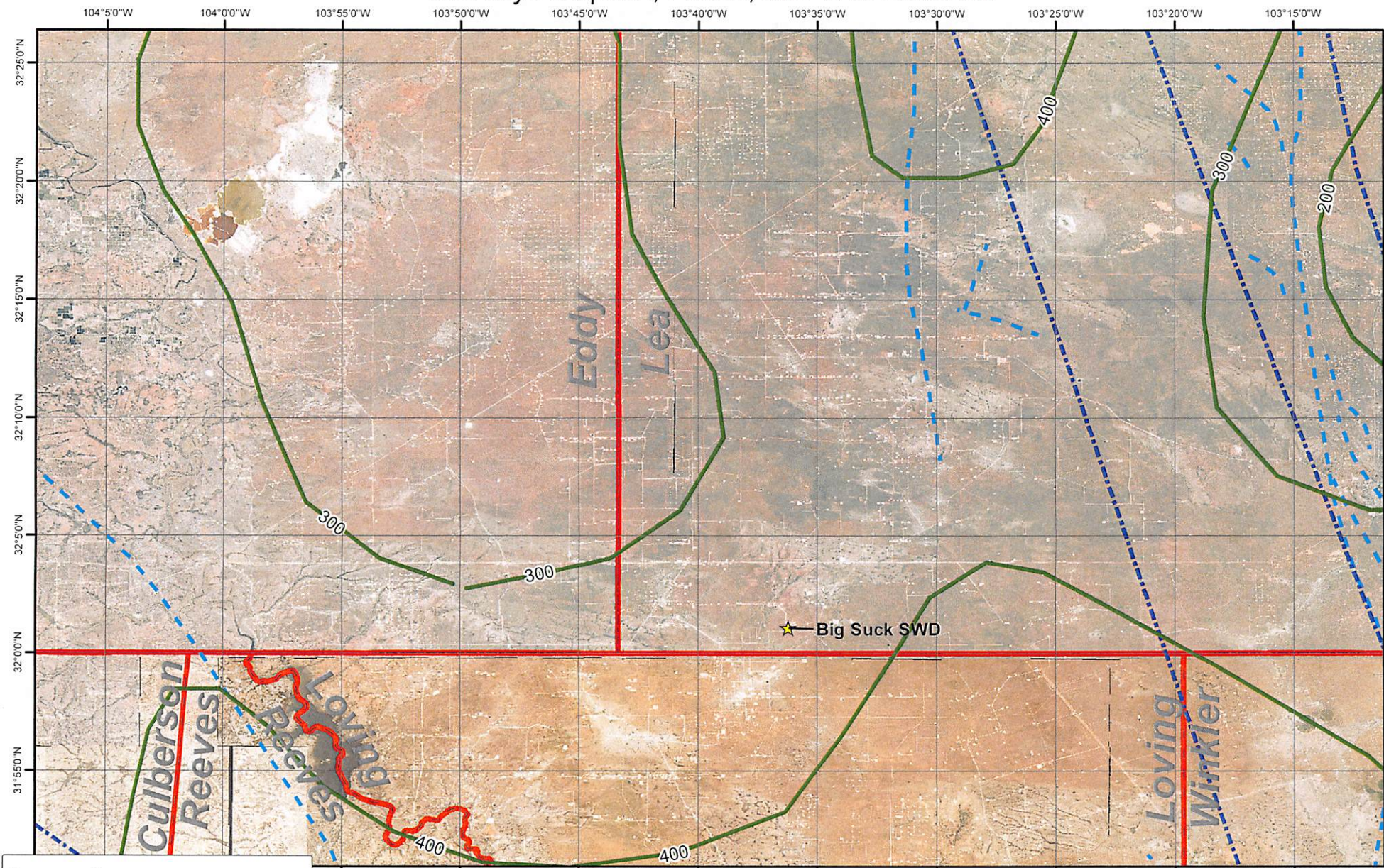
- ★ Proposed Well
- Cross-section wells
- - - Cross-section Line
- - - Cross-section Tie Line
- Sil/Dev (Wristen/Fusselman) Isopach
- - - Precambrian Faults
- - - Basement Faults
- ▭ County Boundaries, NM
- ▭ County Boundaries, TX



Coordinate System: GCS North American 1983
 Datum: North American 1983
 Units: Degree
 Basement faults (if shown) were digitized from Tectonic Map of Texas (Ewing, 1990)
 Precambrian faults were digitized from Frenzel et al (1998) Figure 6.



Montoya Isopach, Faults, and Well Location



Legend

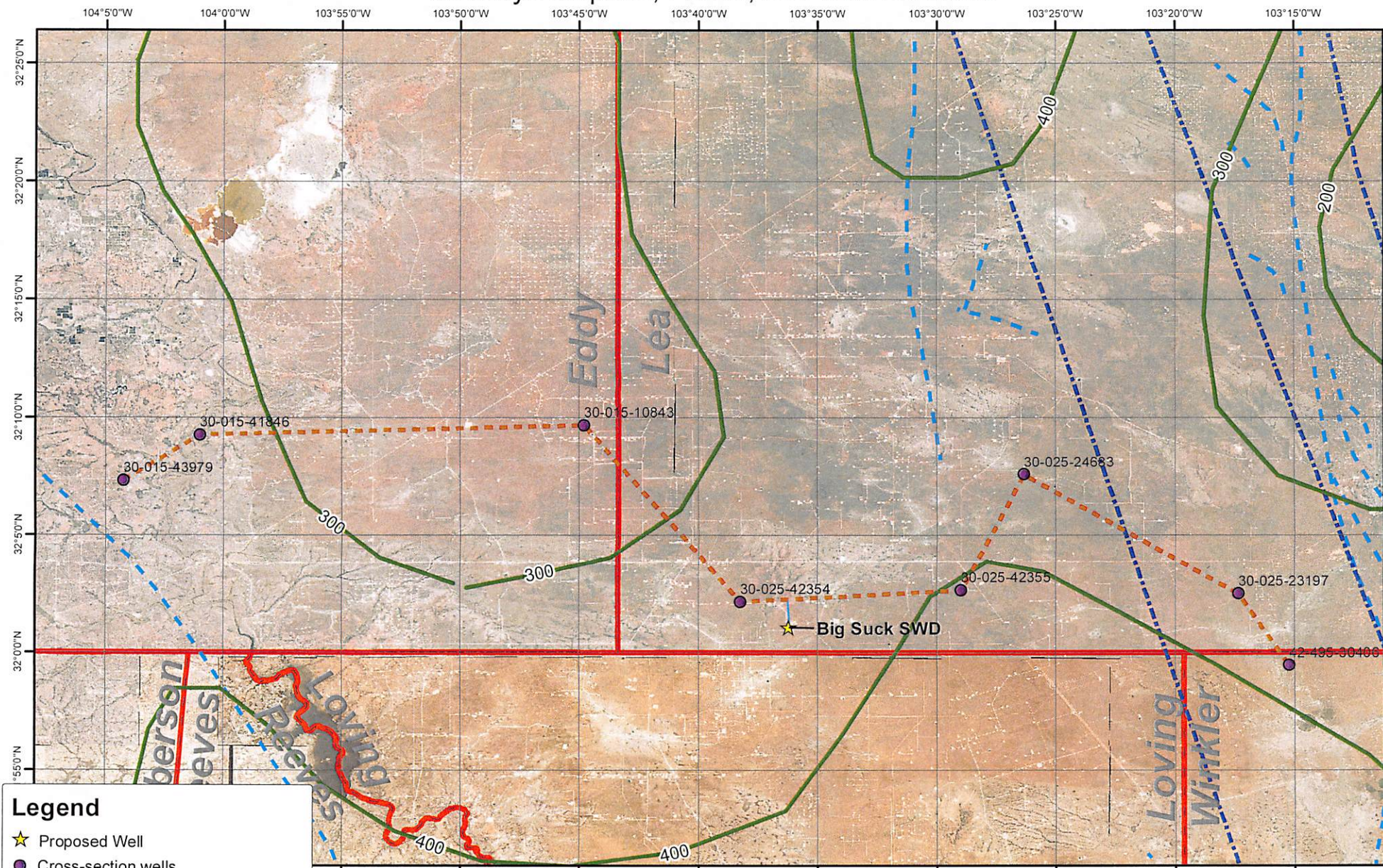
- ★ Proposed Well
- Upper Ordovician (Montoya) Isopach
- - - Precambrian Faults
- - - Basement Faults
- ▭ County Boundaries, NM
- ▭ County Boundaries, TX



Coordinate System: GCS North American 1983
 Datum: North American 1983
 Units: Degree
 Basement faults (if shown) were digitized from Tectonic Map of Texas (Ewing, 1990)
 Precambrian faults were digitized from Frenzel et al (1998) Figure 6.

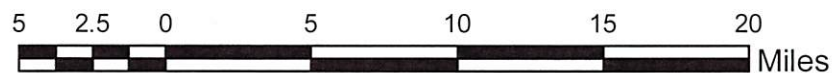


Montoya Isopach, Faults, and Well Location



Legend

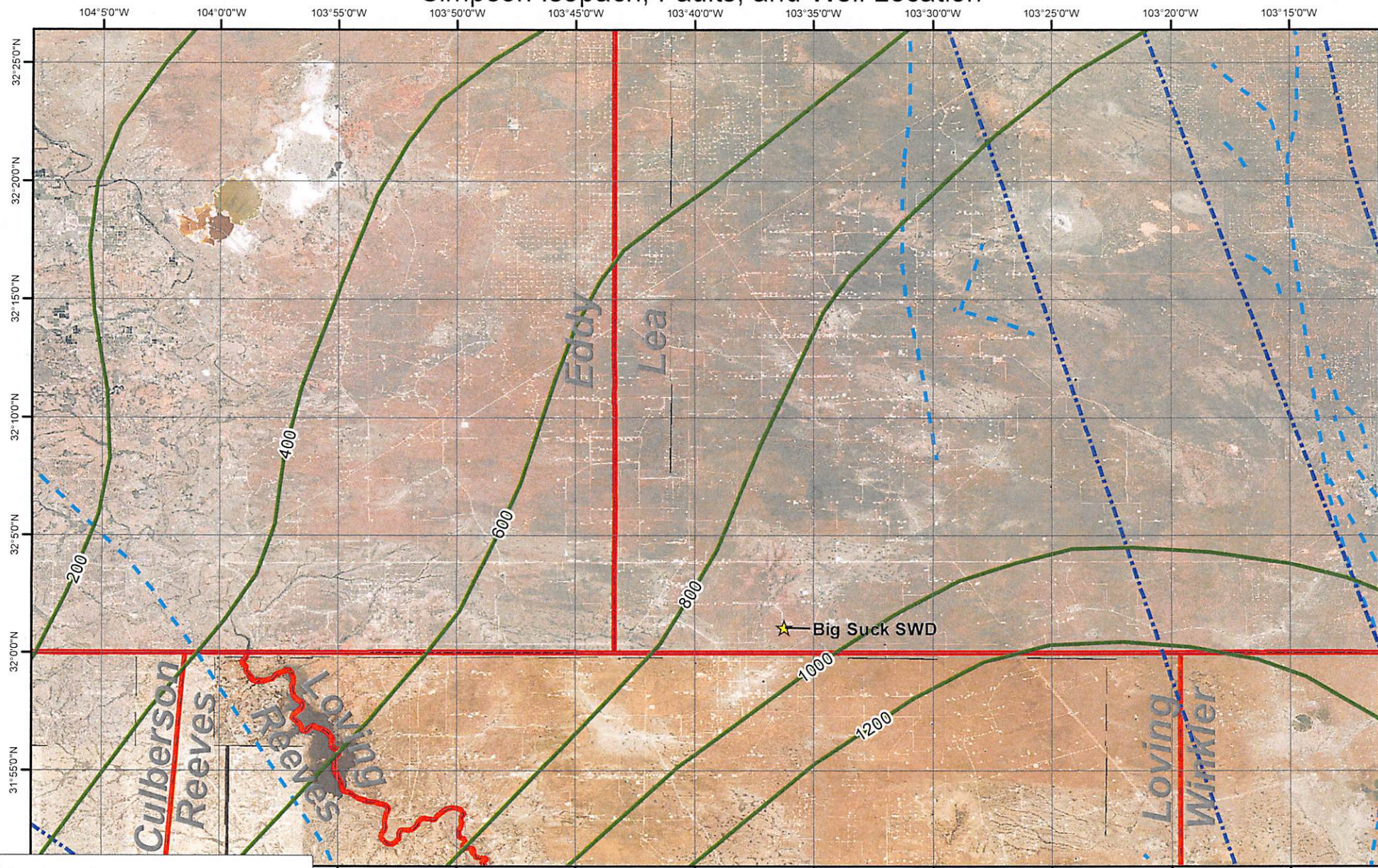
- ★ Proposed Well
- Cross-section wells
- - - Cross-section Line
- - - Cross-section Tie Line
- Upper Ordovician (Montoya) Isopach
- - - Precambrian Faults
- Basement Faults
- ▭ County Boundaries, NM
- ▭ County Boundaries, TX



Coordinate System: GCS North American 1983
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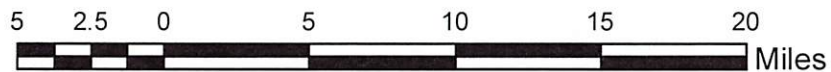


Simpson Isopach, Faults, and Well Location



Legend

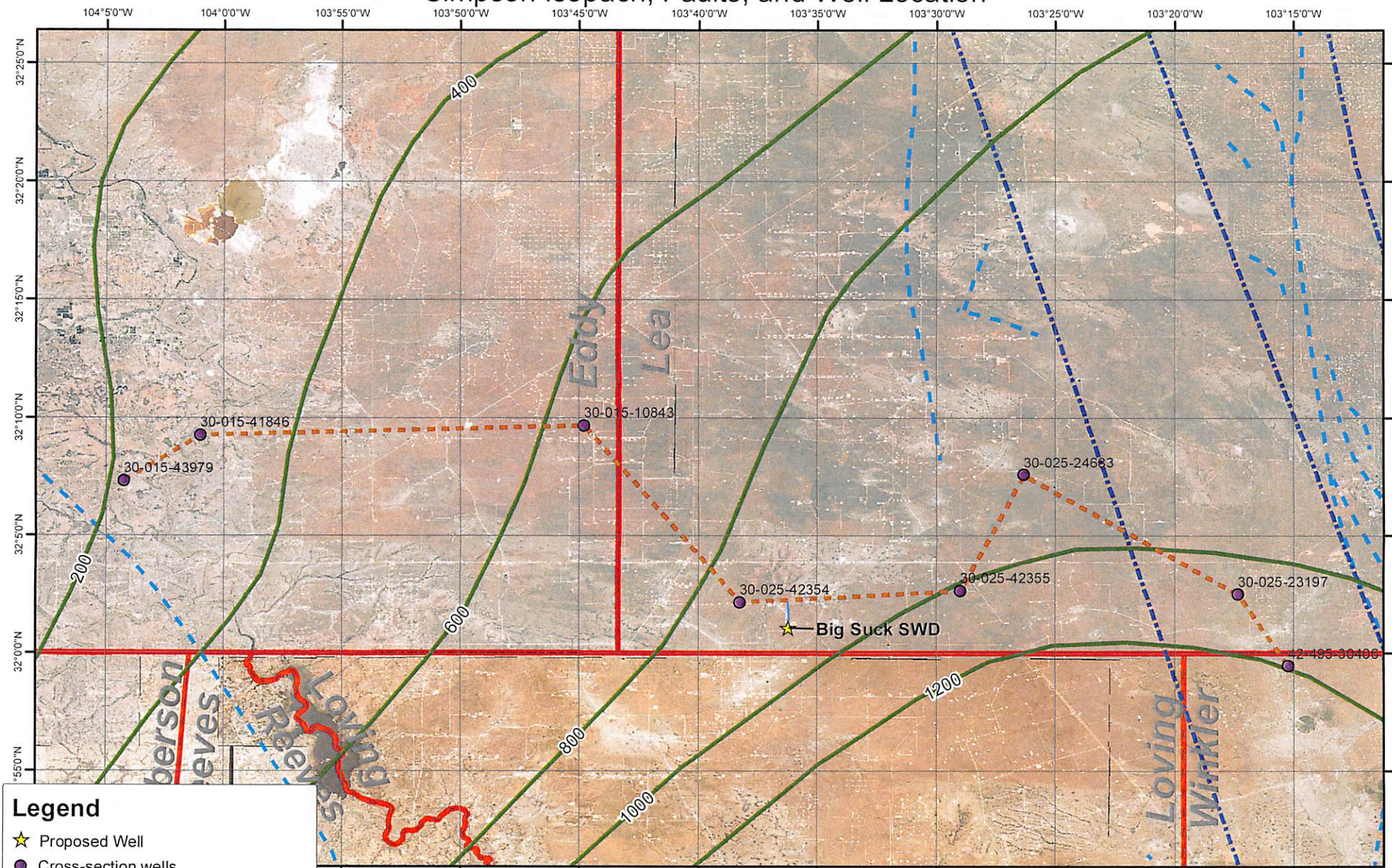
- ★ Proposed Well
- Middle Ordovician (Simpson) Isopach
- - - Precambrian Faults
- Basement Faults
- ▭ County Boundaries, NM
- ▭ County Boundaries, TX



Coordinate System: GCS North American 1983
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 Units: Degree
 Basement faults (if shown) were digitized from Tectonic Map of Texas (Ewing, 1990)
 Precambrian faults were digitized from Frenzel et al (1998) Figure 6.

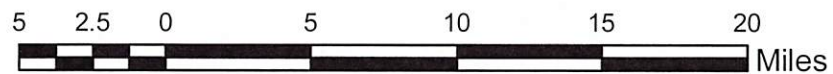


Simpson Isopach, Faults, and Well Location



Legend

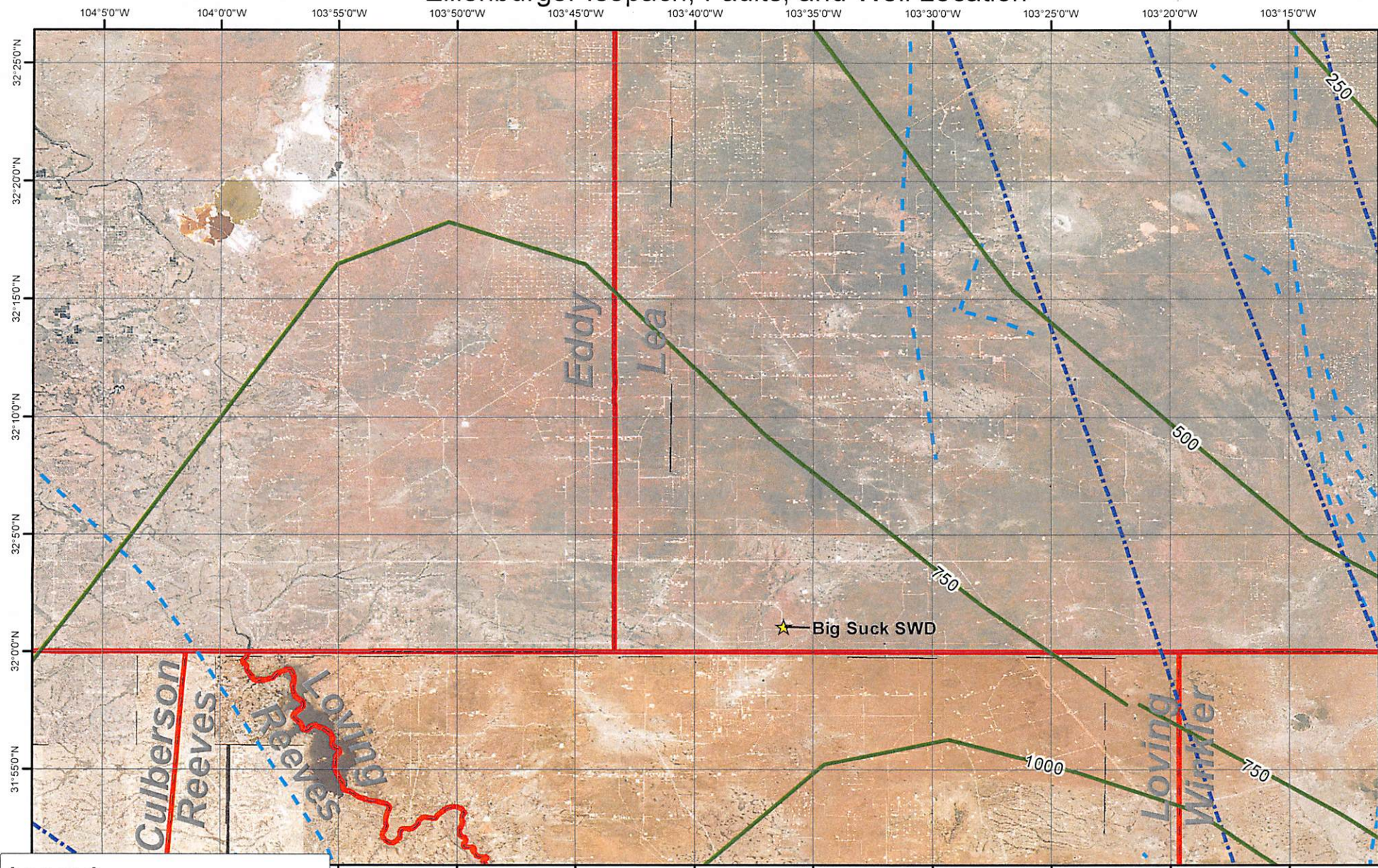
- ★ Proposed Well
- Cross-section wells
- - - Cross-section Line
- - - Cross-section Tie Line
- Middle Ordovician (Simpson) Isopach
- - - Precambrian Faults
- Basement Faults
- ▭ County Boundaries, NM
- ▭ County Boundaries, TX



Coordinate System: GCS North American 1983
 Datum: North American 1983
 Units: Degree
 Basement faults (if shown) were digitized from Tectonic Map of Texas (Ewing, 1990)
 Precambrian faults were digitized from Frenzel et al (1998) Figure 6.

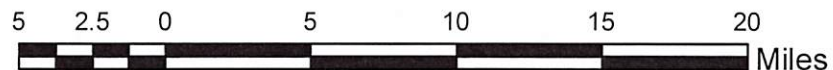


Ellenburger Isopach, Faults, and Well Location



Legend

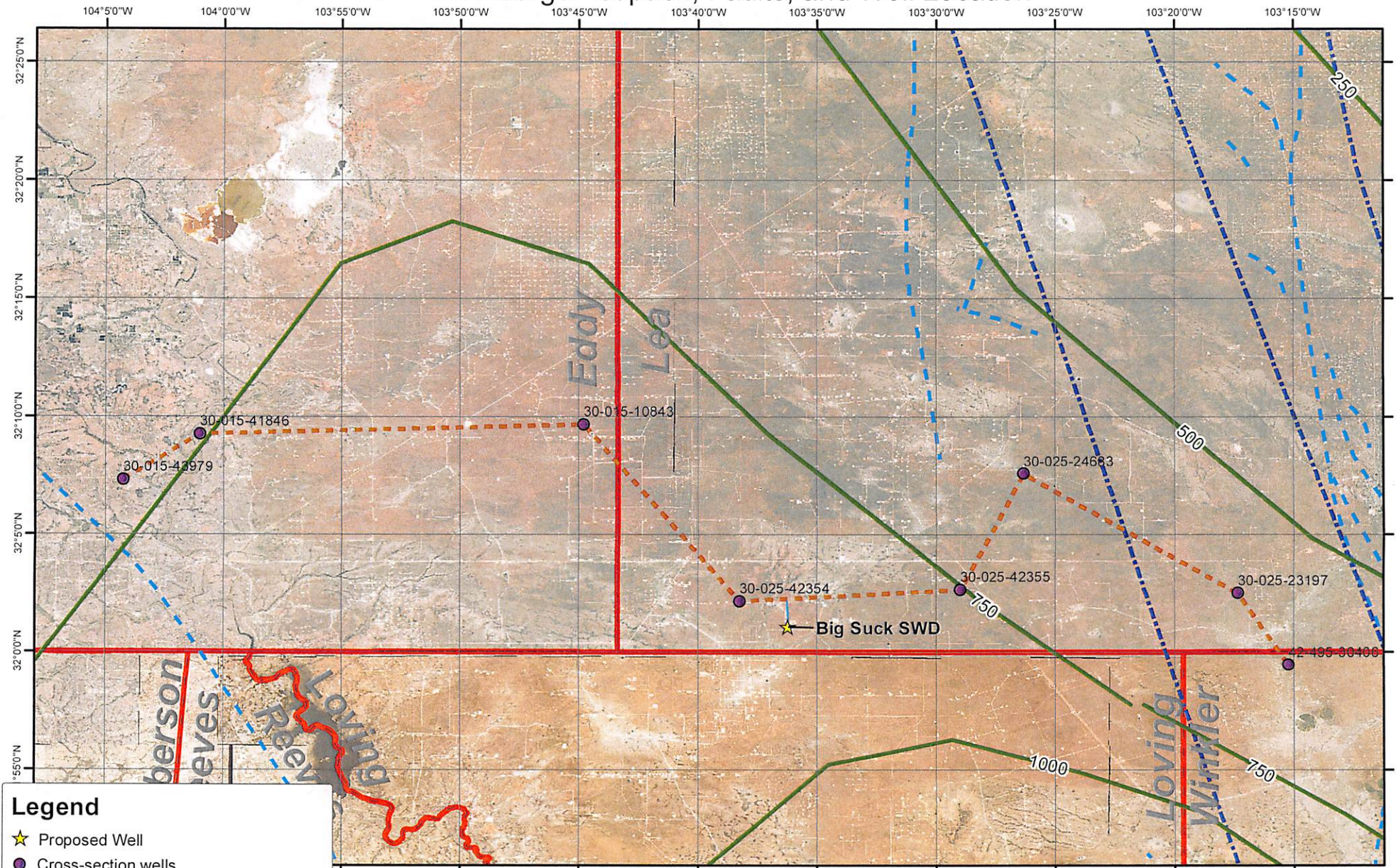
- ★ Proposed Well
- Lower Ordovician (Ellenburger) Isopach
- - - Precambrian Faults
- · · Basement Faults
- ▬ County Boundaries, NM
- ▬ County Boundaries, TX



Coordinate System: GCS North American 1983
 Datum: North American 1983
 Units: Degree
 Basement faults (if shown) were digitized from Tectonic Map of Texas (Ewing, 1990)
 Precambrian faults were digitized from Frenzel et al (1998) Figure 6.

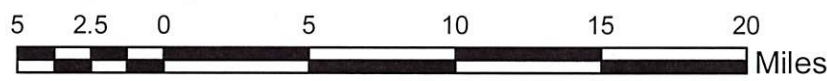


Ellenburger Isopach, Faults, and Well Location



Legend

- ★ Proposed Well
- Cross-section wells
- - - Cross-section Line
- - - Cross-section Tie Line
- Lower Ordovician (Ellenburger) Isopach
- - - Precambrian Faults
- - - Basement Faults
- ▭ County Boundaries, NM
- ▭ County Boundaries, TX

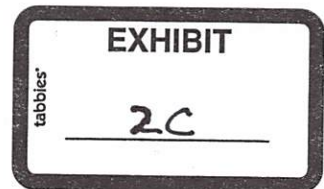
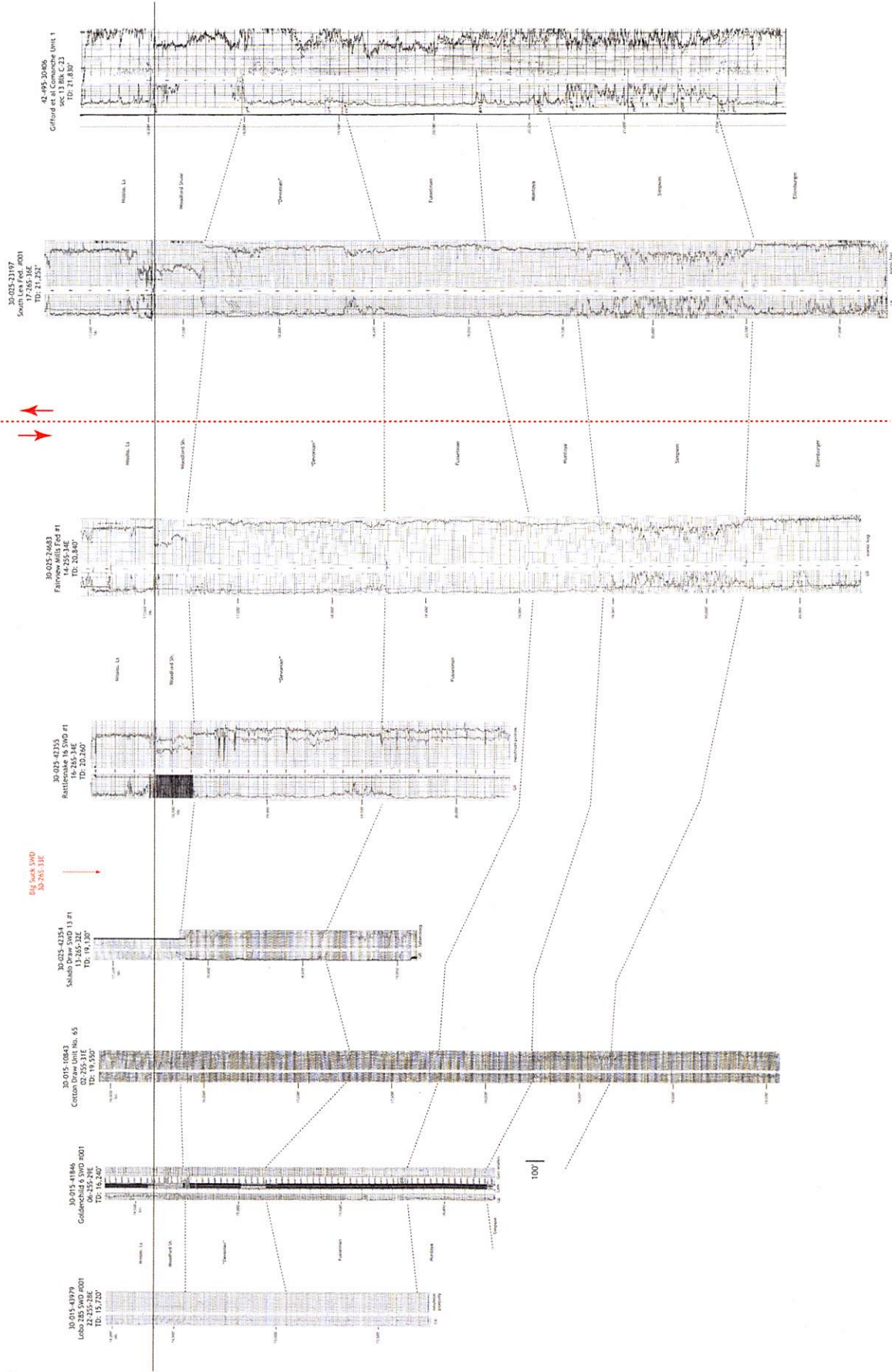


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 Datum: North American 1983
 Units: Degree
 Basement faults (if shown) were digitized from Tectonic Map of Texas (Ewing, 1990)
 Precambrian faults were digitized from Frenzel et al (1998) Figure 6.



Southeast

Northwest





Attachment to C-108
Permian Oilfield Partners, LLC
Big Suck Federal SWD #1
Sec. 30, Twp. 26S, Rge. 33E
1397' FNL & 212' FEL
Lea County, NM

July 30, 2019

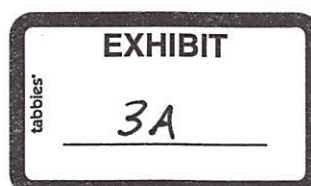
STATEMENT REGARDING SEISMICITY-REVISED

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, 17.4 miles away @ 9 deg heading
2. M3.1, 2012-03-18, 24.9 miles away @ 317 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, to Ewing's 1990 Tectonic map of Texas (via Ruppel's 2005 Preparation of Maps Depicting Geothermal Gradient and PreCambrian Structure in the Permian Basin), 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. There is evidence that there is PreCambrian faulting that extends into the Devonian



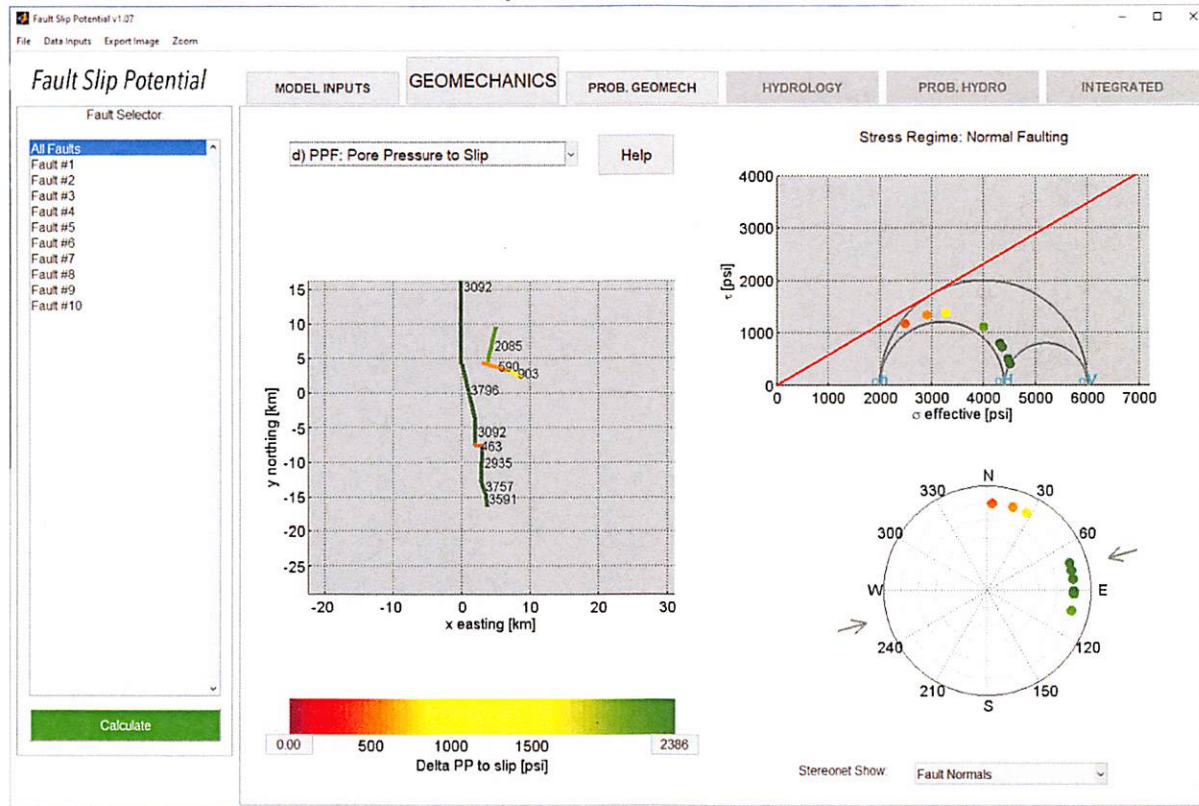
approximately 20 km to the NE. Devonian fault slip is addressed in a separate attached document. Software as discussed in #3 from the Stanford Center for Induced and Triggered Seismicity, "FSP 1.0: A program for probabilistic estimation of fault slip potential resulting from fluid injection", was used 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 stress gradient, .47 psi/ft hydrostatic gradient
 - c. A-phi=0.60 & Max Horizontal Stress direction 75 deg N, as per Snee, Zoback paper noted above.
6. The distance from the proposed injection well to the nearest PreCambrian fault is approximately 11 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.

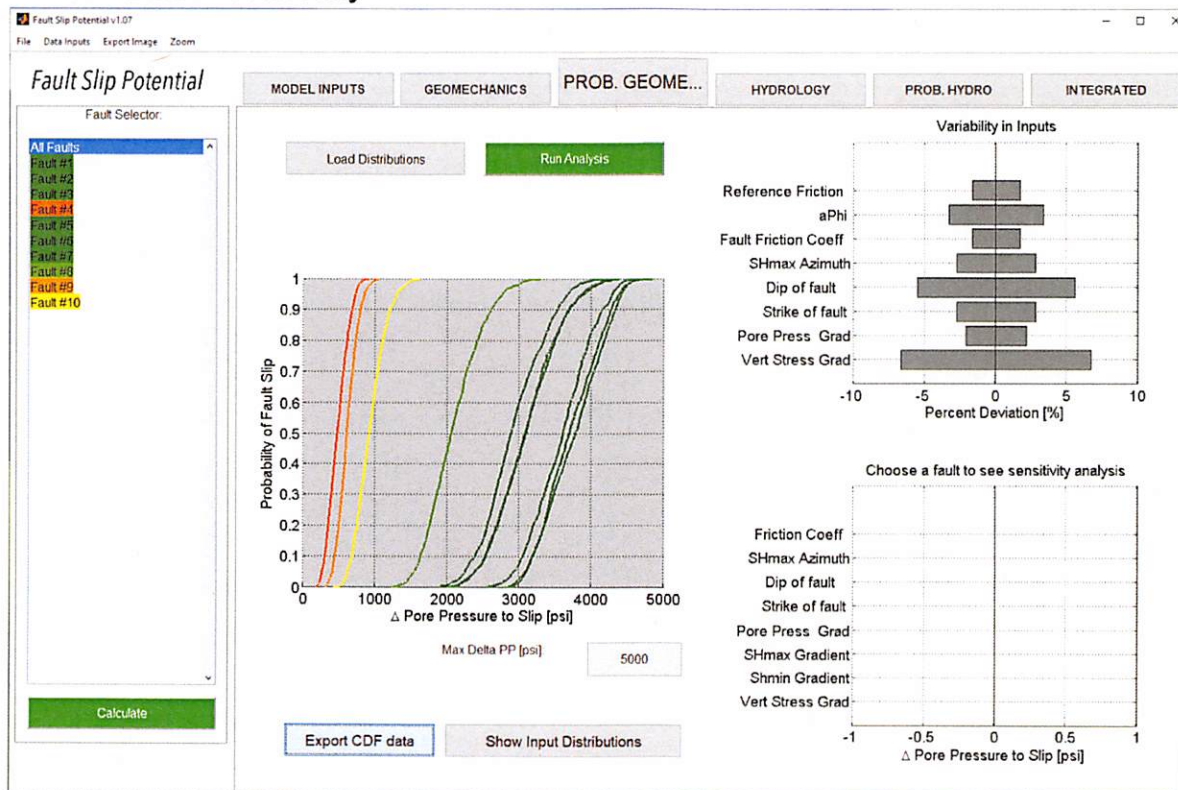
Input assumptions:

Rate (BBL/day)	50000
Interval height (ft)	1500
Average Porosity (%)	3
Vert stress gradient (psi/ft)	0.75
Hor stress direction (deg N)	75
Fault dip (deg)	75
Ref depth (ft)	21400
Initial res press gradient (psi/ft)	0.47
A phi	0.6
Friction coefficient	0.58
Weighted average perm (mD)	12.5
Fluid density (kg/m3)	1100
Dynamic viscosity (Pa-s)	0.0003
Fluid compressibility (/Pa)	4 e-10
Rock compressibility (/Pa)	1.08 e-09

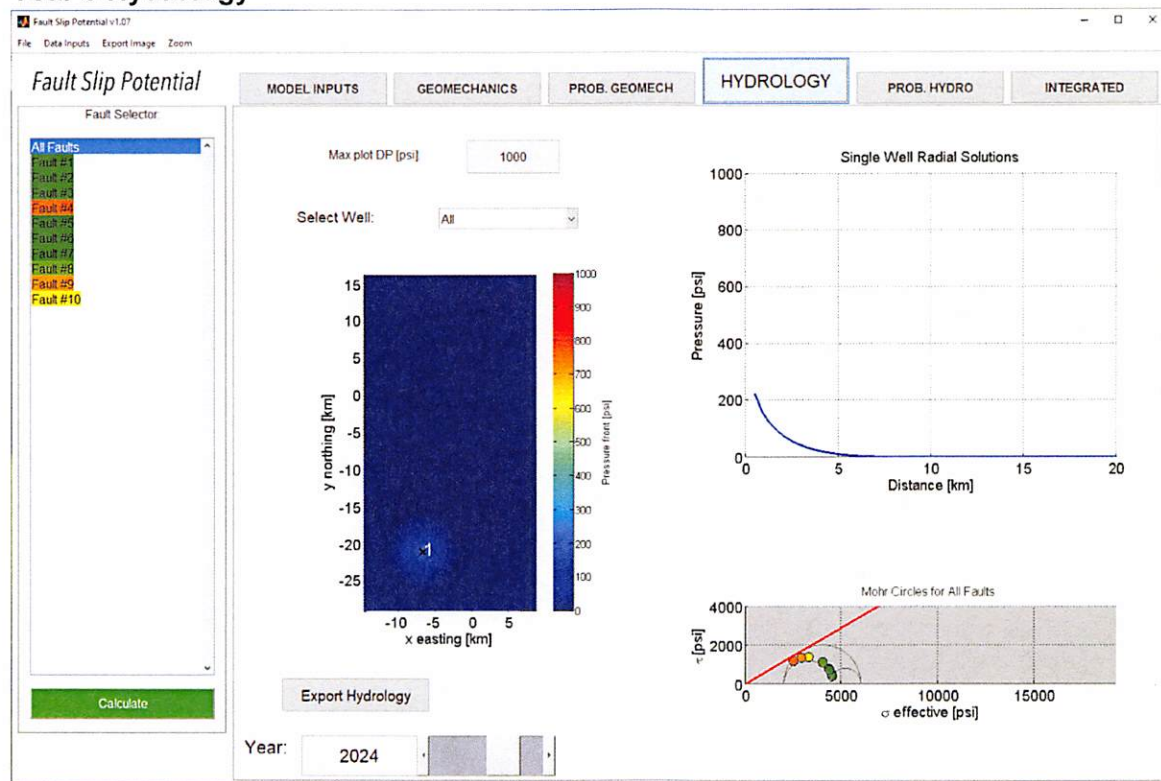
Geomechanics Pore Pressure to Slip



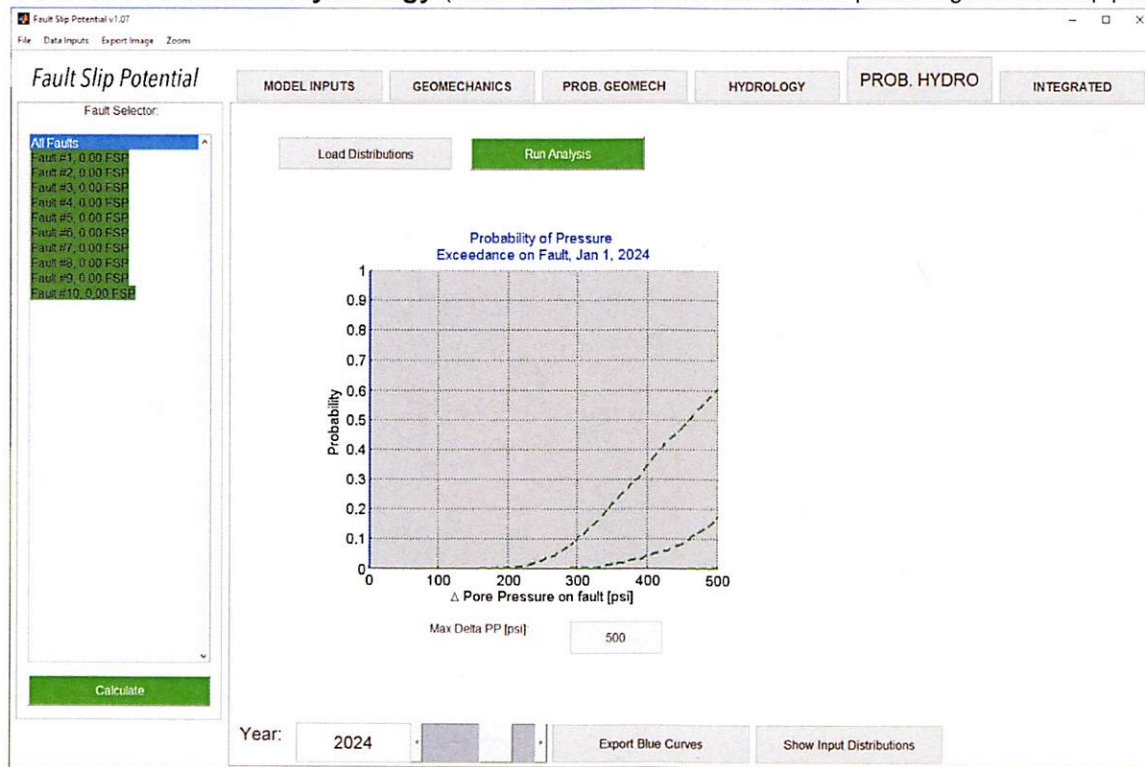
GeoMechanics Variability



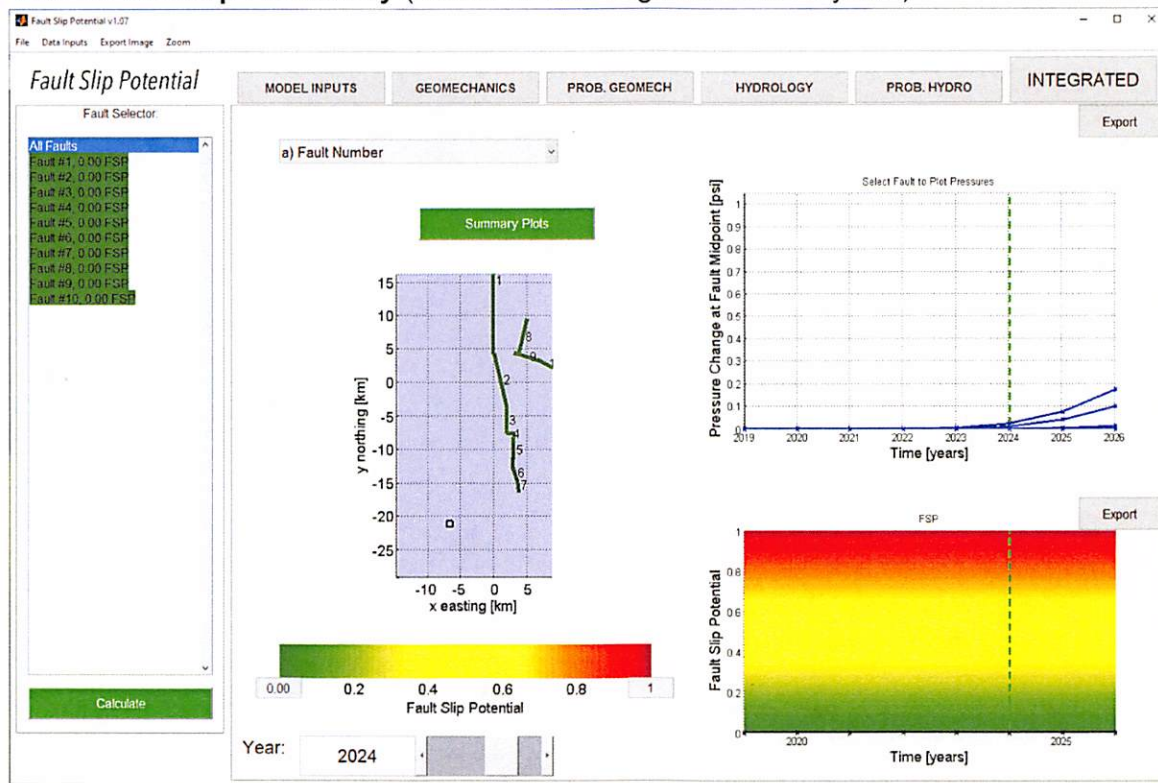
Year 5 Hydrology



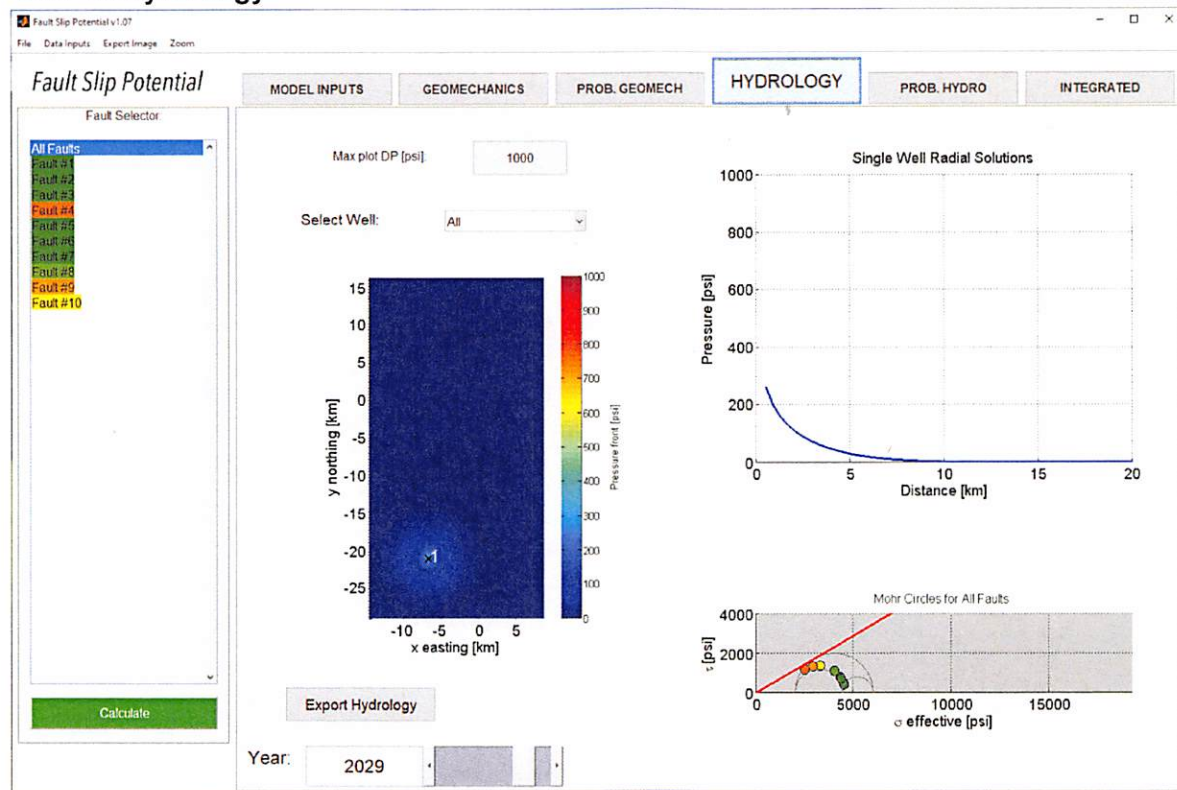
Year 5 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



Year 5 Fault Slip Probability (0% for all fault segments after 5 years)



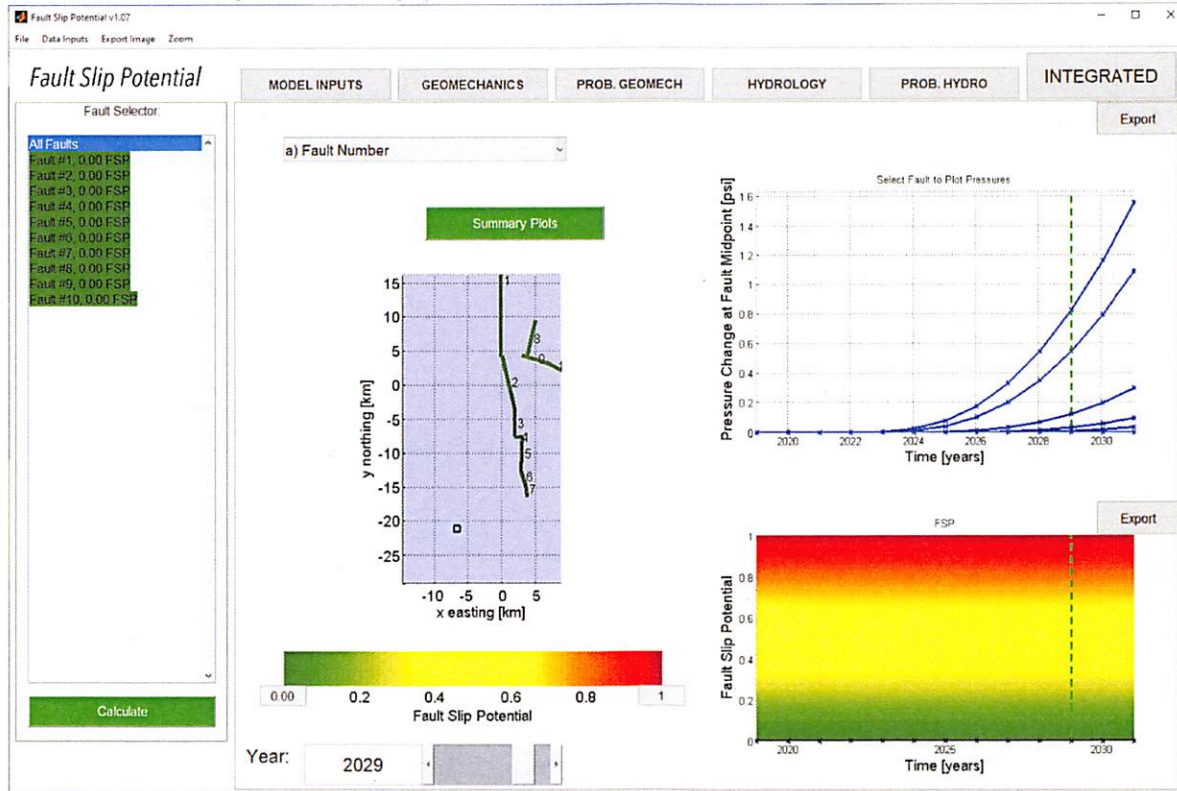
Year 10 Hydrology



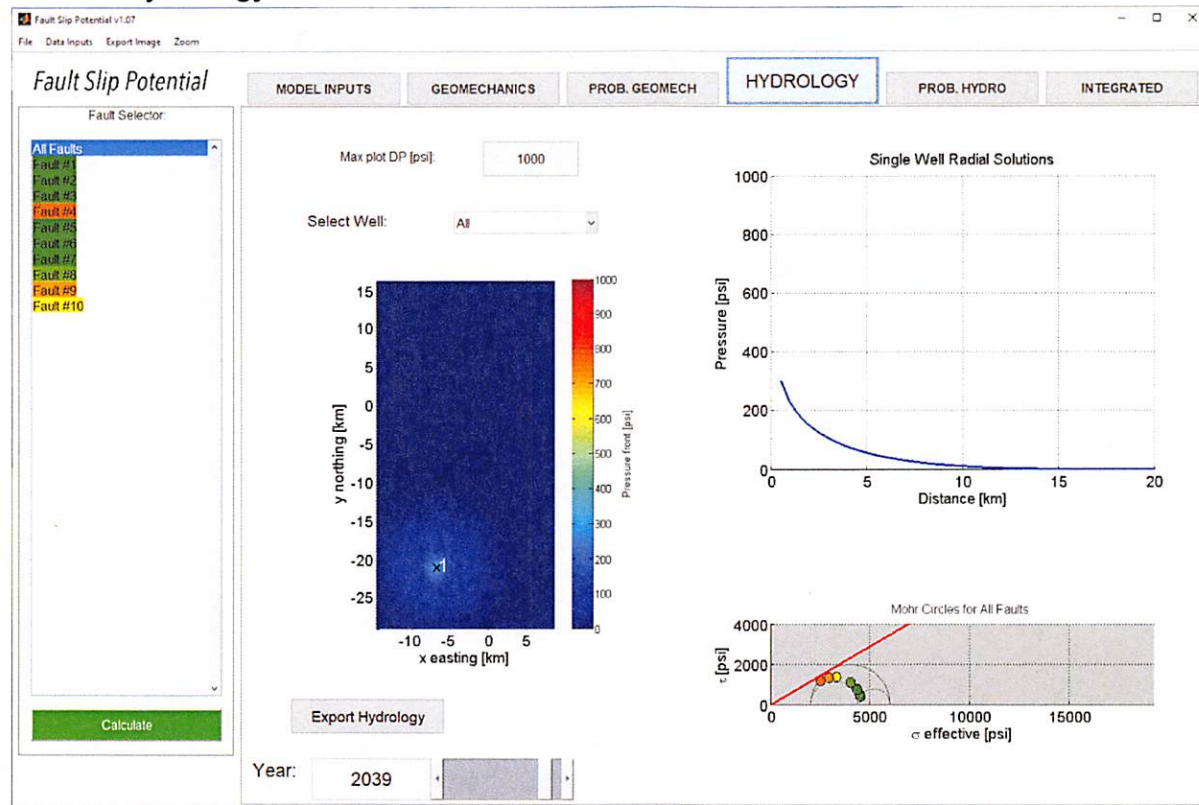
Year 10 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



Year 10 Fault Slip Probability (0% for all fault segments after 10 years)



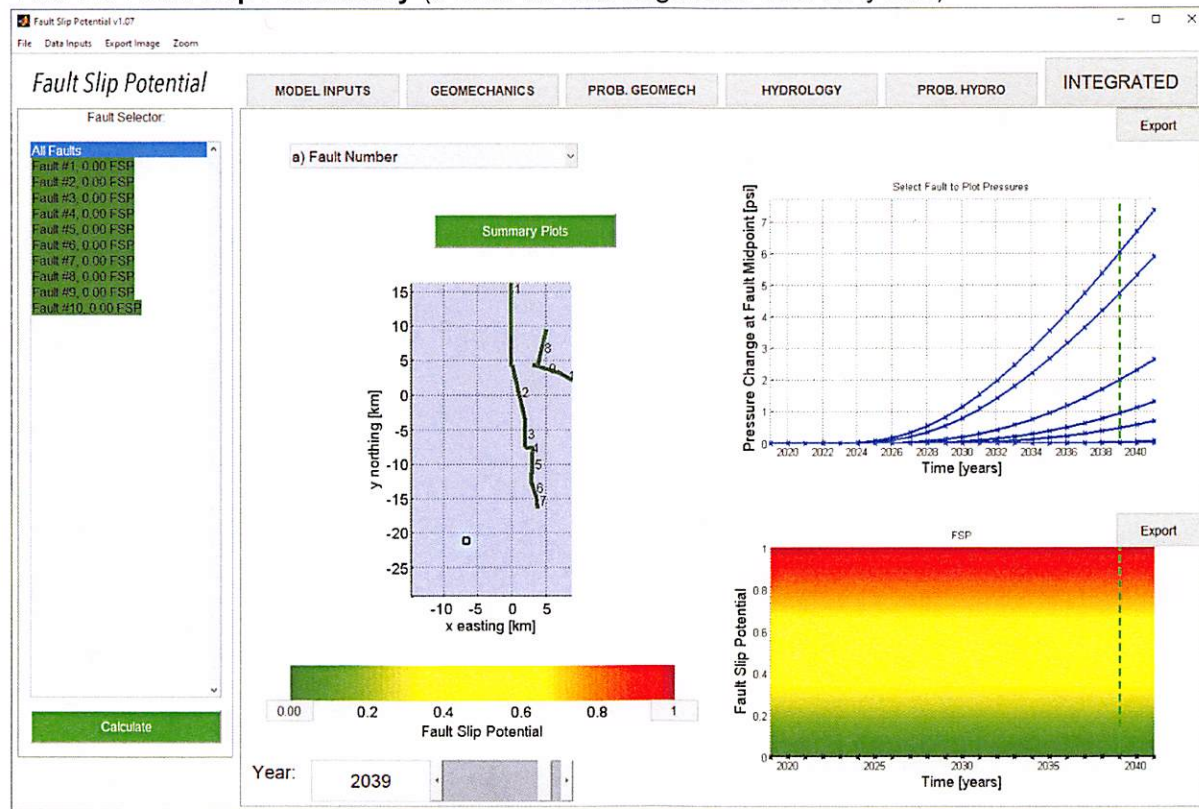
Year 20 Hydrology



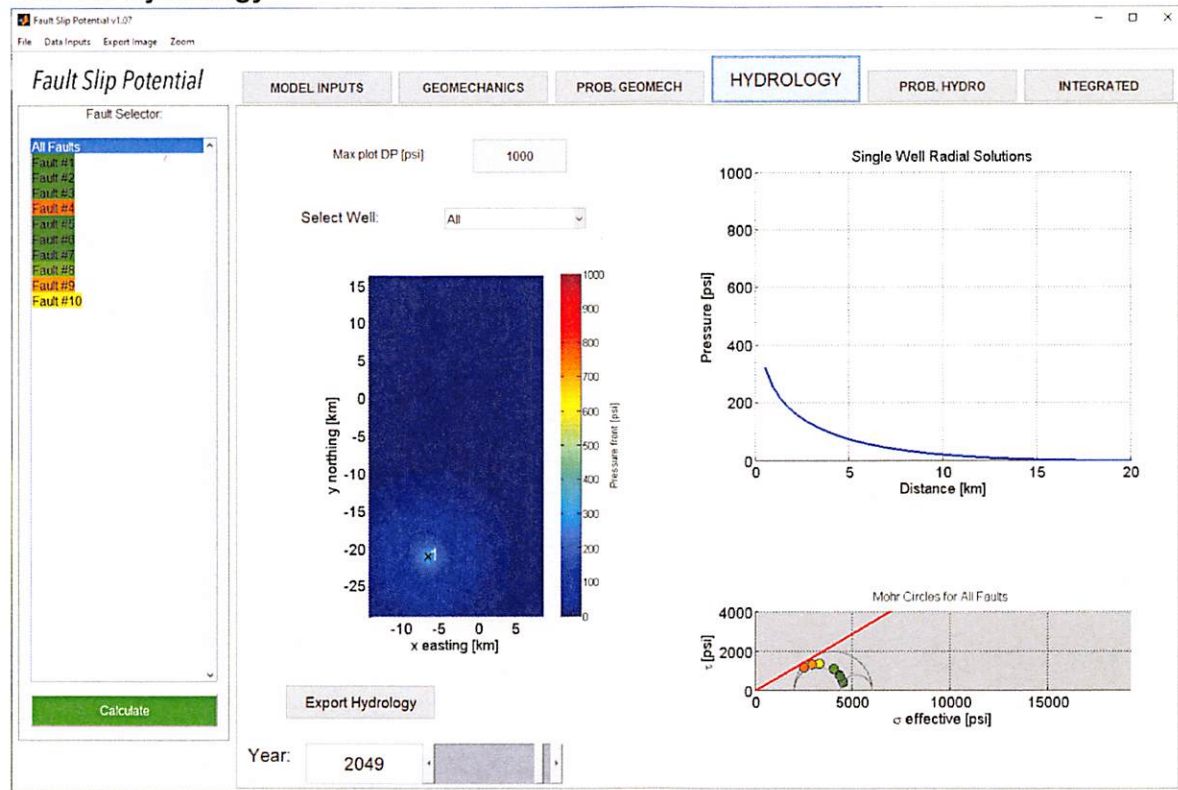
Year 20 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



Year 20 Fault Slip Probability (0% for all fault segments after 20 years)



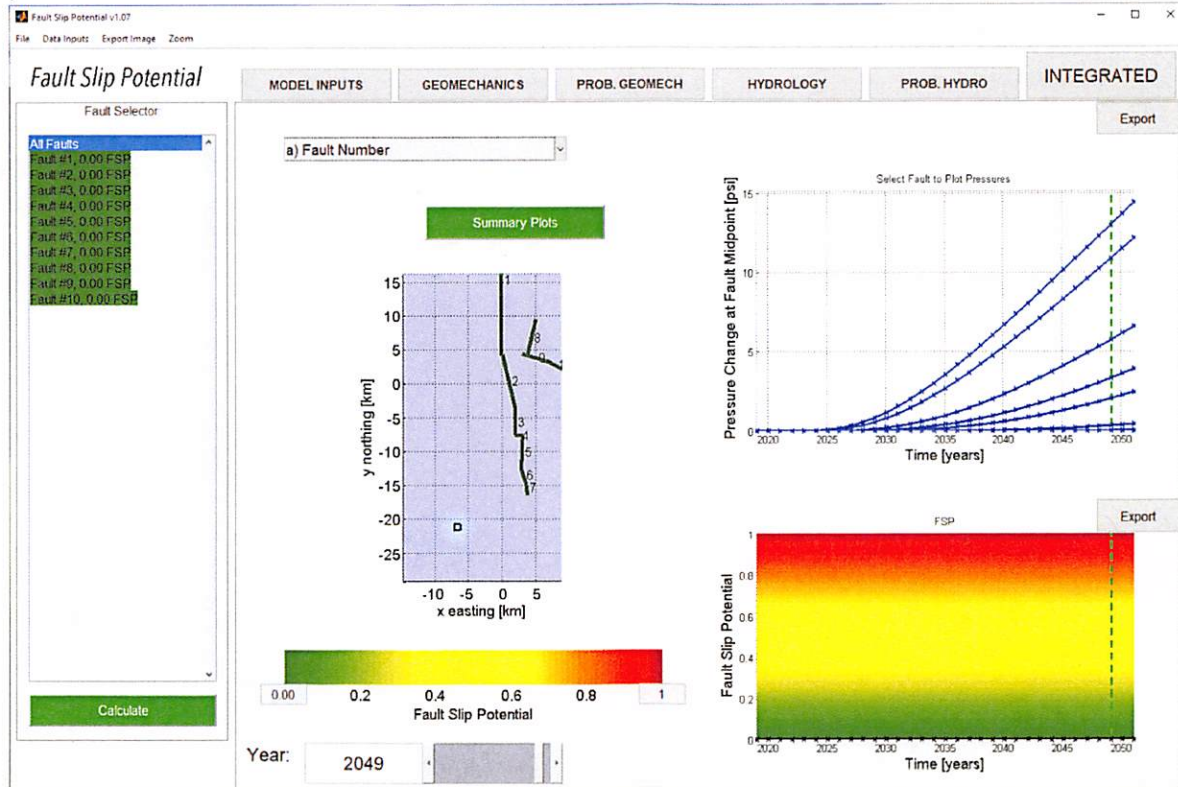
Year 30 Hydrology



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



Year 30 Fault Slip Probability (0% for all fault segments after 30 years. 13 psi fault delta pressure is much less than the 3591 psi required for fault slip in the closest fault segment #7)



As per NM OCD requirements (injection well to injection well spacing minimum of 1.5 miles), this proposed above referenced SWD well is located 2.35 miles away from the nearest active or permitted Devonian disposal well (Mesquite Salado Draw 13 #1, in 13-26S-32E).

Greg E. Fisher

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Attachment to C-108
Permian Oilfield Partners, LLC
Big Suck Federal SWD #1
Sec. 30, Twp. 26S, Rge. 33E
1397' FNL & 212' FEL
Lea County, NM

July 30, 2019

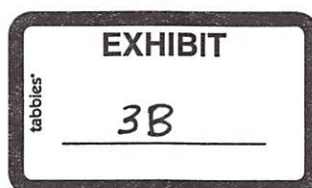
STATEMENT REGARDING SEISMICITY-Devonian fault assumption

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, 17.4 miles away @ 9 deg heading
2. M3.1, 2012-03-18, 24.9 miles away @ 317 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, to Ewing's 1990 Tectonic map of Texas (via Ruppel's 2005 Preparation of Maps Depicting Geothermal Gradient and PreCambrian Structure in the Permian Basin), 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. Permian Oilfield Partners does not believe that the nearest portion of the faults extends into the Devonian, although there is evidence they do so approximately 20 km to the NE. Permian Oilfield Partners ran modeling to check for fault slip assuming PreCambrian fault extension into the Devonian. Software as discussed in #3 from the Stanford Center



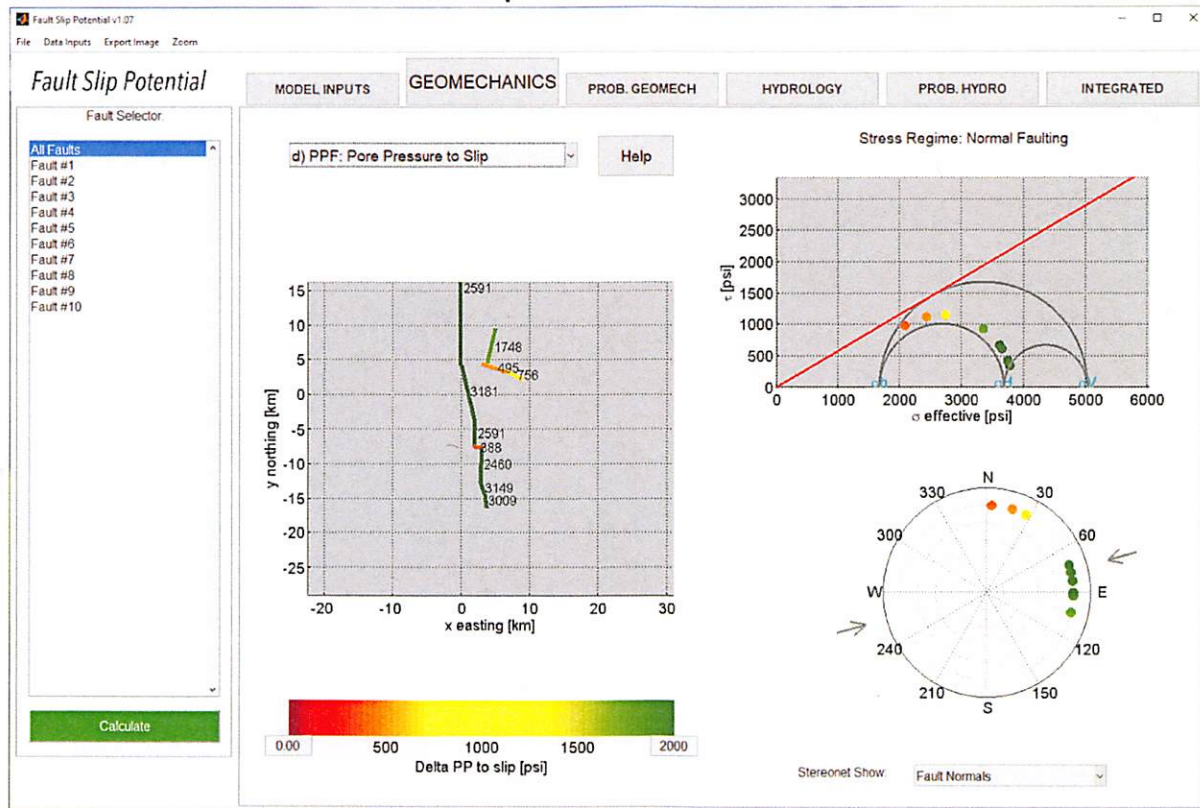
for Induced and Triggered Seismicity, "FSP 1.0: A program for probabilistic estimation of fault slip potential resulting from fluid injection", was used to calculate the probability of the hypothetical Devonian fault being stressed so as to create an induced seismic event, with the following assumptions:

- a. Full proposed capacity of 50,000 BBL/day for 30 years
 - b. 19 mD weighted average permeability, 3.3% weighted average porosity, .75 psi/ft stress gradient, .47 psi/ft hydrostatic gradient
 - c. A-phi=0.60 & Max Horizontal Stress direction 75 deg N, as per Snee, Zoback paper noted above.
6. The distance from the proposed injection well to the nearest fault segment is approximately 11 km. The probability of an induced seismic event in the Devonian is calculated to be 0% after 5, 10, 20, & 30 years as per the FSP results screenshots below.

Input assumptions:

Rate (BBL/day)	50000
Interval height (ft)	1540
Average Porosity (%)	3.3
Vert stress gradient (psi/ft)	0.75
Hor stress direction (deg N)	75
Fault dip (deg)	75
Ref depth (ft)	17935
Initial res press gradient (psi/ft)	0.47
A phi	0.6
Friction coefficient	0.58
Weighted average perm (mD)	19
Fluid density (kg/m3)	1100
Dynamic viscosity (Pa-s)	0.0003
Fluid compressibility (/Pa)	4 e-10
Rock compressibility (/Pa)	1.08 e-09

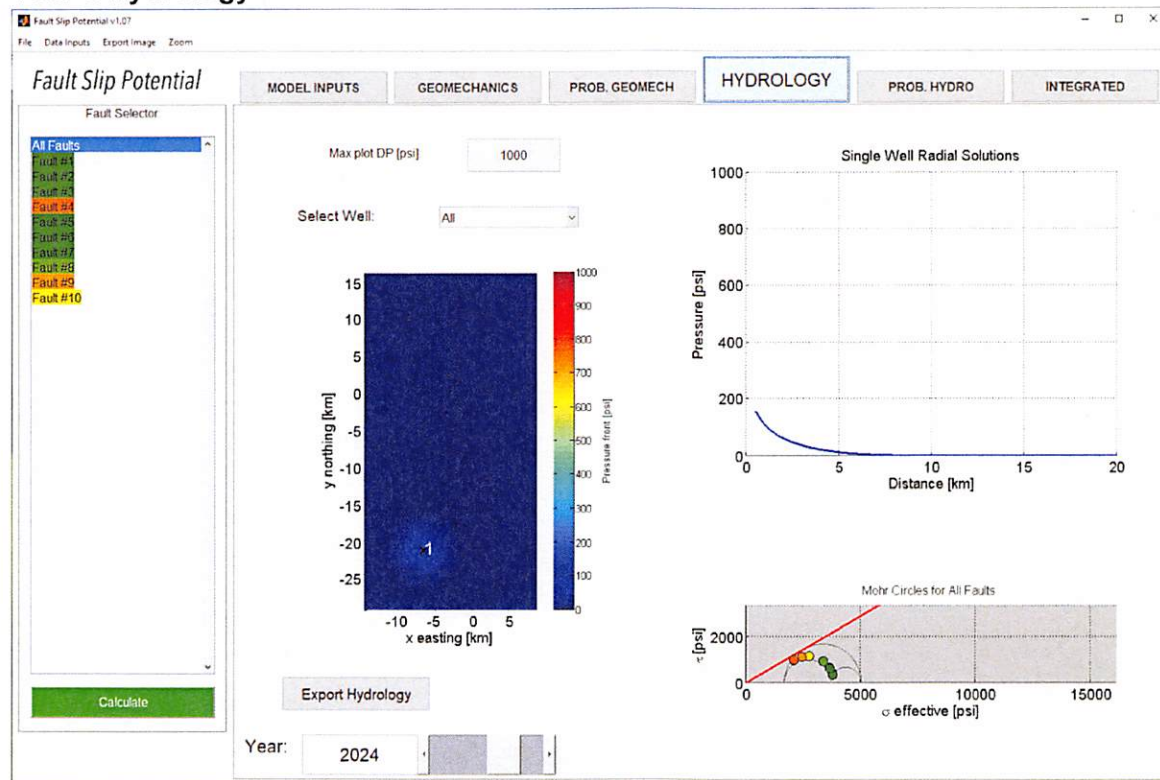
Geomechanics Pore Pressure to Slip



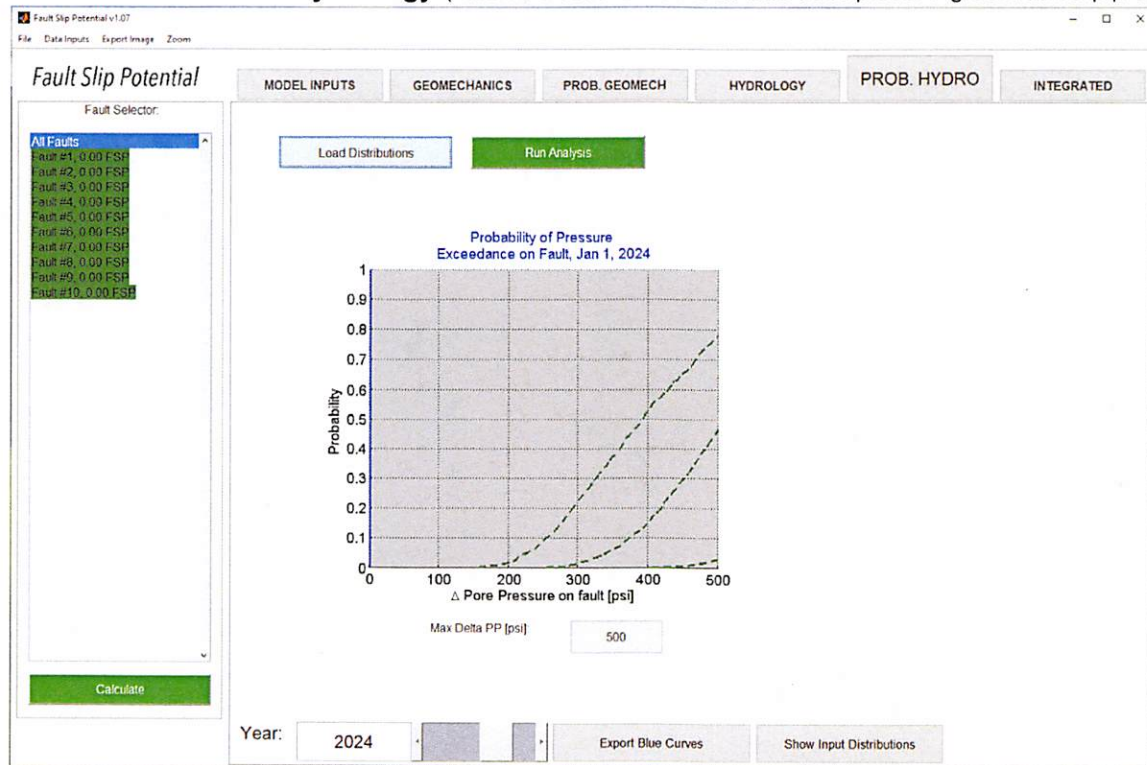
GeoMechanics Variability



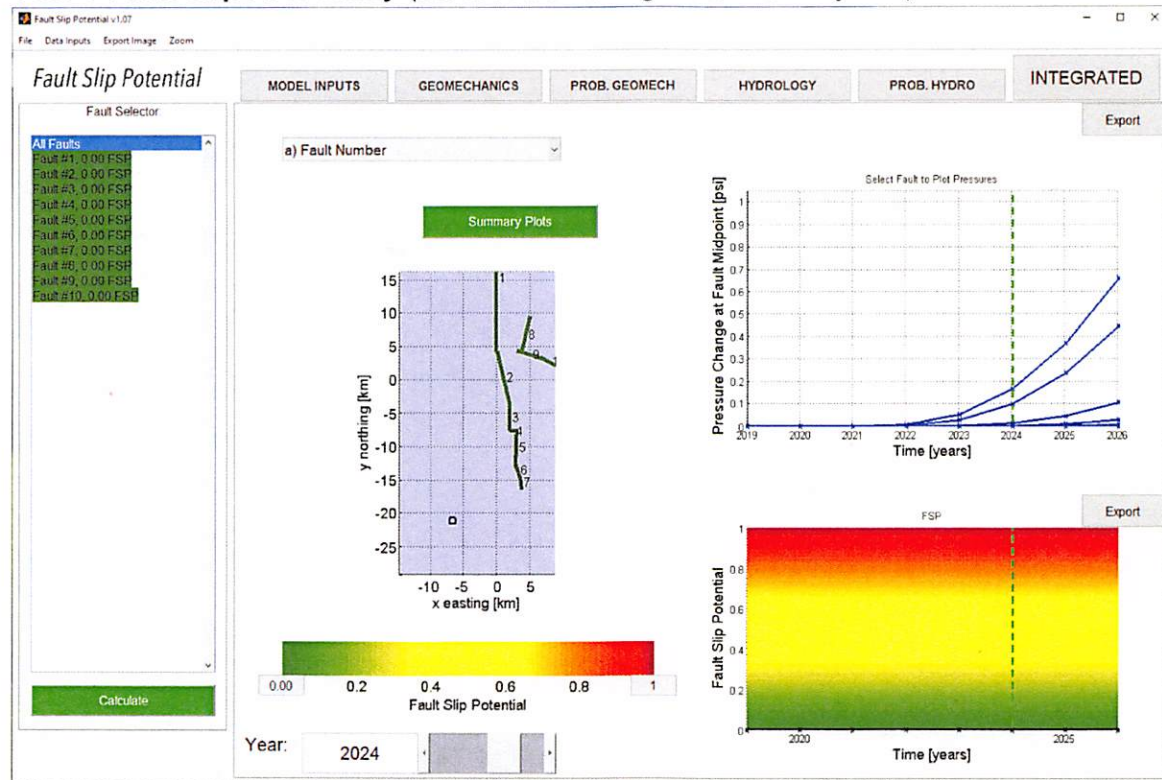
Year 5 Hydrology



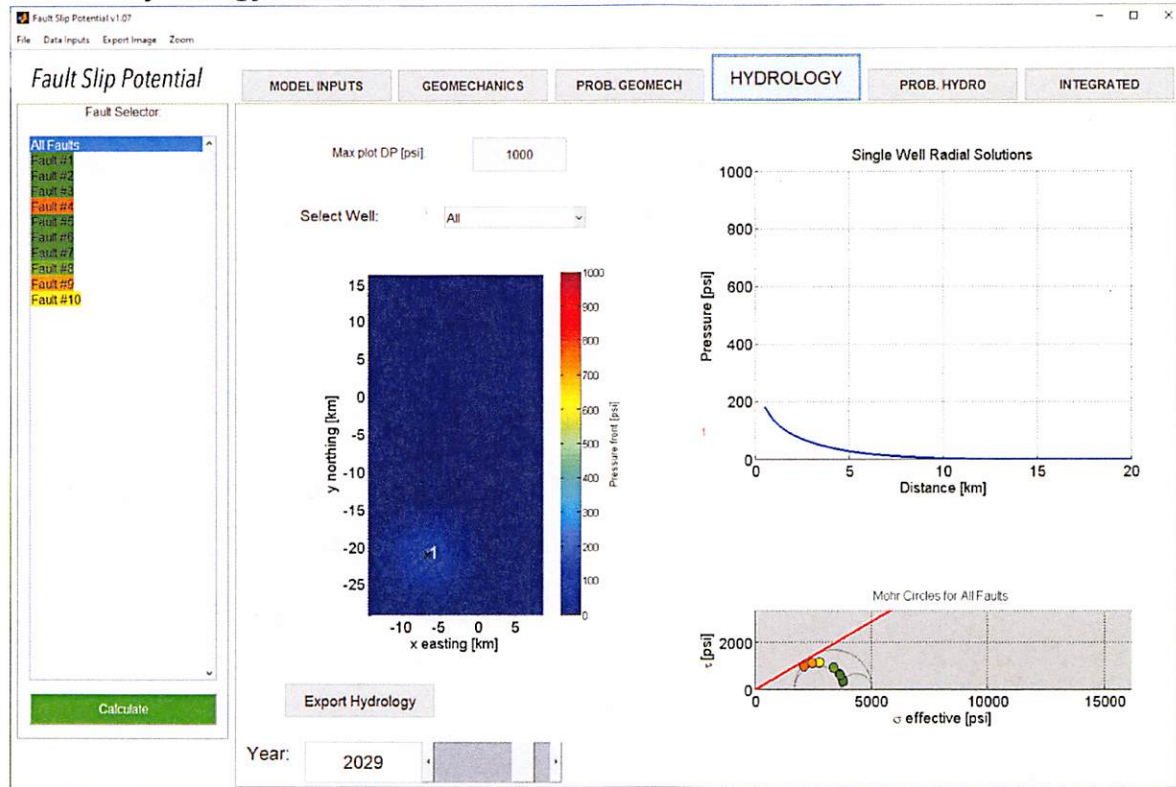
Year 5 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



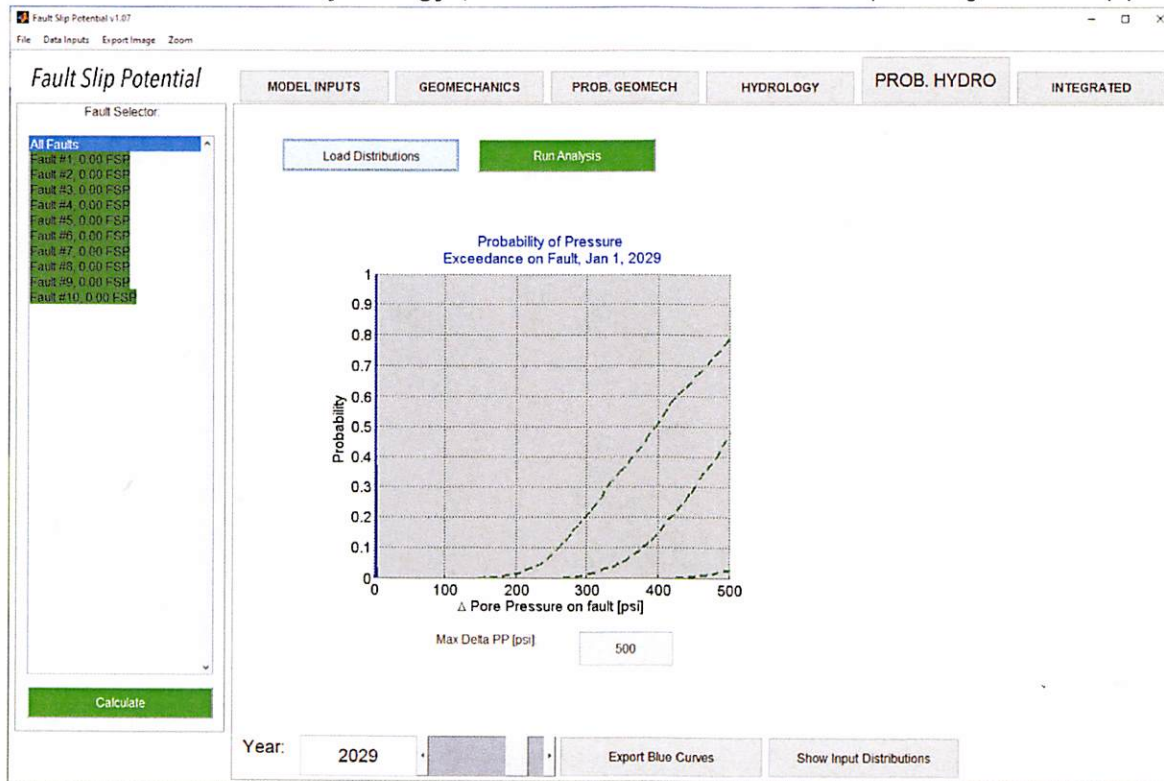
Year 5 Fault Slip Probability (0% for all fault segments after 5 years)



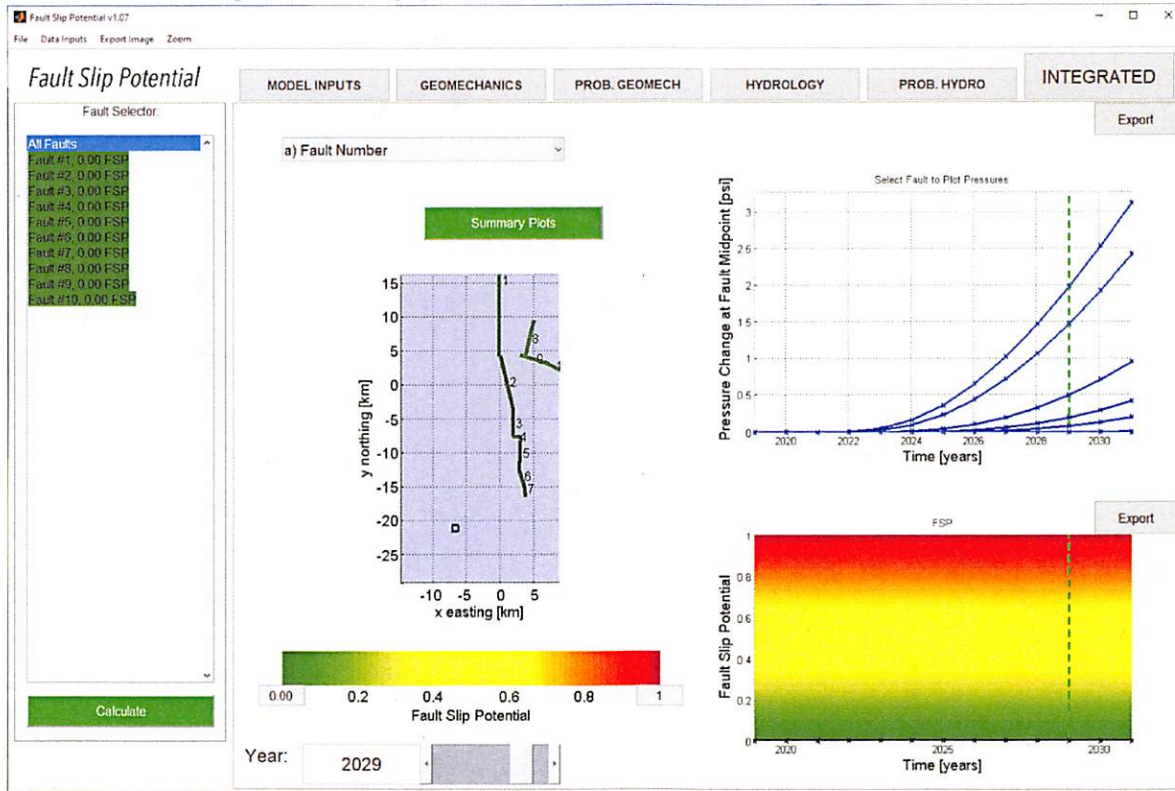
Year 10 Hydrology



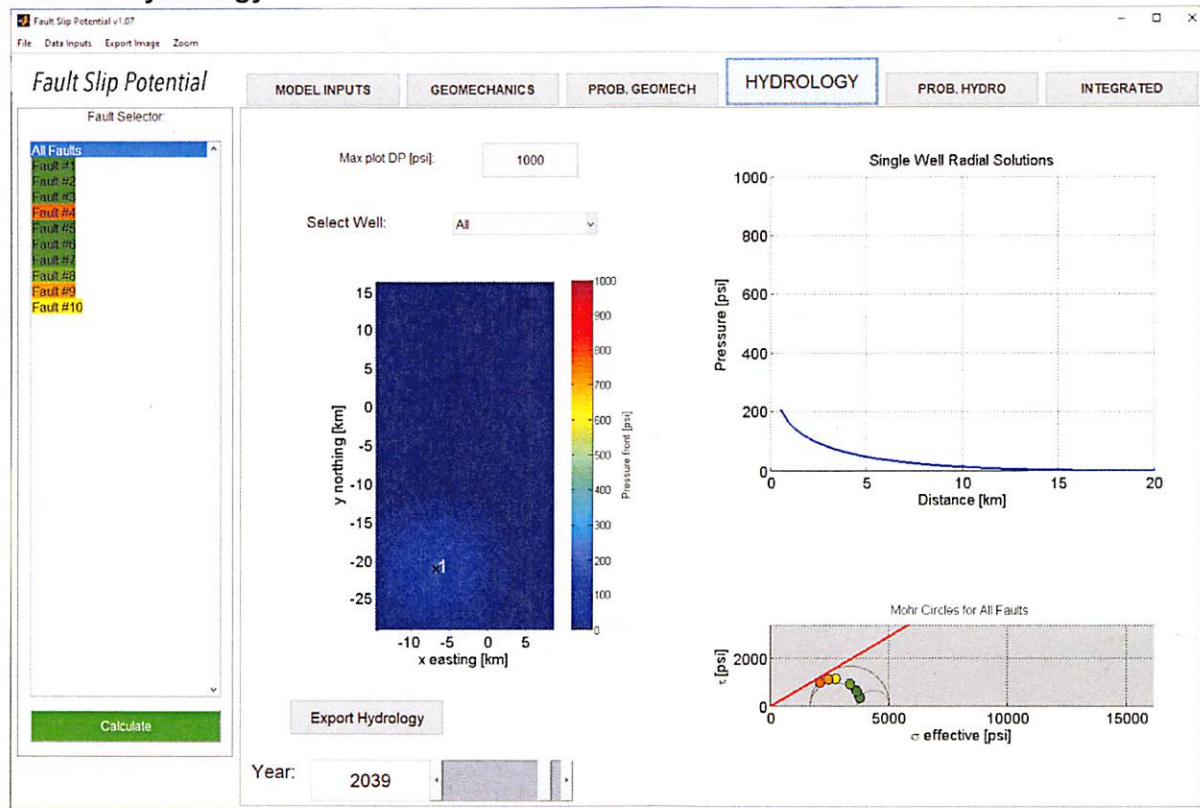
Year 10 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



Year 10 Fault Slip Probability (0% for all fault segments after 10 years)



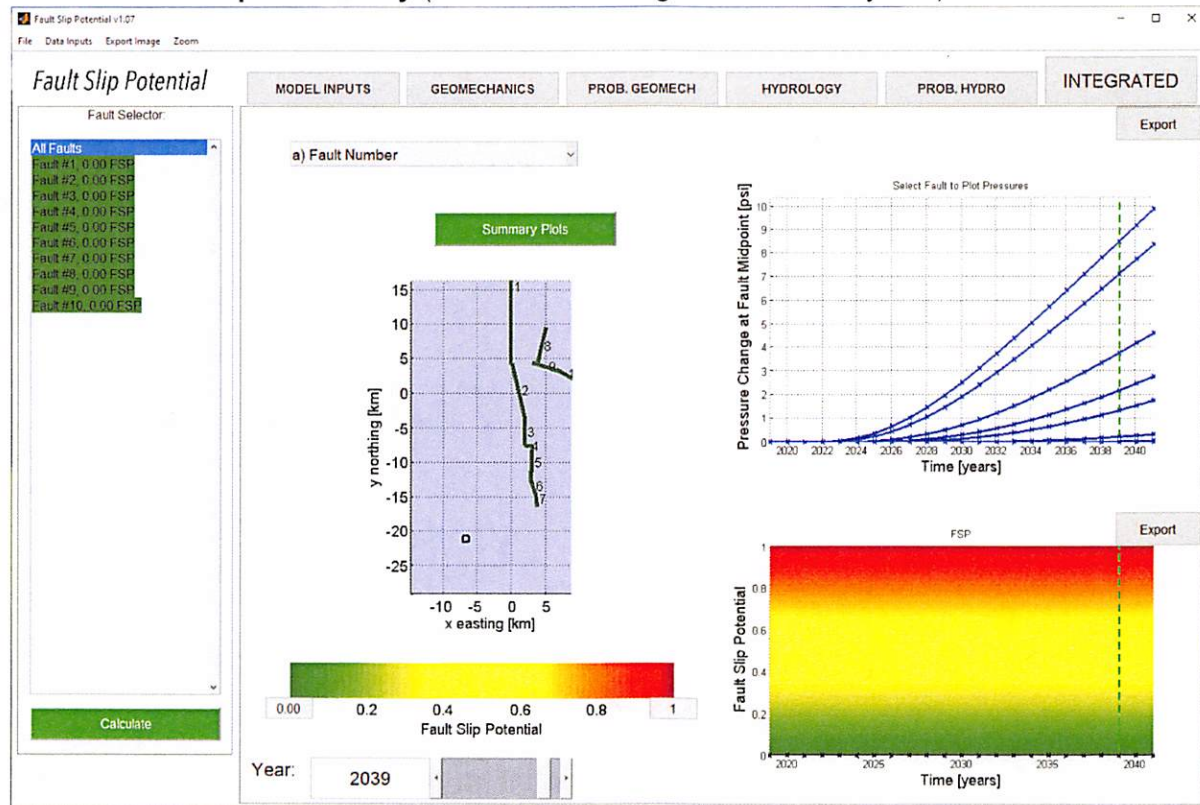
Year 20 Hydrology



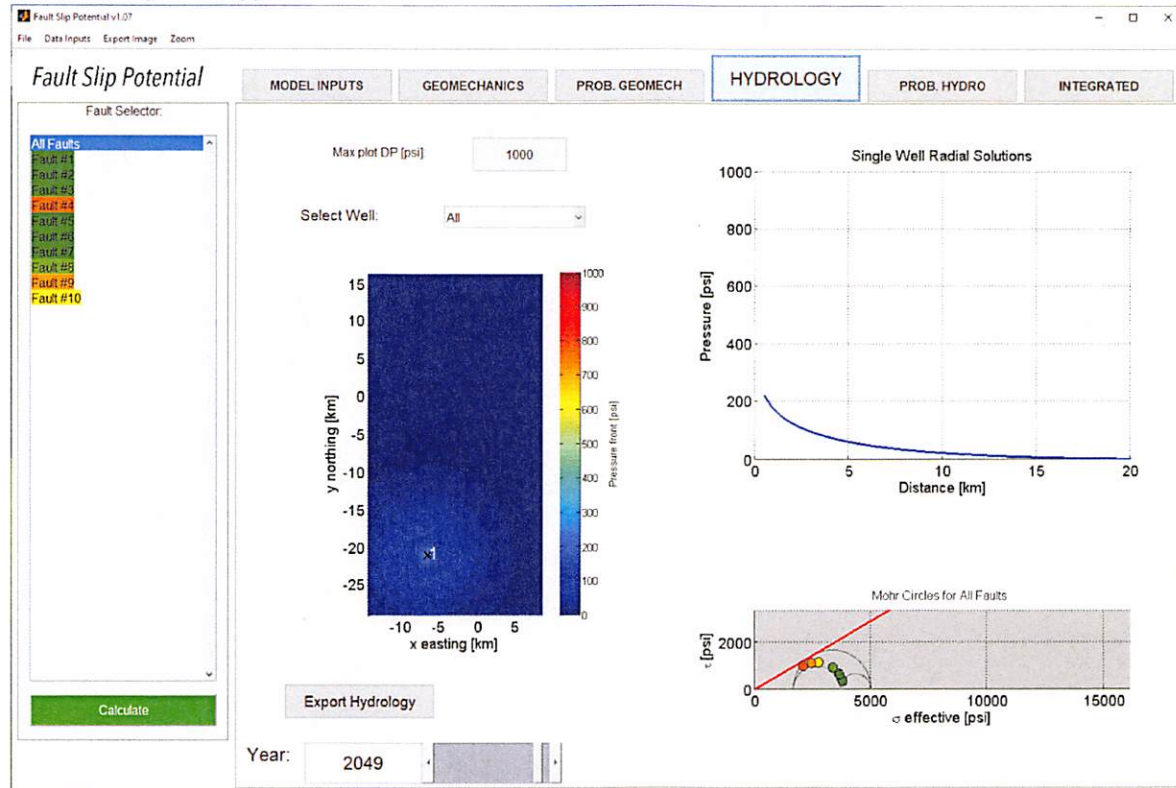
Year 20 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



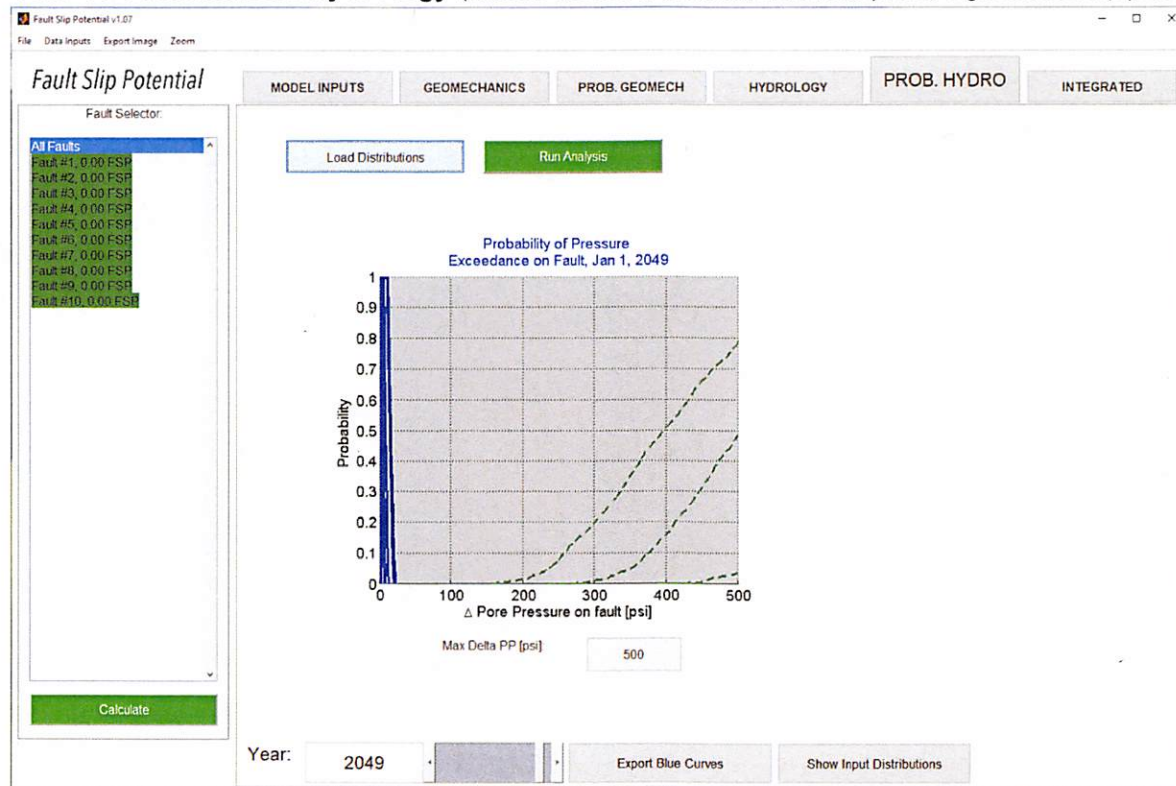
Year 20 Fault Slip Probability (0% for all fault segments after 20 years)



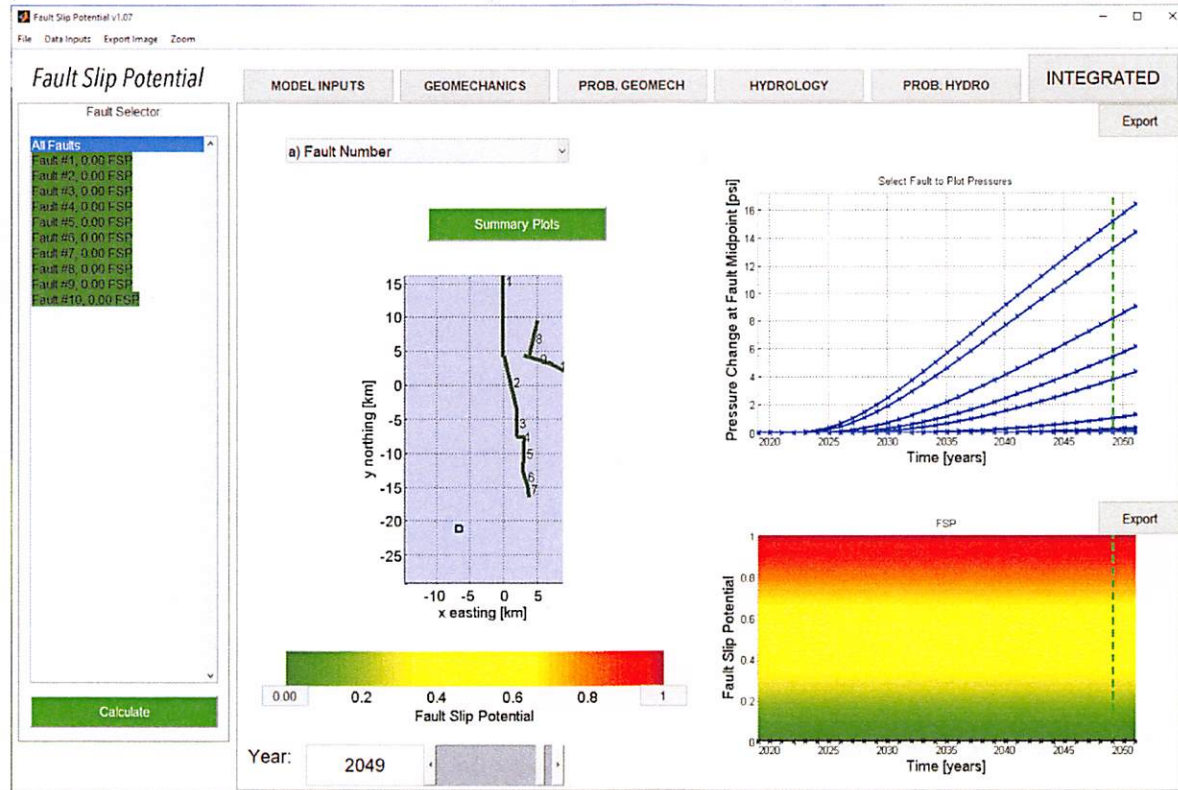
Year 30 Hydrology



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



Year 30 Fault Slip Probability (0% for all fault segments after 30 years. 15 psi fault delta pressure is much less than the 3009 psi required for fault slip in the closest fault segment #7)



As per NM OCD requirements (injection well to injection well spacing minimum of 1.5 miles), this proposed above referenced SWD well is located 2.35 miles away from the nearest active or permitted Devonian disposal well (Mesquite Salado Draw 13 #1, in 13-26S-32E).

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