Application Part I*I*

Attachment to C-108
Permian Oilfield Partners, LLC
Torrent Federal SWD #1
916' FSL & 249' FWL
Sec 4, T26S, R34E
Lea County, NM

July 12, 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, 26.98 miles away @ 87.78 deg heading
2. M4.6, 1992-01-02, 28.98 miles away @ 50.18 deg heading
3. M3.3, 2001-06-02, 27.09 miles away @ 47.35 deg heading
4. M2.9, 1984-12-09, 14.26 miles away @ 342.70 deg heading
5. M3.1, 2012-03-18, 28.13 miles away @ 301.78 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:

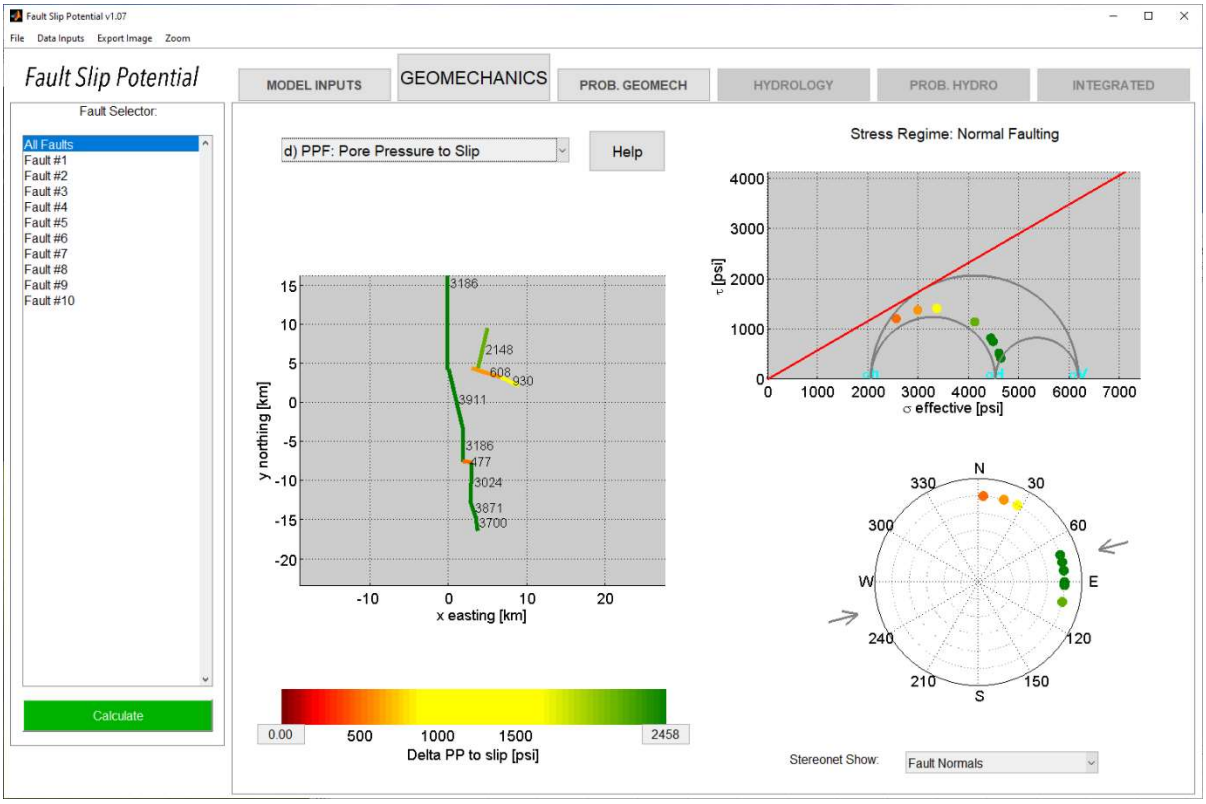
   a. Full proposed capacity of 50,000 BBL/day for 30 years
   b. 12.5 mD average permeability, 3% average porosity, .75 psi/ft stress gradient, .47 psi/ft hydrostatic gradient
   c. A-phi=0.60 & Max Horizontal Stress direction 75 deg N, as per Snee, Zoback paper noted above.

6. The distance from the proposed injection well to the nearest basement fault is approximately 1 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.

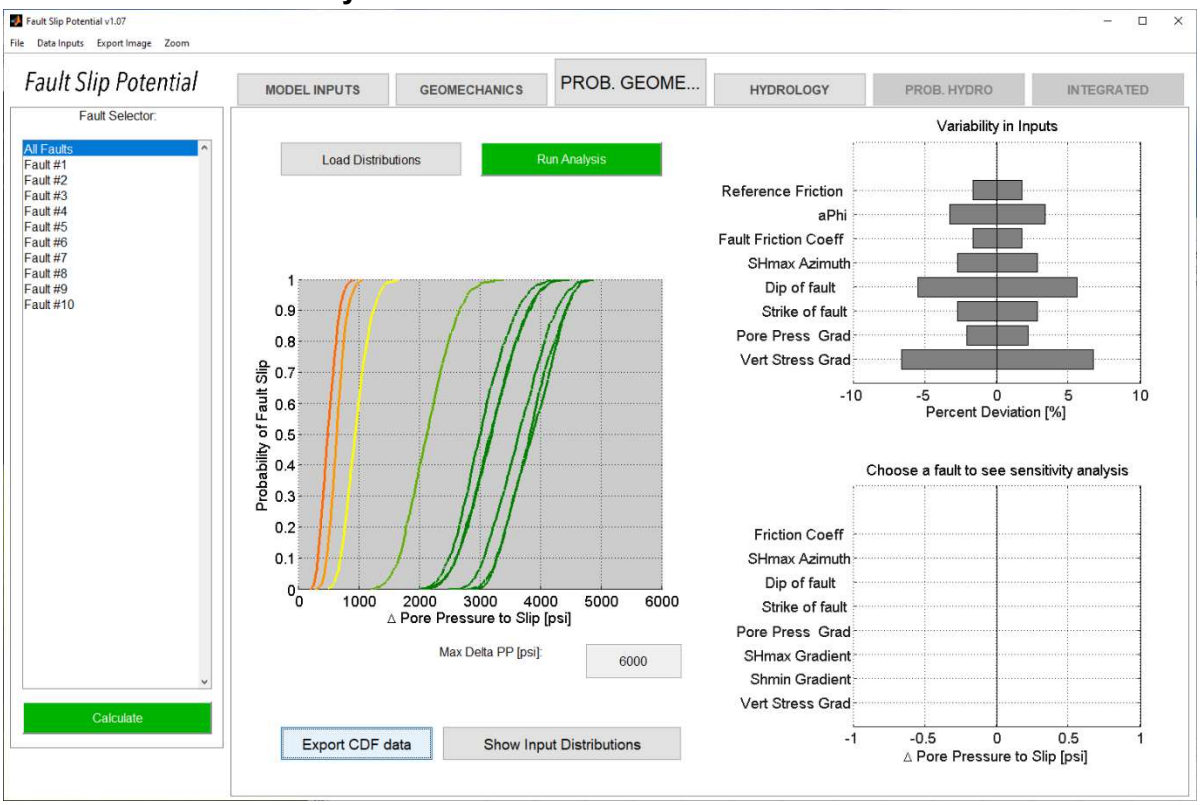
Input assumptions:

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)	22050
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

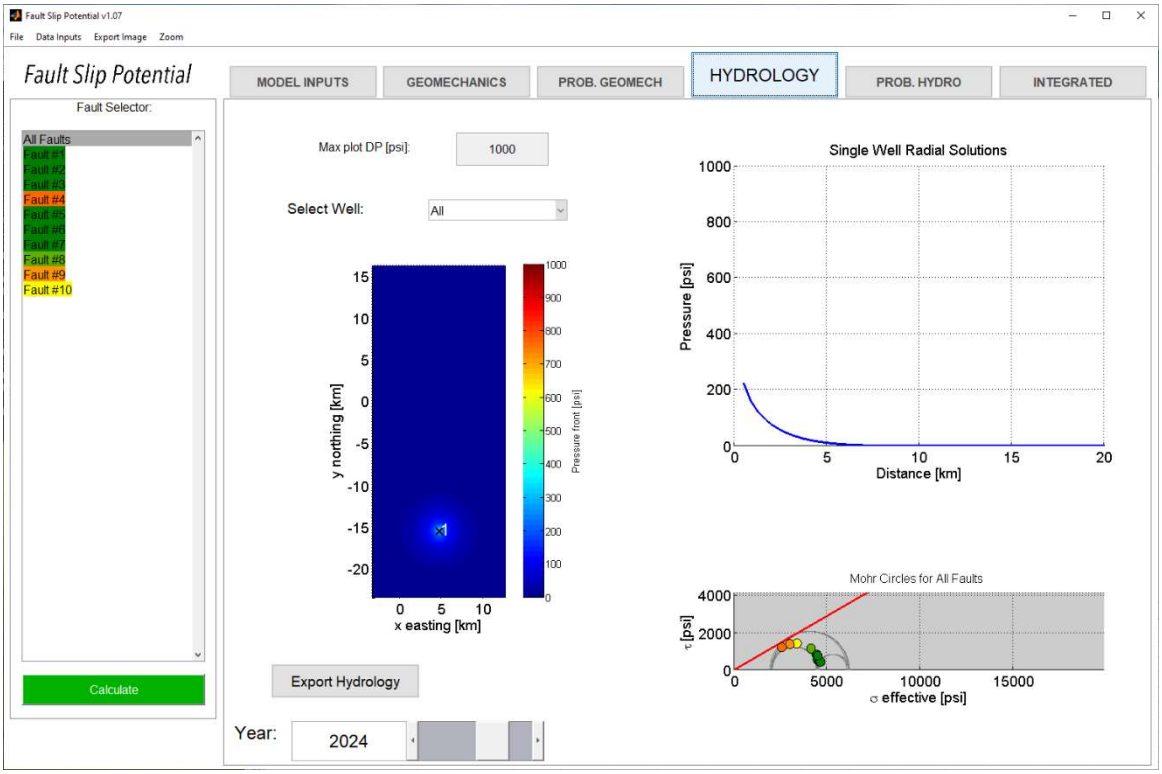
Geomechanics Pore Pressure to Slip



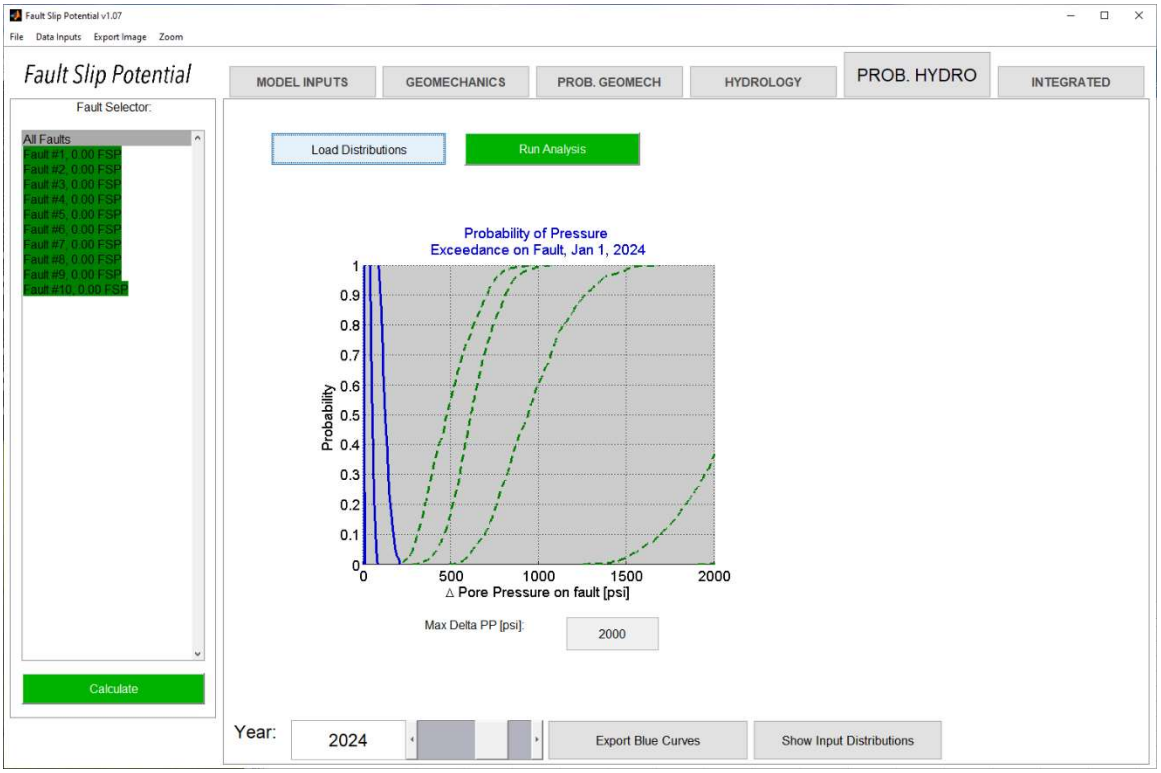
GeoMechanics Variability



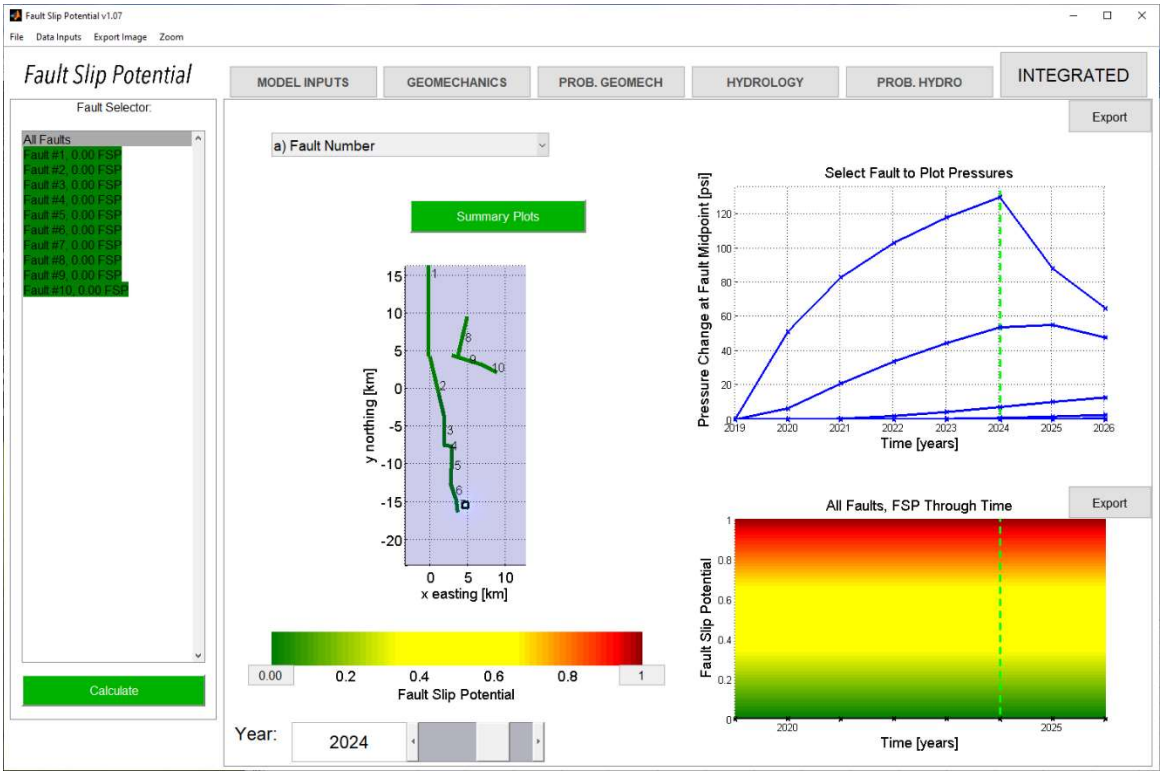
Year 5 Hydrology



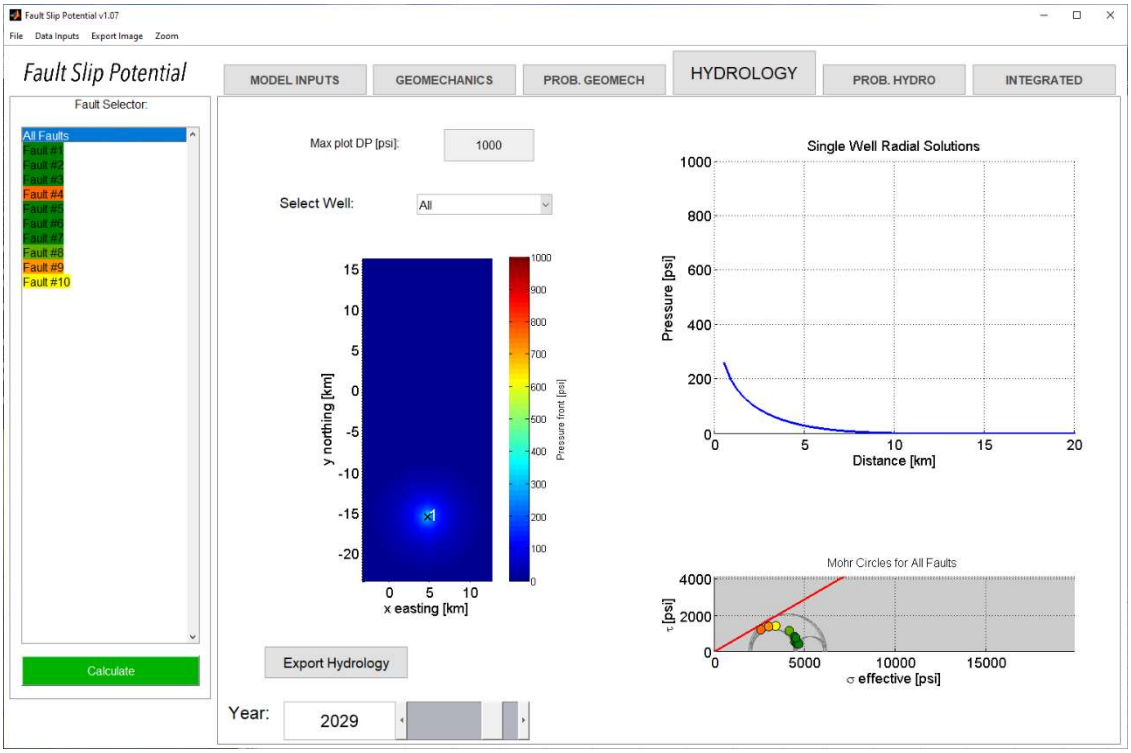
Year 5 Probabilistic Hydrology (note no crossover between blue delta-press. & green fault slip press.)



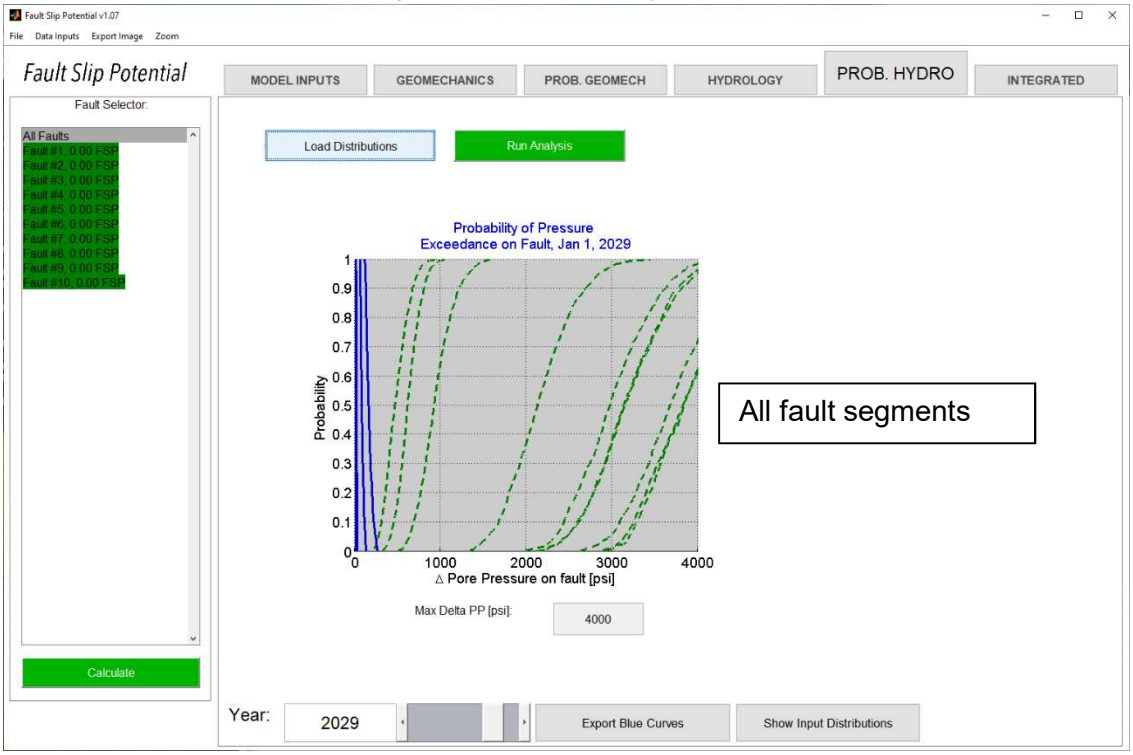
Year 5 Fault Slip Probability (0% for all fault segments after 5 years)

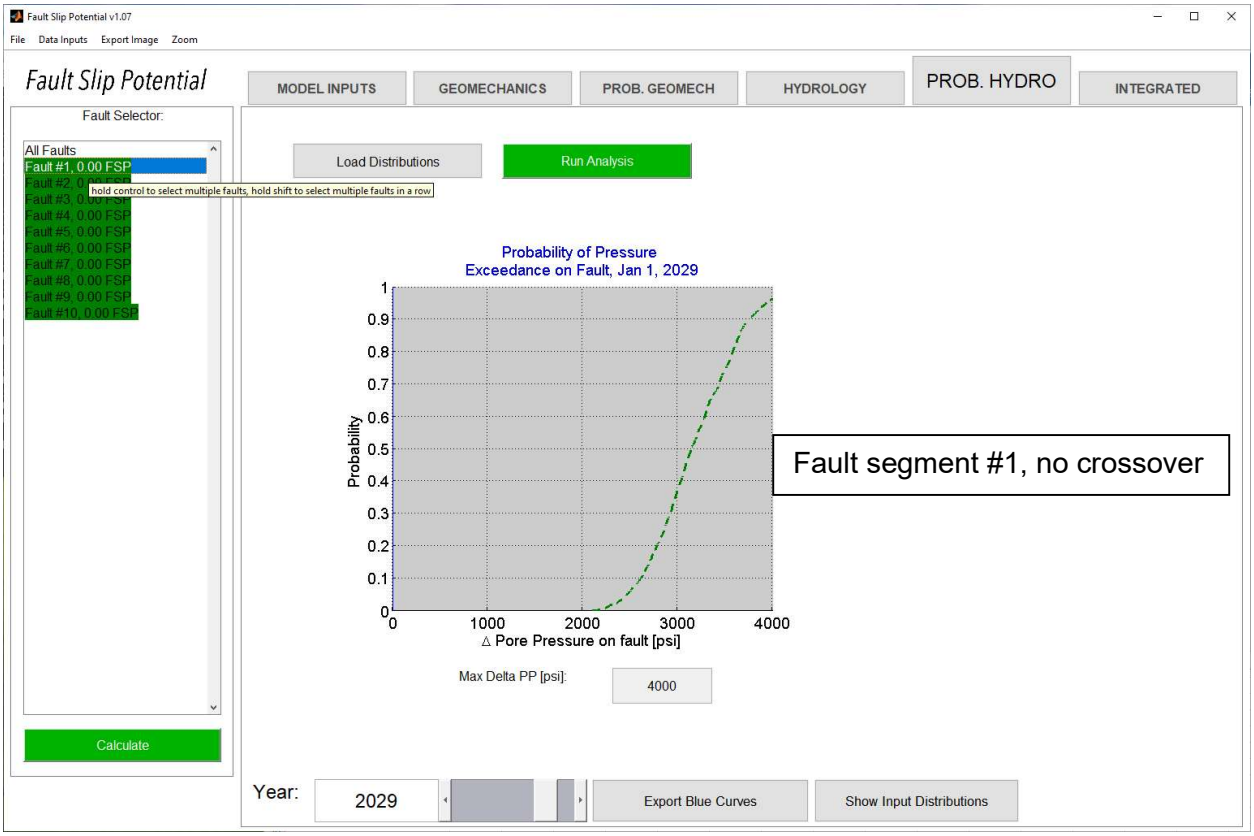


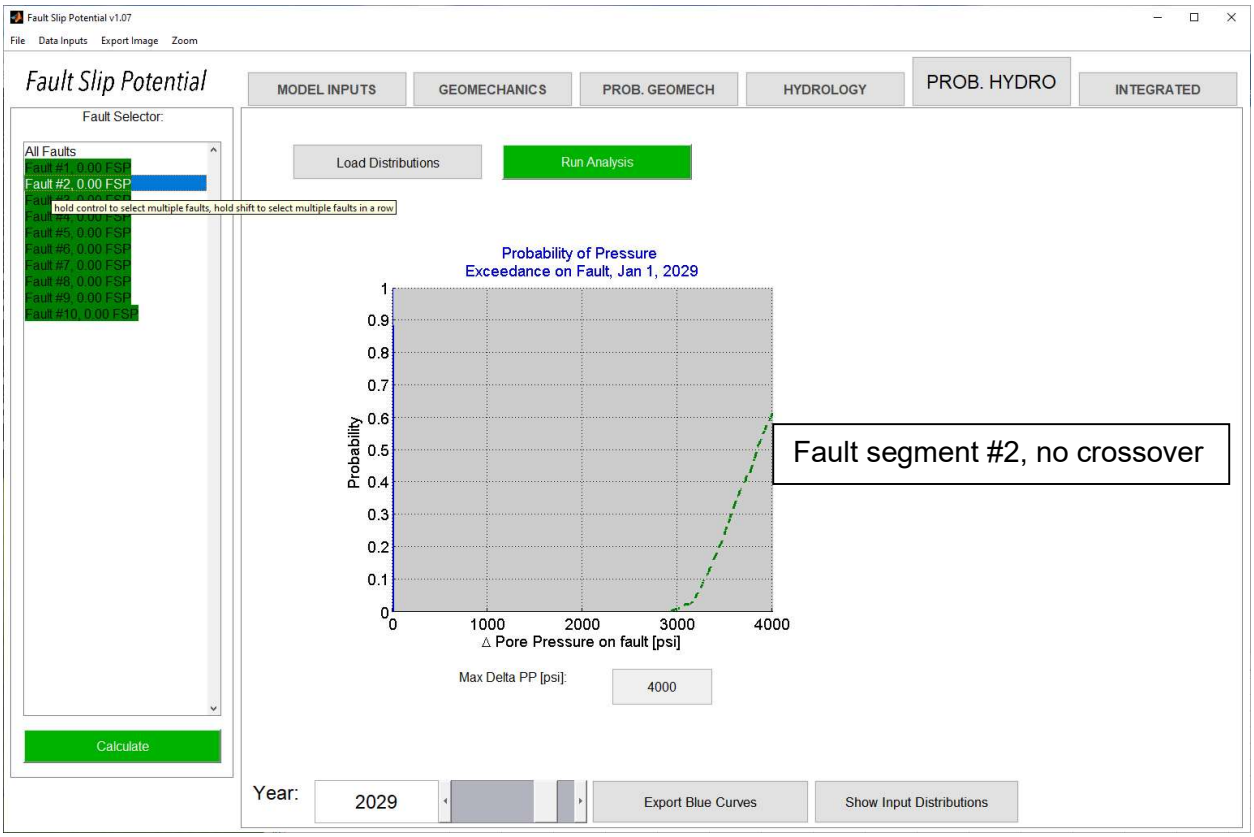
Year 10 Hydrology



Year 10 Probabilistic Hydrology (note that crossover between blue delta-press. & green fault slip press. is due to display of multiple fault segment data on same chart. Fault segments displayed separately below show no crossover between delta-pressure & green fault slip pressure)




Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
hold control to select multiple faults, hold shift to select multiple faults in a row
Load Distributions
Run Analysis
Probability of Pressure Exceedance on Fault, Jan 1, 2029
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Calculate
Year:
2029
Export Blue Curves
Show Input Distributions
Fault segment #1, no crossover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File Data Inputs Export Image Zoom
Fault Slip Potential
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HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
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Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
hold control to select multiple faults, hold shift to select multiple faults in a row
Load Distributions
Run Analysis
Probability of Pressure Exceedance on Fault, Jan 1, 2029
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
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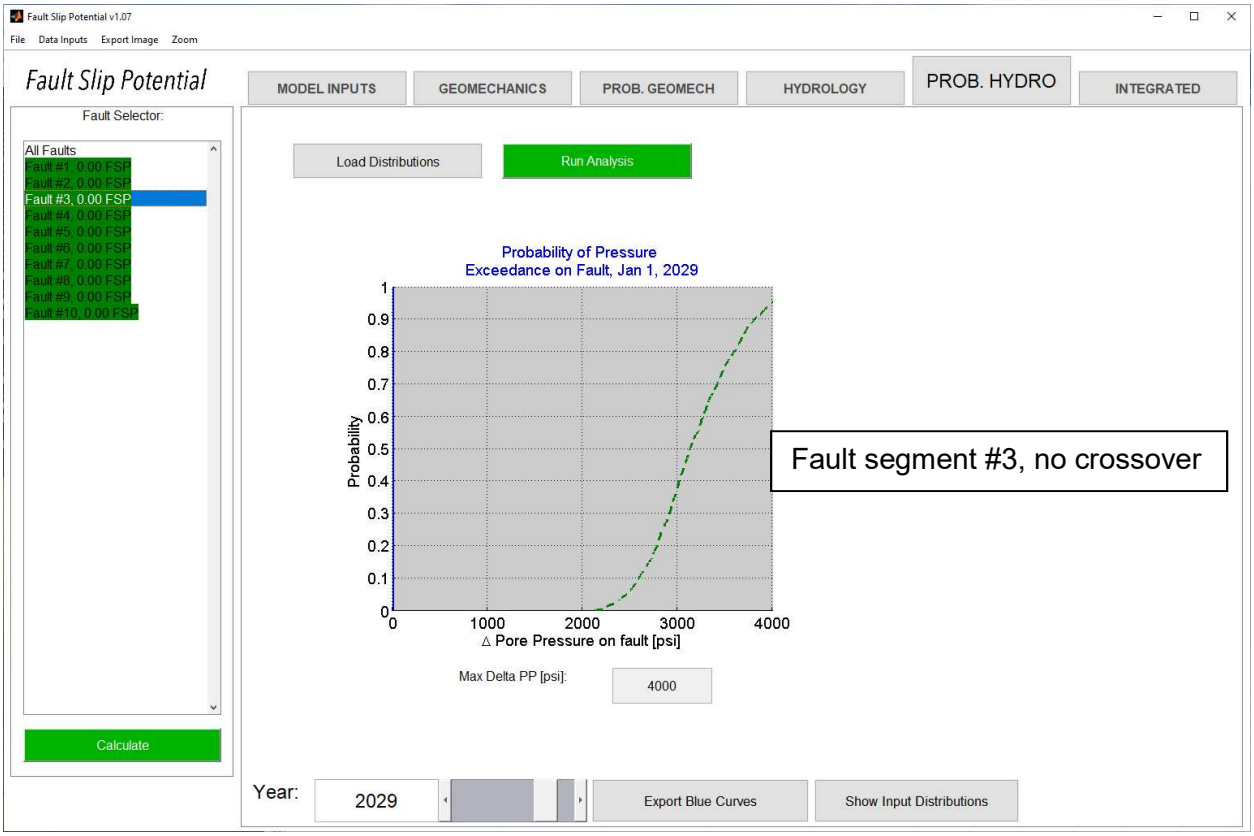
Calculate
Year:
2029
Export Blue Curves
Show Input Distributions
Fault segment #2, no crossover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PROB. HYDRO
INTEGRATED
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Fault #3, 0.00 FSP
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Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2029
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
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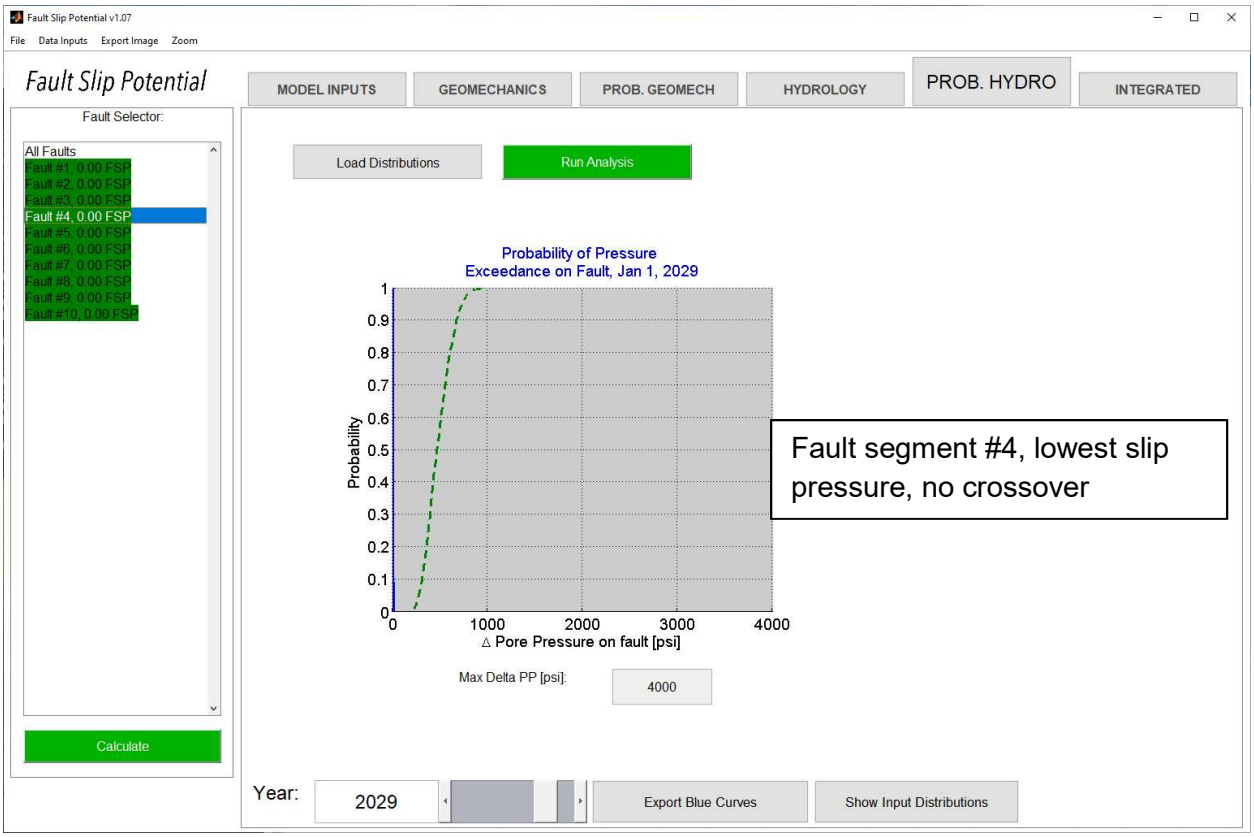
Year:
2029
Export Blue Curves
Show Input Distributions
Fault segment #3, no crossover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File Data Inputs Export Image Zoom
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HYDROLOGY
PROB. HYDRO
INTEGRATED
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Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2029
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
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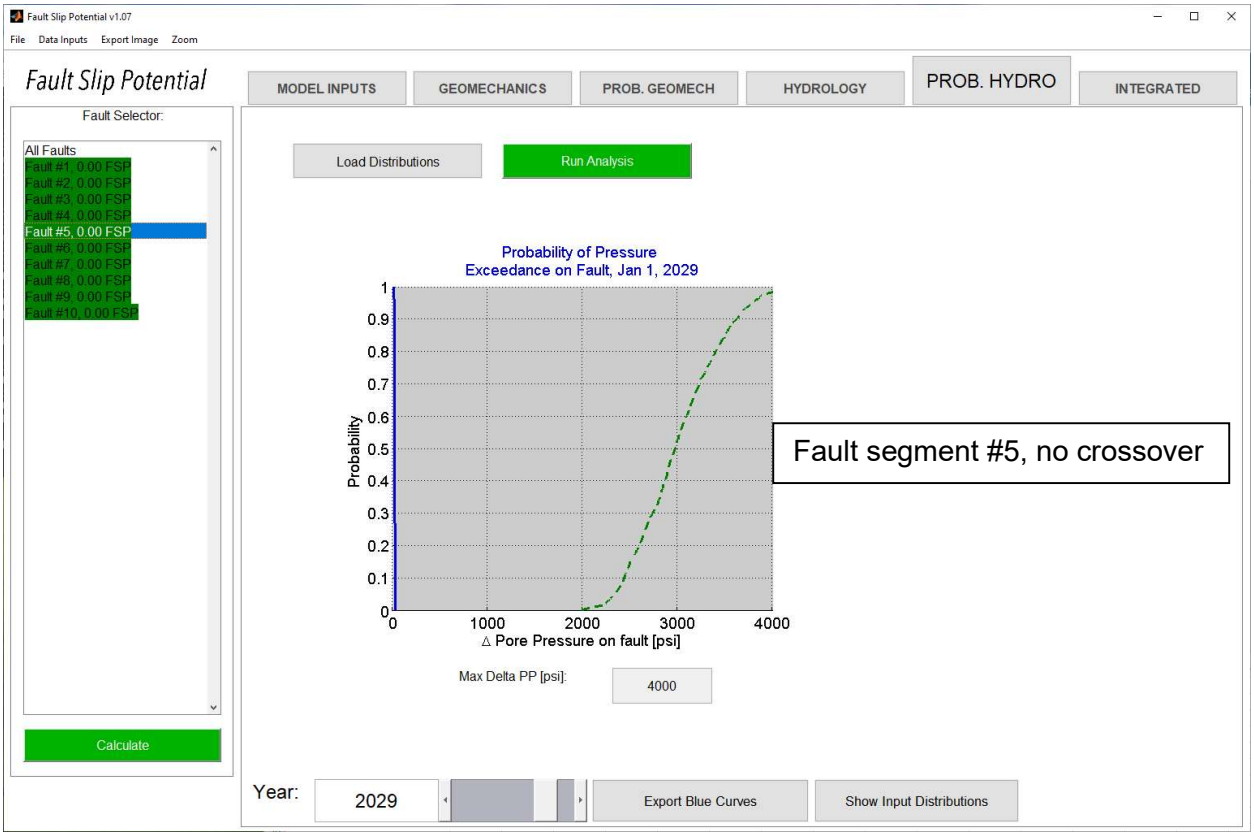
Year:
2029
Export Blue Curves
Show Input Distributions
Fault segment #4, lowest slip pressure, no crossover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PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
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Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2029
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
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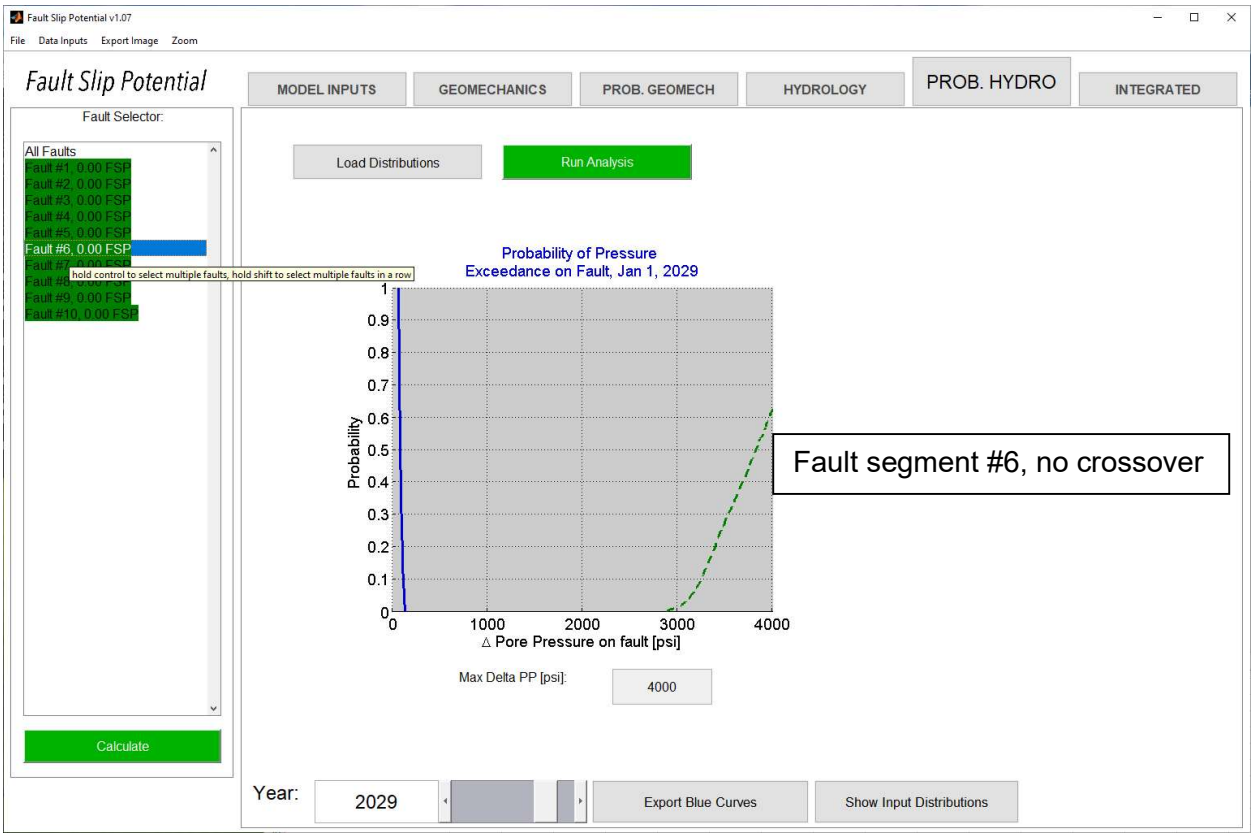
Year:
2029
Export Blue Curves
Show Input Distributions
Fault segment #5, no crossover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File Data Inputs Export Image Zoom
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HYDROLOGY
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INTEGRATED
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Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
hold control to select multiple faults, hold shift to select multiple faults in a row
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2029
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
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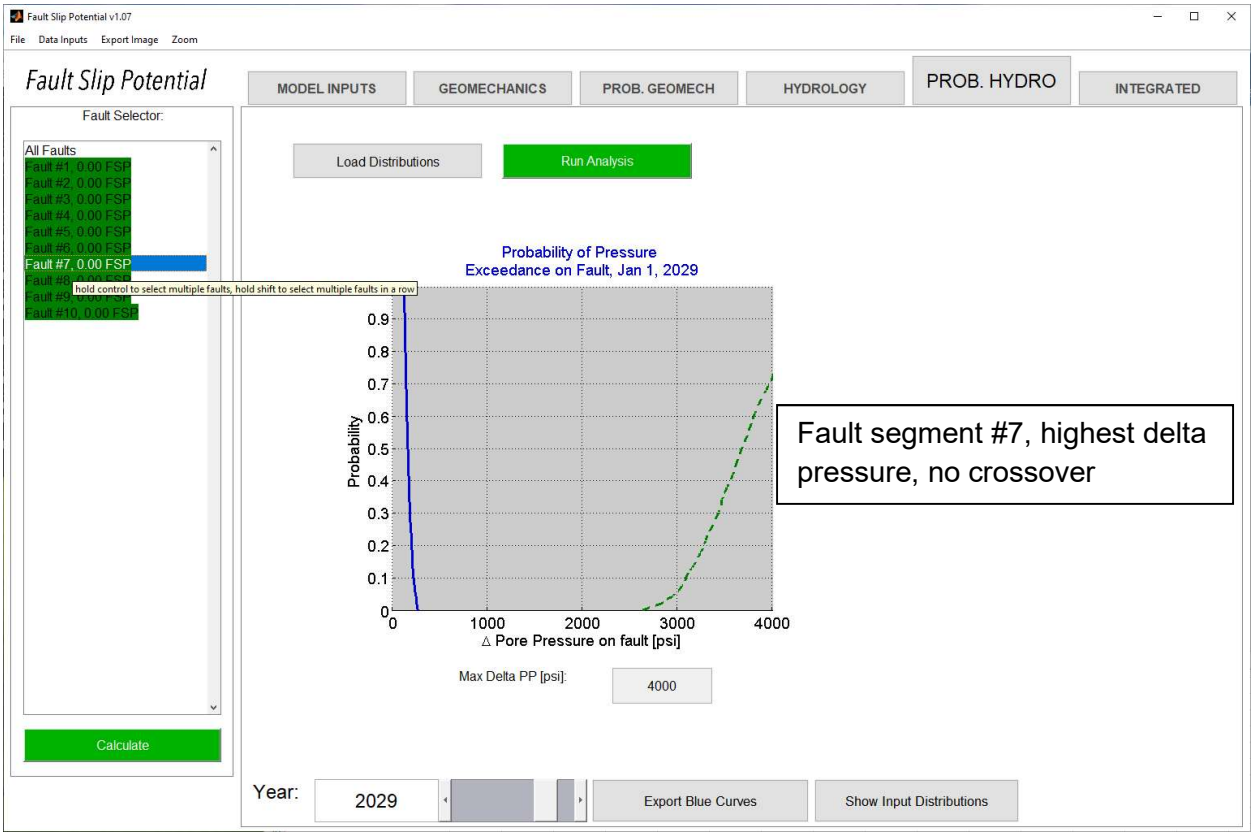
Year:
2029
Export Blue Curves
Show Input Distributions
Fault segment #6, no crossover


Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
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GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
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Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #10, 0.00 FSP
hold control to select multiple faults, hold shift to select multiple faults in a row
Load Distributions
Run Analysis
Probability of Pressure Exceedance on Fault, Jan 1, 2029
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
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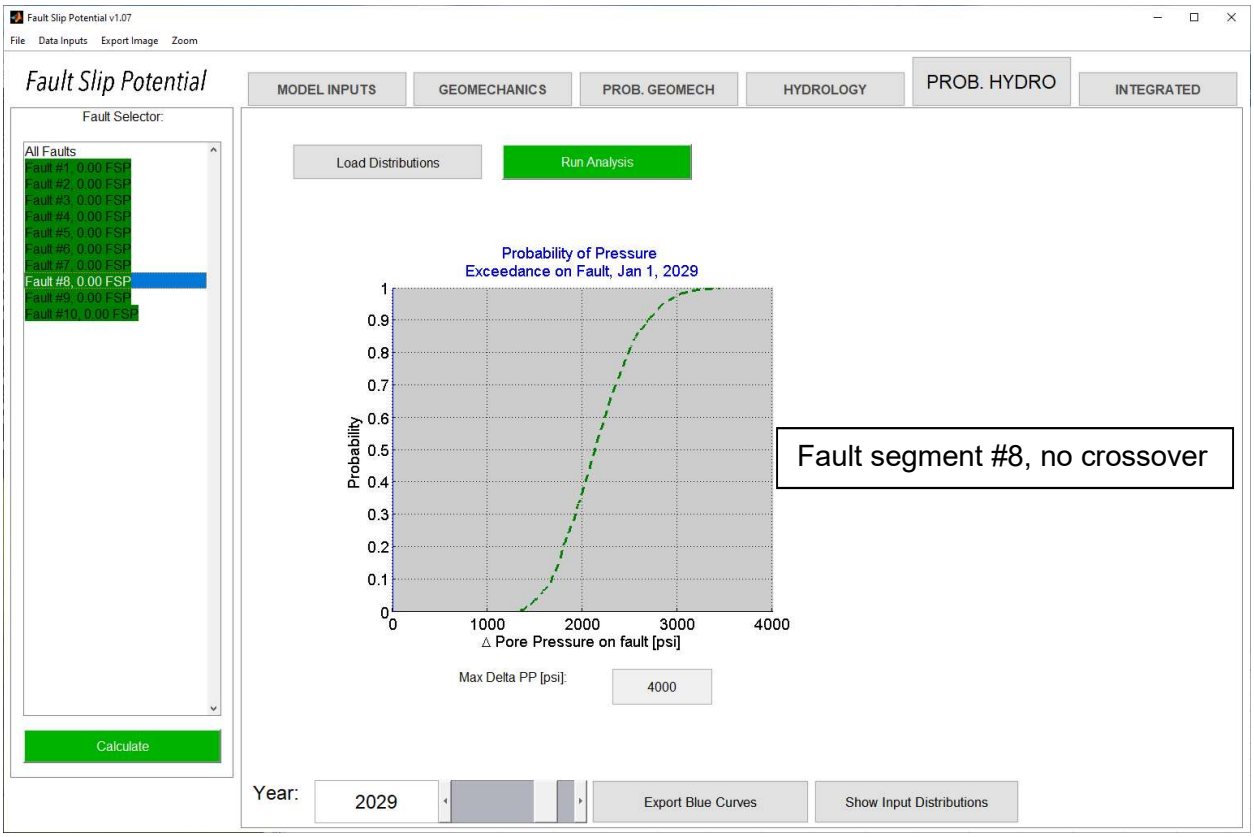
Calculate
Year:
2029
Export Blue Curves
Show Input Distributions
Fault segment #7, highest delta pressure, no crossover


Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
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GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
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Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Load Distributions
Run Analysis
Probability of Pressure Exceedance on Fault, Jan 1, 2029
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
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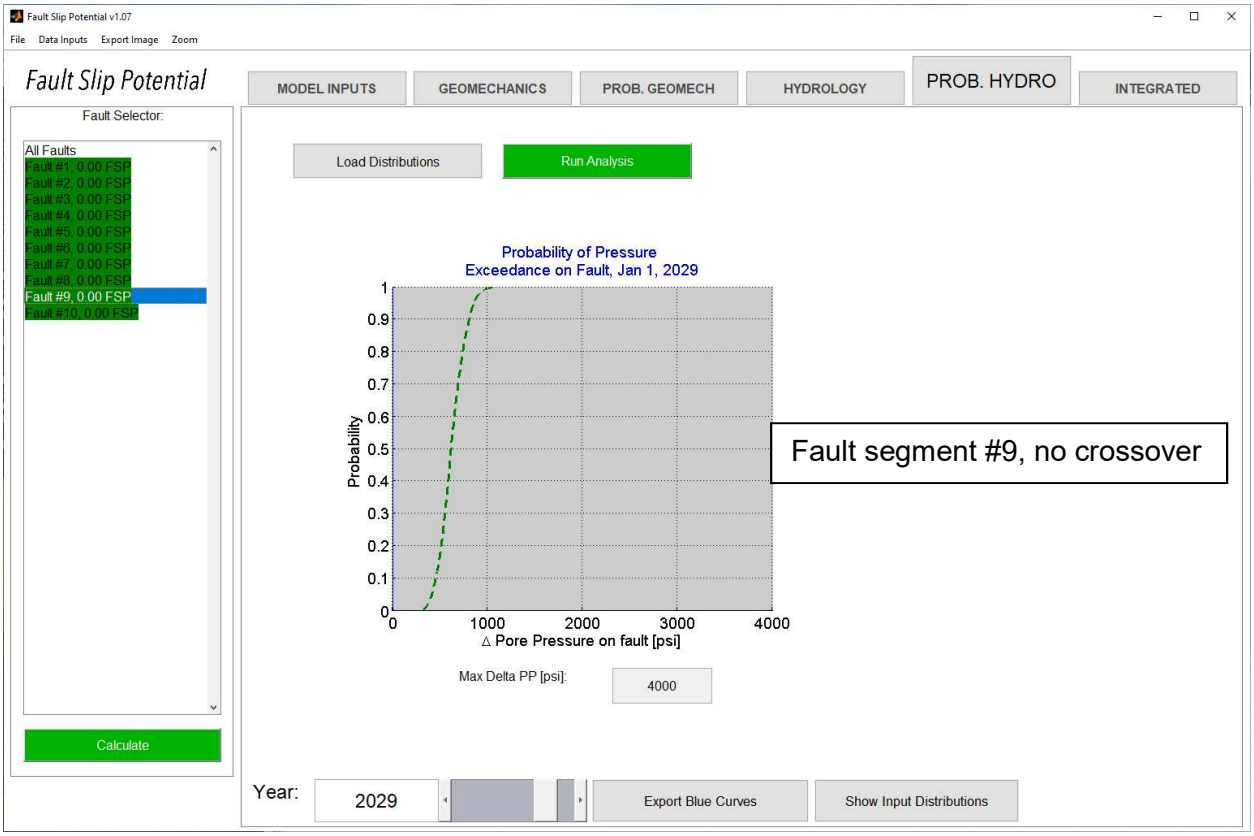
Calculate
Year:
2029
Export Blue Curves
Show Input Distributions
Fault segment #8, no crossover


Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
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GEOMECHANICS
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HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
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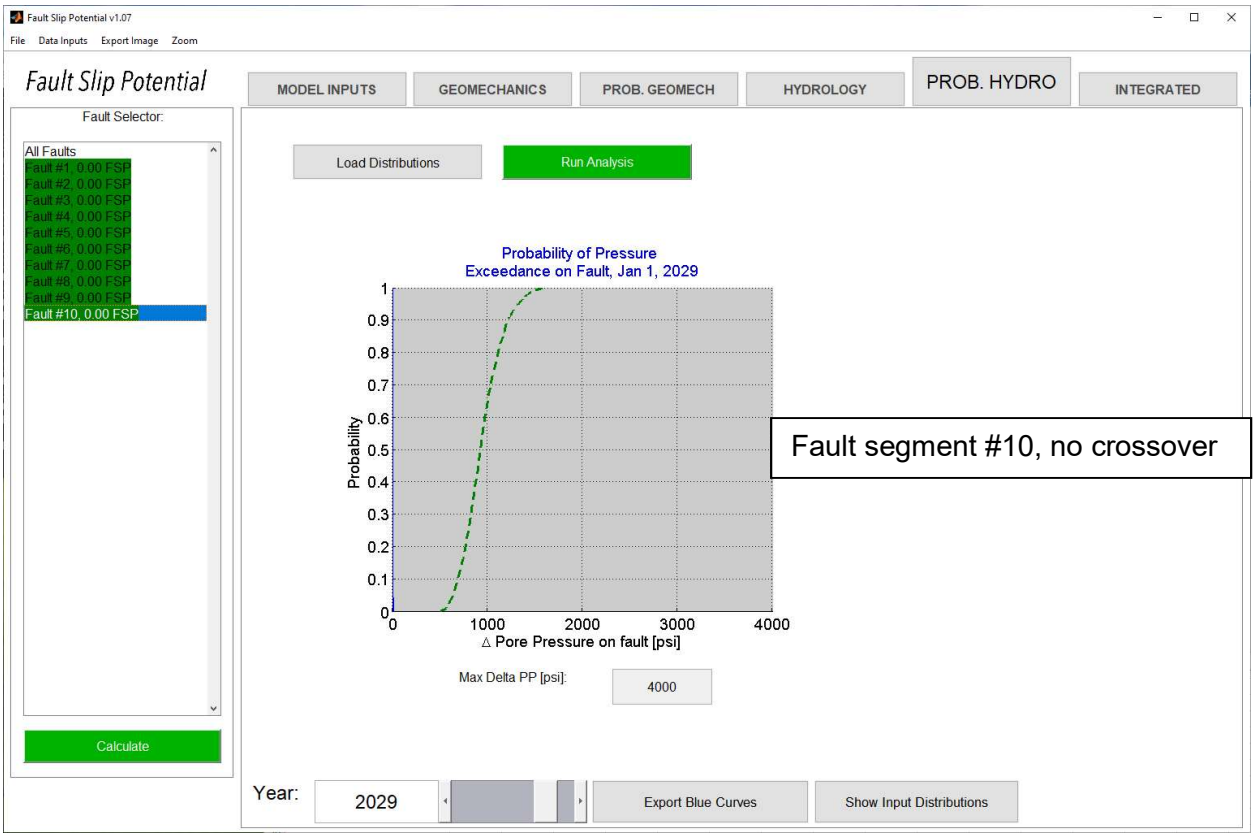
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2029
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2029
Export Blue Curves
Show Input Distributions
Fault segment #9, no crossover


Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
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GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
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All Faults
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Fault #4, 0.00 FSP
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Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2029
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
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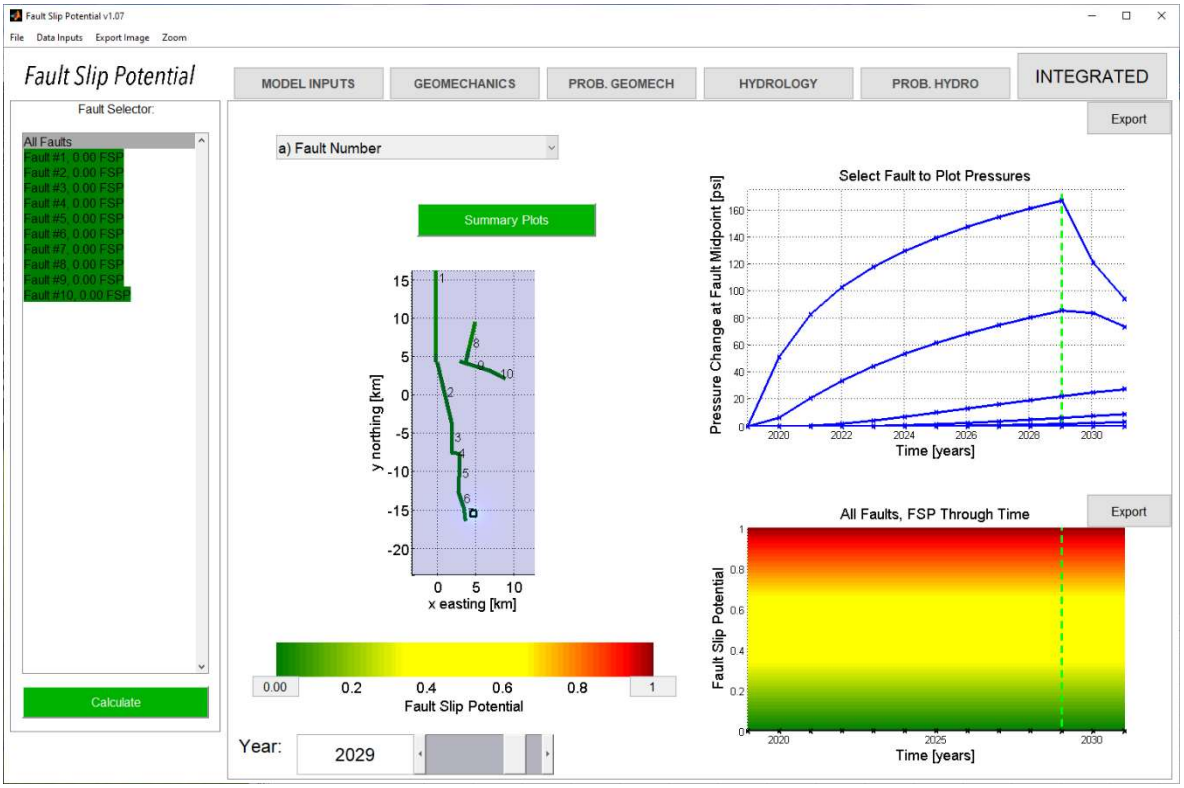
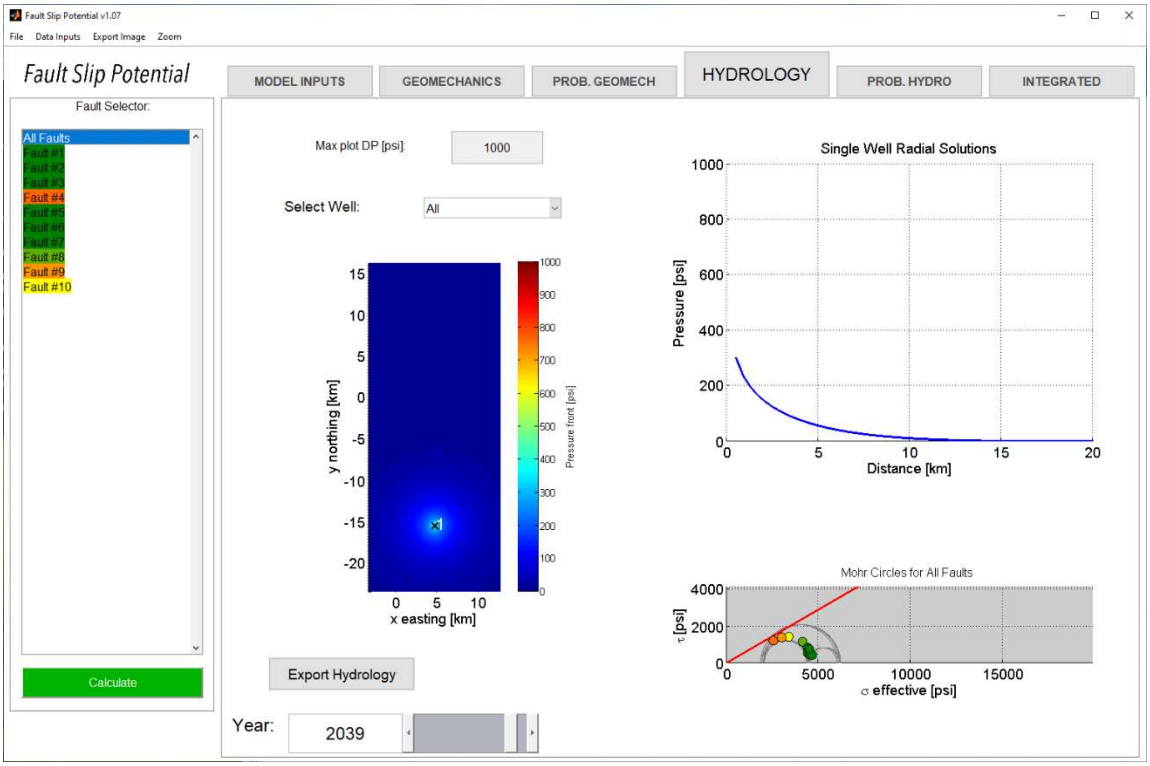
Year:
2029
Export Blue Curves
Show Input Distributions
Fault segment #10, no crossover

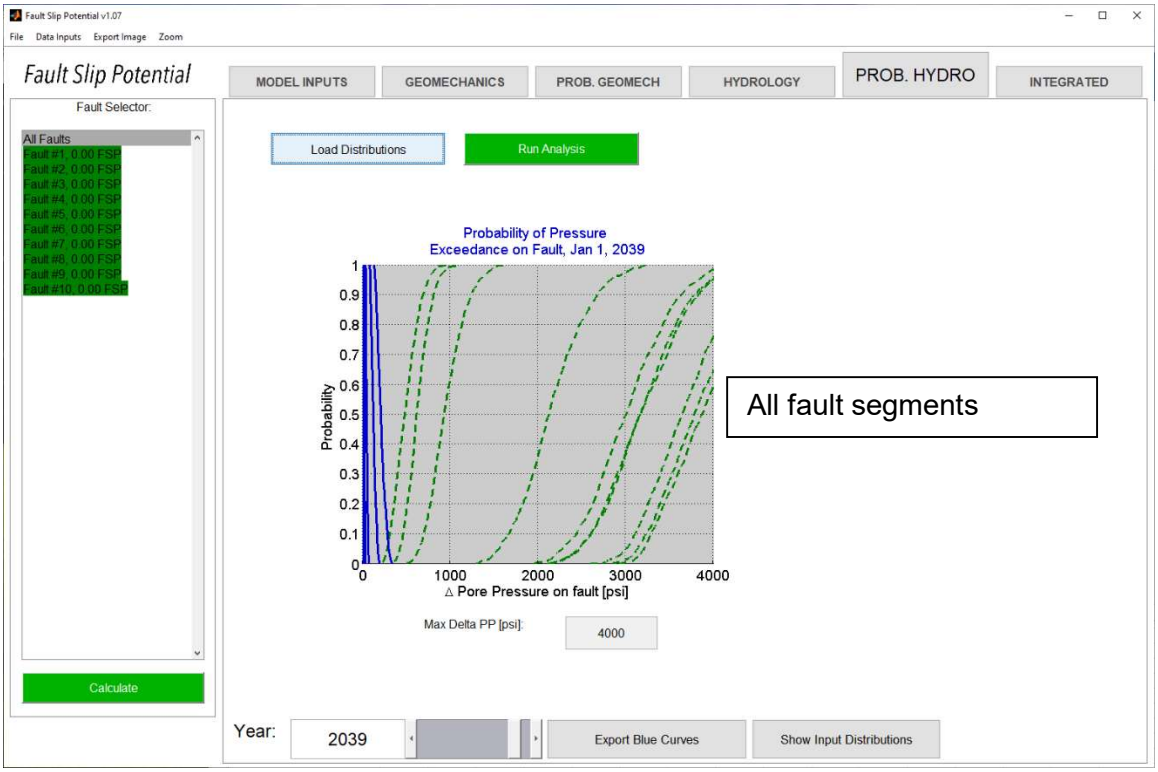
Year 10 Fault Slip Probability (0% for all fault segments after 10 years)

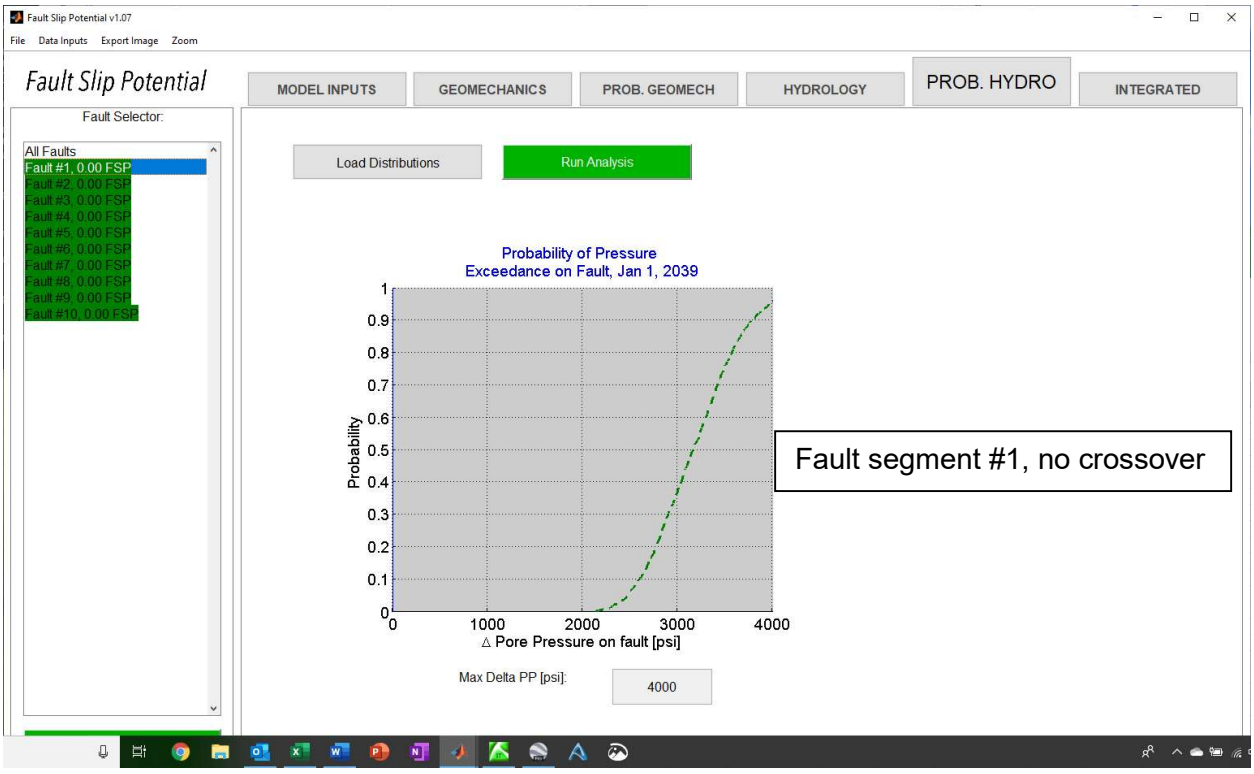


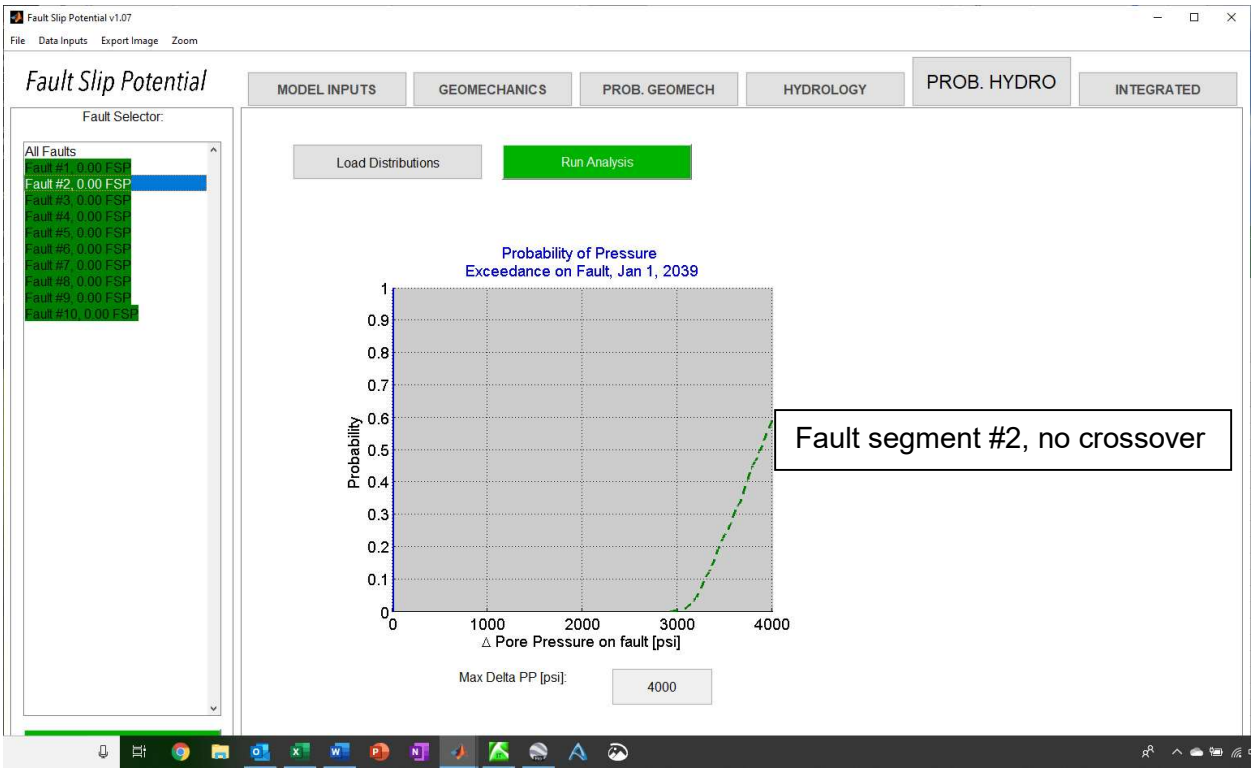
Year 20 Hydrology



Year 20 Probabilistic Hydrology (note that crossover between blue delta-press. & green fault slip press. is due to display of multiple fault segment data on same chart. Fault segments displayed separately below show no crossover between delta-pressure & green fault slip pressure)




Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2039
Probability
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0
1000
2000
3000
4000
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Fault segment #1, no crossover


Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
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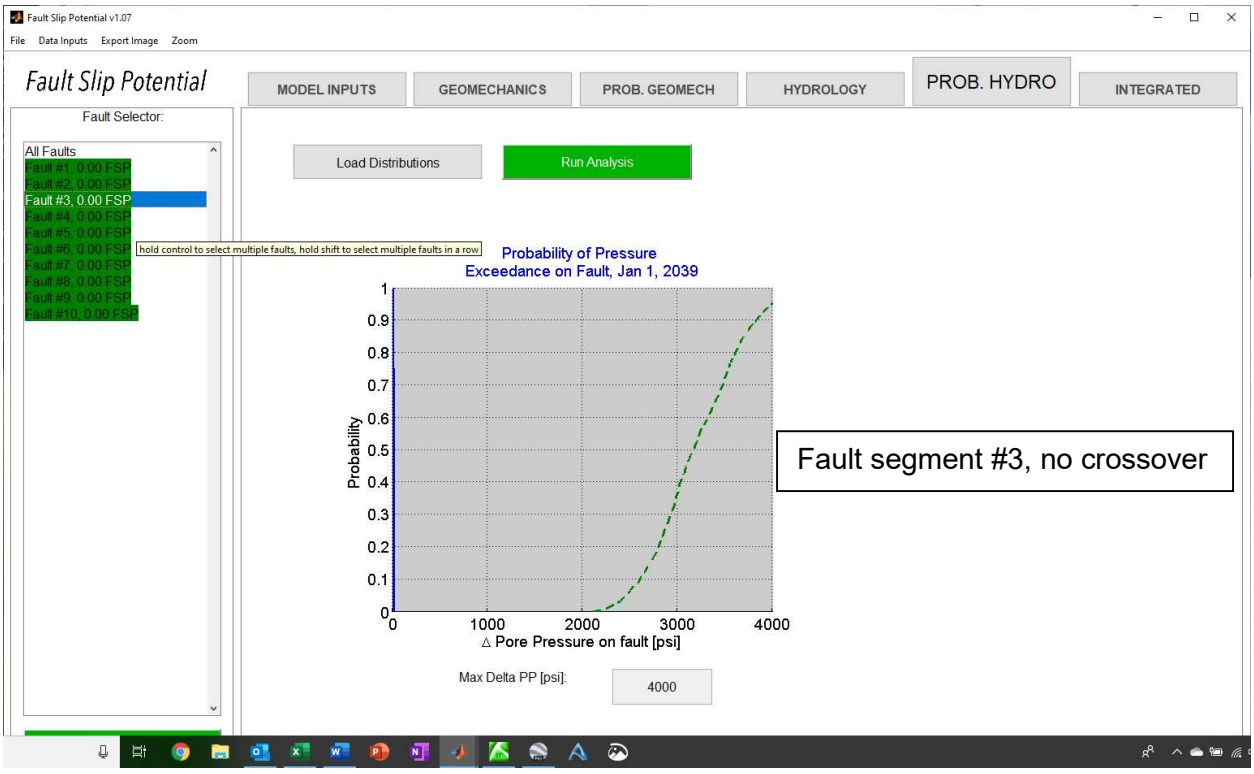
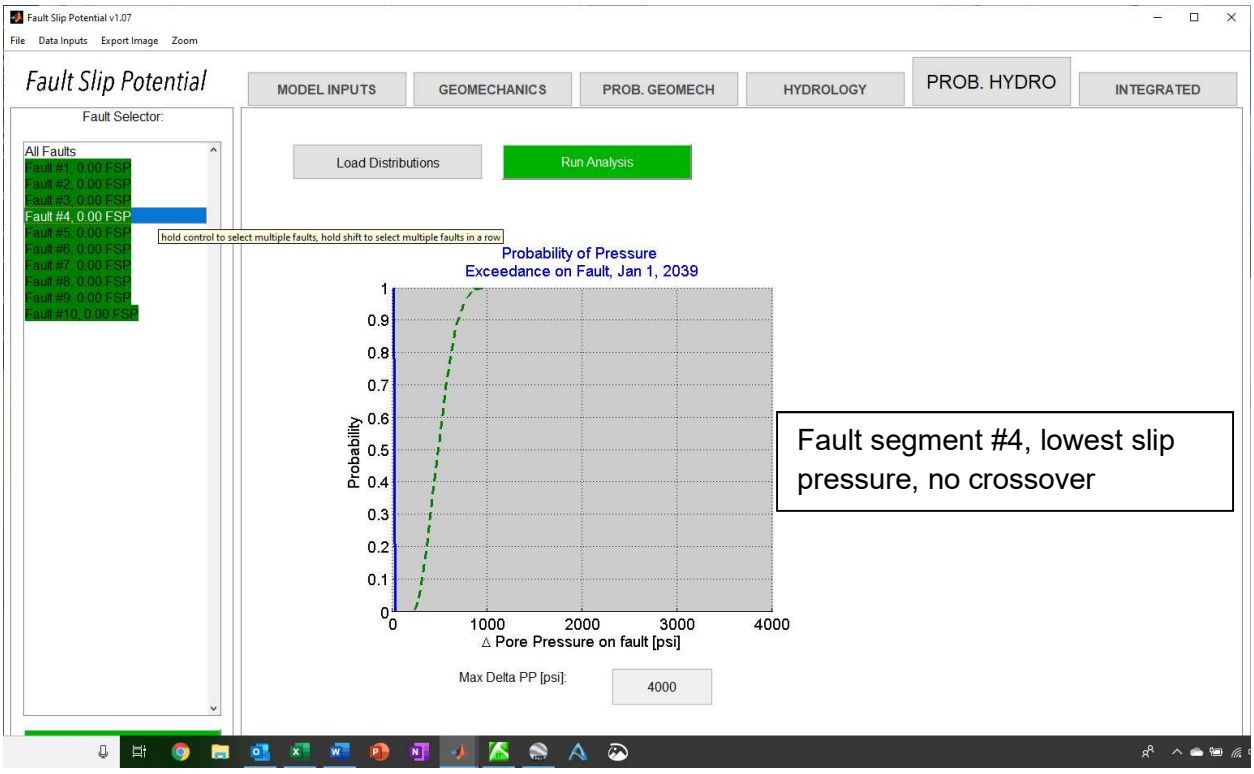
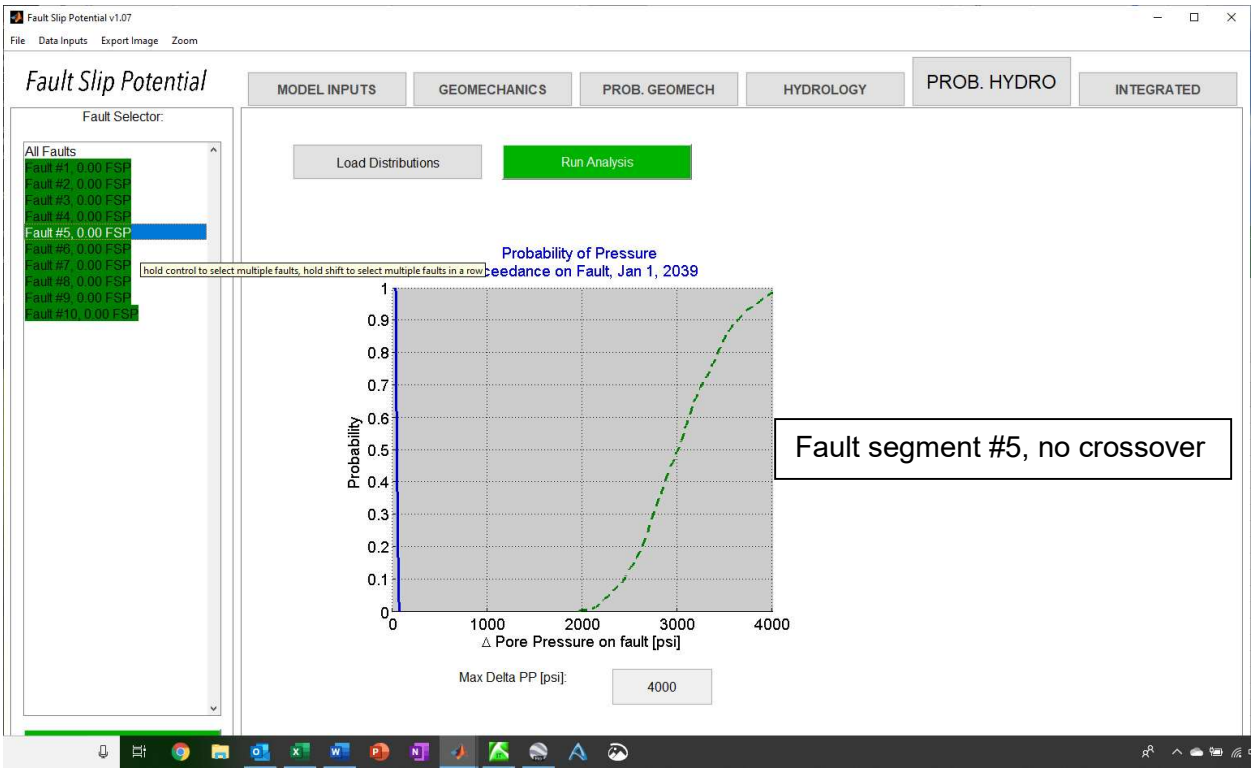
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2039
Probability
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0
1000
2000
3000
4000
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Fault segment #2, no crossover

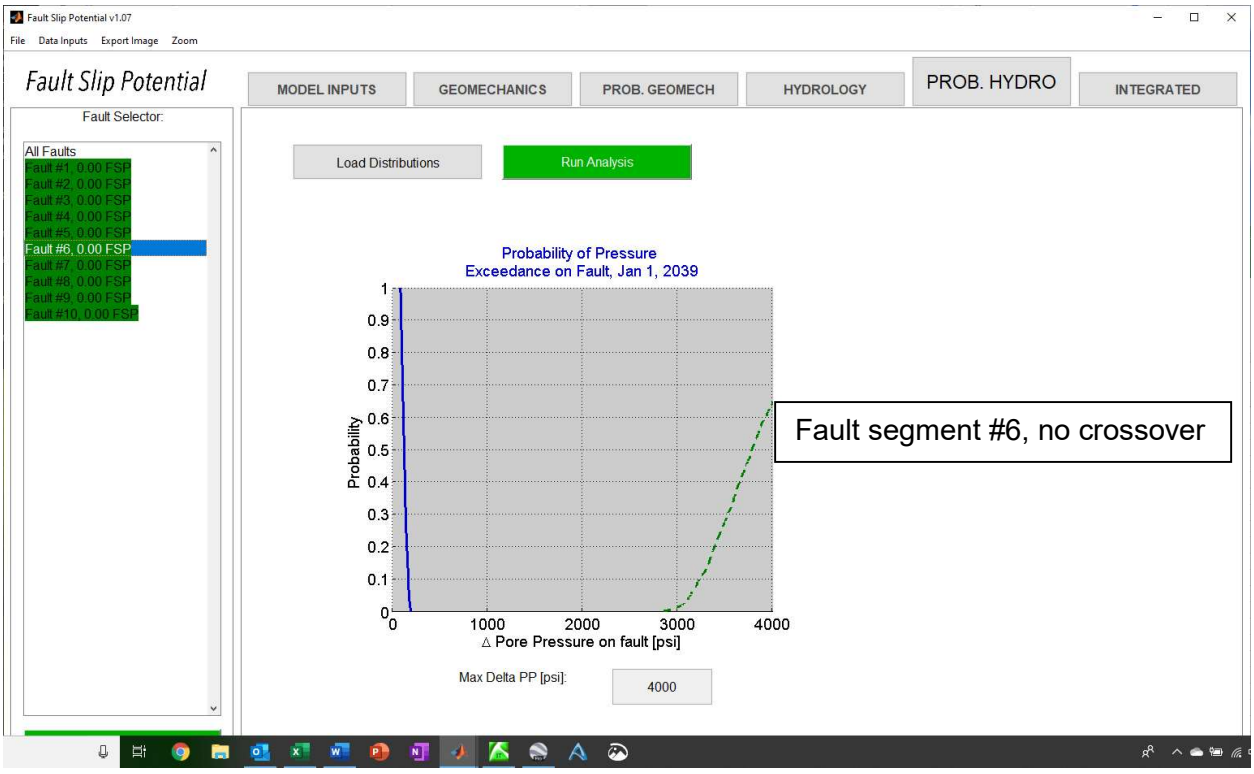


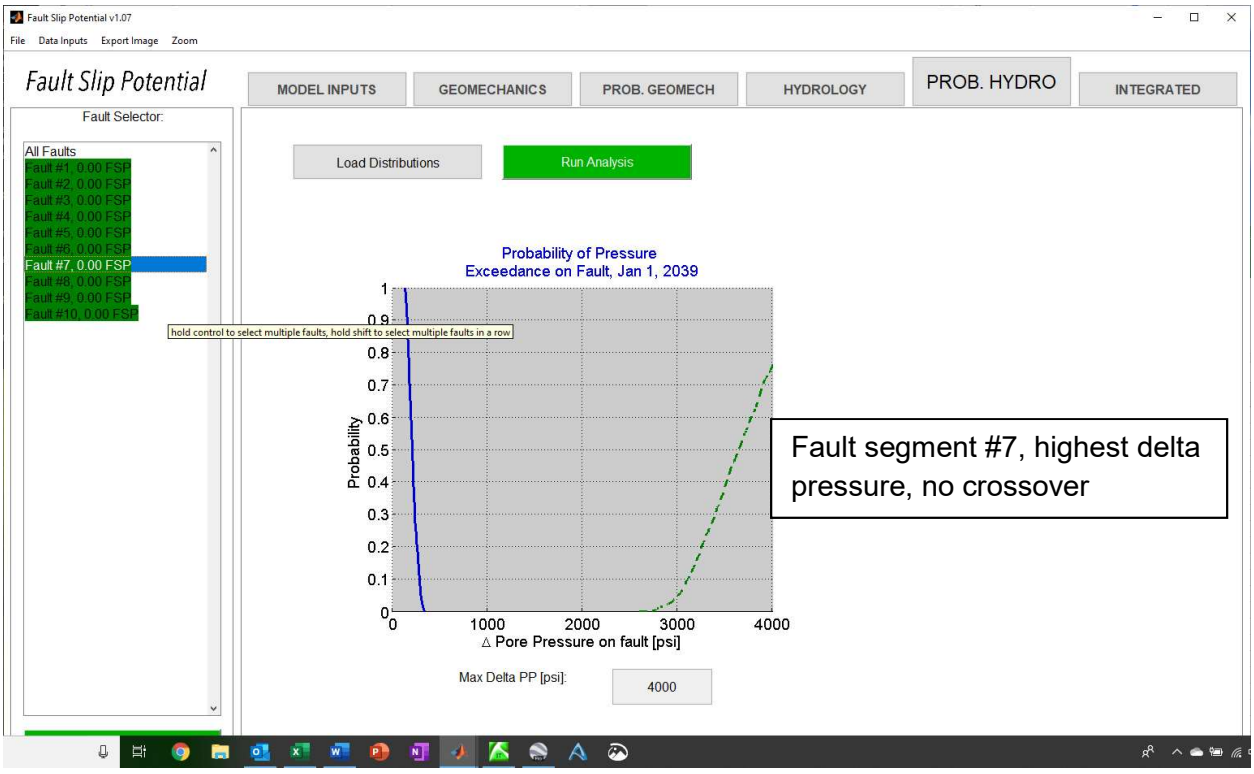
Fault segment #3, no crossover



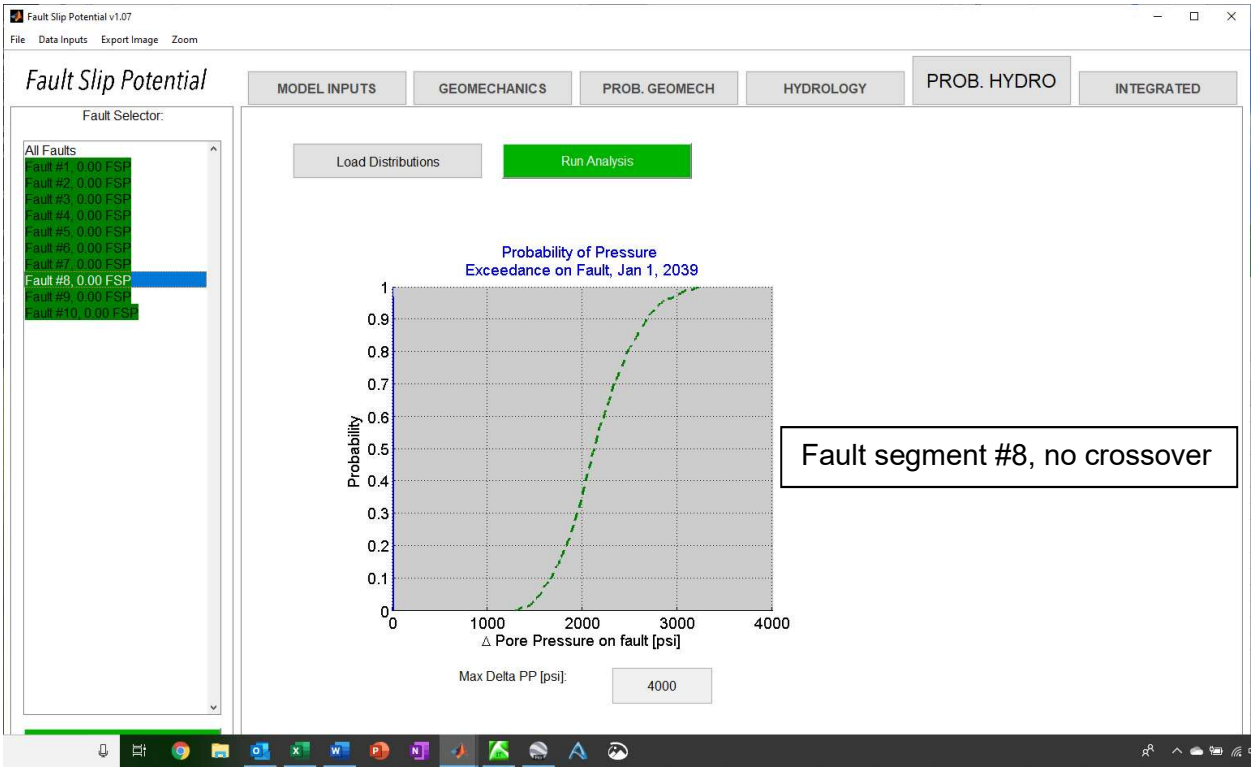
Fault segment #4, lowest slip pressure, no crossover


Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
hold control to select multiple faults, hold shift to select multiple faults in a row
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2039
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Fault segment #5, no crossover

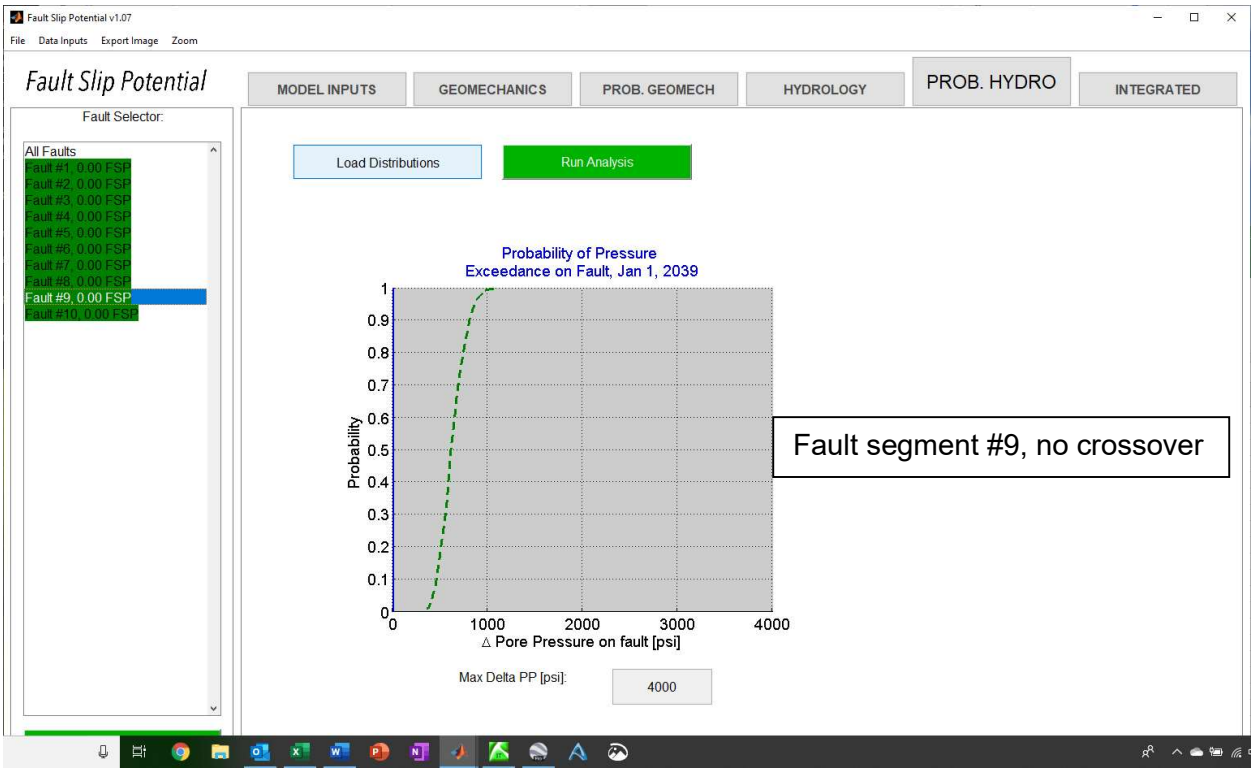

Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2039
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Fault segment #6, no crossover



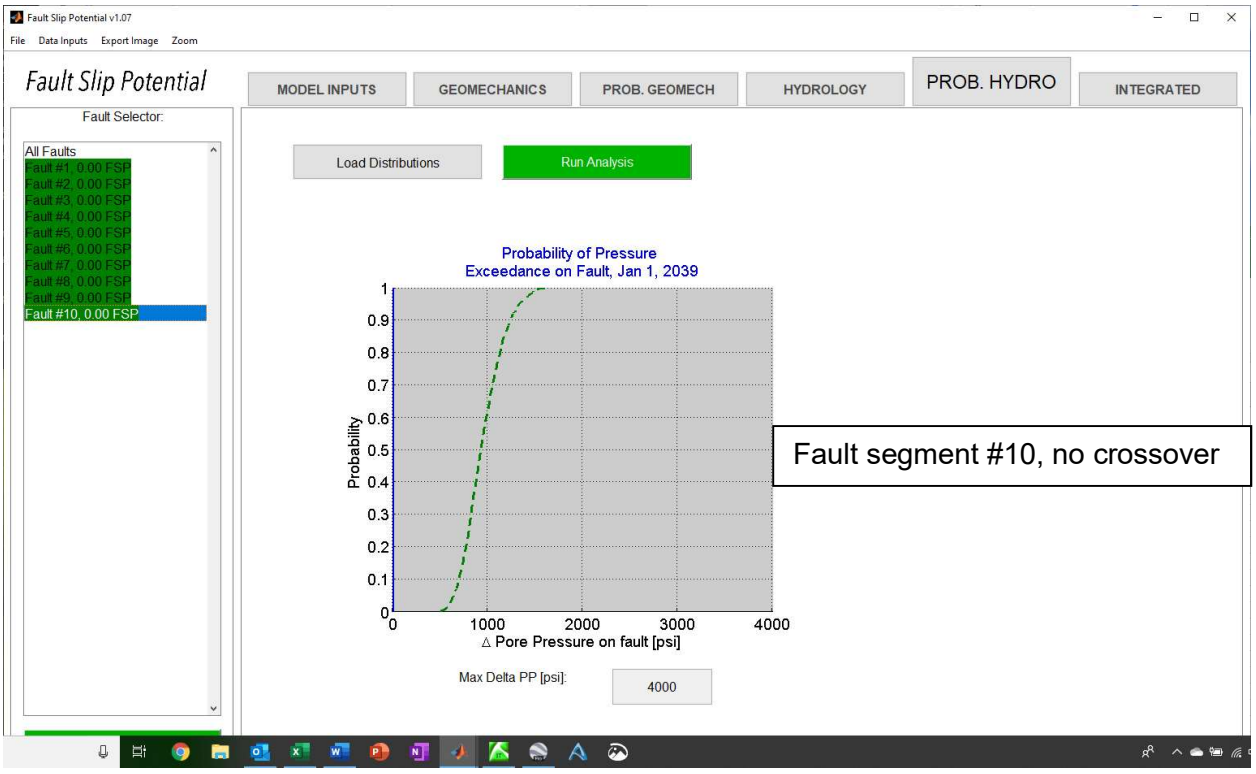
Fault segment #7, highest delta pressure, no crossover



Fault segment #8, no crossover

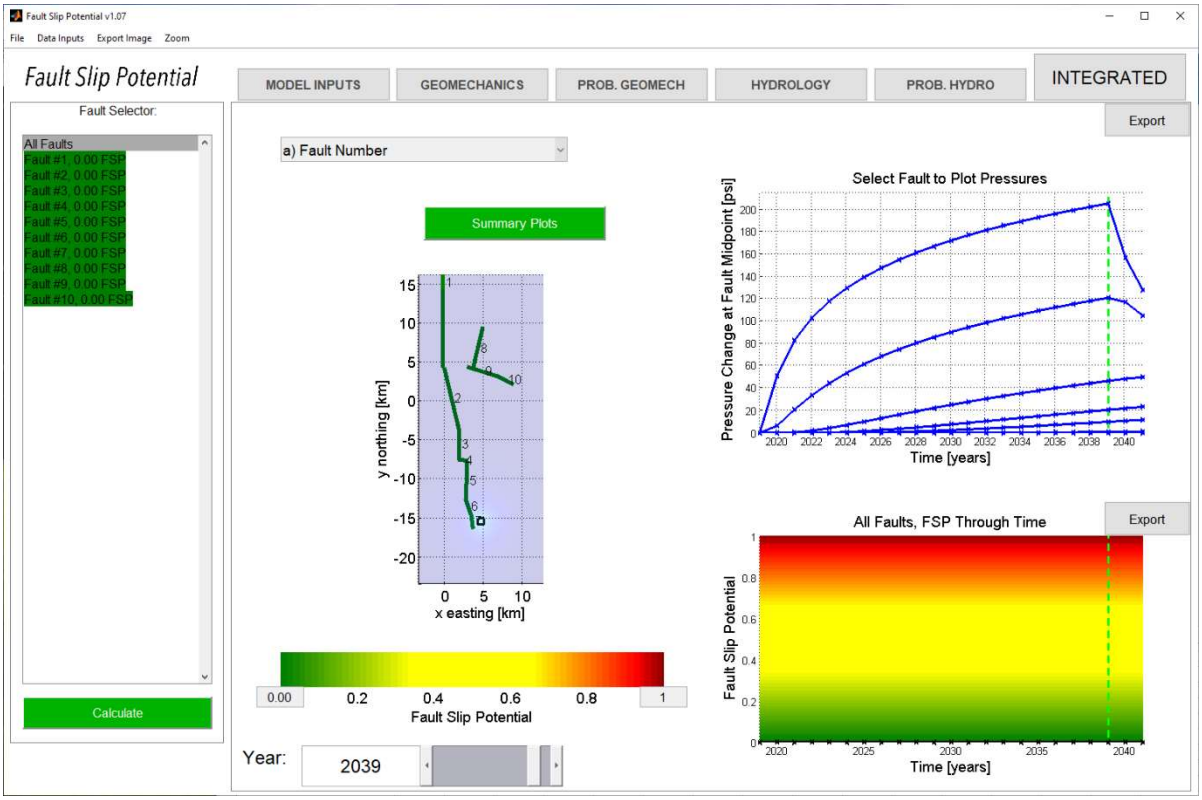


Fault segment #9, no crossover

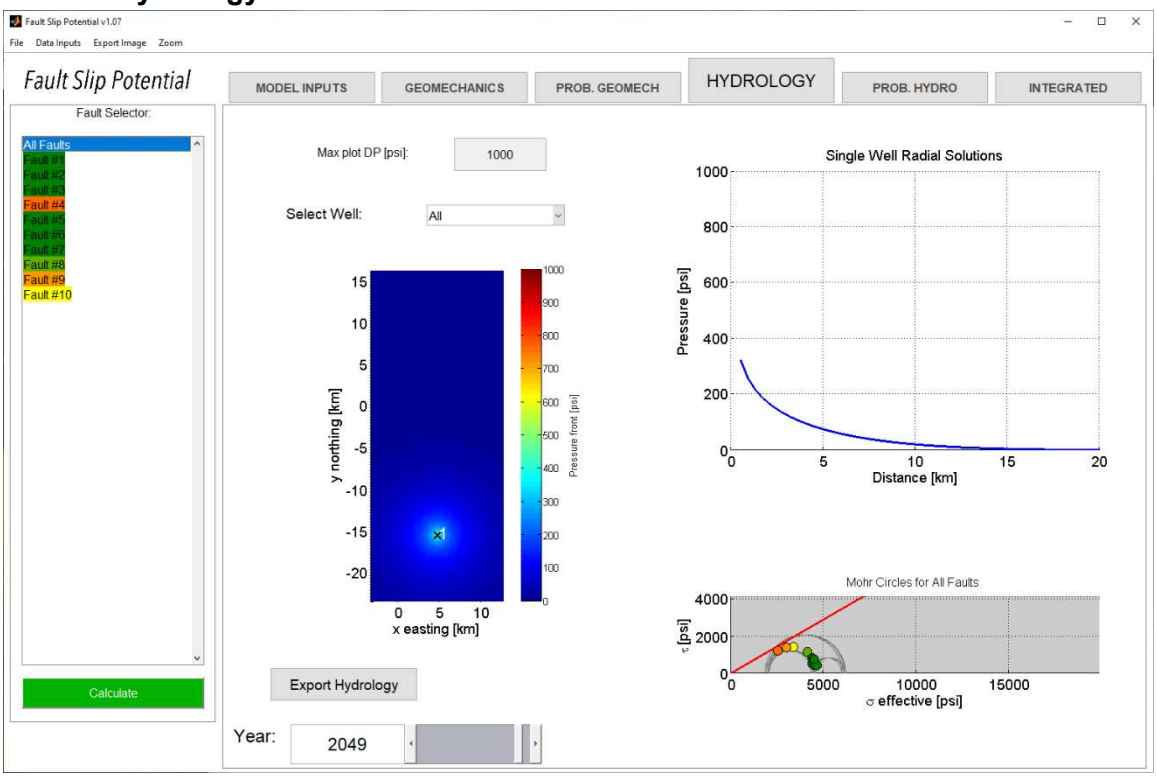


Fault segment #10, no crossover

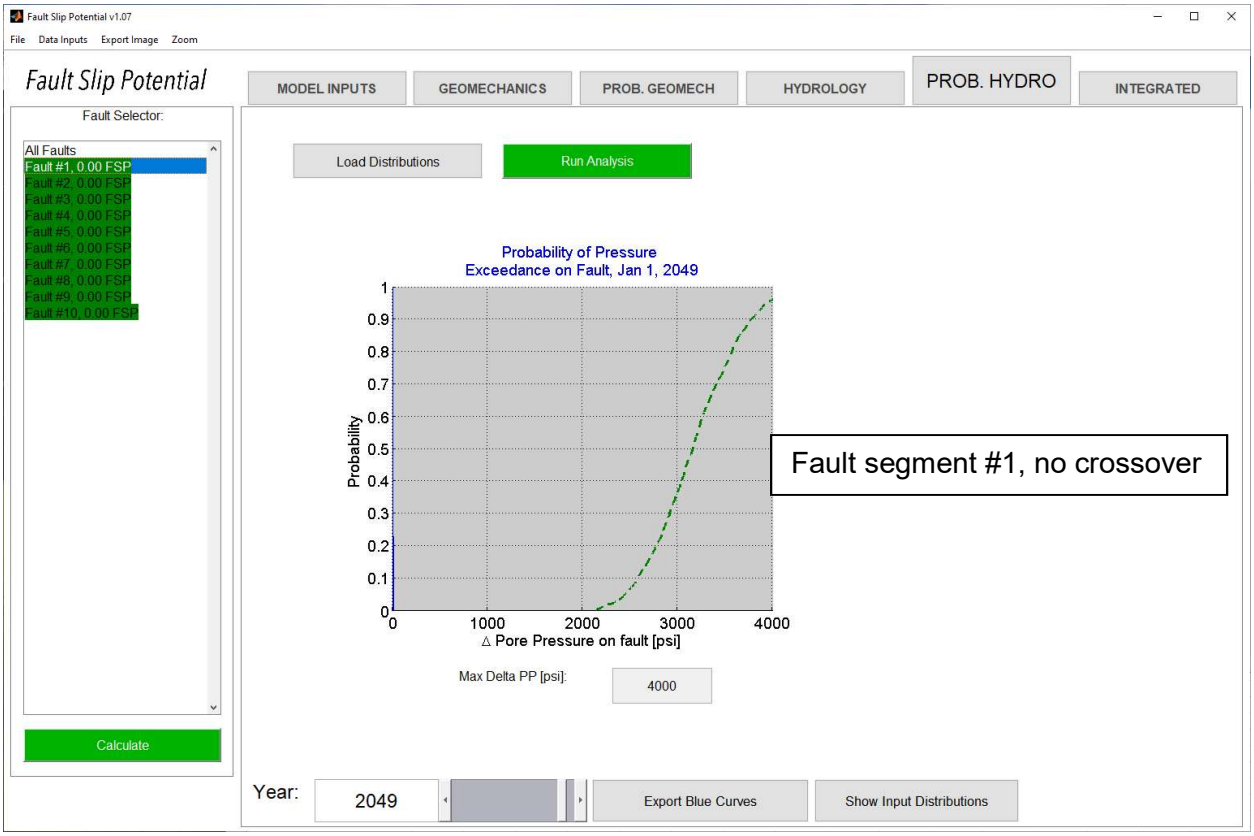
Year 20 Fault Slip Probability (0% for all fault segments after 20 years)

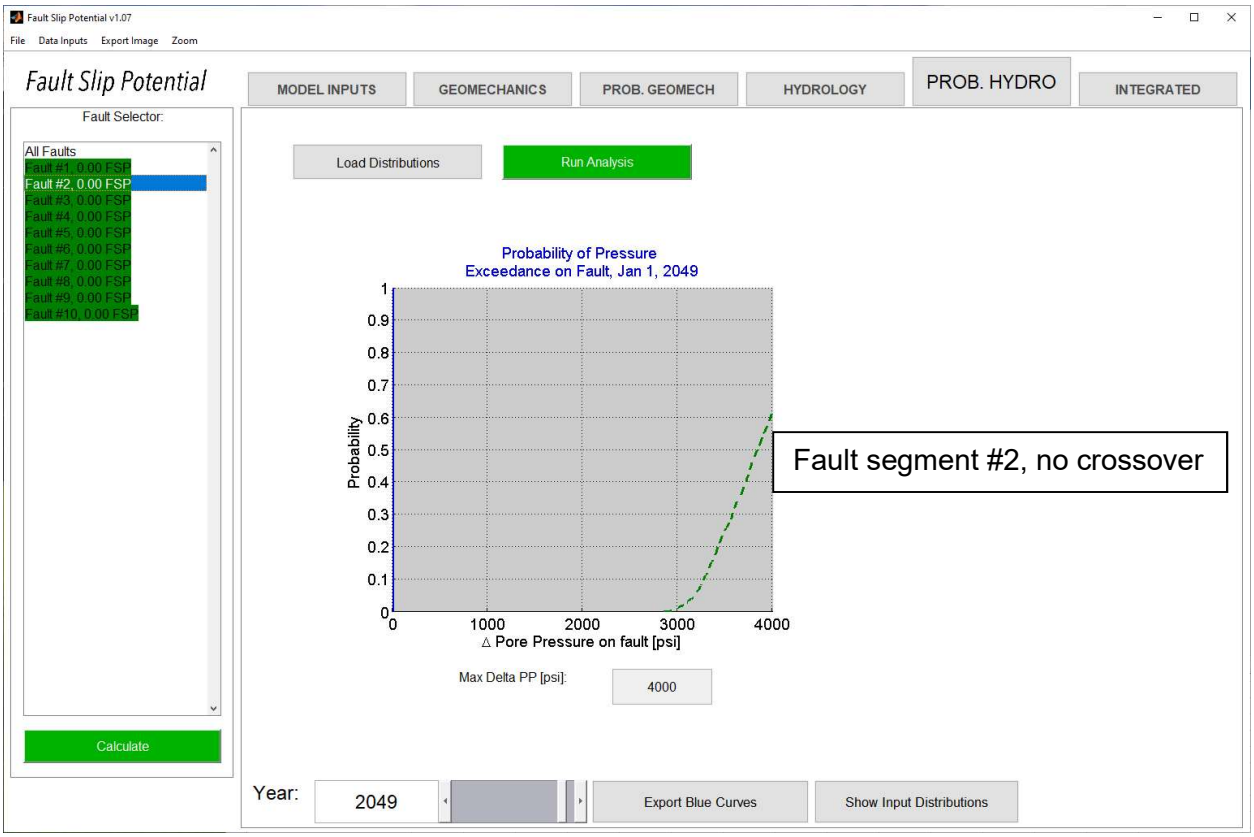


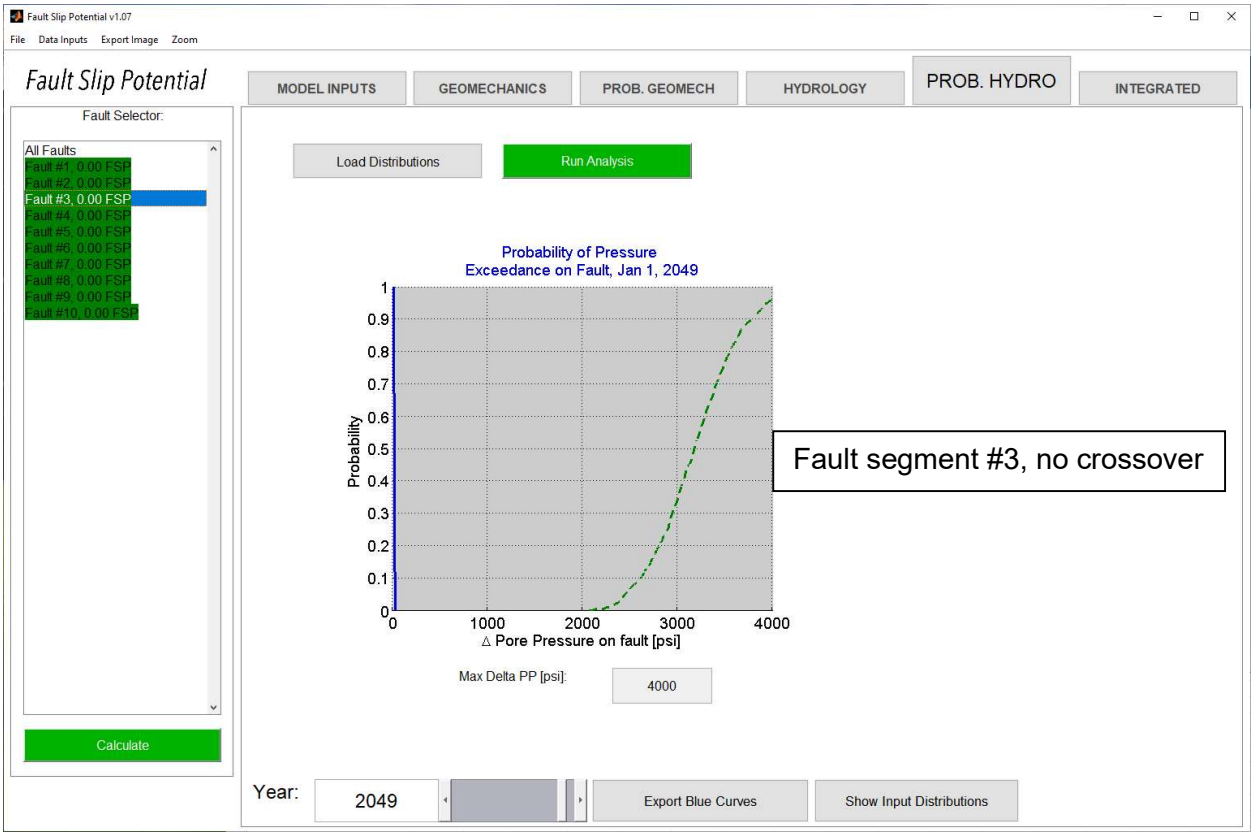
Year 30 Hydrology

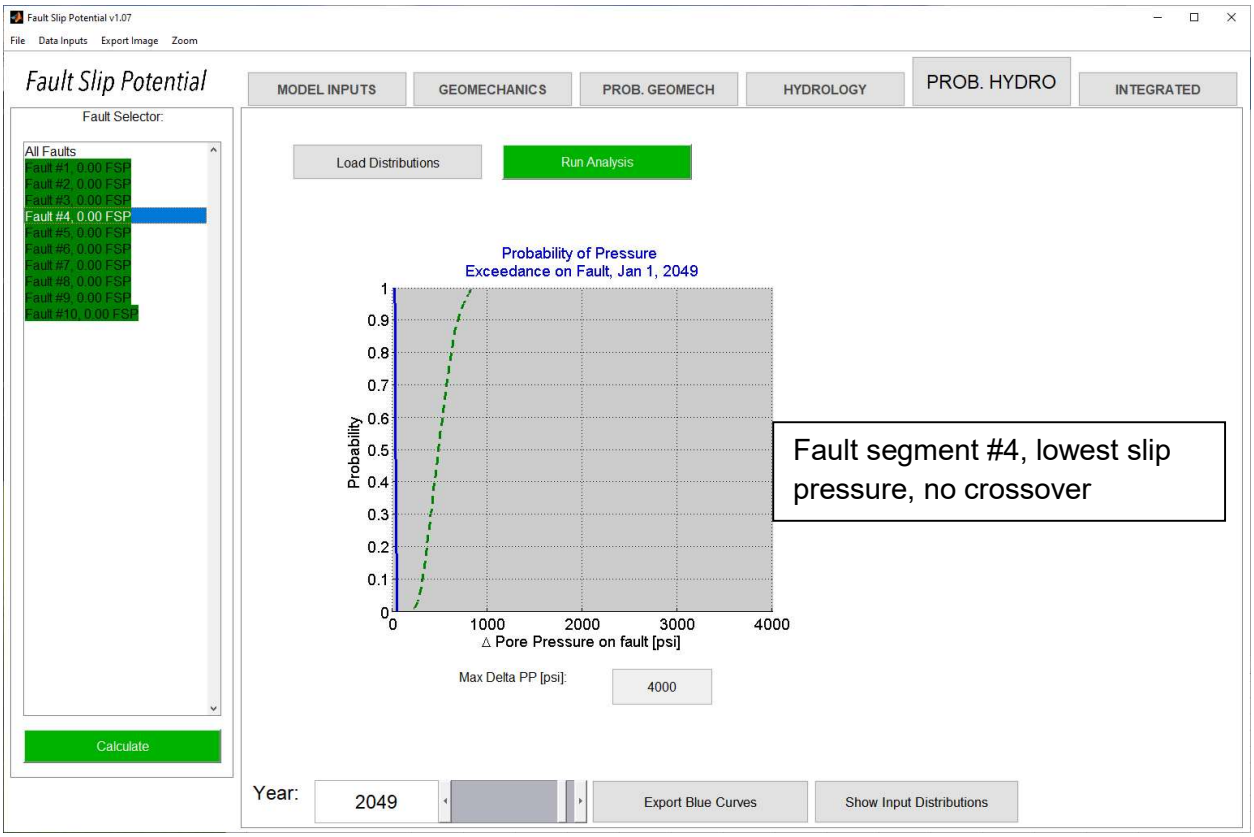


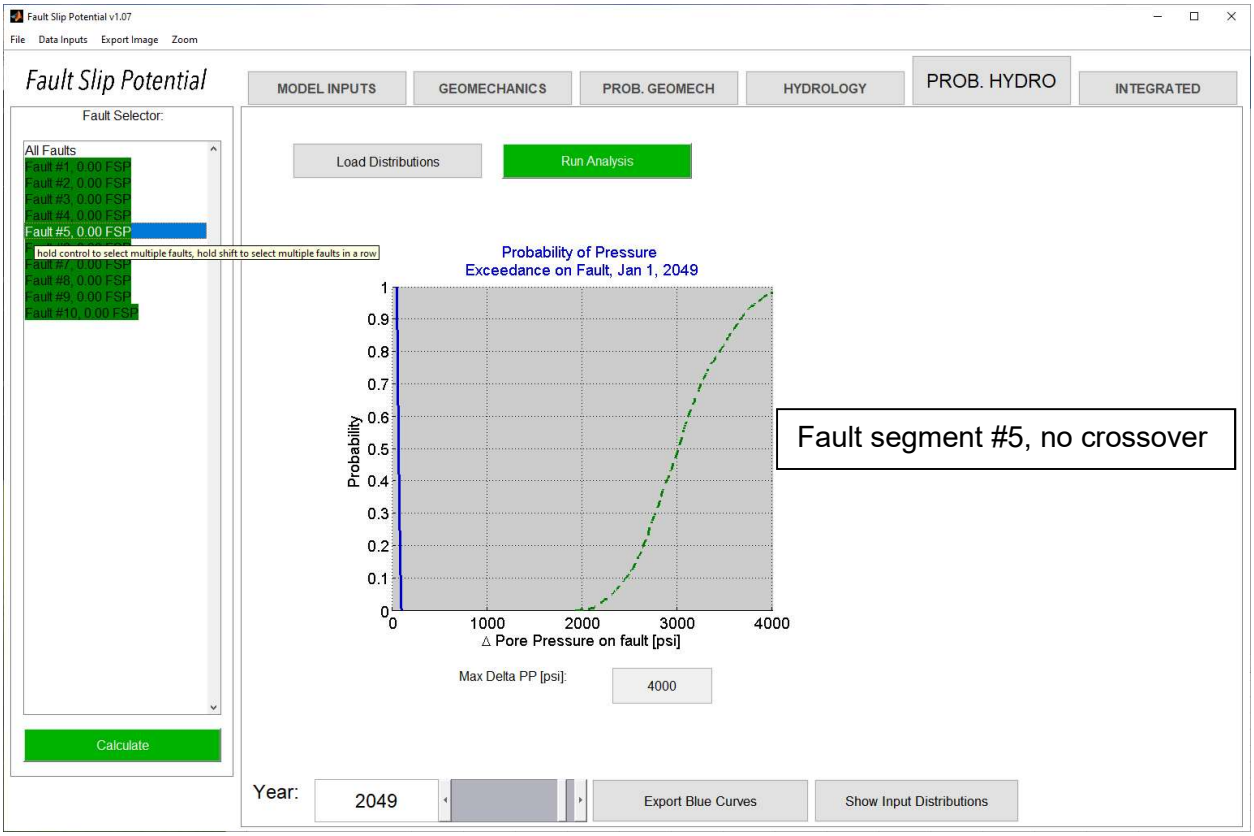
Year 30 Probabilistic Hydrology (note that crossover between blue delta-press. & green fault slip press. is due to display of multiple fault segment data on same chart. Fault segments displayed separately below show no crossover between delta-pressure & green fault slip pressure)

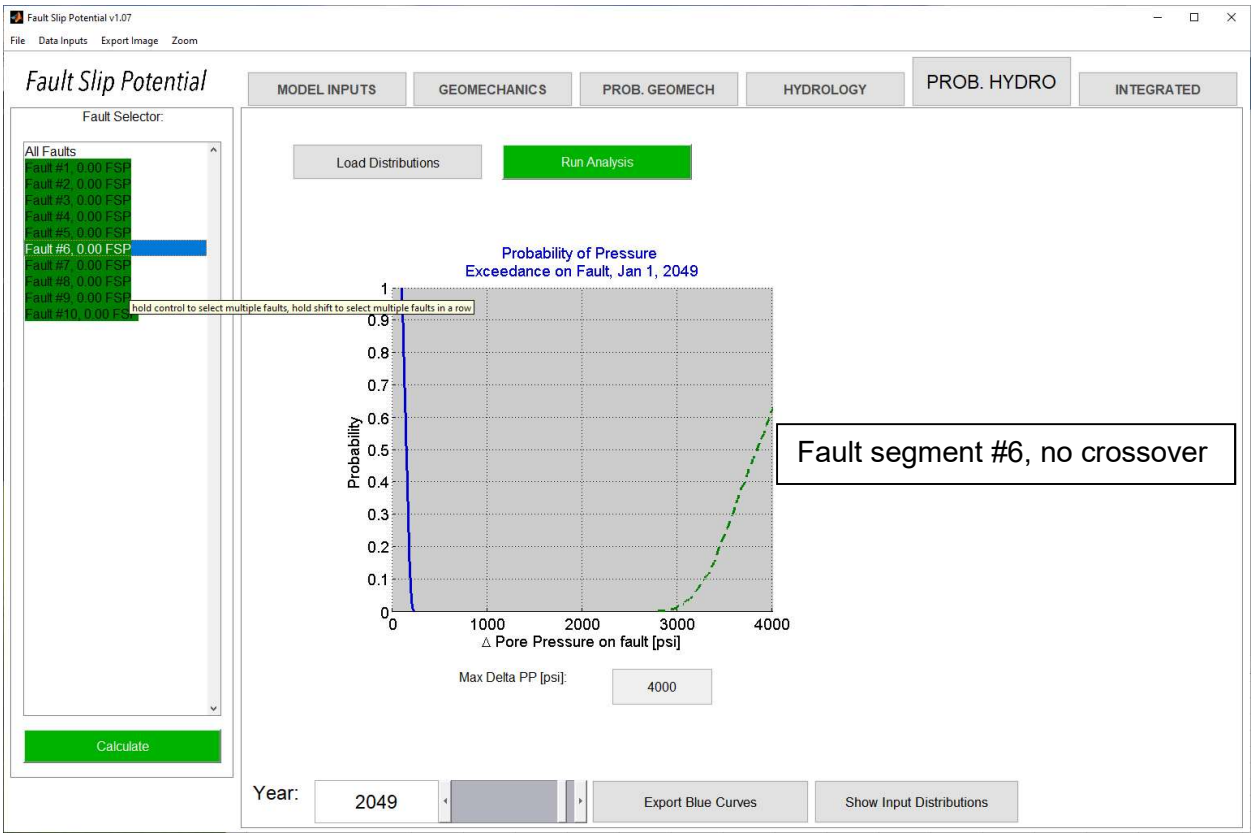

Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2049
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2049
Export Blue Curves
Show Input Distributions
Fault segment #1, no crossover

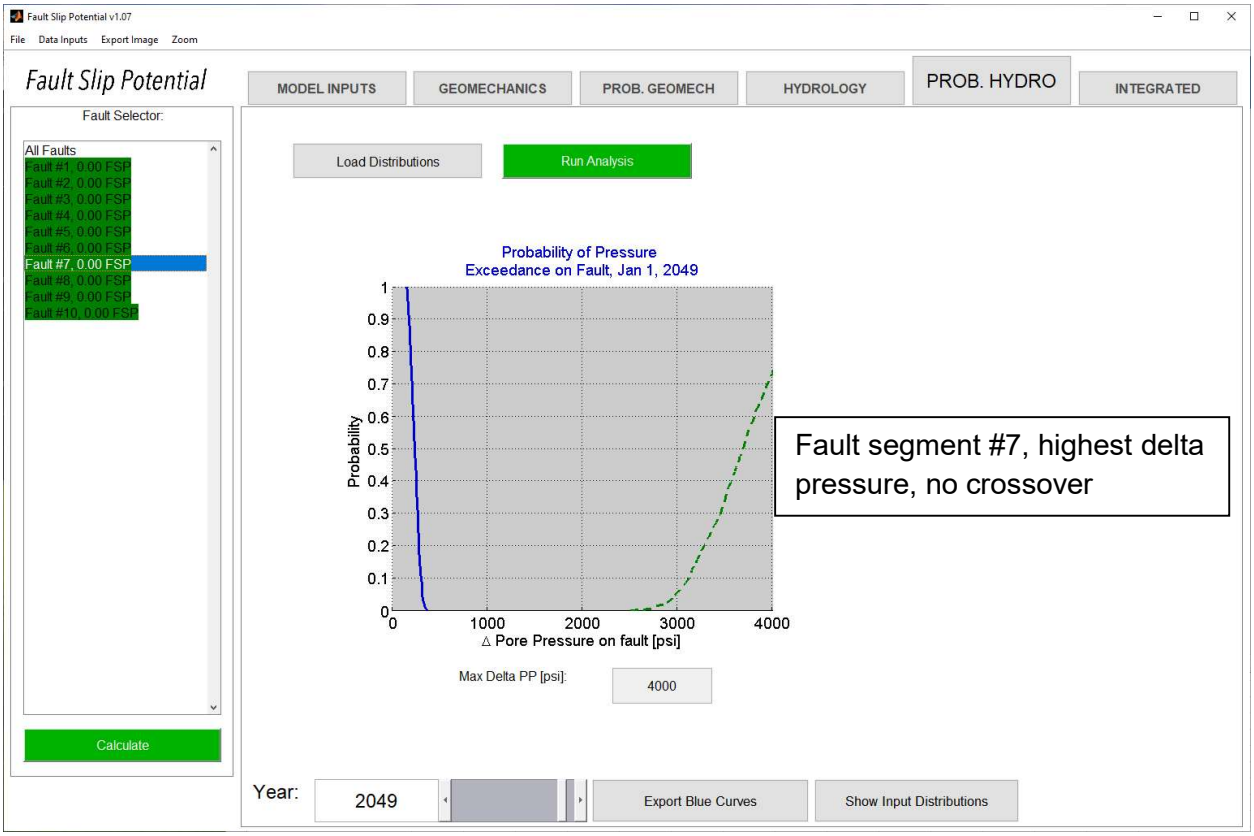

Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2049
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2049
Export Blue Curves
Show Input Distributions
Fault segment #2, no crossover

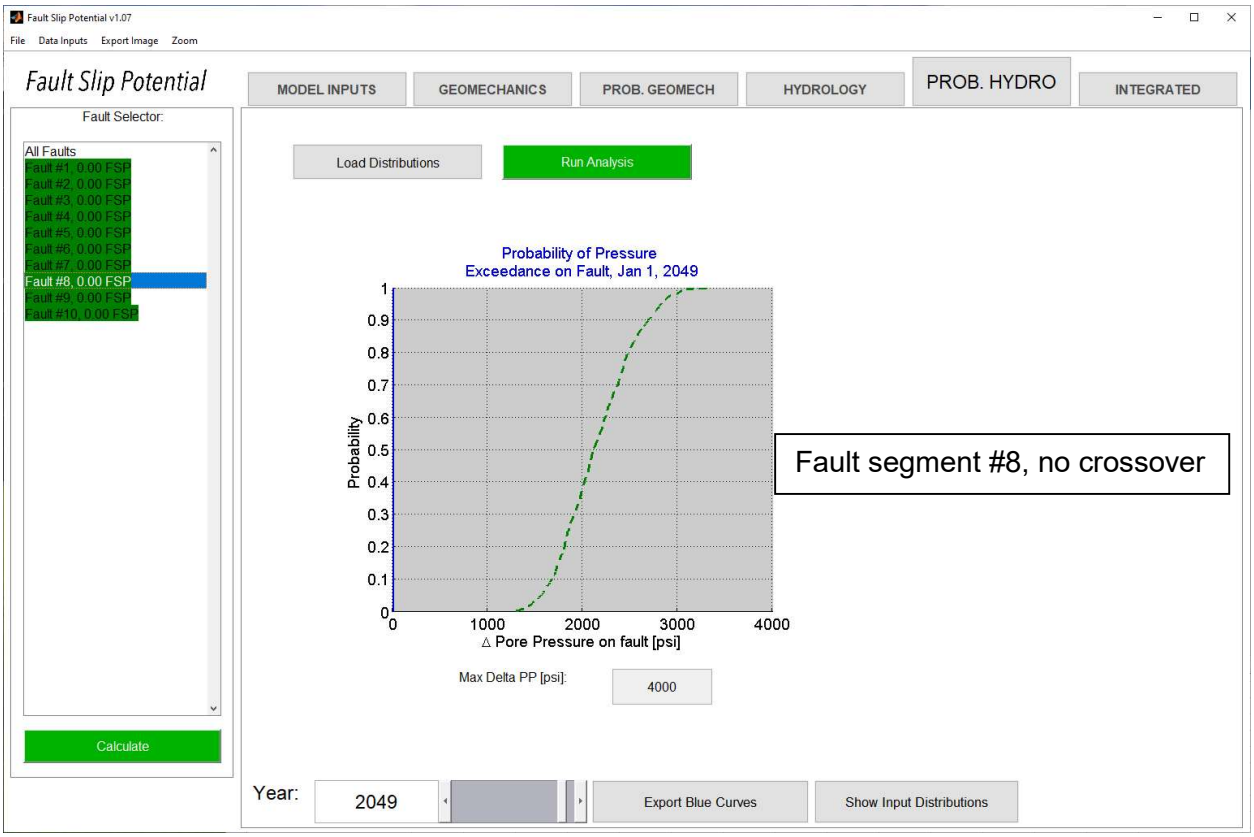

Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2049
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2049
Export Blue Curves
Show Input Distributions
Fault segment #3, no crossover

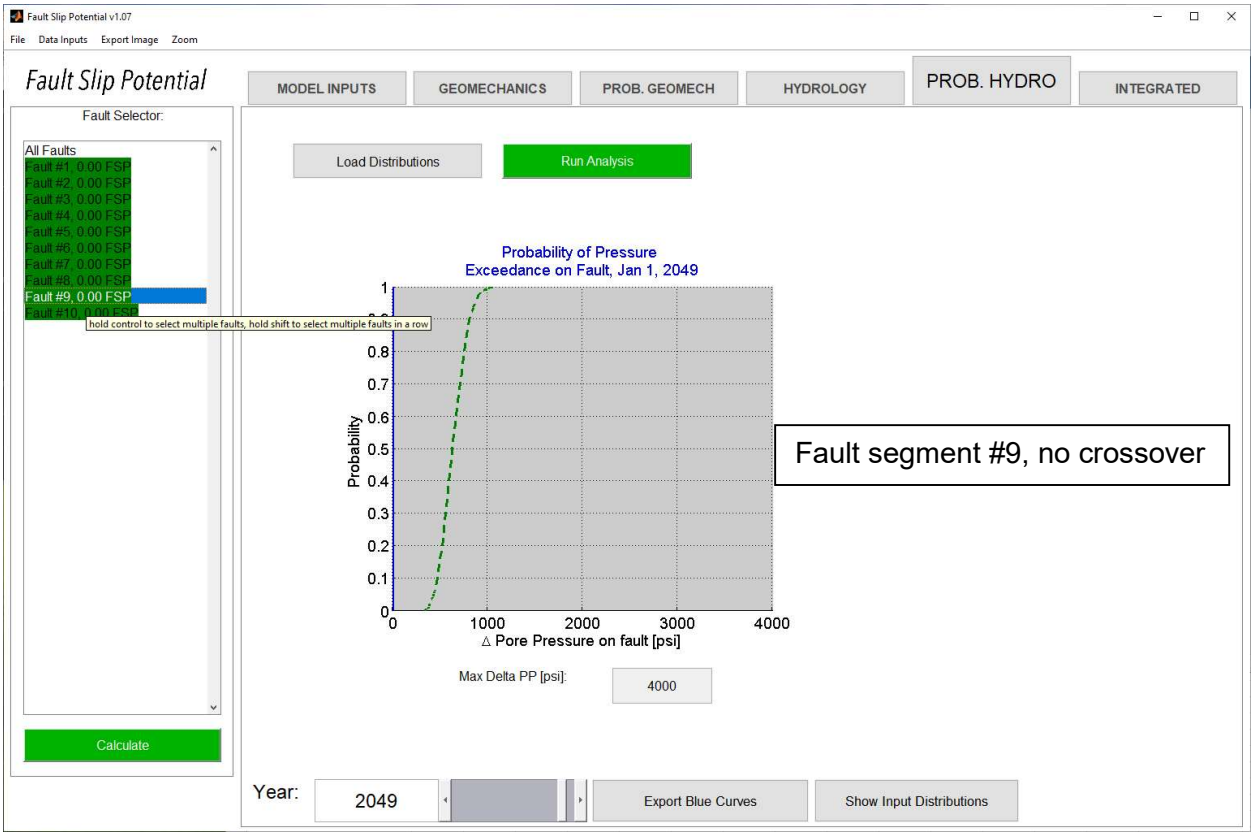

Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2049
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2049
Export Blue Curves
Show Input Distributions
Fault segment #4, lowest slip pressure, no crossover

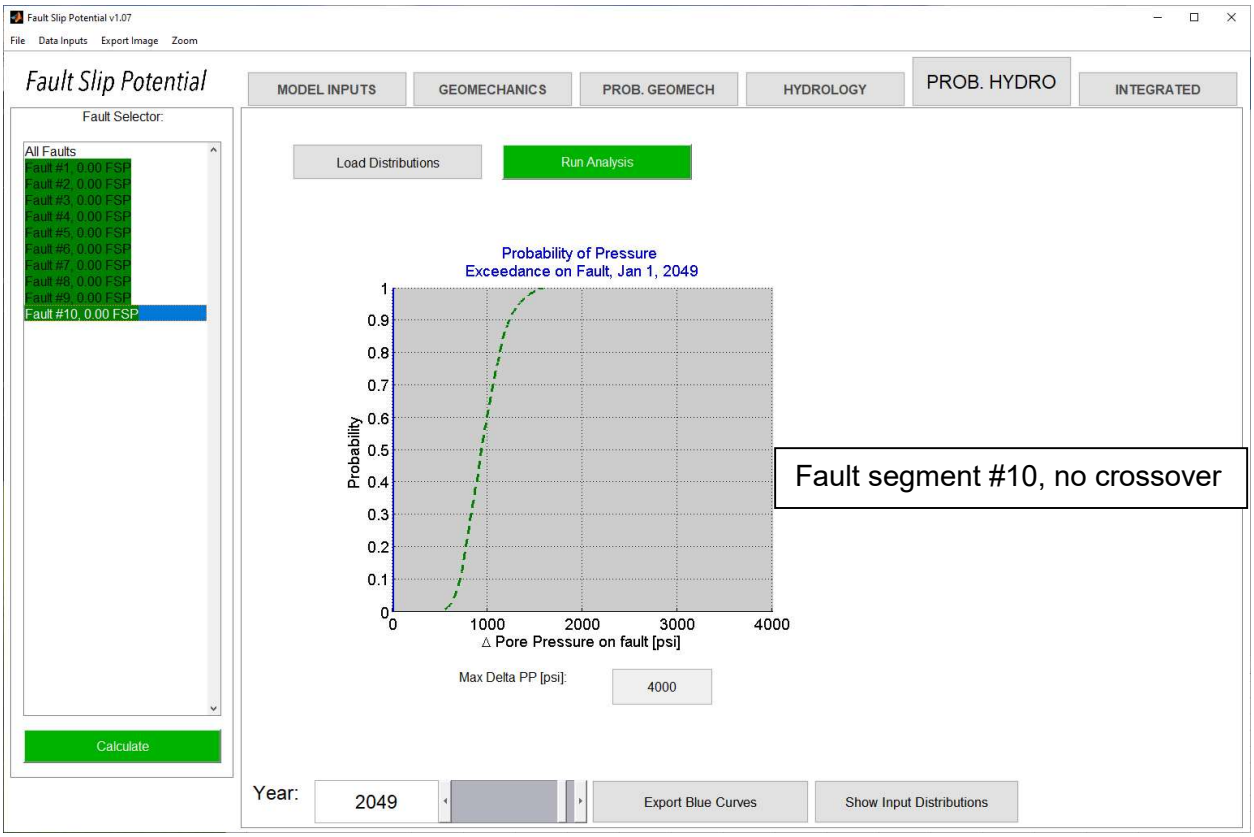

Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
hold control to select multiple faults, hold shift to select multiple faults in a row
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2049
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2049
Export Blue Curves
Show Input Distributions
Fault segment #5, no crossover


Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
hold control to select multiple faults, hold shift to select multiple faults in a row
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2049
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2049
Export Blue Curves
Show Input Distributions
Fault segment #6, no crossover

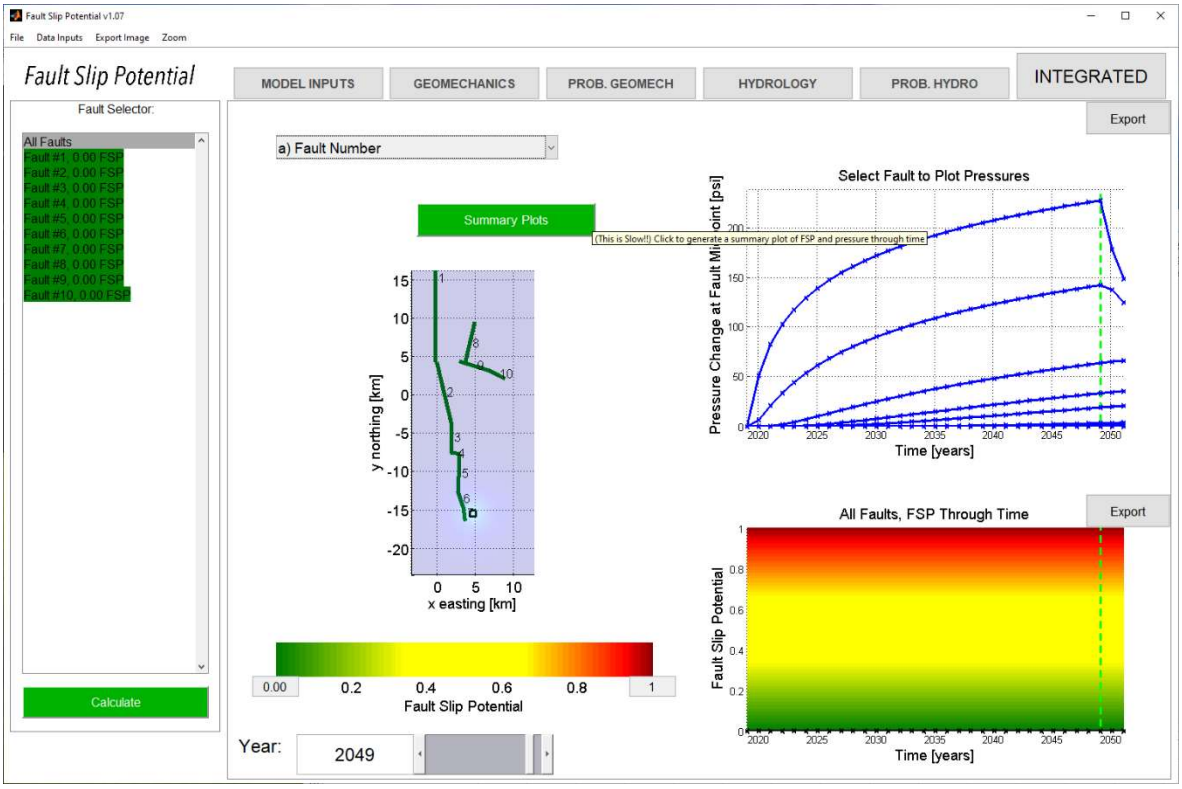

Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2049
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2049
Export Blue Curves
Show Input Distributions
Fault segment #7, highest delta pressure, no crossover


Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2049
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2049
Export Blue Curves
Show Input Distributions
Fault segment #8, no crossover


Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
hold control to select multiple faults, hold shift to select multiple faults in a row
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2049
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2049
Export Blue Curves
Show Input Distributions
Fault segment #9, no crossover


Fault Slip Potential v1.07
File Data Inputs Export Image Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Calculate
Load Distributions
Run Analysis
Probability of Pressure
Exceedance on Fault, Jan 1, 2049
Probability
Δ Pore Pressure on fault [psi]
Max Delta PP [psi]:
4000
Year:
2049
Export Blue Curves
Show Input Distributions
Fault segment #10, no crossover

Year 30 Fault Slip Probability (0% for all fault segments after 30 years. 230 psi fault delta pressure is much less than the 3700 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 1.63 miles away from the nearest active or permitted Devonian disposal well.

gfisher@popmidstream.com
(817) 606-7630