Application Part I*I*

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 16, 2019
and ending with the issue dated
July 16, 2019.

Publisher

Sworn and subscribed to before me this
16th day of July 2019.

Business Manager

My commission expires
January 29, 2023
(Seal)

OFFICIAL SEAL
GUSSIE BLACK
Notary Public
State of New Mexico
My Commission Expires 1-29-23

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
JULY 16, 2019

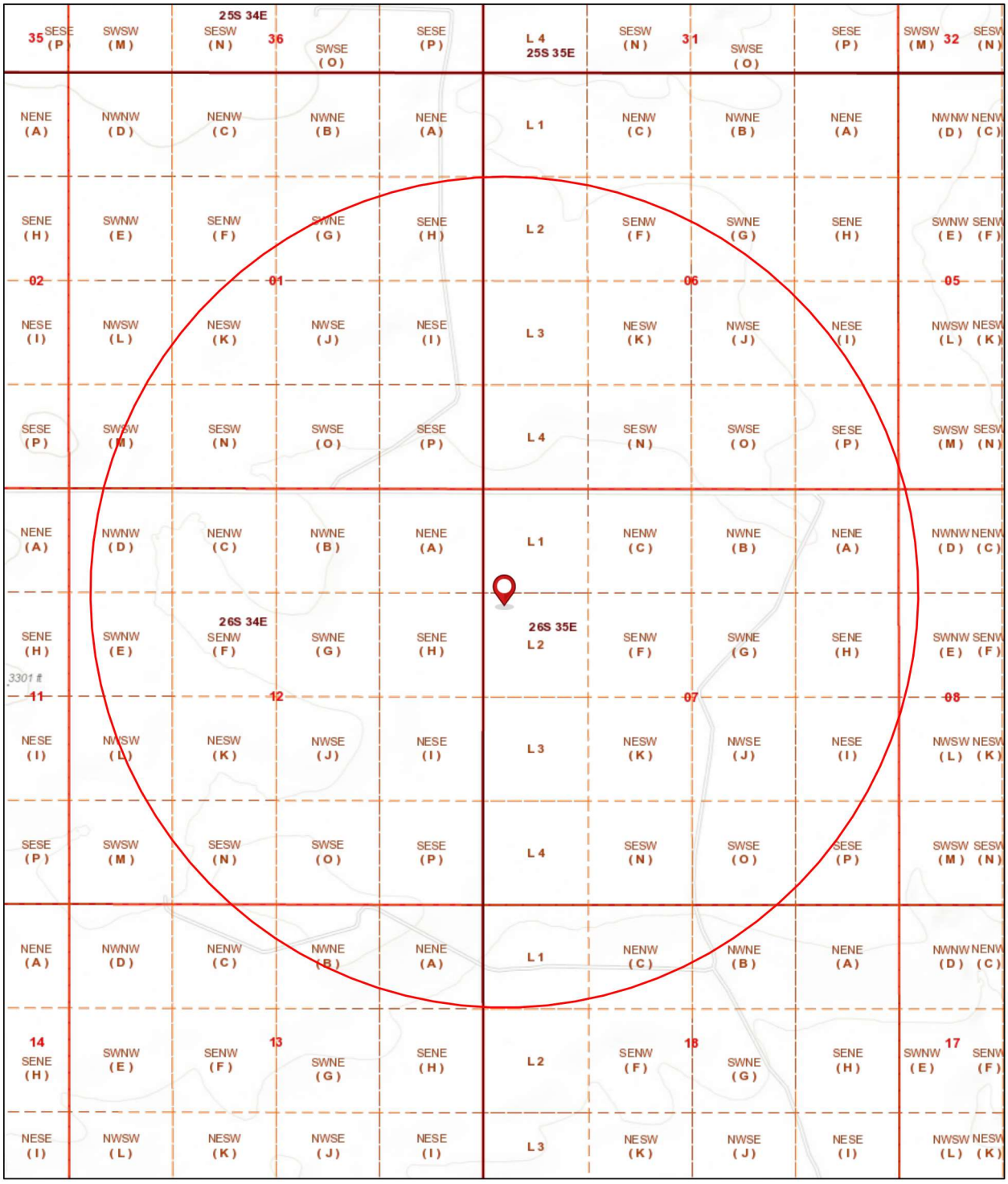
Permian Oilfield Partners, LLC, PO Box 3329, Hobbs, NM 88241, phone (817)606-7630, attn. Gary Fisher, has filed form C-108 (Application for Authorization for Injection) with the New Mexico Oil Conservation Division seeking approval to drill a commercial salt water disposal well in Lea County, New Mexico. The well is the Avenger Federal SWD #1, and is located 1320' FNL & 271' FWL, Lot #1, Section 7, Township 26 South, Range 35 East, NMPM, approximately 13.5 mi SW of Jal, NM. The well will dispose of water produced from nearby oil and gas wells into the Devonian formation from a depth of 18,615 feet to 20,444 feet. The maximum expected injection rate is 50,000 BWPD at a maximum surface injection pressure of 3,723 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.
#34434

67115647 00230851

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

Avenger Federal SWD #1 Water Wells in 1mi Radius



7/18/2019, 10:45:46 AM

OCD Districts

OCD District Offices

PLSS First Division

PLSS Second Division

PLSS Townships

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

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

New Mexico Oil Conservation Division

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 03795 POD1		C	LE	4	4	3	24	26S	35E	658419	3544221	496	250	246
J 00005 POD1		J	LE	2	2	2	13	26S	35E	659200	3547174*	601	230	371

Average Depth to Water: **240 feet**

Minimum Depth: **230 feet**

Maximum Depth: **250 feet**

Record Count: 2

PLSS Search:

Township: 26S **Range:** 35E

***UTM location was derived from PLSS - see Help**

7/18/19 10:56 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Item XII. Affirmative Statement

Re: C-108 Application for SWD Well
Permian Oilfield Partners, LLC
Avenger Federal SWD #1
1320' FNL & 271' FWL
Sec 7, T26S, R35E
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: 7/12/2019

Plugging Risk Assessment

Permian Oilfield Partners, LLC.
Avenger Federal SWD #1
SL: 1320' FNL & 271' FWL
Sec 7, T26S, R35E
Lea County, New Mexico

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Avenger Federal SWD #1
1320' FNL, 271' FWL
Sec. 7, T26S, R35E, Lea Co. NM
Lat 32.0614999° N, Lon 103.4142527° W
GL 3260', RKB 3290'

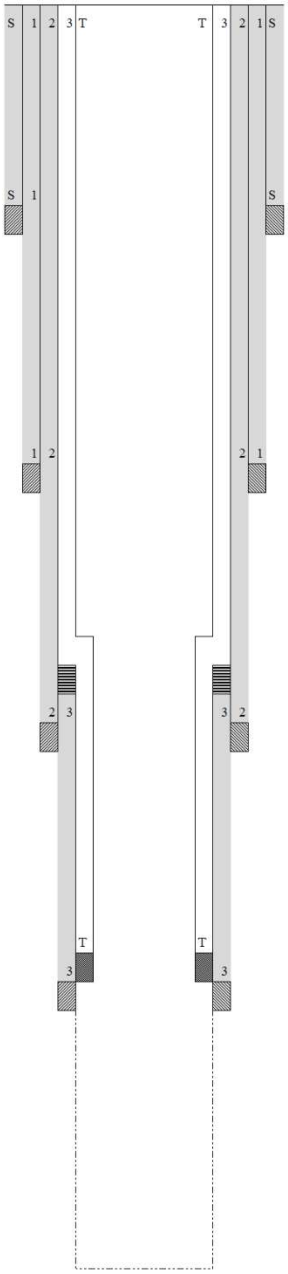
Surface - (Conventional)
Hole Size: 26"
Casing: 20" - 94# H-40 & 106.5# J-55 STC Casing
Depth Top: Surface
Depth Btm: 1122'
Cement: 745 sks - Class C + Additives
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)
Hole Size: 17.5"
Casing: 13.375" - 61# J-55 & 68# J-55 STC Casing
Depth Top: Surface
Depth Btm: 5464'
Cement: 1791 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: 12818'
Cement: 2183 sks - Lite Class C (60:40:0) + Additives
Cement Top: Surface - (Circulate)
ECP/DV Tool: 5564'

Intermediate #3 - (Liner)
Hole Size: 8.5"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 12618'
Depth Btm: 18615'
Cement: 274 sks - Lite Class C (60:40:0) + Additives
Cement Top: 12618' - (Volumetric)

Intermediate #4 - (Open Hole)
Hole Size: 6.5"
Depth: 20444'
Inj. Interval: 18615' - 20444' (Open-Hole Completion)



Tubing - (Tapered)
Tubing Depth: 18570'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 12618'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 18580'
Packer: 5.5" - Perma-Pak or Equivalent (Inconel)

7" UFJ Tubing Inside of 9 ⅝" 40# Casing

Bowen Series 150 Releasing and Circulation Overshots

Maximum Catch Size 6⅝" to 7¼" Inclusive

Maximum Catch Size (Spiral)		6⅝	6¼	7	7¼
Maximum Catch Size (Basket)		5⅞	6⅛	6⅜	6⅝
Overshot O.D.		8¼	7⅞	8⅛	8⅜
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

A 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 ½" UFJ Tubing Inside of 7 ⅝" 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 4¼" to 5½" Inclusive

Maximum Catch Size (Spiral)		4¼	4⅝	4¾	4¾	5	5	5½
Maximum Catch Size (Basket)		3⅛	4⅛	4¼	4¼	4¼	4¼	4⅞
Overshot O.D.		5⅜	5⅜	5⅜	5¾	5⅞	6⅜	6⅜
Type		F.S.	S.H.	S.H.	S.F.S.	S.H.	F.S.	S.H.
Complete Assembly	Part No.	5896	5698	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	5699	A-5169	8976	A-5172	B-4826	8826
Bowl	Part No.	5898	5700	B-5170	8977	B-5173	B-4827	8817
Packer	Part No.	169	1140	B-2199	6114	L-5950	L-4505	8818
Spiral Grapple	Part No.	165	1135	B-2201	6112	B-4369	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.	165	1135	B-2201	6112	B-4369	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.
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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.

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5. Trip in hole with inside diameter cutting tool and cut the tubing below the damaged fishing neck.
6. Trip out hole with cutting tool.
7. Trip in hole with spear sized to engage the I.D. of the tubing.
8. Engage the previously cut tubing segment with spear.
9. Trip out hole with cut tubing segment and spear.
10. Trip in hole with overshot and engage fish.
11. Pick up 2 points over neutral weight.
12. Turn pipe 10-15 turns to the right to release the seal assembly from the packer.
13. Once released from packer, trip out of hole with fish.

Abandonment Procedure

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

- The operator will ensure that all geologic formations are properly isolated.

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

Attachment to C-108
Permian Oilfield Partners, LLC
Avenger Federal SWD #1
1320' FNL & 271' FWL
Sec 7, T26S, R35E
Lea County, NM

July 13, 2019

STATEMENT REGARDING SEISMICITY

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

1. M2.6, 2017-05-03, 23.03 miles away @ 86.35 deg heading
2. M4.6, 1992-01-02, 26.35 miles away @ 43.83 deg heading
3. M3.3, 2001-06-02, 24.65 miles away @ 40.24 deg heading
4. M2.9, 1984-12-09, 16.36 miles away @ 329.64 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.

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:

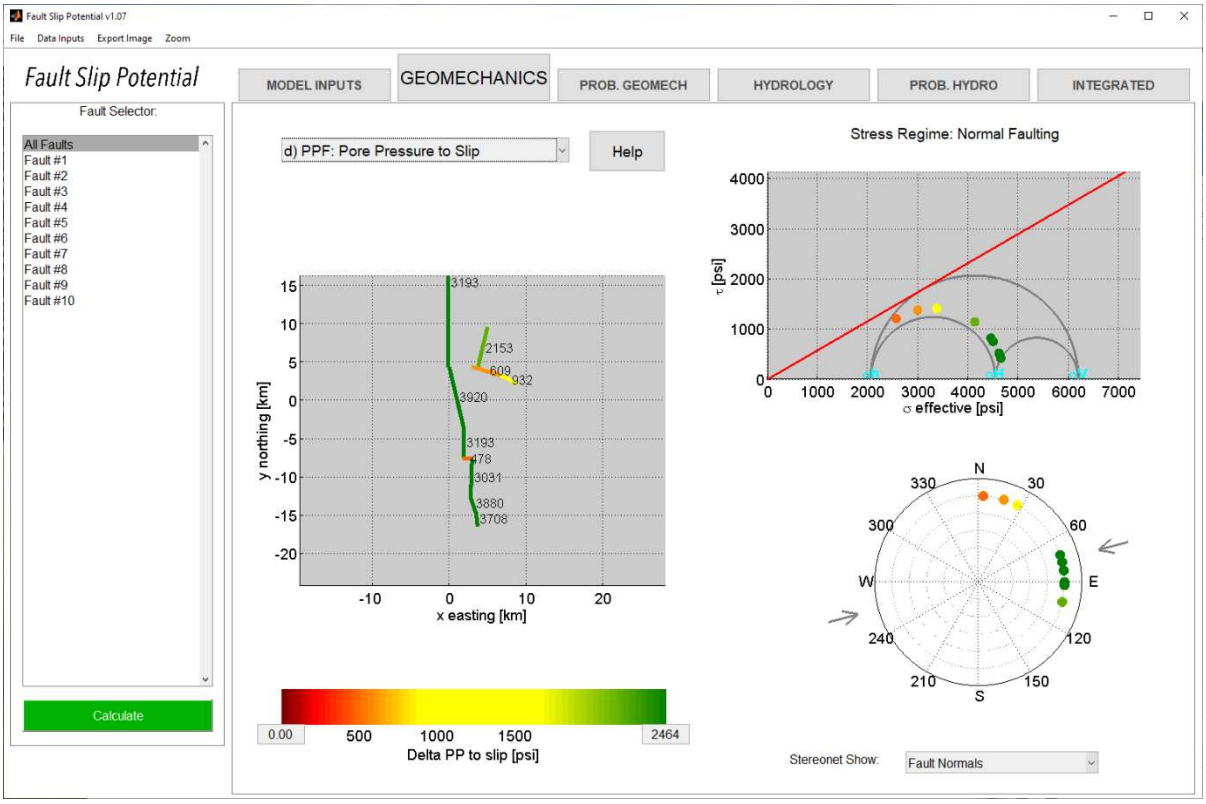
   a. Full proposed capacity of 50,000 BBL/day for 30 years
   b. 12.5 mD average permeability, 3% average porosity, .75 psi/ft stress gradient, .47 psi/ft hydrostatic gradient
   c. A-phi=0.60 & Max Horizontal Stress direction 75 deg N, as per Snee, Zoback paper noted above.

6. The distance from the proposed injection well to the nearest basement fault is approximately 8 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.

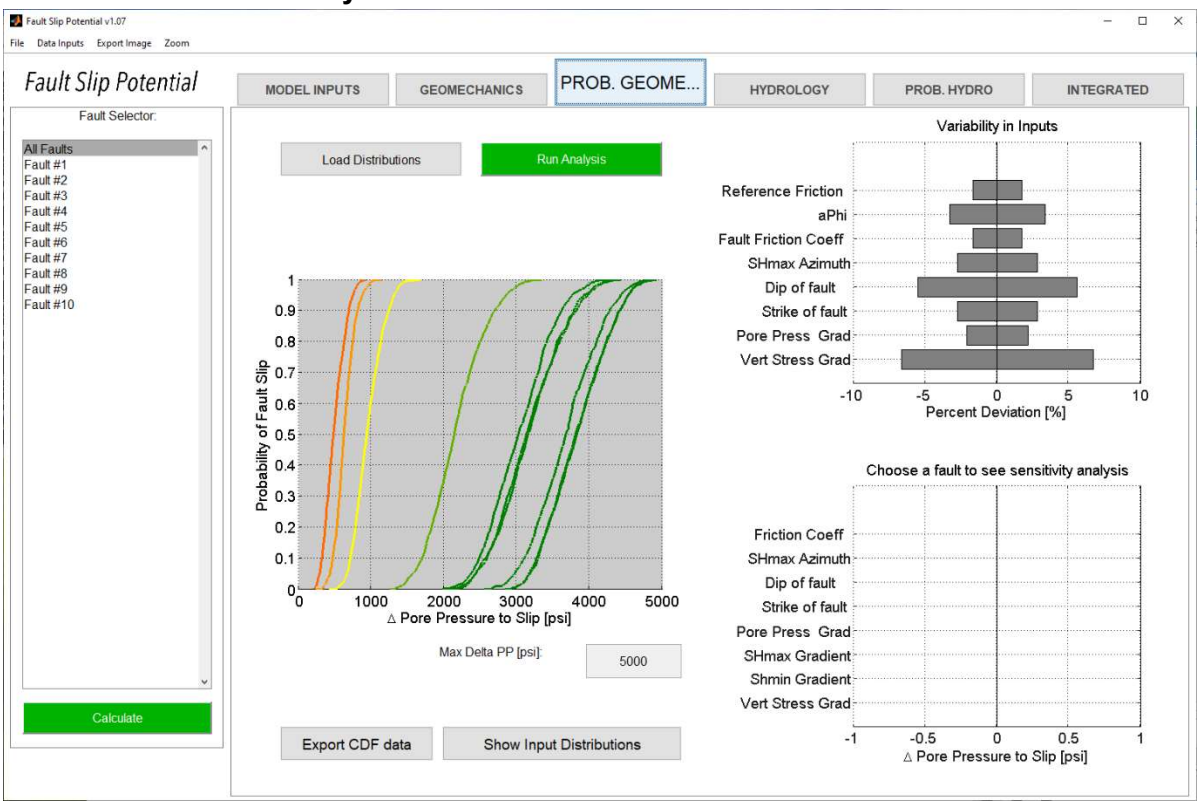
Input assumptions:

Rate (BBL/day)	50000
Interval height (ft)	1500
Average Porosity (%)	3
Vert stress gradient (psi/ft)	0.75
Hor stress direction (deg N)	75
Fault dip (deg)	75
Ref depth (ft)	22100
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

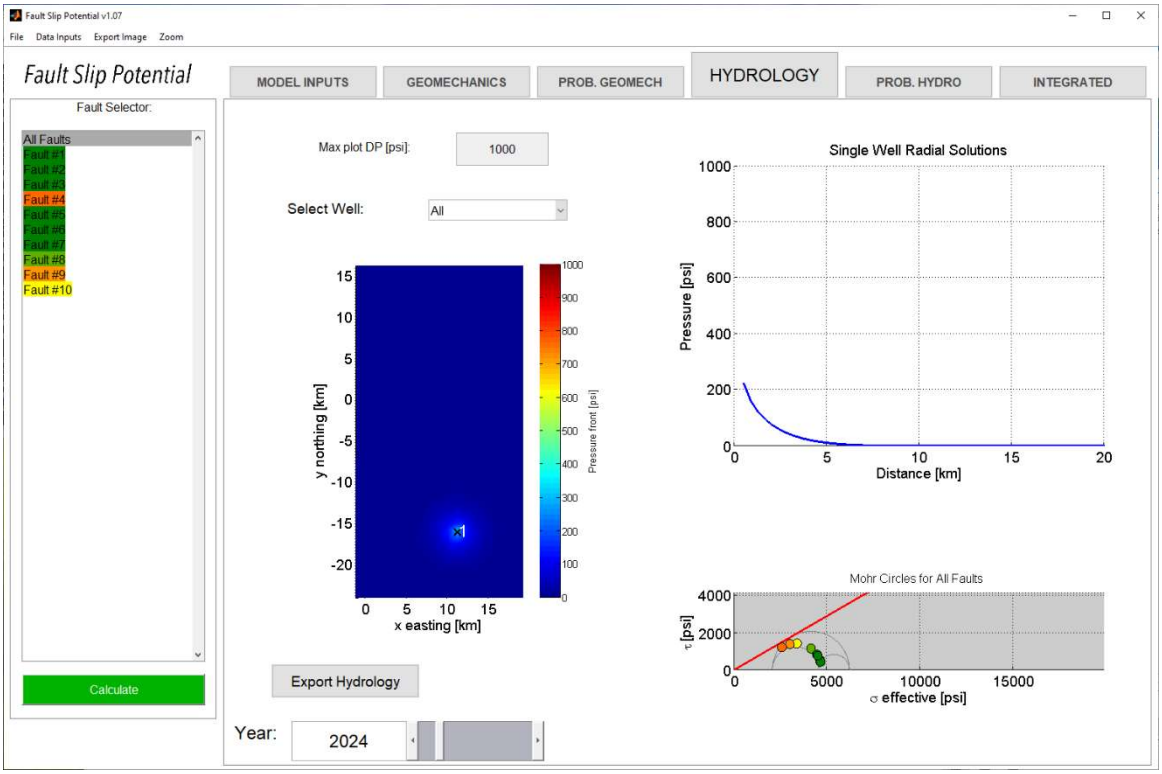
Geomechanics Pore Pressure to Slip



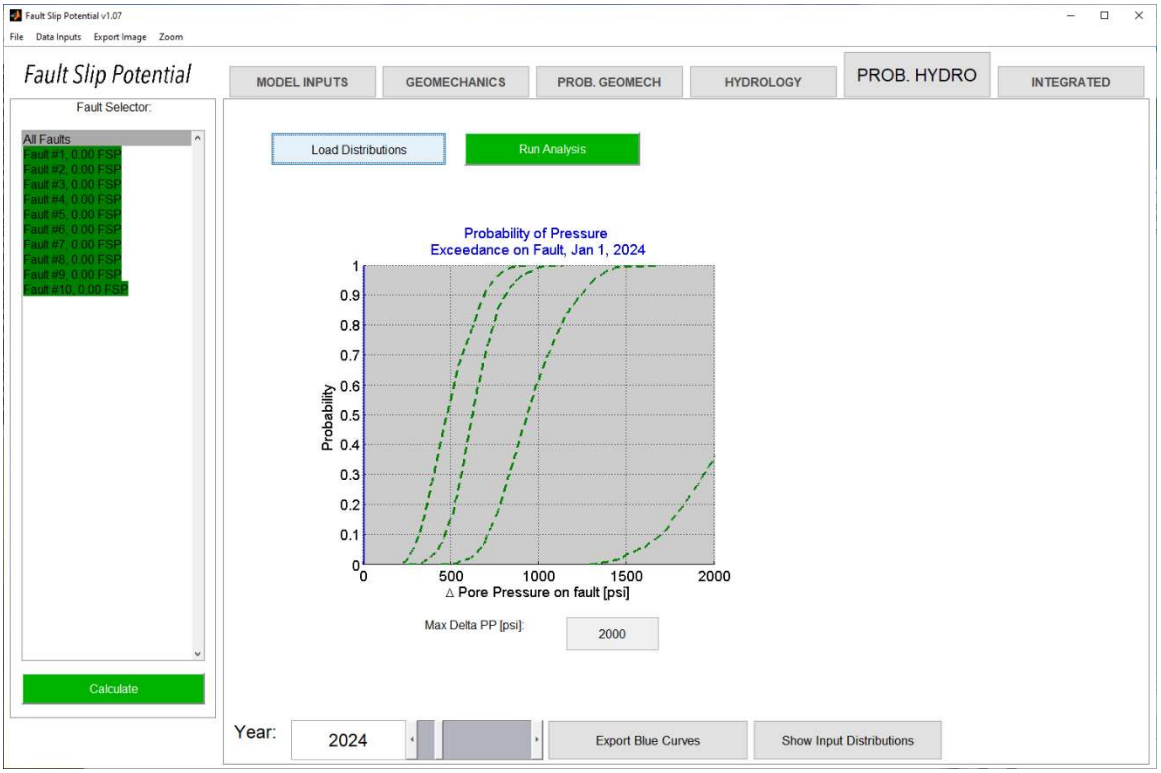
GeoMechanics Variability



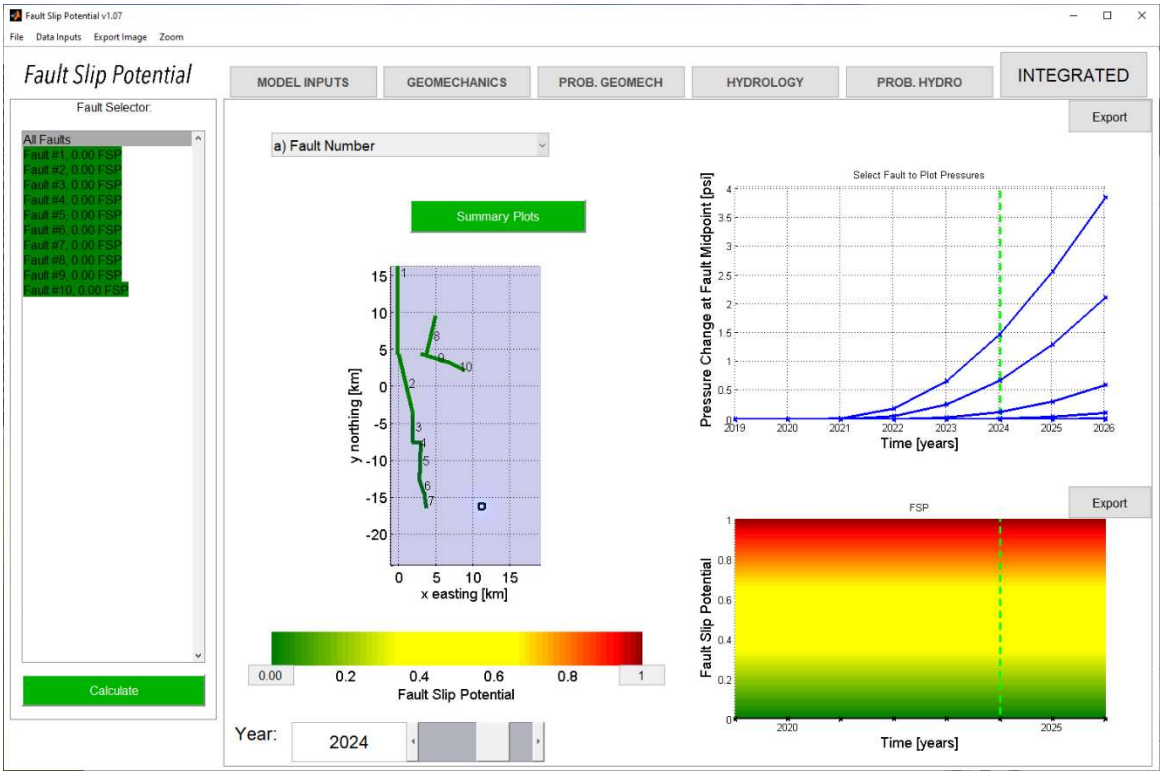
Year 5 Hydrology



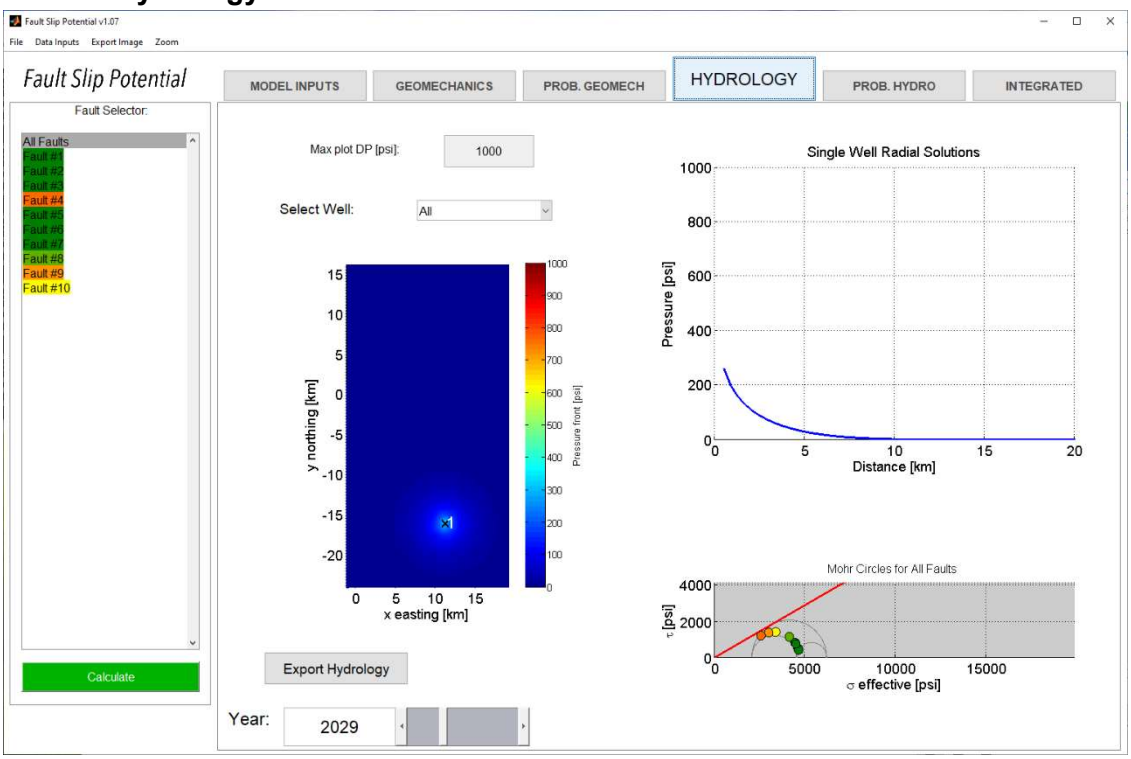
Year 5 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



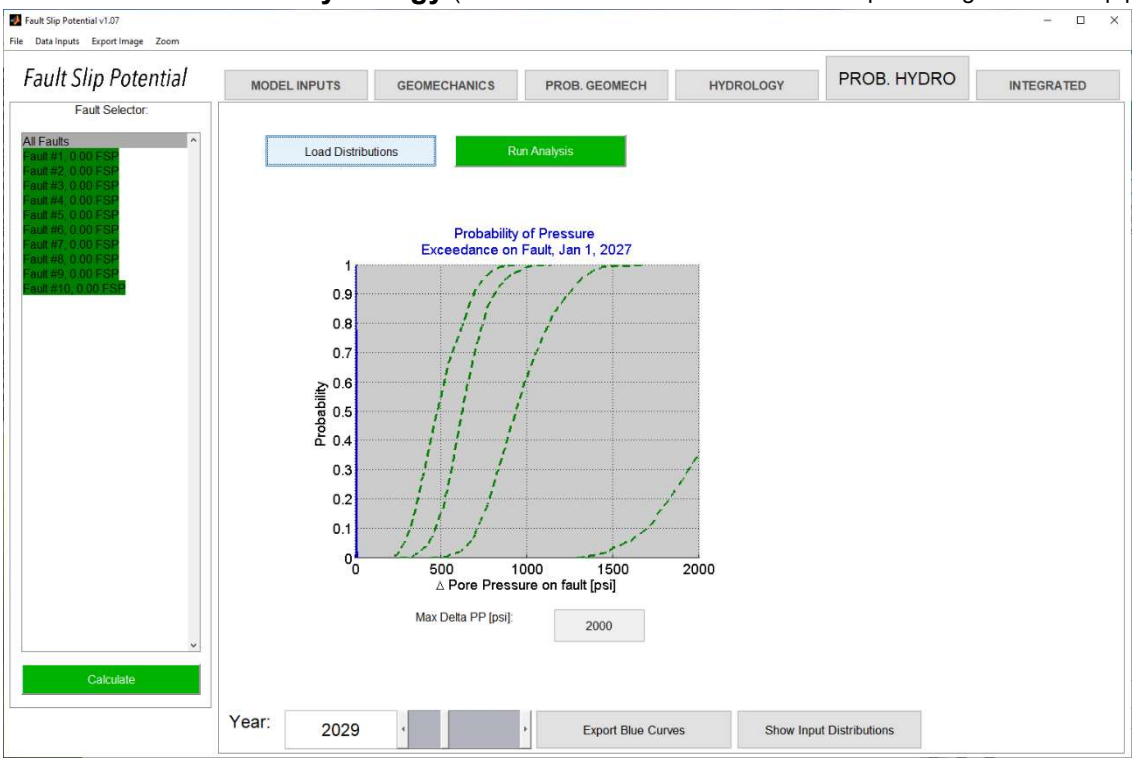
Year 5 Fault Slip Probability (0% for all fault segments after 5 years)



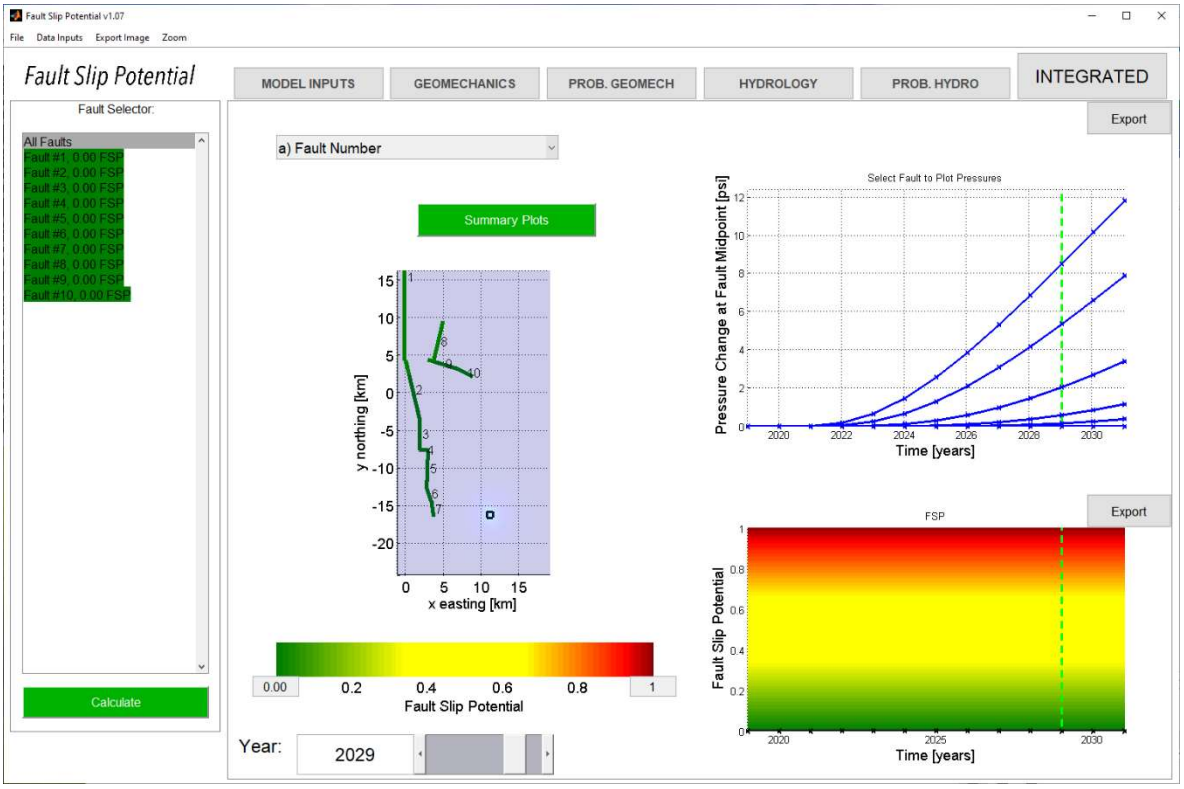
Year 10 Hydrology



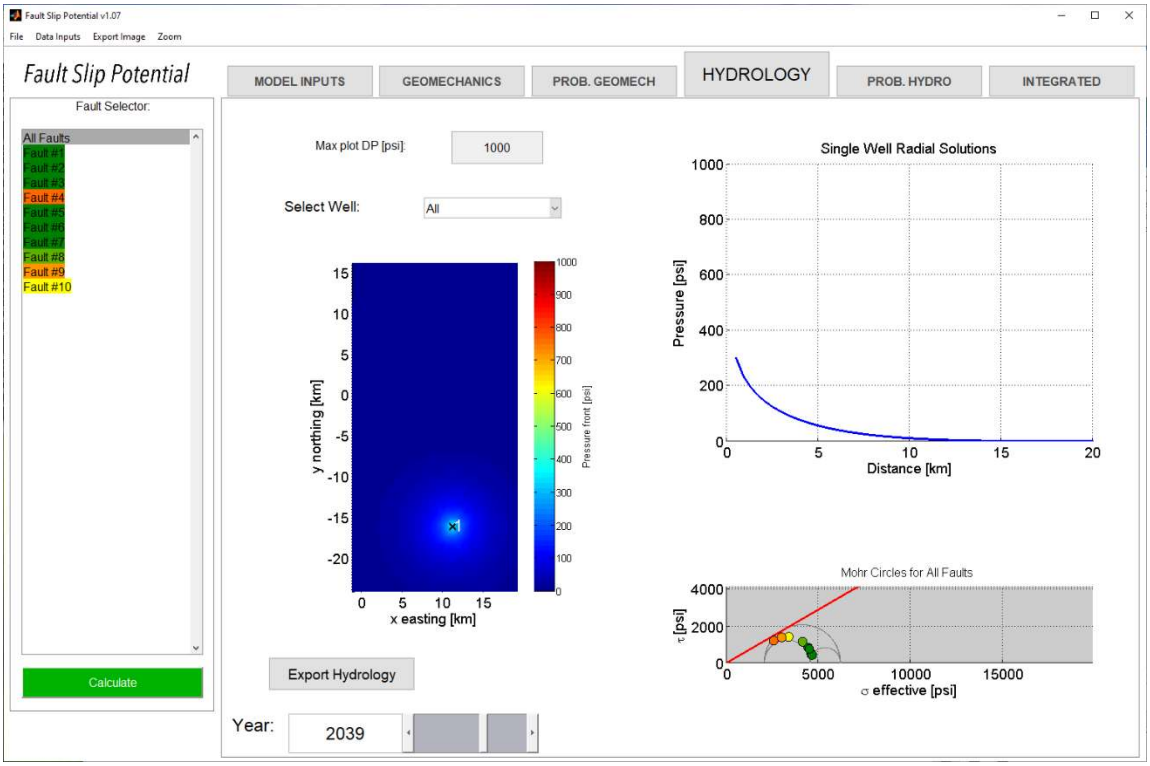
Year 10 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



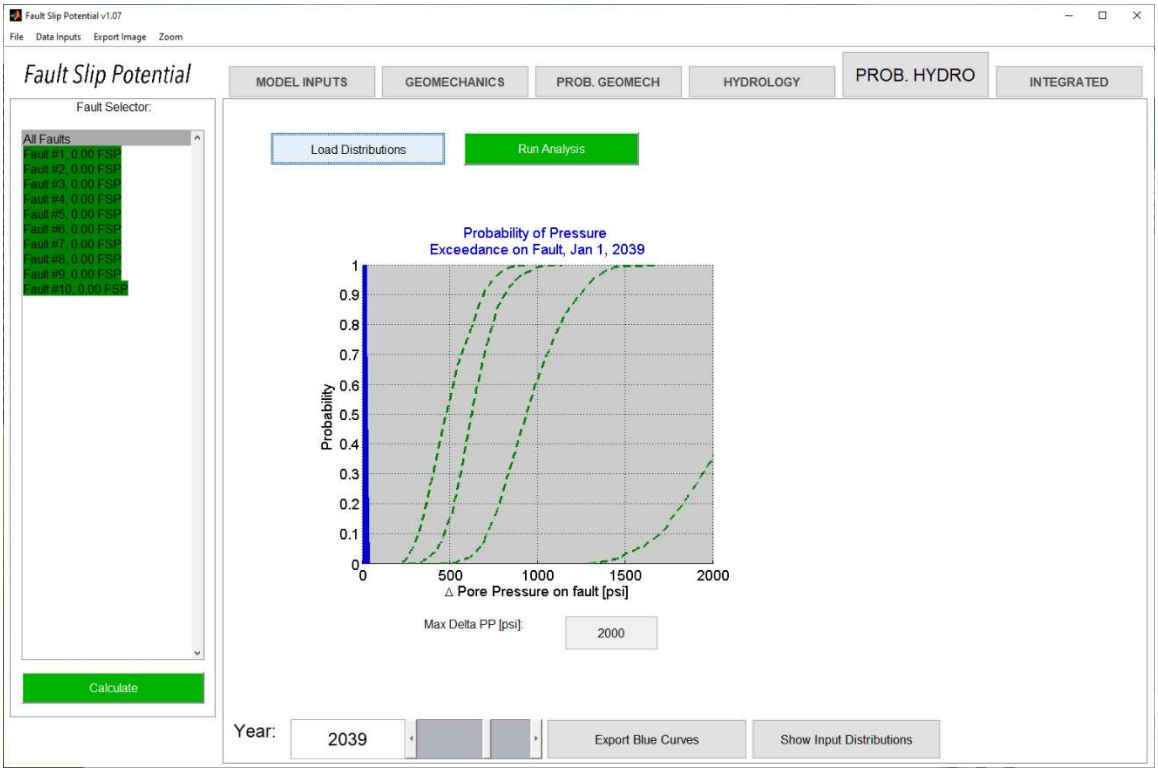
Year 10 Fault Slip Probability (0% for all fault segments after 10 years)



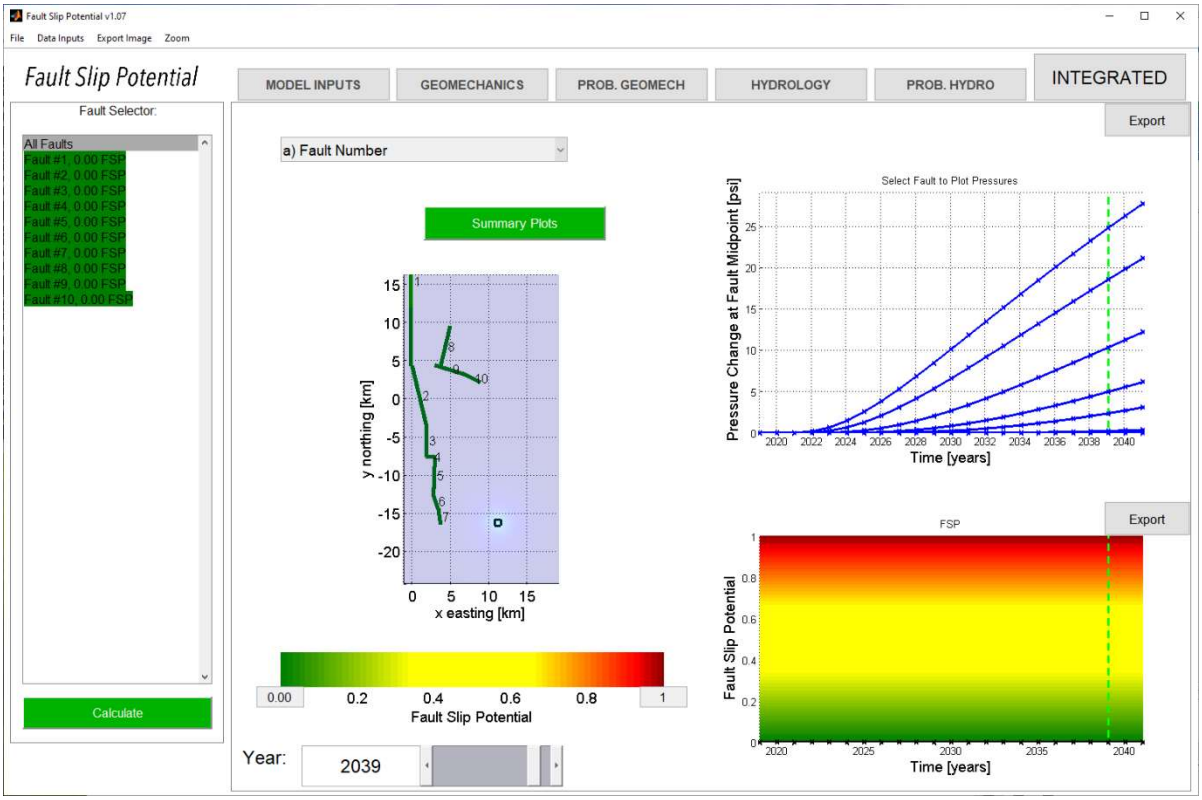
Year 20 Hydrology



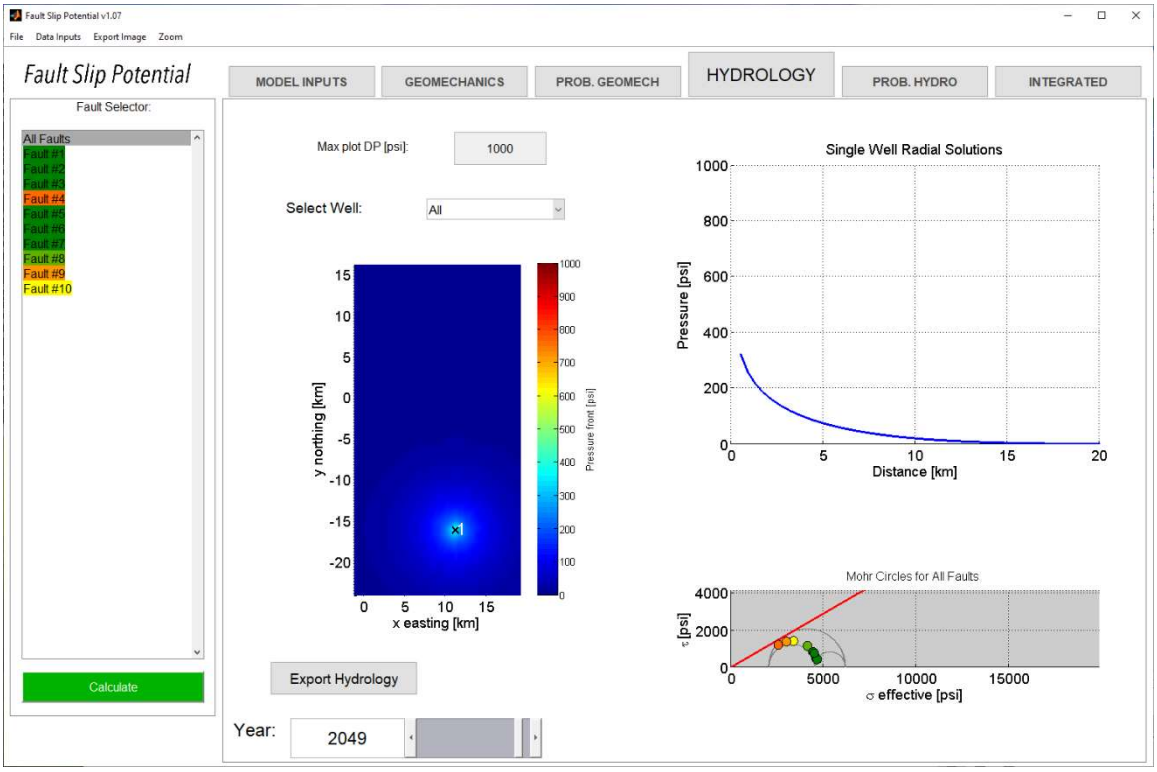
Year 20 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



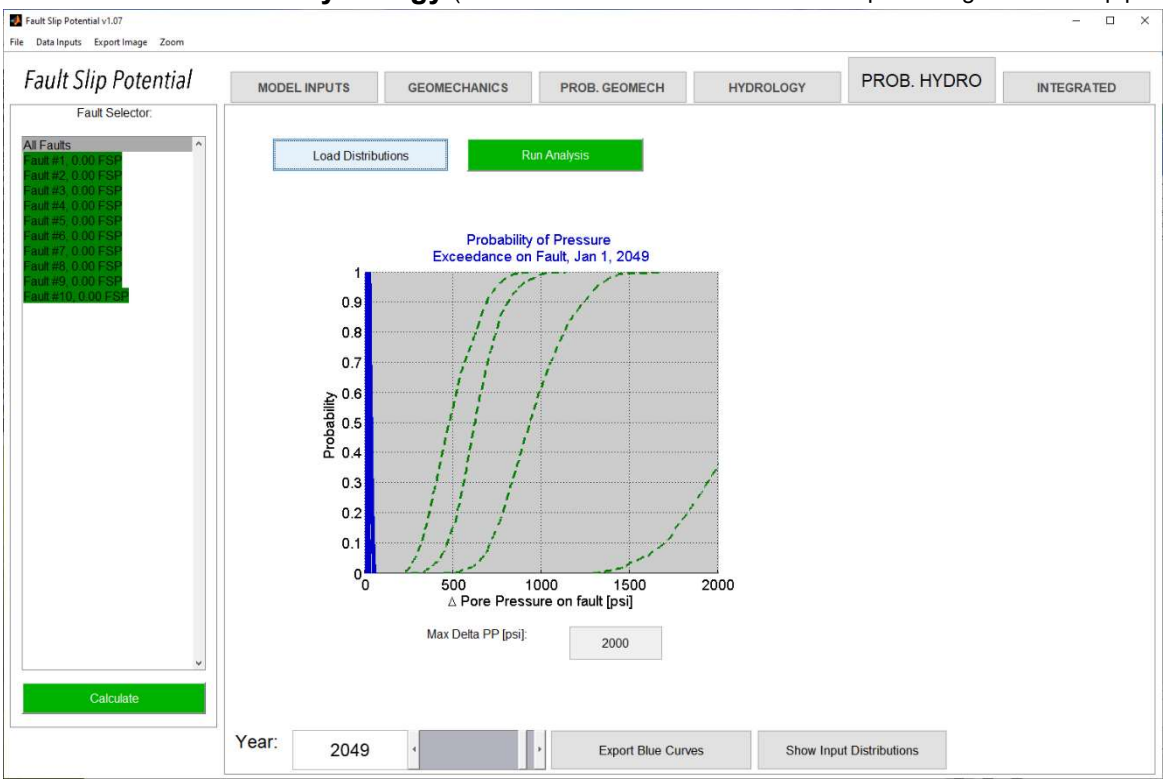
Year 20 Fault Slip Probability (0% for all fault segments after 20 years)



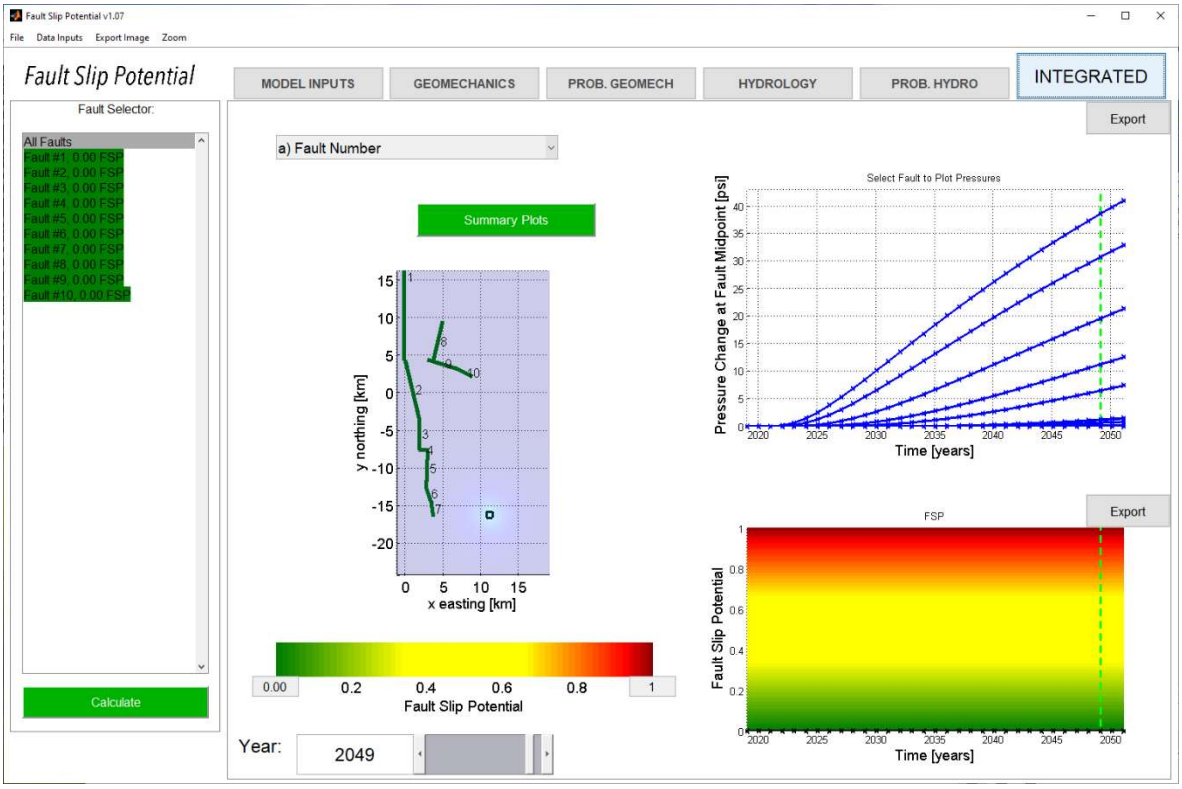
Year 30 Hydrology



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. 39 psi fault delta pressure is much less than the 3708 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 3.25 miles away from the nearest active or permitted Devonian disposal well.

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