

Additional Information

2nd Extension Request 9/30/21



MODRALL SPERLING

L A W Y E R S

September 30, 2021

Deana M. Bennett
Deana.bennett@modrall.com
505-848-1834 (direct)
505.848.1800 (office)

Via E-mail

Oil Conservation Division
Energy, Minerals and Natural Resources Department
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505
OCD.Engineer@state.nm.us

Re: Permian Oilfield Partners, LLC Request for Extension of Time to Commence Injection Operations Under Order R-20955

Dear Oil Conservation Division:

Permian Oilfield Partners, LLC (“Permian”) respectfully requests an additional one (1) year extension to commence injection operations in the Vortex Federal SWD #1, under Order R-20955, through November 7, 2022. This extension is being requested for several reasons: First, the New Mexico State Land Office (“NMSLO”) filed a de novo hearing application of Order R-20955, which the NMSLO recently dismissed. Second, there have been changes in Permian’s drilling schedule due to COVID-19 and current market conditions. Third, Permian requires an APD from the Bureau of Land Management for this well, which Permian anticipates will take several months to obtain. The NMSLO concurs in this request for an extension of time.

In further support of this request, Permian states as follows:

1. Order R-20955 (the “Order”) was issued to Permian on November 7, 2019 and authorized Permian to utilize its Vortex Federal SWD #1 Well (the “Well”) as an Underground Injection Control Class II well for commercial disposal of produced water into the Devonian and Silurian formations.
2. After the Order was issued, the NMSLO filed an application for a de novo hearing with respect to the Order with the Oil Conservation Commission (“OCC”), along with de novo hearing applications for three other Permian orders.¹ In total, the NMSLO objected to ten (10) Permian salt water disposal wells (“SWDs”).

¹ Permian is requesting an extension of time to commence injection operations for these three orders in separate requests.

3. The OCC hearings were continued a number of times due to COVID-19 and due to settlement discussions between the parties.
4. Due to the pending OCC de novo case, Permian sought, and was granted, a one-year extension of time to commence injection, which extension will expire on November 7, 2021. *See* Exhibit A.
5. Recently, Permian and the NSMLO reached an agreement, resolving NMSLO's objections to Order R-20955, and NMSLO withdrew its objections to Order R-20955 on September 9, 2021 and the OCC de novo case was dismissed on September 9, 2021.
6. On September 28, 2021, the NMSLO filed a withdrawal of its objections to the Vortex Well with the Division.
7. Due to the pendency of the OCC cases, the number of SWDs the NMSLO objected to, and the delays occasioned by COVID 19, as well as other issues described below, Permian cannot commence injection operations before the Order's current expiration date, which is November 7, 2021.
8. Permian is requesting an extension of time pursuant to the Order, which states: "The disposal authority granted herein shall terminate one year after the effective date of this order if the Operator has not commenced injection operations into the proposed well, provided however, the Division, upon written request, mailed by the Operator prior to the termination date, may grant an extension thereof for good cause." Order, ¶ 22.²
9. Good cause exists for Permian's request for an extension of time:
 - The NMSLO de novo hearing, along with the NMSLO's objection to Permian's SWDs, created uncertainty for Permian, which has now been resolved, and which clears the way for Permian to begin the process it needs to commence drilling the Well—a process that will not be complete before the Order expires.
 - In addition, Permian requires additional time to apply for and obtain an APD from the Bureau of Land Management, which Permian anticipates will take several months. Upon acquiring an APD, Permian will need additional time to drill the Well before it can commence injection.

² Permian's counsel confirmed with NMOCD's counsel that submitting a written request for an extension of time is the appropriate method for such a request.

- Permian cannot commence injection on or before the current injection date and, without an extension, Order R-20955, will terminate. The parties have devoted time and effort to resolving the NMSLO's concerns, and if the Order were to terminate, that time and effort would be wasted.
 - Permian intends to drill and operate the Well.
 - Permian understands that the NMOCD has adopted a new UIC form of order and, if NMOCD grants the extension of time, Permian agrees either that the terms of the new UIC form of order related to seismicity can be incorporated into the Order or, alternatively, Permian agrees that the Order can be replaced with the revised UIC form of order to conform the Order to the new UIC form of order.
10. Permian has reviewed the 1-mile Area of Review (AOR) associated with this well and one new affected party was identified. *See* Exhibit B, Declaration of Gary Fisher. Permian's request for an extension of time was sent to the new affected party. *See* Exhibit C. No additional wells penetrating the approved injection interval have been drilled within the AOR. *See* Declaration of Gary Fisher.
11. The NMSLO concurs in the granting of Permian's request to amend Order R-20955 to allow Permian an additional one-year extension of time to commence injection into the Well under the order.
12. Permian prepared an updated Statement Regarding Seismicity attached as Exhibit 1 to Mr. Fisher's Declaration. As evidenced by the updated analysis, the likelihood of fault slip is extremely low, even over time. The distances from the Well to the nearest known fault is approximately 8.1 miles. The probability of an induced seismic event is calculated to be 0% after 5, 10, 20, and 30 years.

For these reasons, Permian respectfully requests that R-20955 be amended to allow Permian an additional one-year extension of time to commence injection operations, through November 7, 2022.

Sincerely,



*Attorney for Permian Oilfield Partners,
LLC*

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Director
Oil Conservation Division



October 28, 2020

Permian Oilfield Partners, LLC (OGRID 328259)
c/o Gary Fisher
gfisher@popmidstream.com

RE: Hearing Order No. R-20955 (Case No. 20574): Extension of Deadline to Inject
Well: Vortex Federal SWD No. 1 (API 30-025-Pending)
Located: Lot 1, Sec 01, T24S, R32E, NMPM, Lea County, New Mexico
Order Date: November 7, 2019
Injection formations: Devonian and Silurian formations: 16,619 to 18,427 feet

Dear Mr. Fisher:

Reference is made to your September 24, 2020 request on behalf of Permian Oilfield Partners LLC (the "operator") to extend the deadline stipulated in the above titled order to commence injection for the above referenced well for reasons outlined in your correspondence. The current deadline date to commence injection under said order is one year after issuance of the order: November 7, 2020.

It is the Oil Conservation Division's (OCD) understanding from your correspondence that since the date of issuance of this permit, no additional wells that penetrate the approved injection interval were drilled and no new affected parties were identified within the 1-mile Area of Review (AOR).

The New Mexico State Land Office has requested a *De Novo* hearing (received by the OCD on November 19, 2019) before the Oil Conservation Commission, which at this date is scheduled for April 15, 2021.

The OCD finds that for reasons you have stated, the granting of this request to extend this hearing order is in the interest of conservation, will prevent waste, and will protect the environment. Therefore, the deadline to commence injection for the existing order is hereby extended until November 7, 2021.

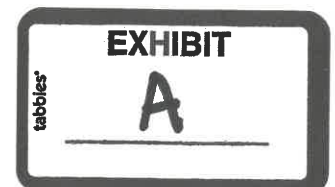
All requirements of the above referenced administrative order and agreements in the application remain in full force and effect.

A handwritten signature in black ink, appearing to read "AS", is written over a horizontal line.

ADRIENNE SANDOVAL
Director

AS/KAM

cc: Oil Conservation Division – Hobbs Office
Bureau of Land Management – Carlsbad Field Office
Case 20574



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

SELF-AFFIRMED DECLARATION OF GARY FISHER

Gary Fisher hereby states and declares as follows:

1. I am over the age of 18, I am the President of Permian Oilfield Partners, LLC (“Permian”), and I have personal knowledge of the matters stated herein. I have previously testified before the Oil Conservation Division (“Division”) and my credentials have been accepted as a matter of record.

2. My area of responsibility at Permian includes the area of Lea County in New Mexico.

3. I submit the following information in support of Permian’s request for an additional extension of time to commence injection operations in the Vortex Federal SWD #1 (the “Well”) under Order R-20955.

4. In my opinion, good cause exists to grant Permian’s request for an additional extension of time.

5. Permian intends to drill and operate the Well and an additional extension of time will allow Permian to move forward with this Well, which is an important component of Permian’s overall plans.

6. Permian’s drilling schedule was delayed for several reasons. First, the NMSLO de novo hearing caused uncertainty for Permian, which delayed Permian’s plans for drilling the Well. Second, COVID 19 and the market conditions resulting from the pandemic delayed Permian’s drilling schedule. Third, Permian requires an APD from the Bureau of Land Management, which Permian anticipates will take several months to obtain.



7. The NMSLO's concerns have now been resolved, which clears the way for Permian to begin the process it needs to commence drilling the Well—a process that will not be complete before the Order expires. Permian can now also apply for the BLM APD with certainty. Upon acquiring an APD, Permian will need additional time to drill the Well before it can commence injection. As a result, Permian cannot commence injection on or before the current injection date and, without an extension Order R-20955, will terminate.

8. If the Order were to terminate, the time and effort the parties have devoted to resolving the NMSLO's concerns would be wasted.

9. Permian understands the Oil Conservation Division ("Division") is concerned about seismicity and the Division's authority to address potential seismic events under the prior form of order.

10. In preparing to submit this request for an extension of time, I have reviewed the OCD's new form of UIC injection order/permit, which I understand became effective as of January 1, 2021, *i.e.*, after the Vortex Order was issued.

11. As part of this extension request, Permian agrees to either incorporate the provisions of the new form of UIC order relating to seismicity into the Vortex Order or to have OCD issue the extension on the new form of UIC order.

12. In addition, to address any concerns regarding seismicity for the Vortex Well, I prepared an updated Statement Regarding Seismicity and an updated Fault Slip Potential analysis ("FSP"), which is attached as Exhibit 1 to this declaration.

13. In preparing the updated FSP, I reviewed seismic activity in the area, and I also used publicly available data and software to conduct a fault slip analysis.

14. A review of USGS and TexNext databases showed minimal seismic activity in the area.

15. The distances from the Well to the nearest known fault is approximately 8.1 miles.

16. The probability of an induced seismic event is calculated to be 0% after 5, 10, 20, and 30 years.

17. I reviewed the 1-mile Area of Review (AOR) associated with this Well and I identified one new affected party: Titus Oil & Gas Production, LLC, 420 Throckmorton St #1150, Fort Worth, TX 76102. Although Order no. R-20955 does not require notice to any parties, including newly identified affected parties, I provided this information to my counsel and directed her to mail Titus Oil & Gas Production, LLC notice of this request for an extension of time.

18. I reviewed the 1-mile Area of Review (AOR) associated with this Well and no additional wells penetrating the approved injection interval have been drilled.

19. The attachments to this declaration were prepared by me, or compiled from company business records, or were prepared at my direction.

[Signature page follows]

I attest under penalty of perjury under the laws of the State of New Mexico that the information provided herein is correct and complete to the best of my knowledge and belief.

Dated: September 29, 2021



Gary E. Fisher
President, Permian Oilfield Partners, LLC



**Attachment to C-108
Permian Oilfield Partners, LLC
Vortex Federal SWD #1
Sec. 1, Twp. 24S, Rge. 32E
1151' FNL, 337' FEL
Lea County, NM**

September 16, 2021

STATEMENT REGARDING SEISMICITY-REVISED

Examination of the USGS and TexNet seismic activity databases has shown minimal historic seismic activity in the area (< 5.64 miles) of our proposed above referenced SWD well as follows:

1. M2.9, 1984-12-04, 3.95 miles away @ 74.64 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 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, the NMOCD SWD Applications & Fault Map dated 6/22/2020, 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 ran modeling to check for fault slip assuming that any known faults penetrate the Devonian-Silurian injection zone. 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



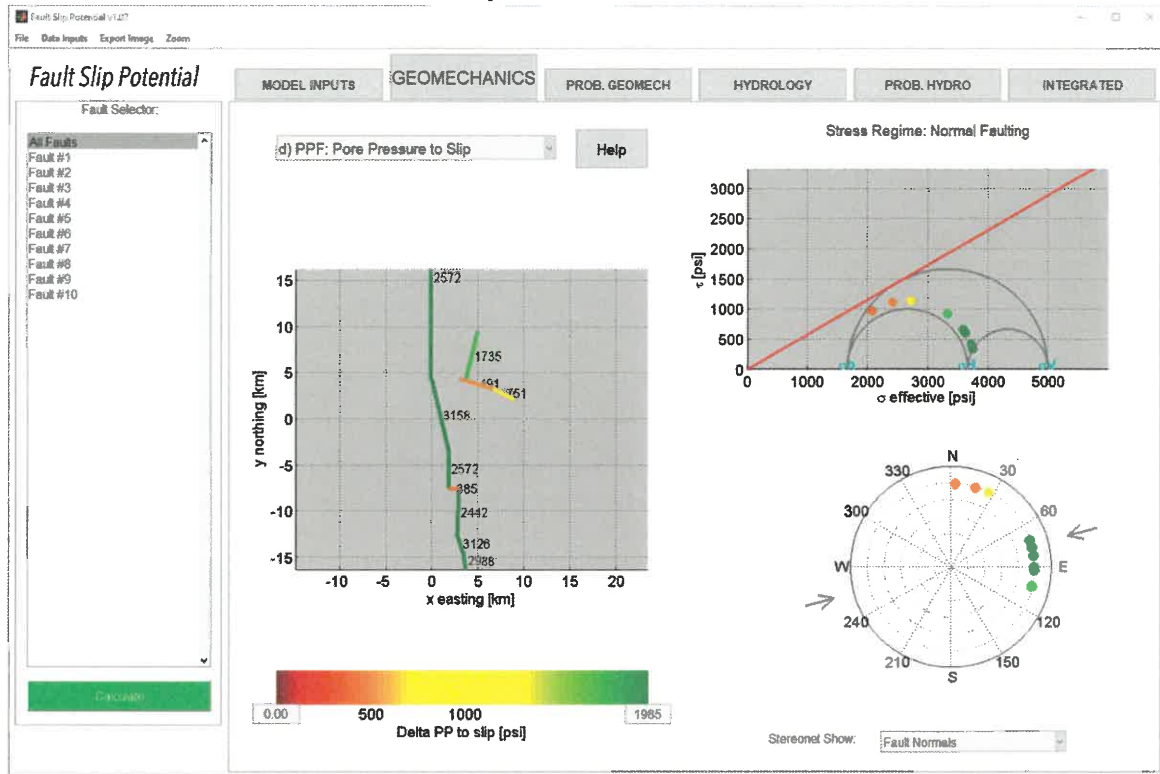
calculate the probability of the fault being stressed so as to create an induced seismic event.

6. The distance from the proposed injection well to the nearest known fault is approximately 8.1 mi (13 km). The probability of an induced seismic event is calculated to be 0% after 5, 10, 20, & 30 years as per the FSP results screenshots below.

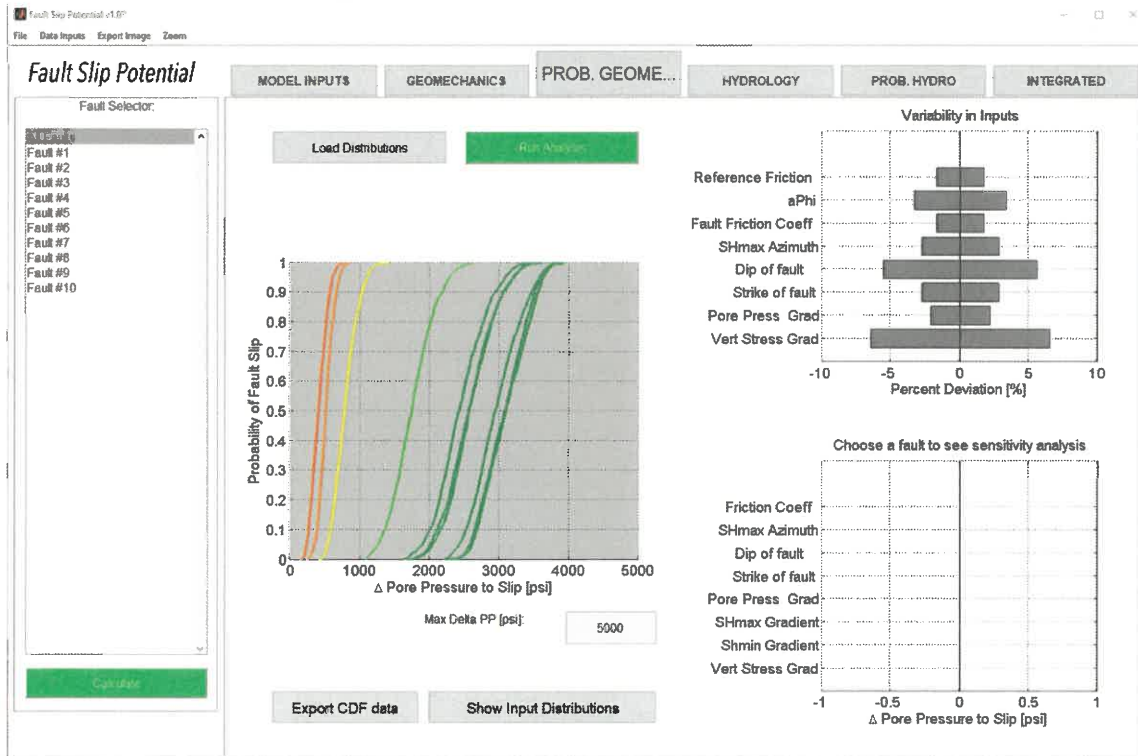
Input assumptions:

Rate (BBL/day)	50000
Interval height (ft)	1808
Average Porosity (%)	4.3
Vert stress gradient (psi/ft)	0.77
Hor stress direction (deg N)	75
Fault dip (deg)	75
Ref depth (ft)	16619
Initial res press gradient (psi/ft)	0.47
A phi	0.6
Friction coefficient	0.58
Weighted Average perm (mD)	18.9
Fluid density (kg/m ³)	1100
Dynamic viscosity (Pa-s)	0.0003
Fluid compressibility (/Pa)	4 e-10
Rock compressibility (/Pa)	1.08 e-09

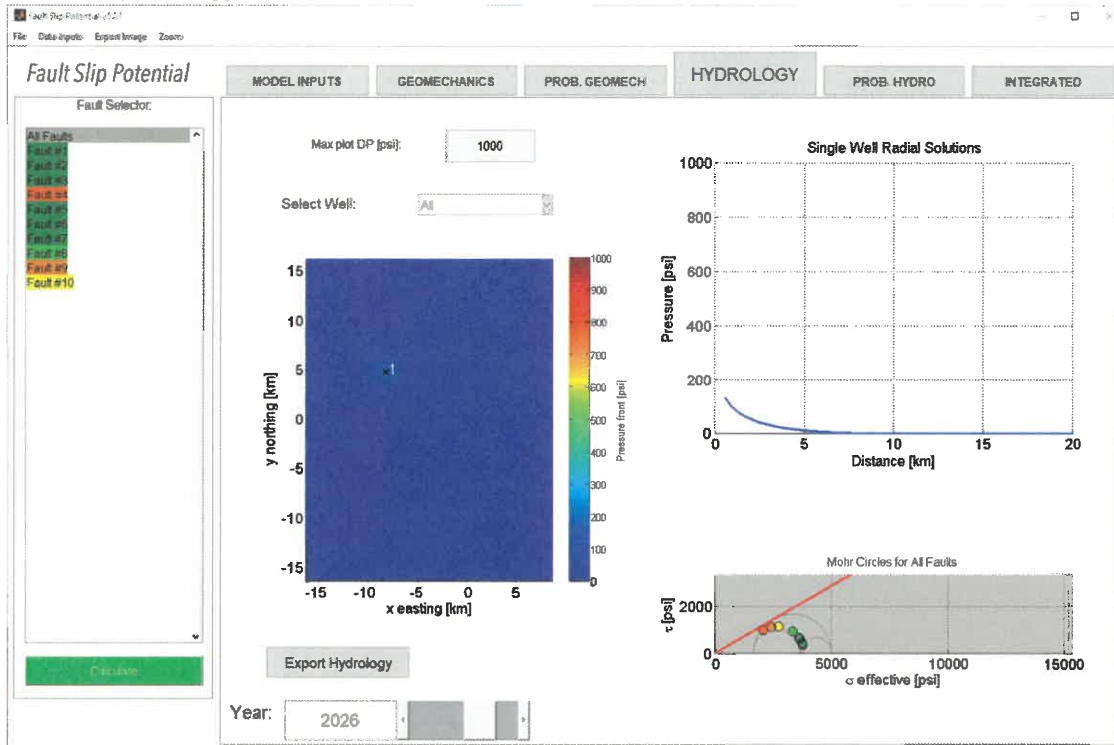
Geomechanics Pore Pressure to Slip



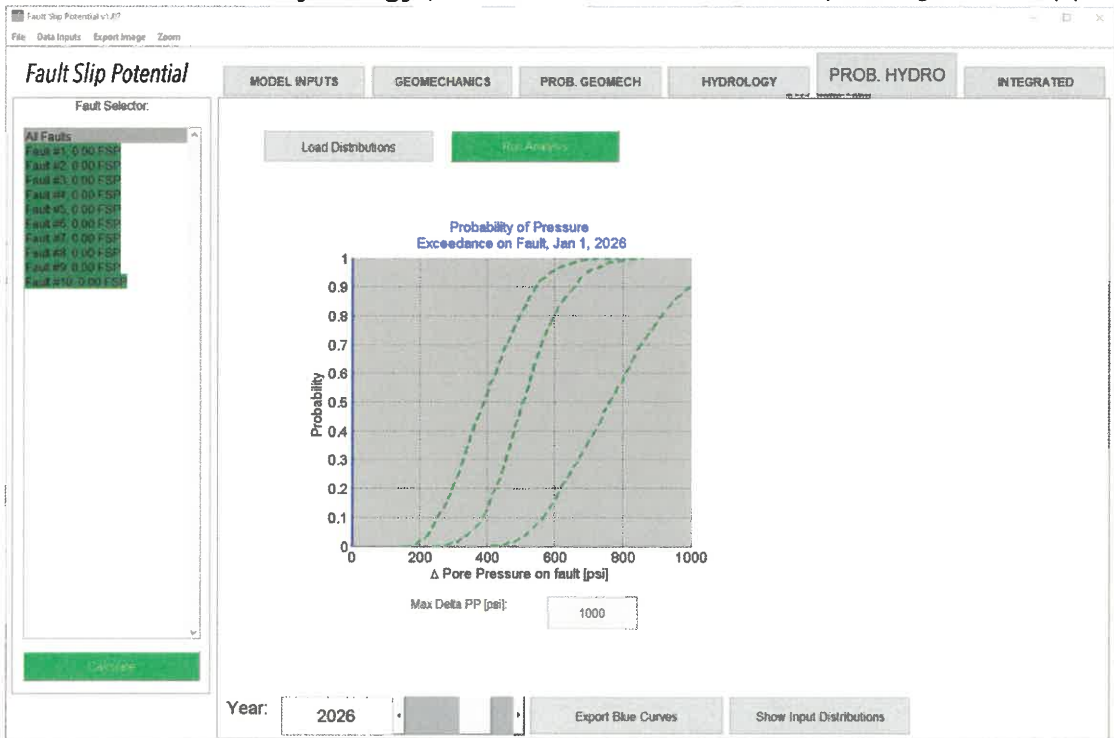
GeoMechanics Variability



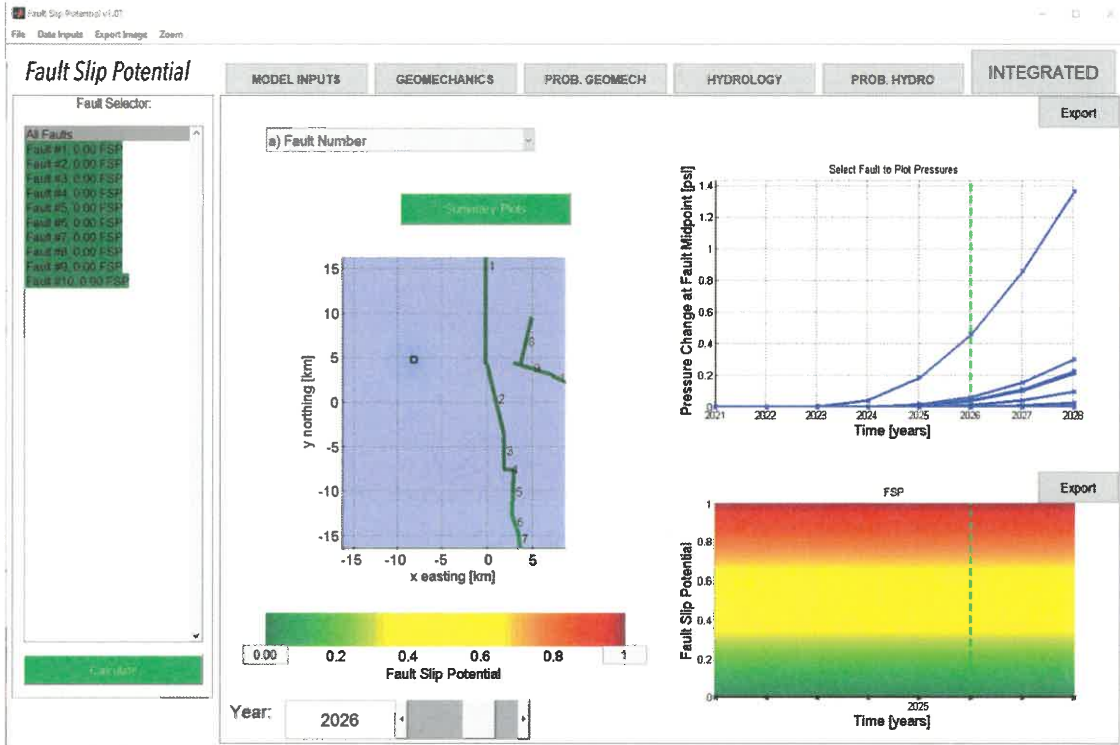
Year 5 Hydrology



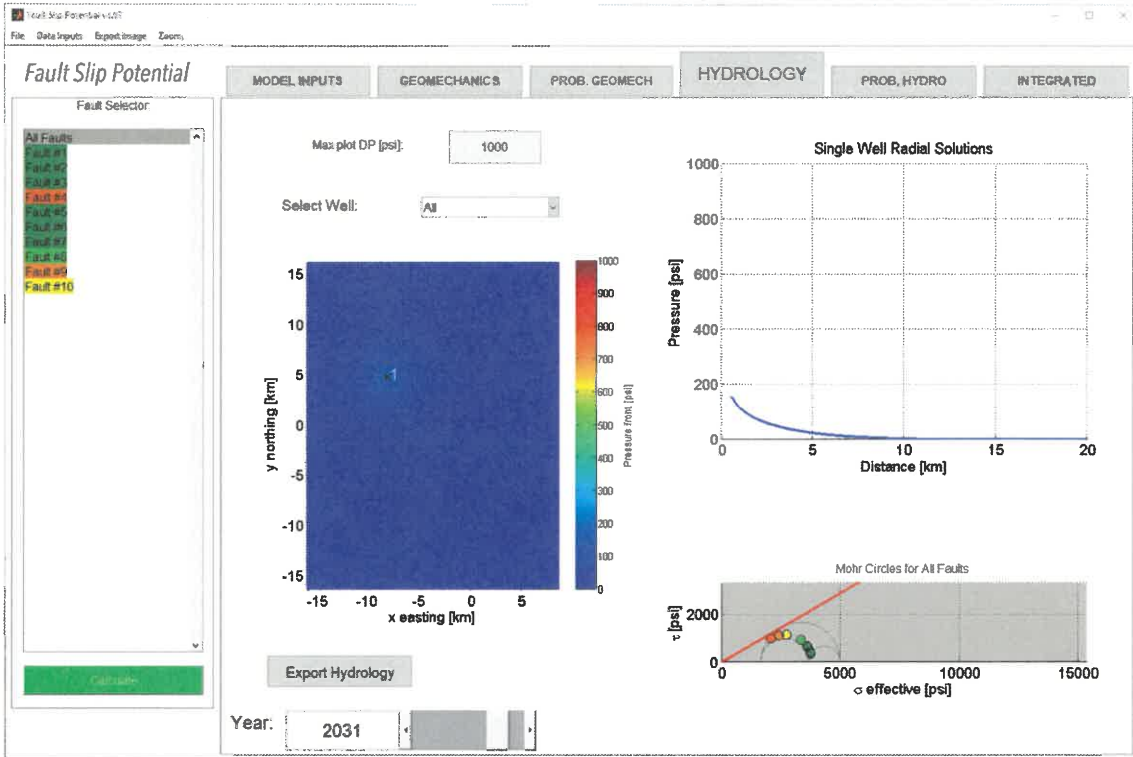
Year 5 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



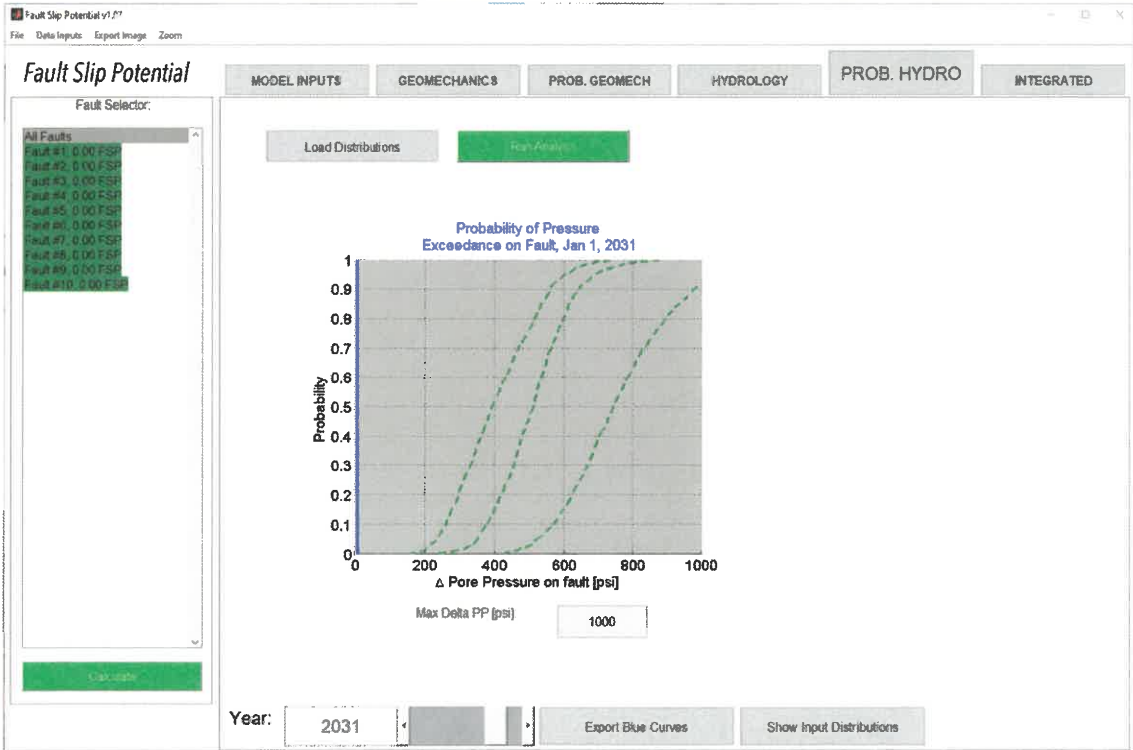
Year 5 Fault Slip Probability (0% after 5 years)



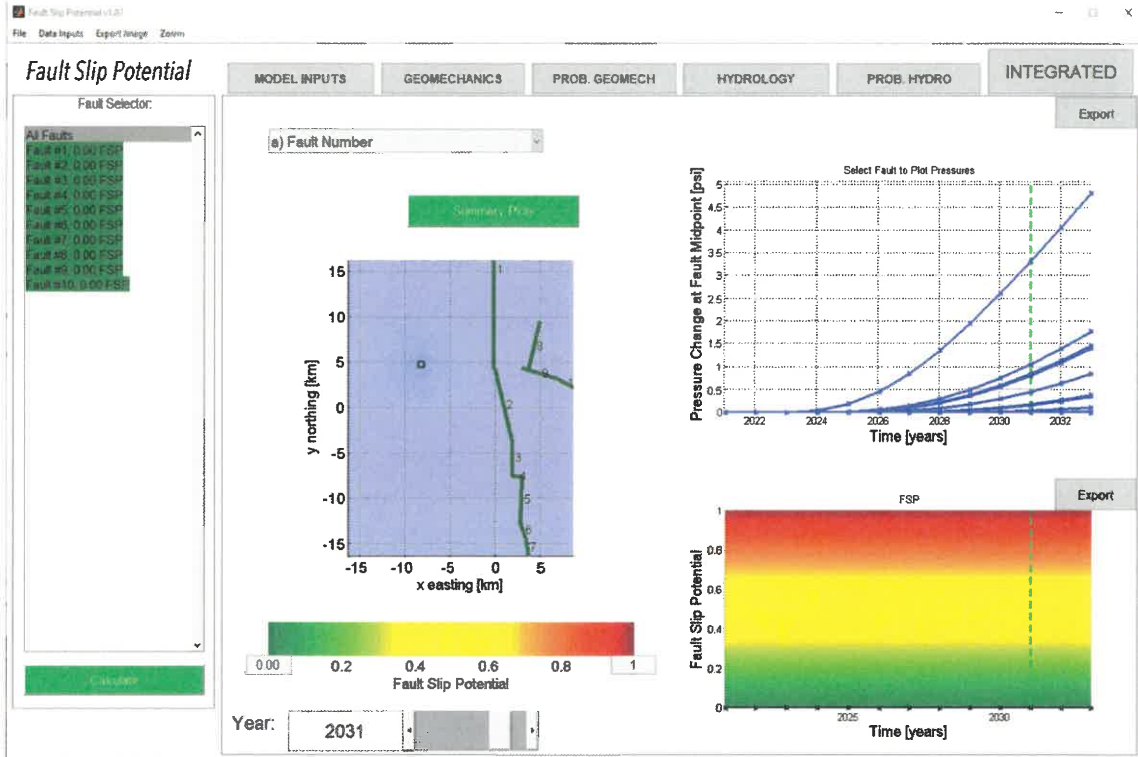
Year 10 Hydrology



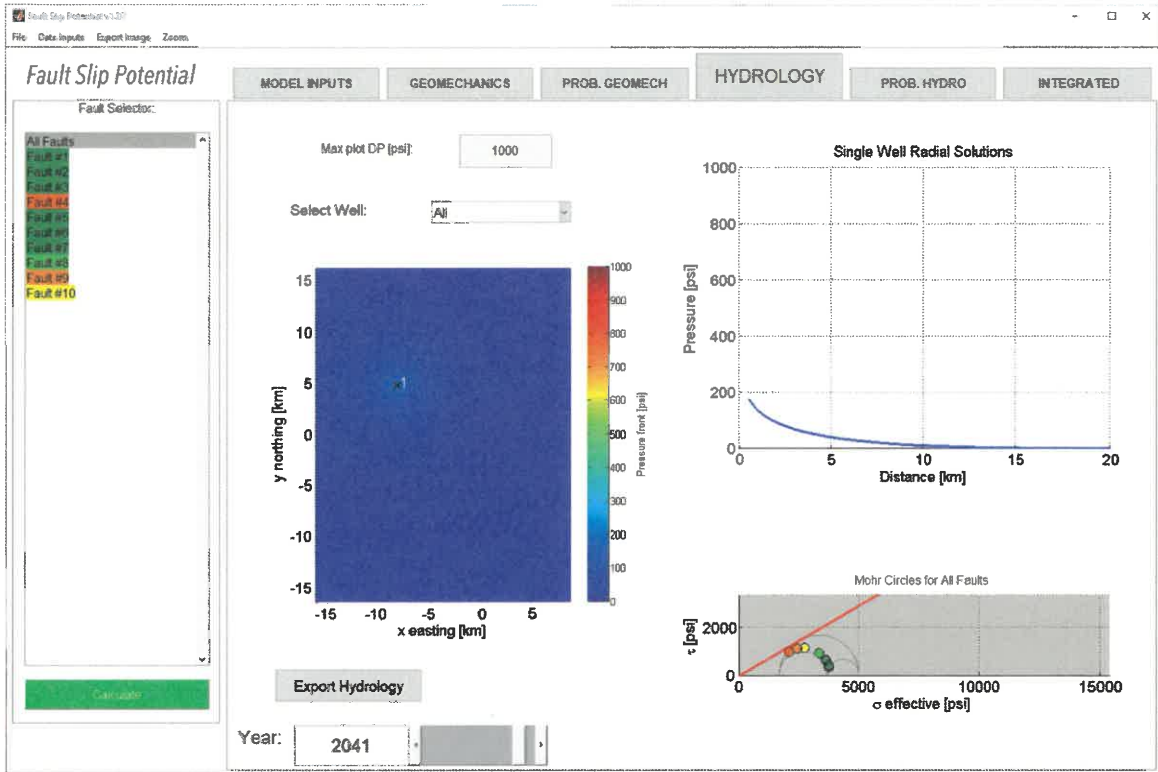
Year 10 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



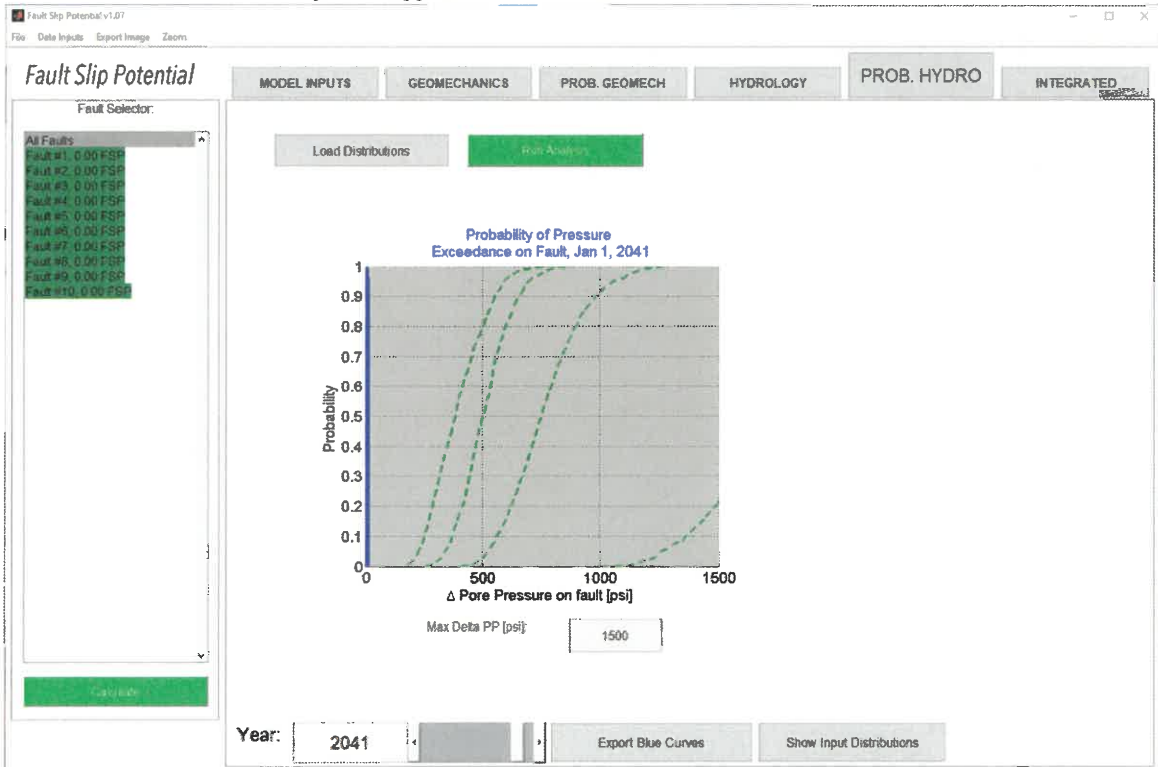
Year 10 Fault Slip Probability (0% after 10 years)



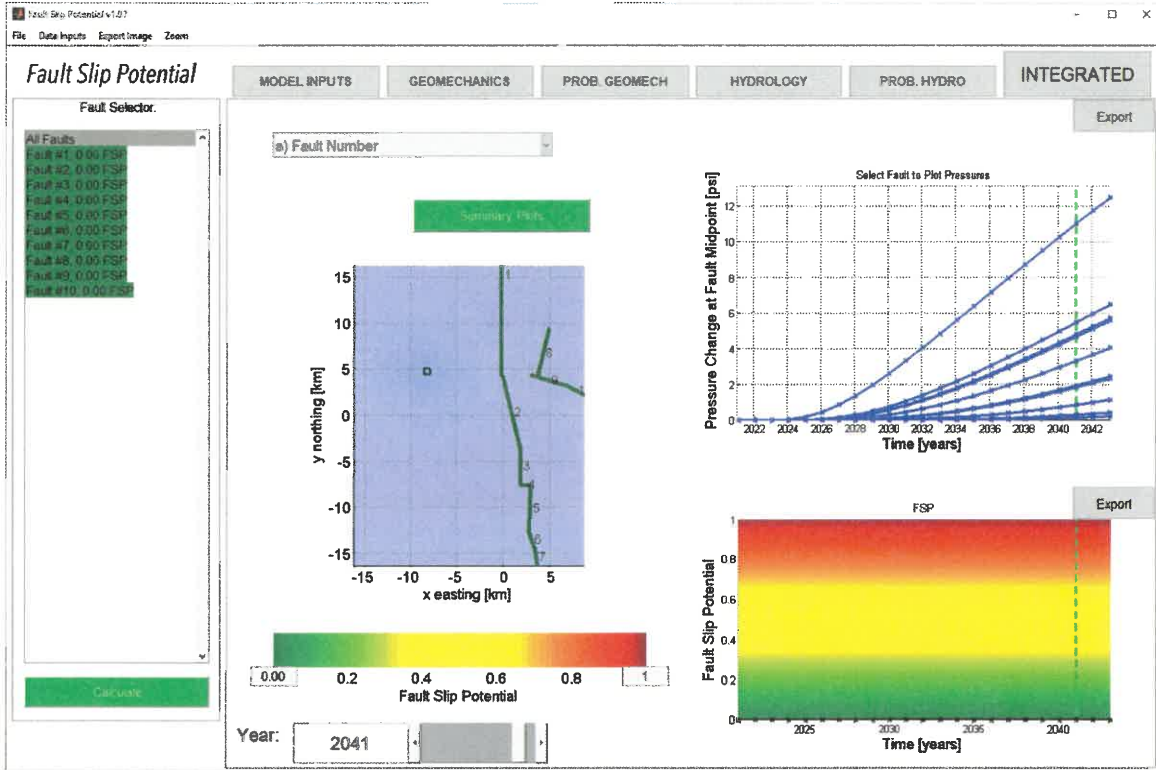
Year 20 Hydrology



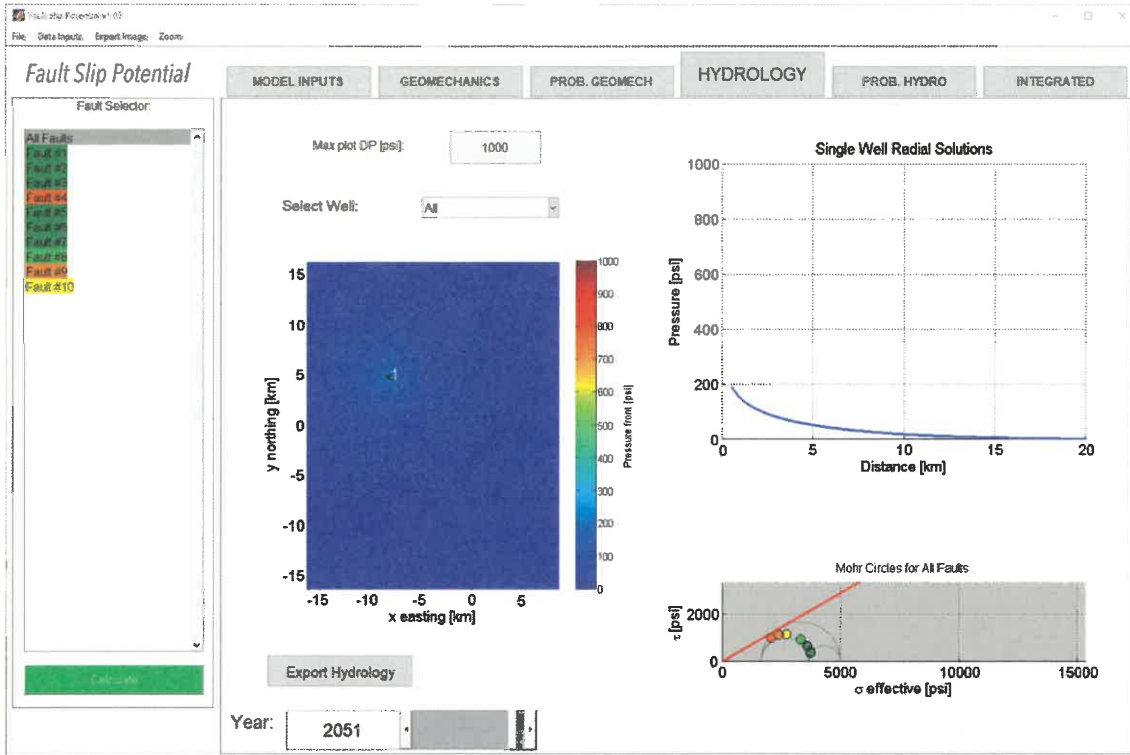
Year 20 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



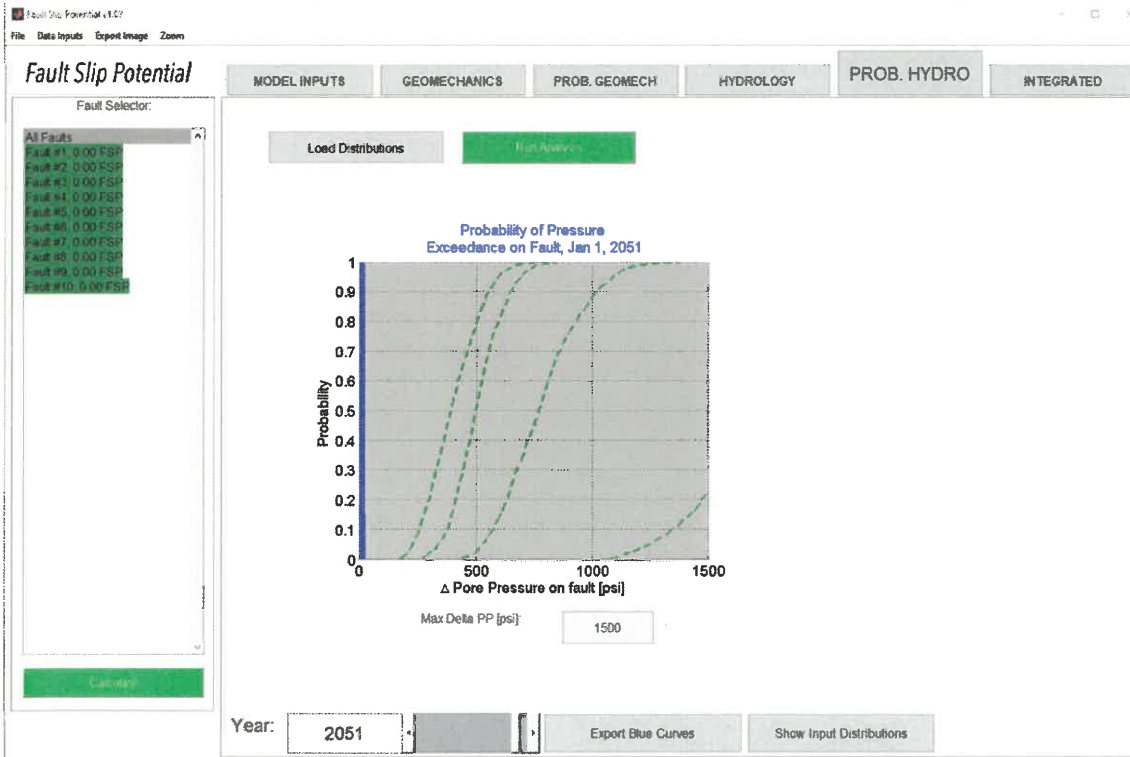
Year 20 Fault Slip Probability (0% after 20 years)



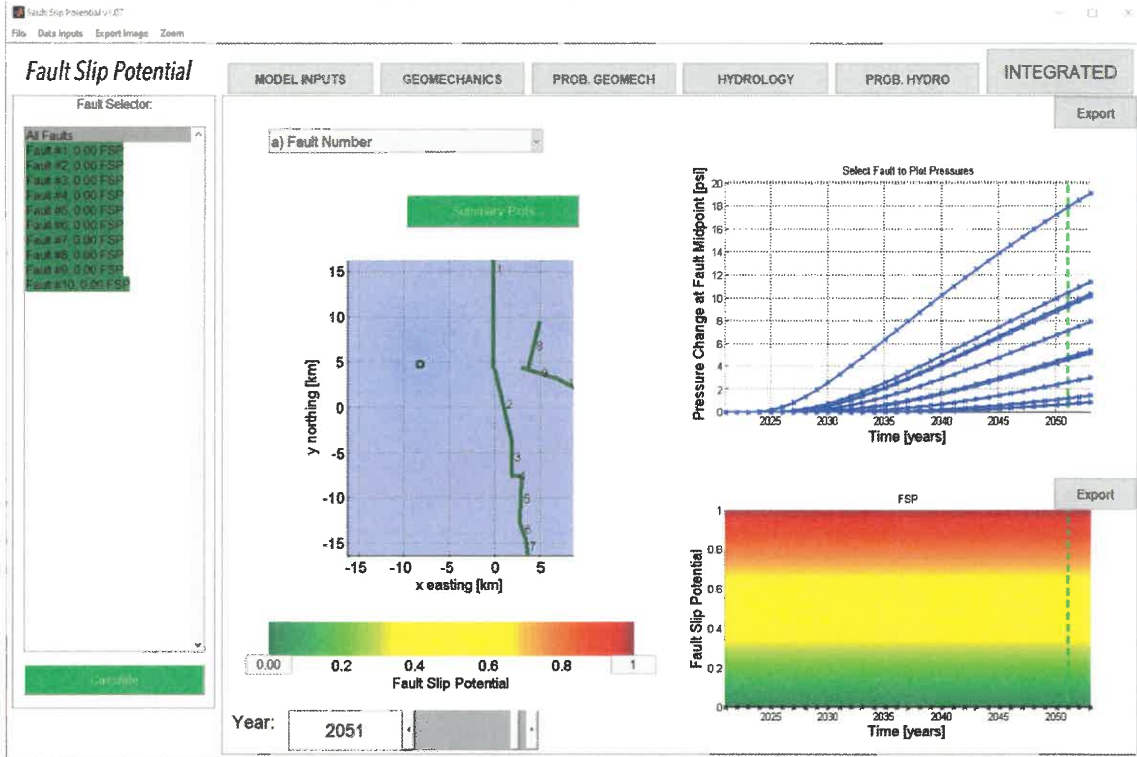
Year 30 Hydrology



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



Year 30 Fault Slip Probability (0% after 30 years)



As per NM OCD requirements (injection well to injection well spacing minimum of 1.5 miles), this proposed above referenced SWD well is located 2.4 miles away from the nearest active or permitted Devonian disposal well (OWL SWD Operating, Brininstool SWD #3, Sec. 19, T23S, R33E).

Gregory E. Fisher

gfisher@popmidstream.com
(817) 606-7630



MODRALL SPERLING
LAWYERS

September 30, 2021

Deana M. Bennett
Deana.bennett@modrall.com
505-848-1834

VIA CERTIFIED MAIL

Re: Notice of Permian Oilfield Partners, LLC Request for Extension of Time to Commence Injection Operations Under Order R-20955

TO: AFFECTED PERSONS

This letter is to advise you that Permian Oilfield Partners, LLC (“Permian”) has submitted the enclosed request to the Oil Conservation Division (the “Division”) requesting an extension of time to commence injection operations in the Vortex Federal SWD #1, under Order R-20955. You are receiving this notice because, in preparing its extension request, Permian reviewed the 1-mile Area of Review associated with the Vortex Federal SWD #1 well and identified parties that had changed since Permian originally submitted its Vortex Federal SWD #1 well application and after Order R-20955 was issued by the Division.

Please let me know if you have any questions.

Sincerely,

Deana M. Bennett
*Attorney for Permian Oilfield Partners,
LLC*

Modrall Sperling
Roehl Harris & Sisk P.A.

500 Fourth Street NW
Suite 1000
Albuquerque,
New Mexico 87102

PO Box 2168
Albuquerque,
New Mexico 87103-2168

Tel: 505.848.1800
www.modrall.com



PS Form 3877

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

Type of Mailing: CERTIFIED MAIL
09/30/2021

Firm Mailing Book ID: 215947

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
1	9314 8699 0430 0087 1661 74	Titus Oil & Gas Production, LLC 420 Throckmorton, St #1150 Fort Worth TX 76102	\$1.56	\$3.75	\$1.85	\$0.00	10053 Vortex Notice
Totals:			\$1.56	\$3.75	\$1.85	\$0.00	
			Grand Total:		\$7.16		

Dated:

Postmaster:
Name of receiving employee

Total Number of Pieces
Received at Post Office

List Number of Pieces
Listed by Sender