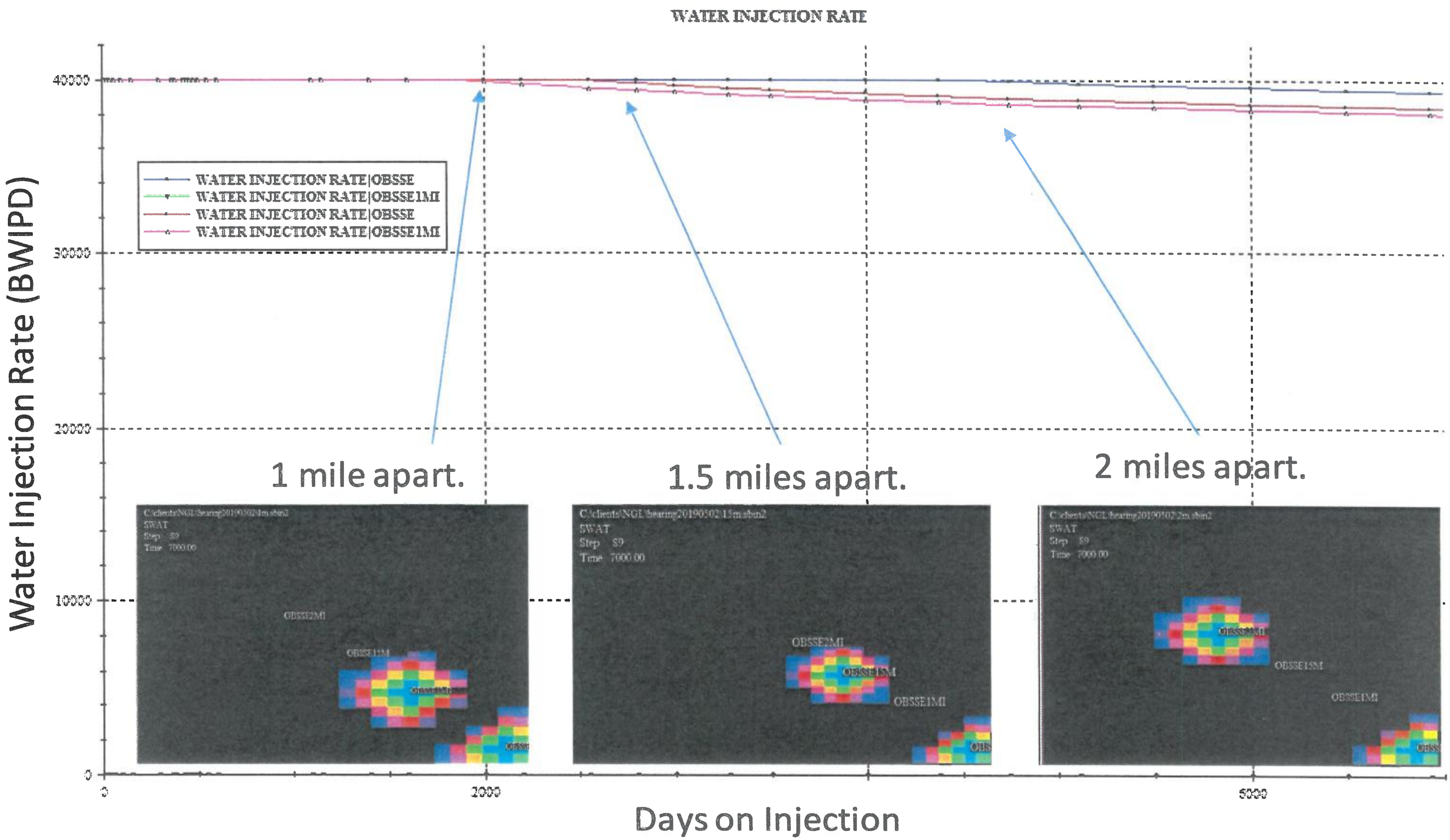
NGL Water Solutions, LLC

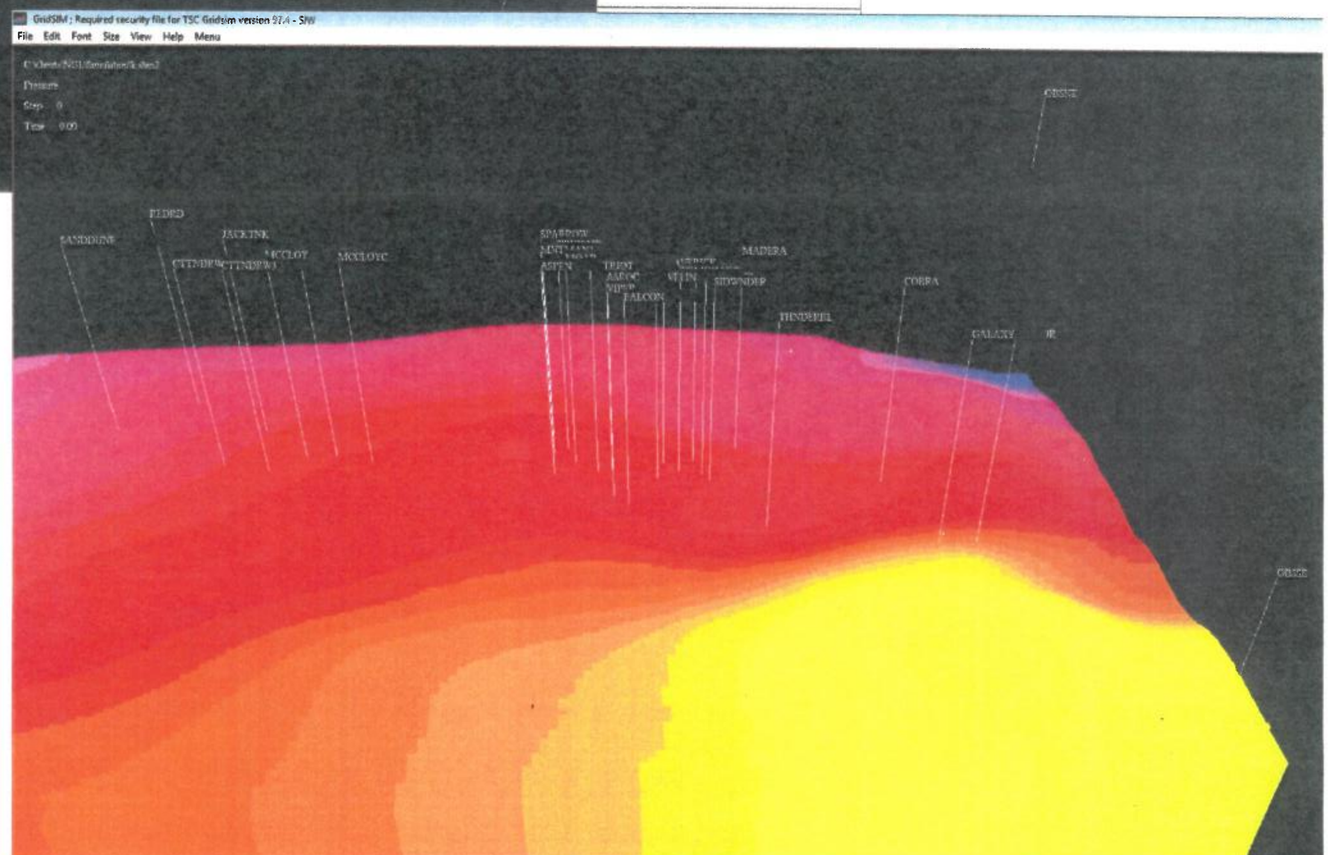
Typical wells showing interference when spaced 1, 1.5, and 2 miles apart.
Closer spacing causes rates to fall, but not significantly.



Exh. 15

2019
(0 years)

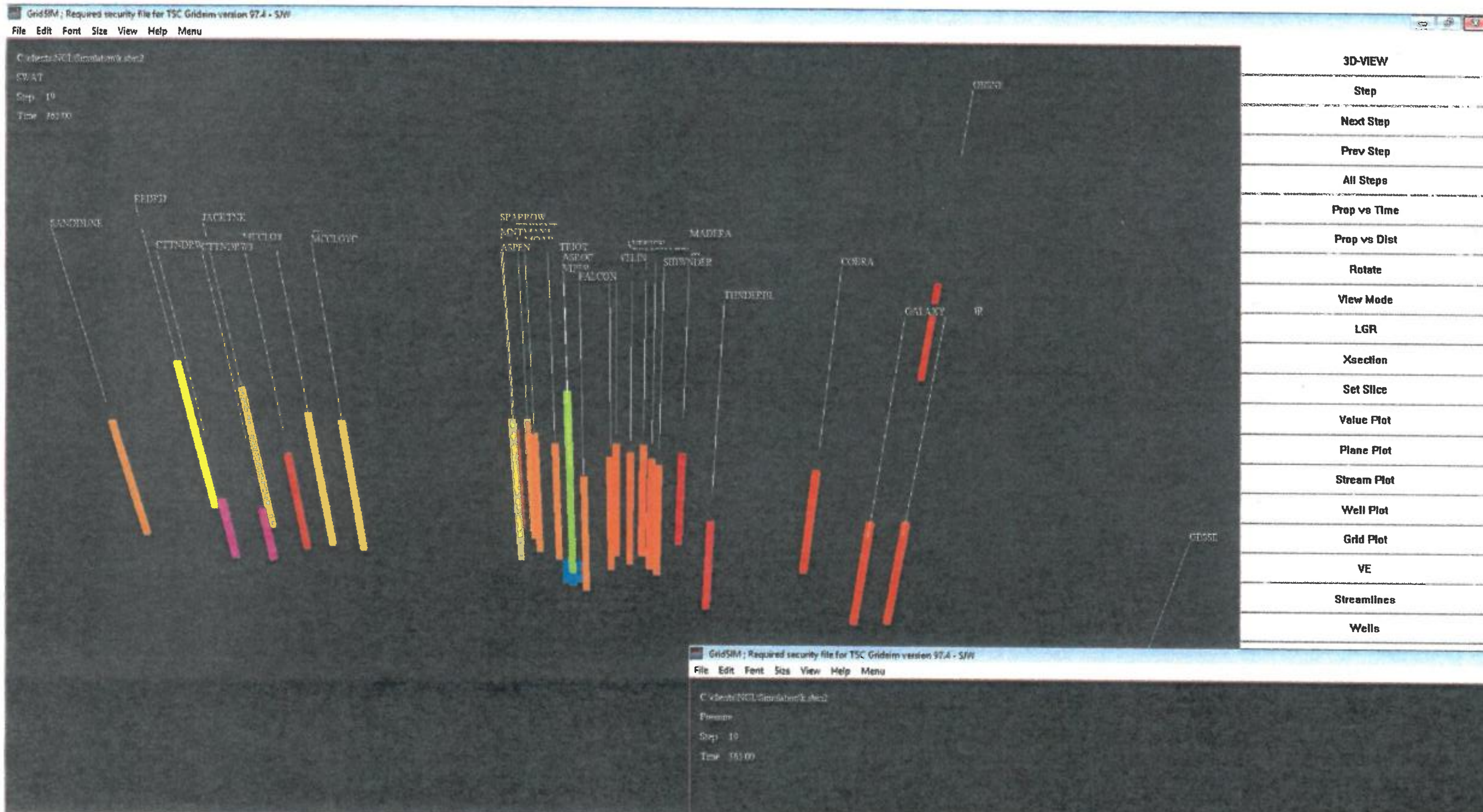
Water movement & Pressure

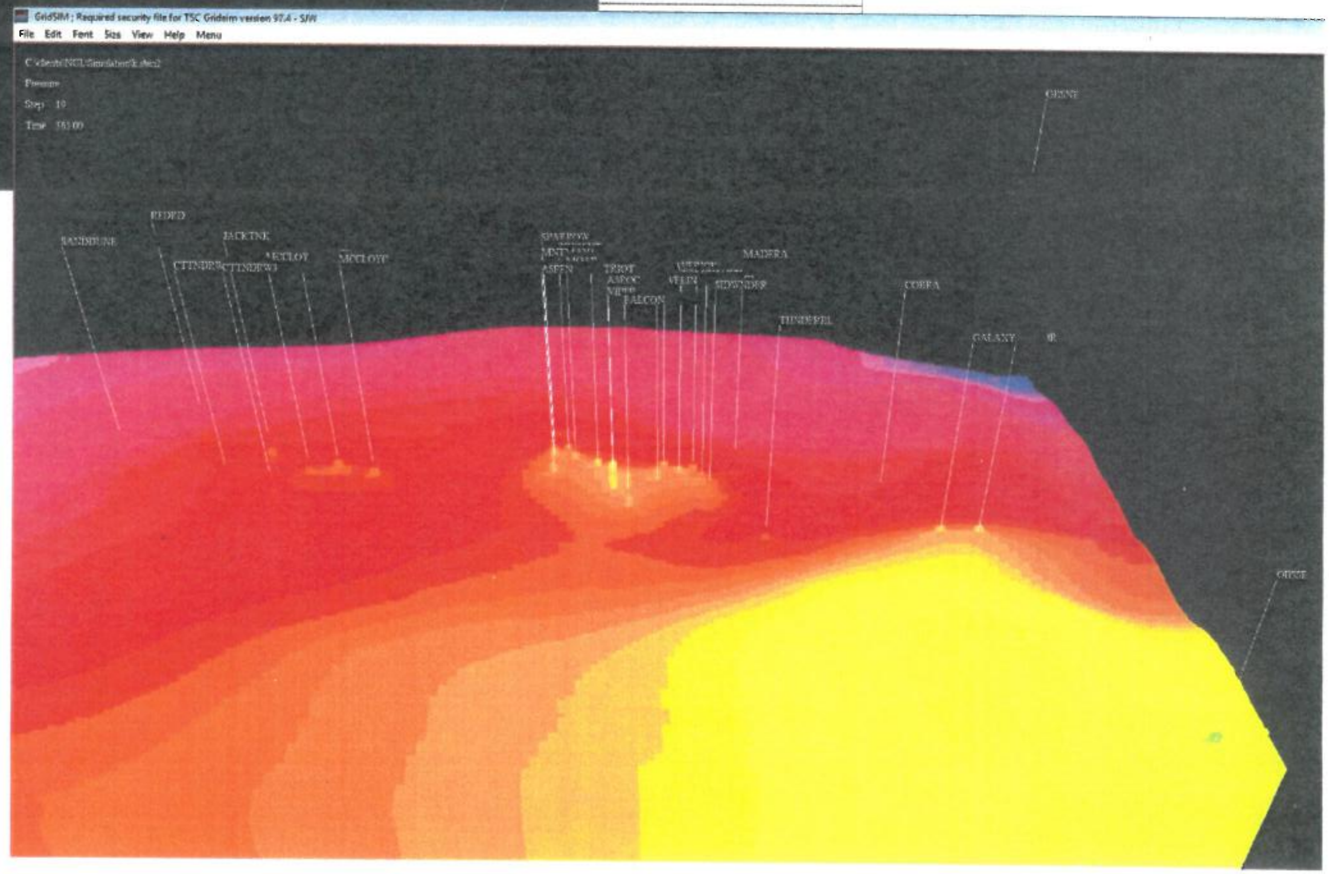


4/29/2019

Exh. 16

2020 (1 year)

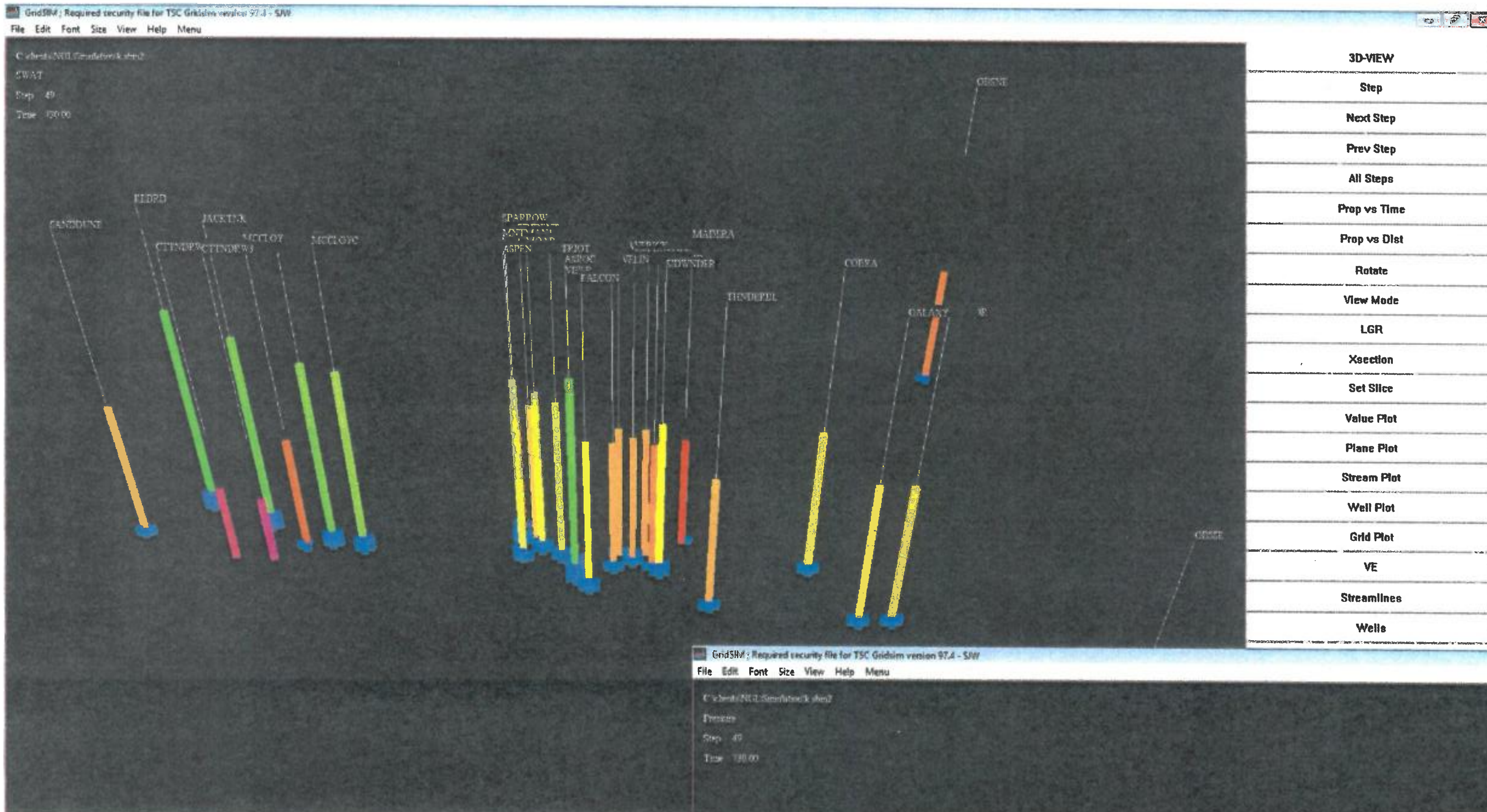




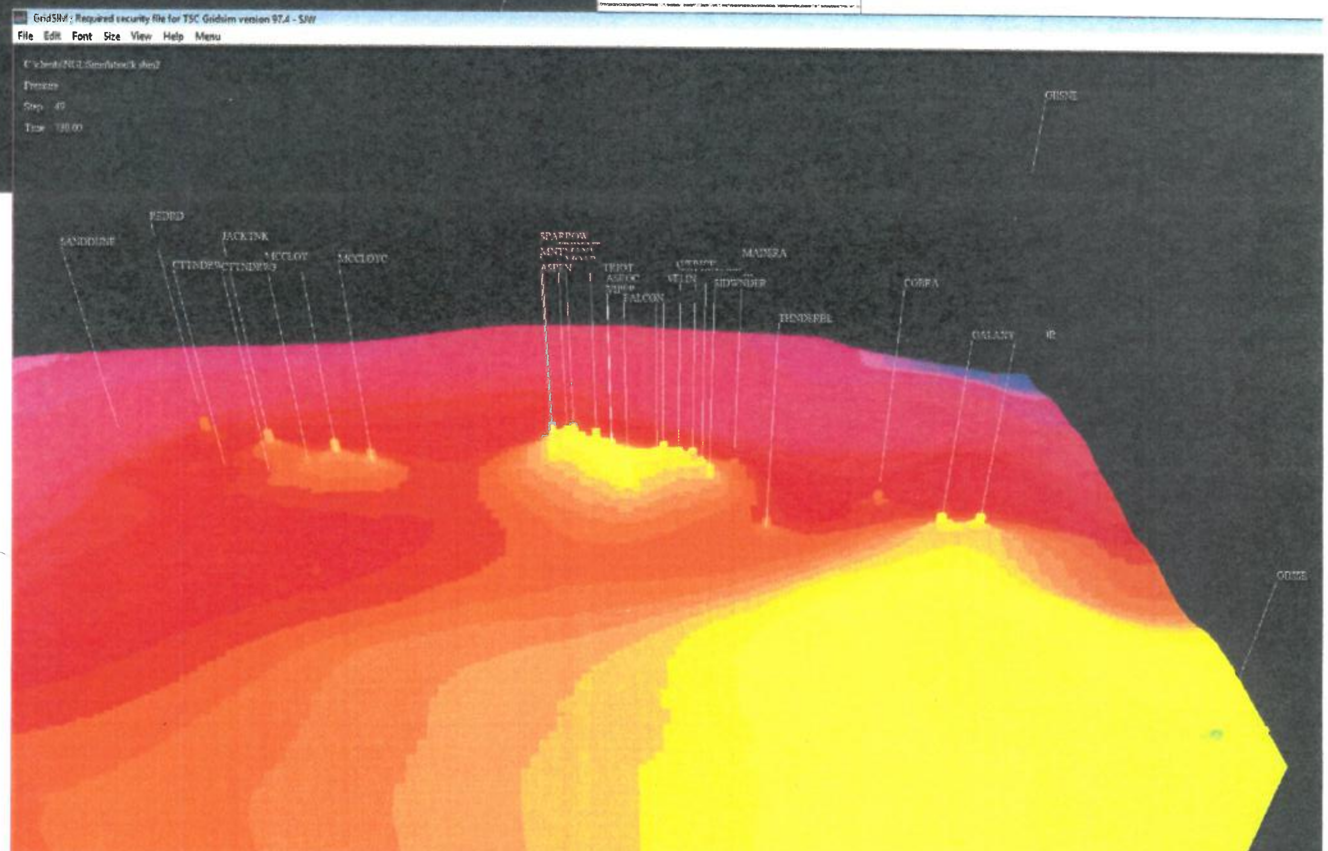
Water movement & Pressure

4/29/2019

Exh. 17



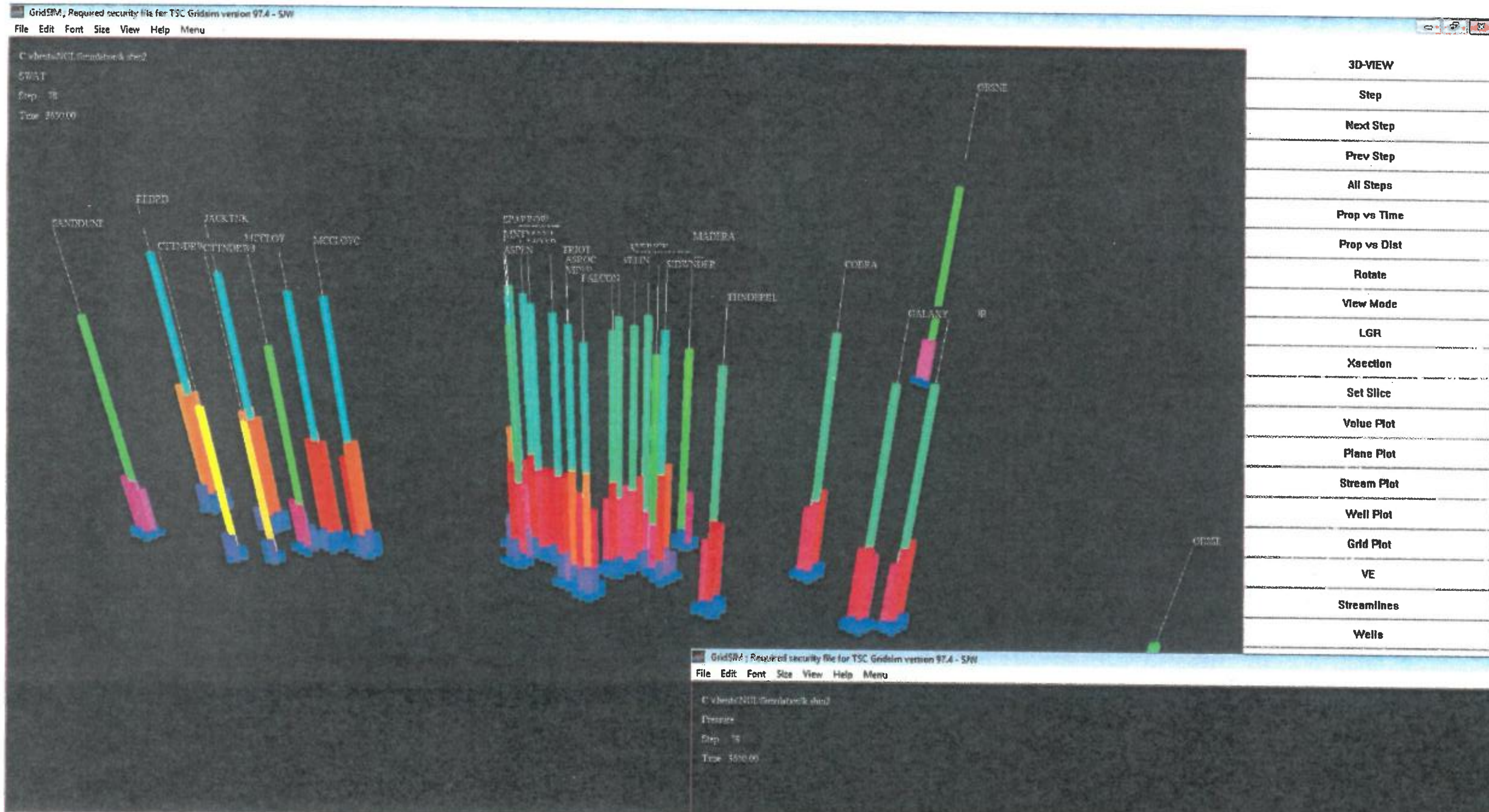
2021
(2 years)



Water movement & Pressure

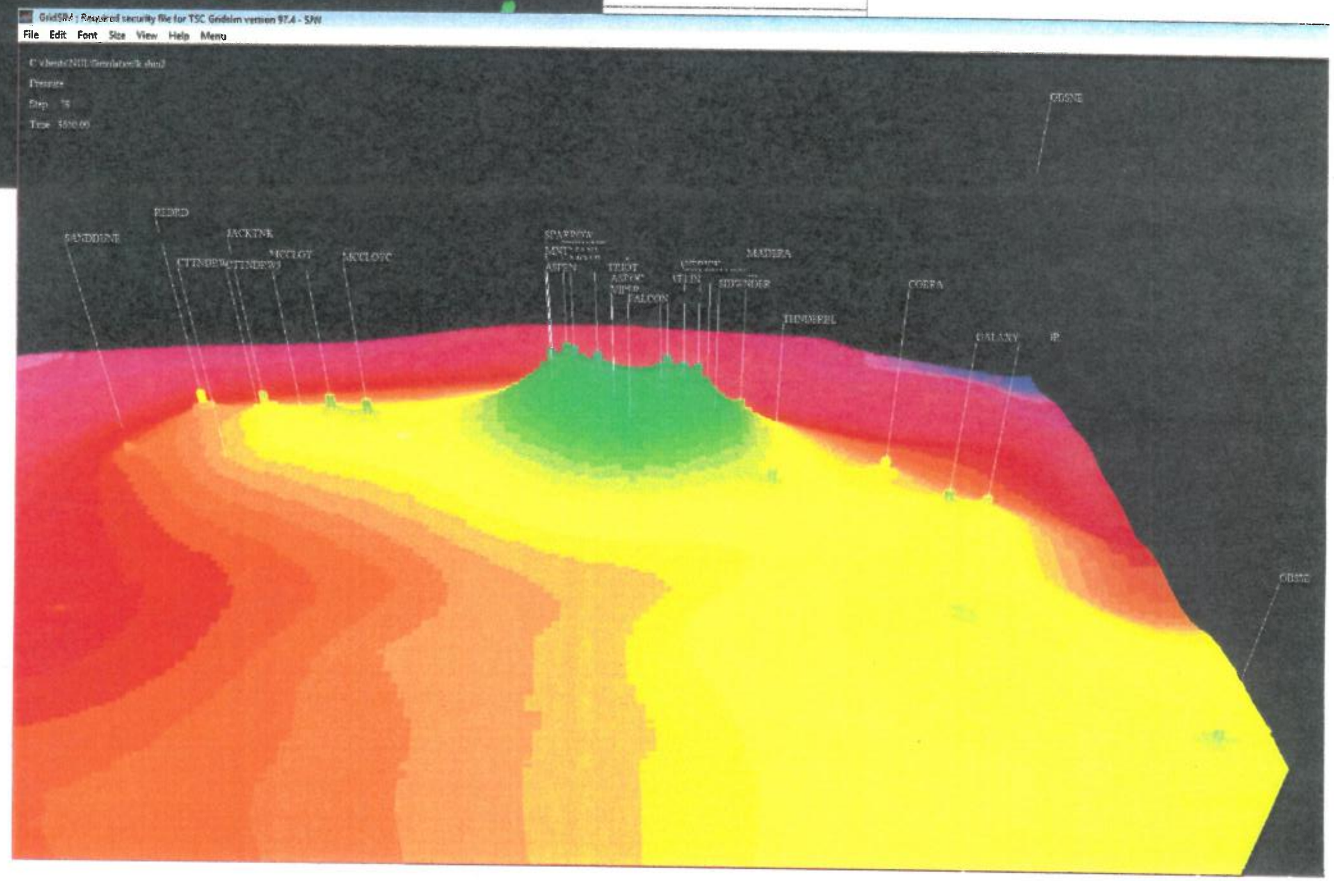
4/29/2019

Exh. 18



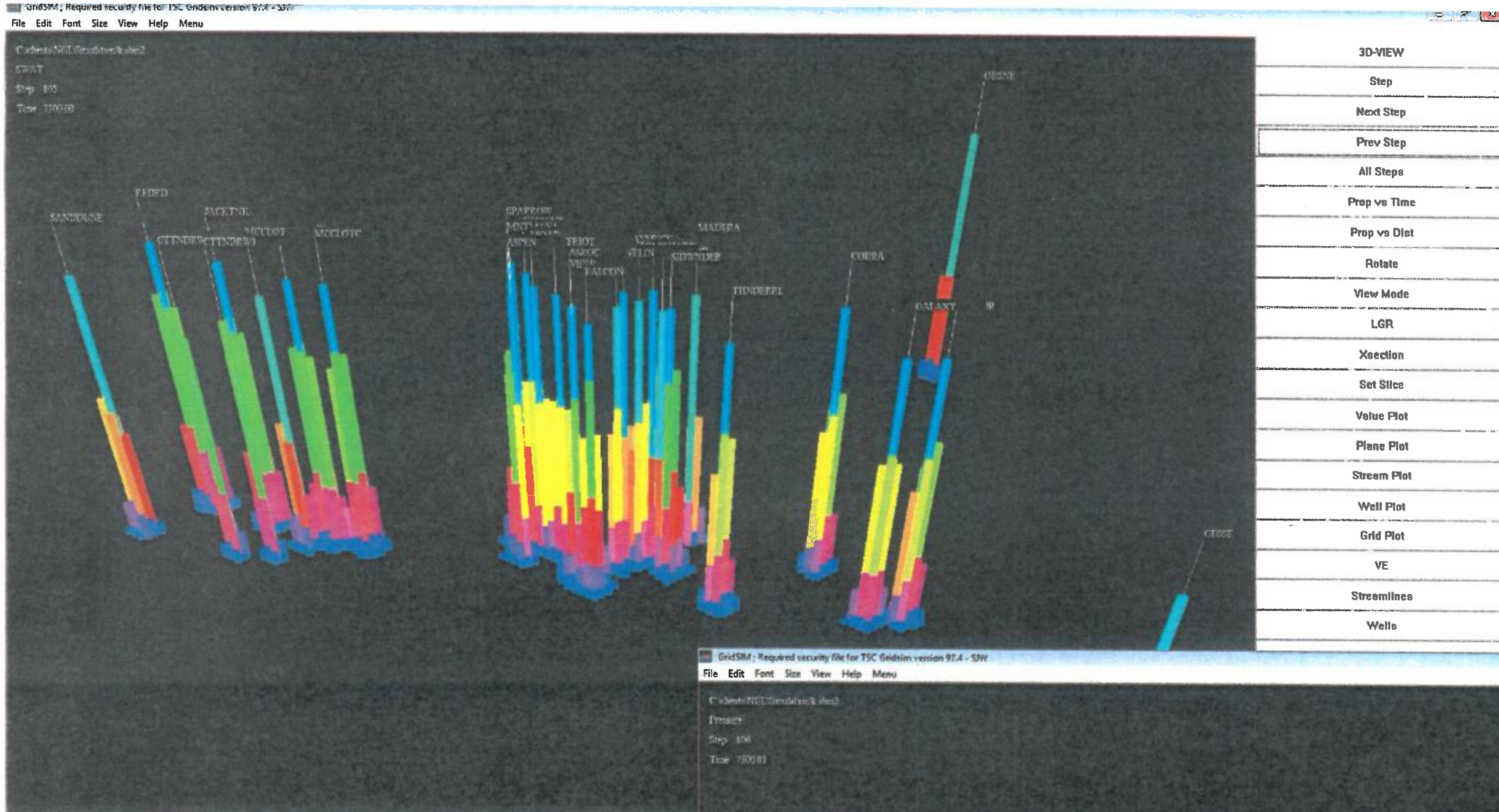
2029
(10 years)

Water movement & Pressure

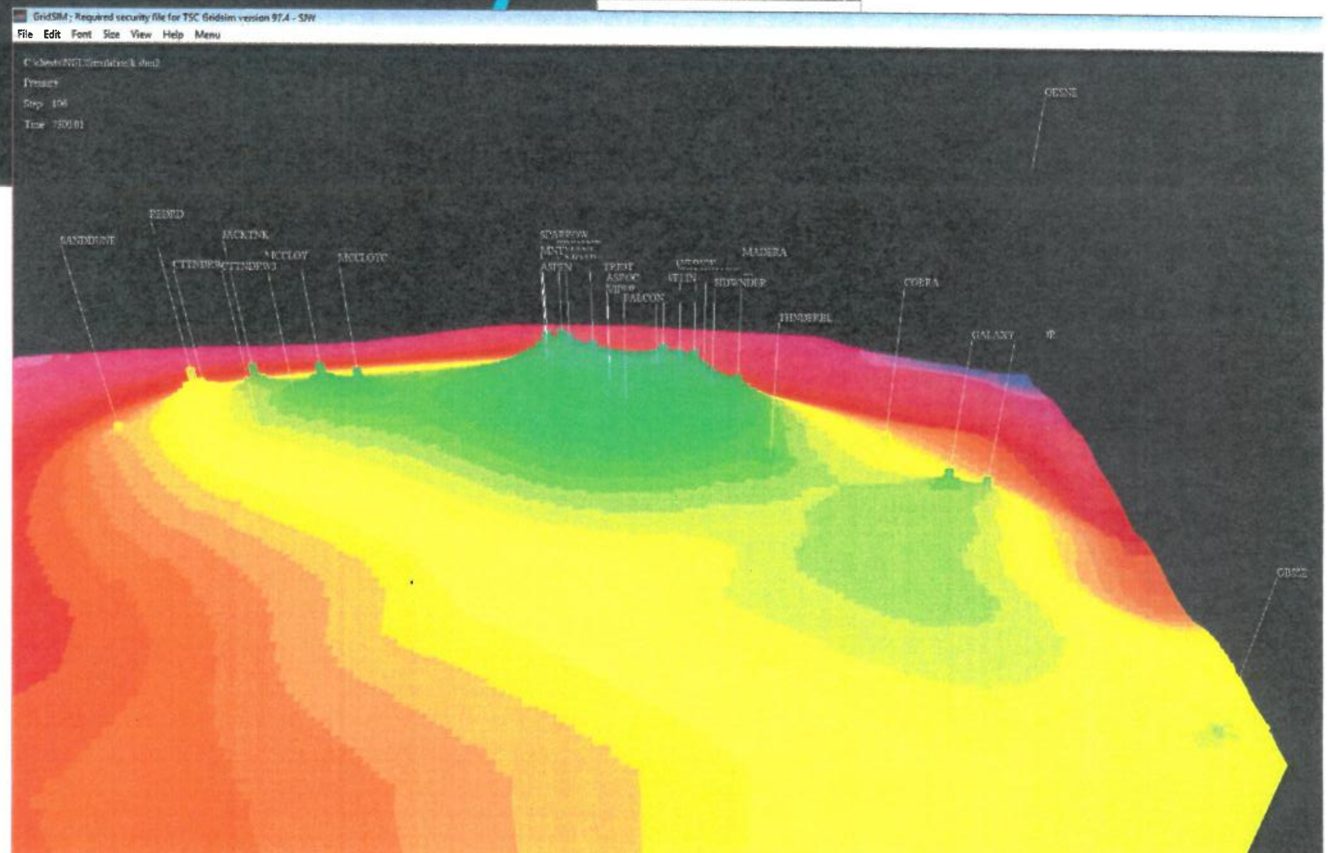


4/29/2019

Exh. 19



2039
(20 years)



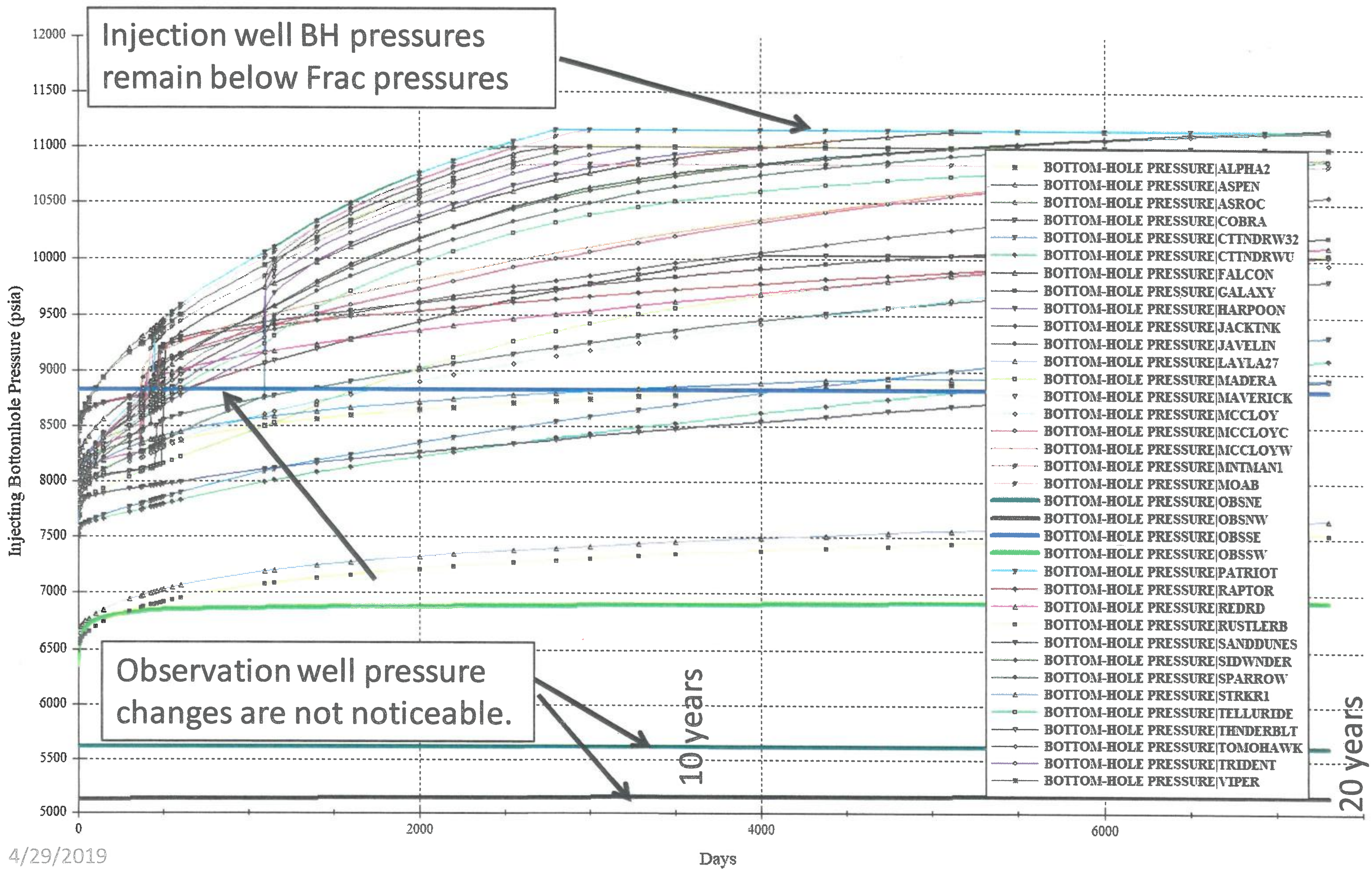
Water movement & Pressure

4/29/2019

Exh. 20

NGL Water Solutions, LLC

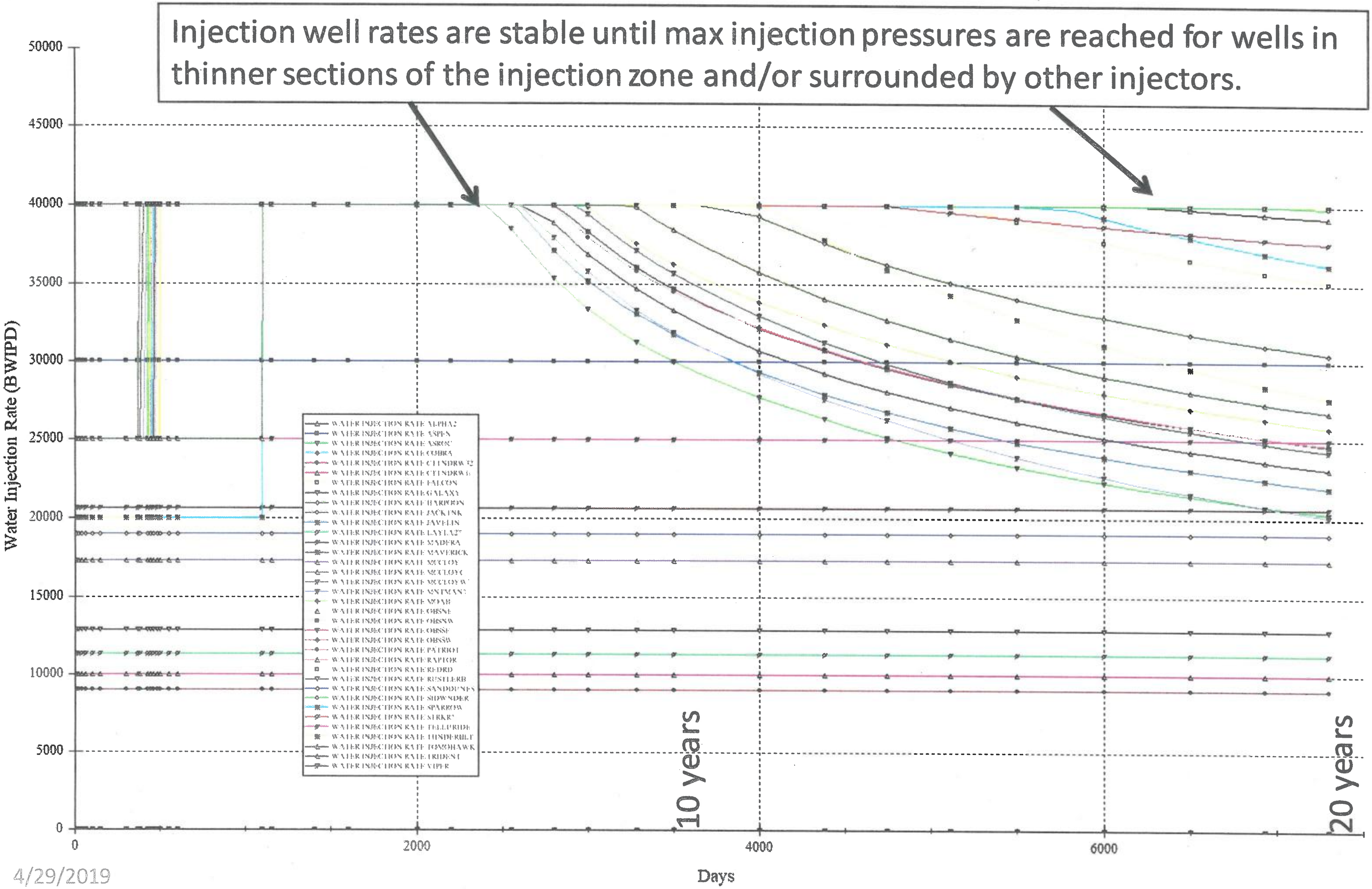
Simulation predictions for individual wells over time.



Exh. 21

NGL Water Solutions, LLC

Simulation predictions for individual wells over time.



4/29/2019

Exhibit 5

Exhibits of Kate Zeigler
On Behalf of NGL Water Solutions Permian, LLC

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

AMENDED APPLICATION OF NGL WATER SOLUTIONS PERMIAN, LLC FOR APPROVAL OF SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO

CASE NO. 16506 (HARPOON)

AMENDED APPLICATION OF NGL WATER SOLUTIONS PERMIAN, LLC FOR APPROVAL OF SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO

CASE NO. 20150 (MAVERICK)

AFFIDAVIT OF DR. KATE ZEIGLER

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

I, Kate Zeigler, make the following affidavit based upon my own personal knowledge.

1. I am over eighteen (18) years of age and am otherwise competent to make the statements contained herein.

2. I am the senior geologist at Zeigler Geologic Consulting, and I provide a wide range of geoscience related services to companies and other entities in Southeastern New Mexico.

3. I have obtained a bachelor's degree in geology from Rice University, a master's degree in paleontology from the University of New Mexico, and a Ph.D. in stratigraphy and paleomagnetism from the University of New Mexico. Additionally, I have completed several

surface geologic maps for the New Mexico Bureau of Geology and Mineral Resource's Geologic Mapping Program as well as for independent operators who are exploring prospects within the western Permian Basin. I have also conducted a prior geologic study concerning what is commonly referred to as the Devonian and Silurian formations in Southeastern New Mexico to help determine whether the approval of 7" by 5 ½" tubing is appropriate in Devonian and Silurian salt water disposal wells approved by the New Mexico Oil Conservation Division.

4. I am familiar with the amended applications that NGL Water Solutions Permian, LLC ("NGL") has filed in these matters, and I have conducted a geologic study of the lands which are the subject matter of the applications. A copy of my geologic study, including cross sections, a structure map and isopach are included in Attachment A to this affidavit.

5. The applicant, NGL (OGRID No. 372338), seeks an order approving the Harpoon SWD #1 well (Case No. 16506), which is a salt water disposal well.

6. The applicant, NGL (OGRID No. 372338), seeks an order approving the Maverick SWD #1 well (Case No. 20150), which is a salt water disposal well.

7. I have been informed that the injection intervals for the wells will be isolated to the Devonian and Silurian formations (also referred to as the Wristen Group and Fusselman Formation) and the wells will have four strings of casing protecting the fresh water aquifer, the salt-bearing interval, the Permian aged rocks through the Wolfcamp Formation. The deepest casing is 7 5/8", which is cemented and cement is circulated on the 7 5/8" casing.

8. The wells will be spaced out and not located closer than approximately 1 mile from other disposal wells that have been approved for injection into the Devonian and Silurian formations.

9. The injection zone for the wells are located below the Woodford Shale. The Woodford Shale is an Upper Devonian unit which has low porosity and permeability and consists predominantly of shale and mudstone with some carbonate beds. The Woodford Shale acts as a permeability boundary to prevent fluids from moving upward out of the underlying formations. The Woodford Shale formation in the areas where the wells are located is between 150 feet to 200 feet thick.

10. Below the injection zone for the wells is the Ordovician formation, also referred to as the Simpson Group, which contains sequences of shale that make up approximately 55% of the total thickness of the formation in any given place and can likewise act as a permeability boundary which prevents fluids from migrating downwards into deeper formations and the basement rock. In the areas where the wells are located, the Ordovician formation is between 850' and 900' feet thick and, as a result, there is a significant thickness in this lower shale. Below the Ordovician is the Ellenburger Formation, which is up to 650 feet thick.

11. Based on my geologic study of the area, it is my opinion that the approved injection zone for the wells is located below the base of the Woodford Shale formation and above the Simpson Group formation, both of which consist of significant shale deposits. Evidence indicates that shale formations located above and below the approved injection zones will likely restrict fluids from migrating beyond the approved injection zones for the wells.

12. The wells will primarily be injecting fluids into the Wristen Group and Fusselman Formation, with some fluids potentially being injected into the Upper Montoya Group. Each of these rock units are located within what is commonly referred to by operators and the Division as the "Devonian-Silurian" formations. These zones consist of a very thick sequence of limestone

and dolostone which has significant primary and secondary porosity and permeability that is collectively between 1,800 to 2,000 feet thick.

13. It is my opinion that there is no risk to freshwater resources for injection within the Wristen Group, Fusselman, and Upper Montoya Group because of the depth of these sub-formations and the upper shale permeability boundary created by the Woodford Shale.

14. I have also studied the location of known fault lines within the area where the wells are proposed to be drilled and the closest known fault line to the wells is located approximately 2 miles away from where the wells are proposed to be drilled.

15. There are no currently recognized production shales within the Wristen Group, Fusselman Formation, and Upper Montoya Group in this part of the western Permian Basin. While there may be some isolated traps located within these sub-formations, it takes significant ability with imaging to be able to locate these deposits in order to properly target them.

16. I attest that the information provided herein is correct and complete to the best of my knowledge and belief.

17. The granting of these applications is in the interests of conservation and the prevention of waste.

[Signature page follows]

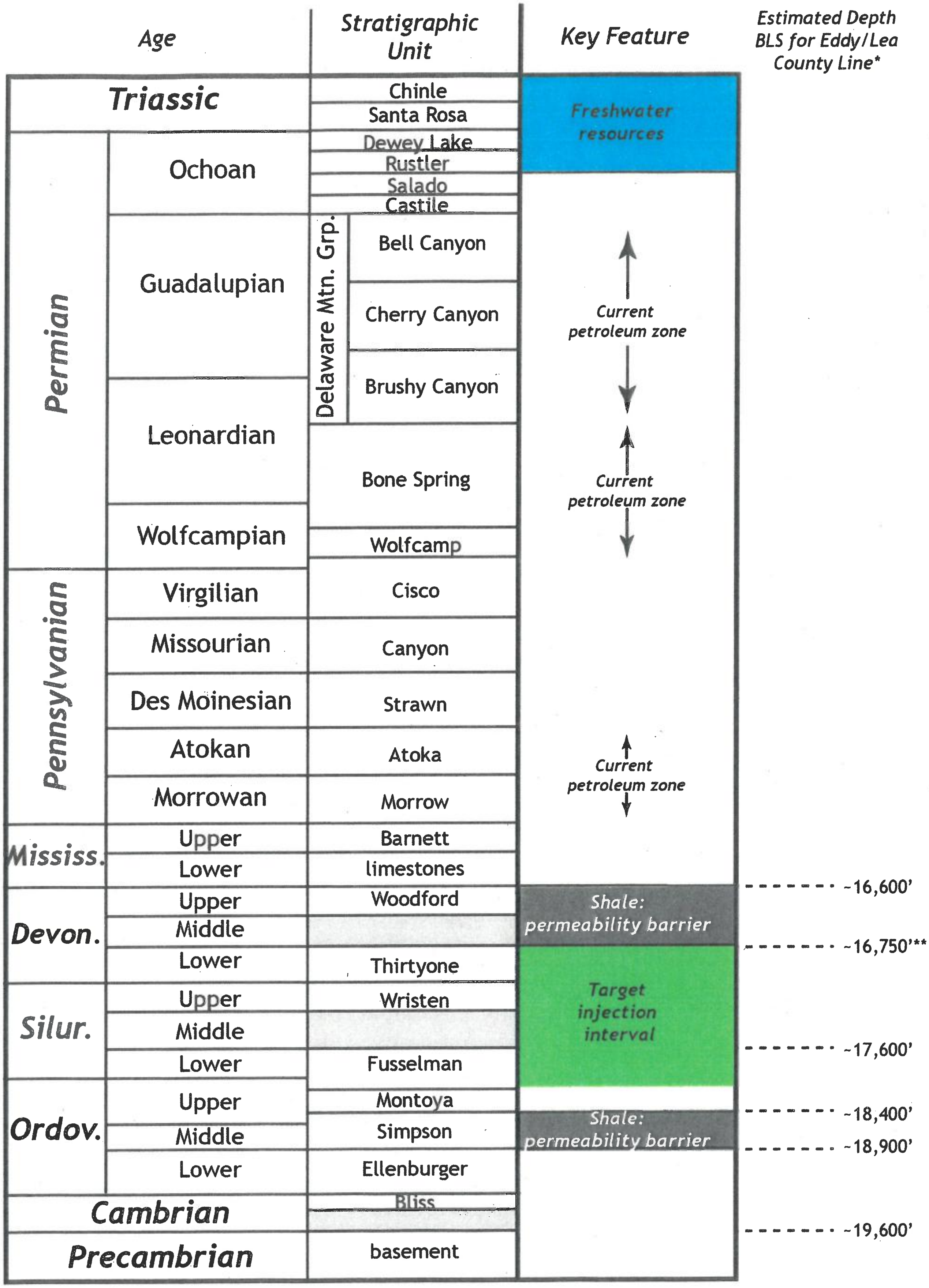
Dr. Kate Zeigler

SUBSCRIBED AND SWORN to before me this 30 th day of April, 2019 by Dr. Kate Zeigler.

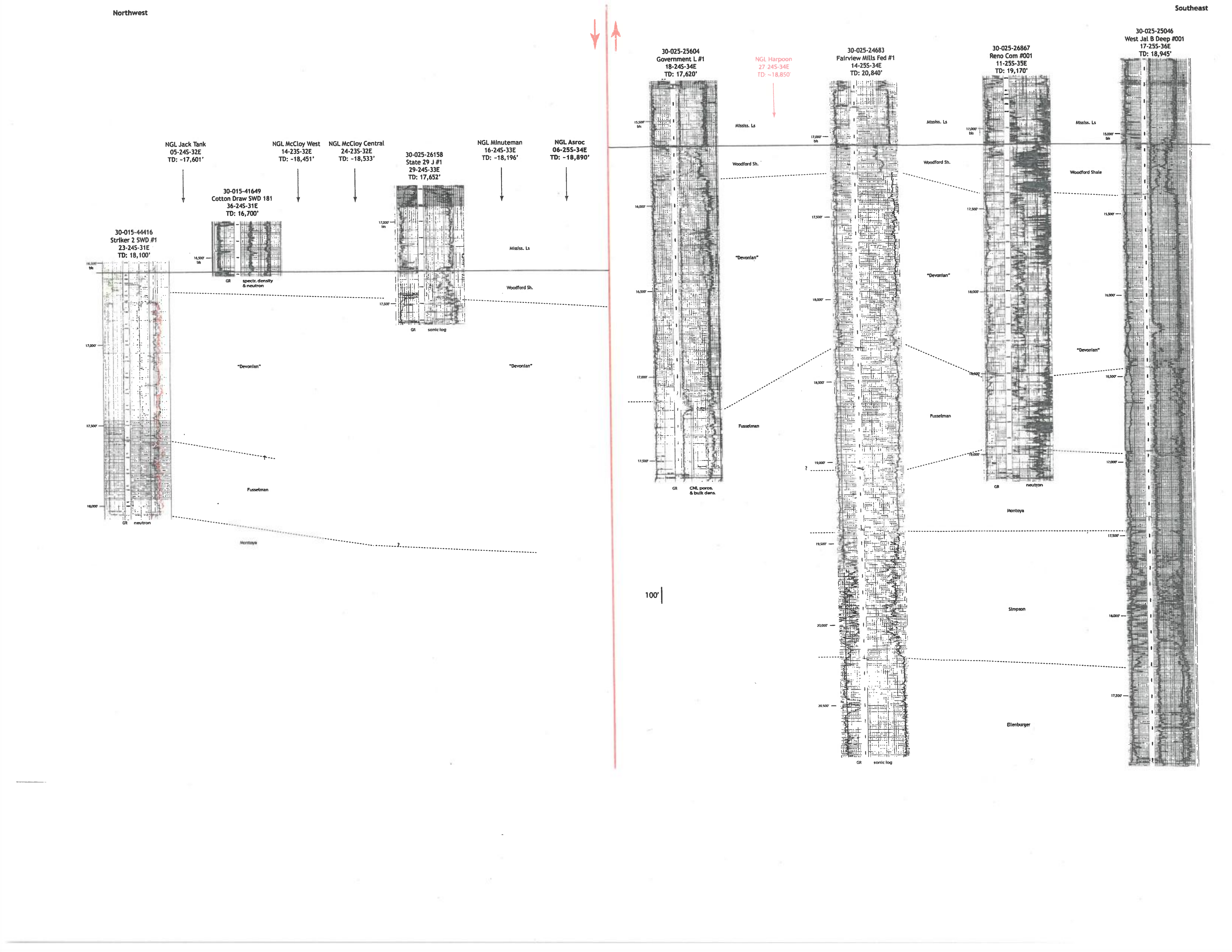
Notary Public

My commission expires: 01/31/2023

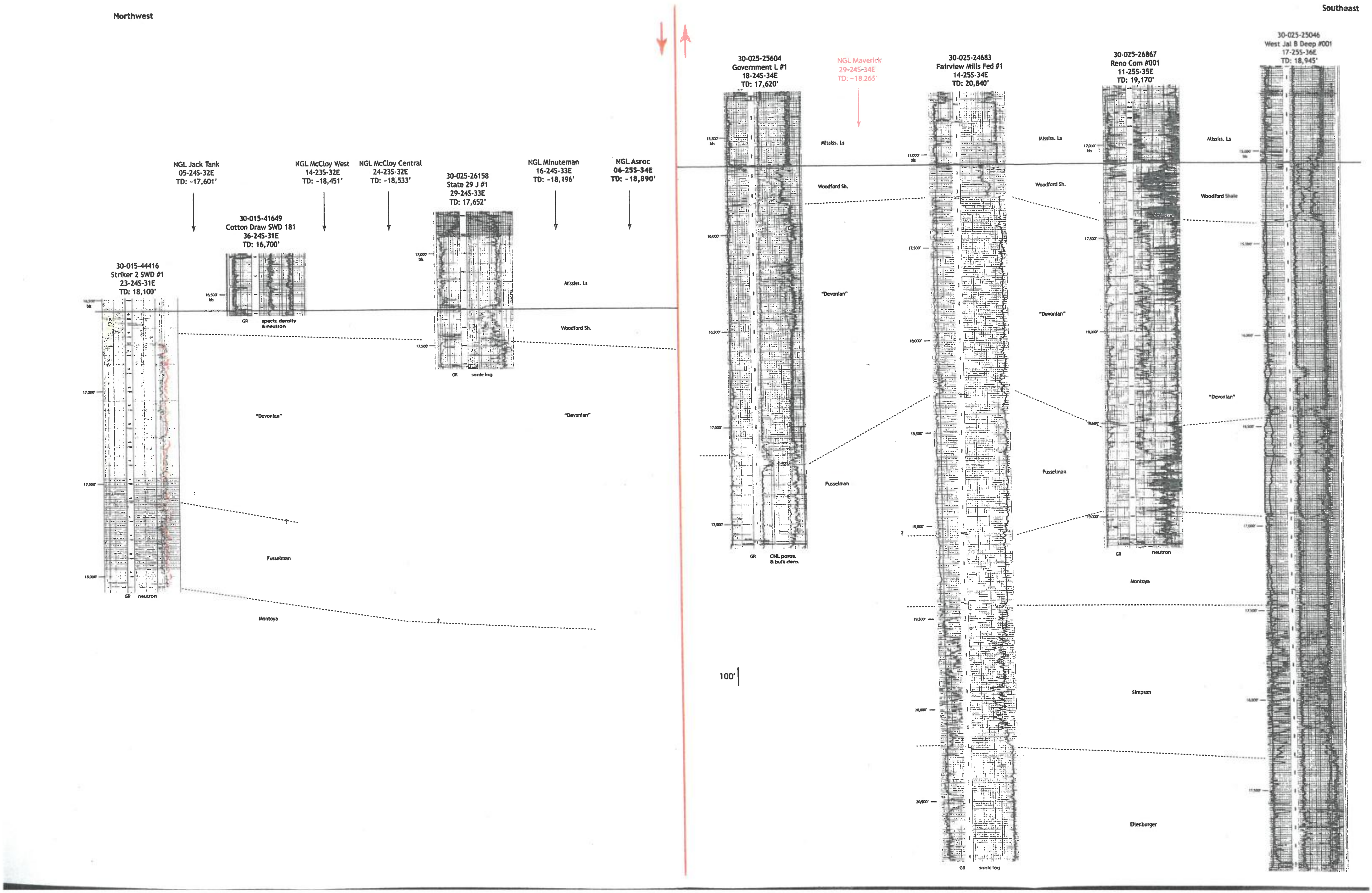
OFFICIAL SEAL
BELINDO YAZZIE
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 01/31/2023



Stratigraphic chart for the Delaware Basin from Broadhead (2017).
* Based on data from 30-015-44416 Striker 2 SWD #1 (23-24S-31E).
**Note the Thirtyone Formation is not present in the project area.



Northwest
Southeast
NGL Jack Tank
05-24S-32E
TD: -17,601'
NGL McCloy West
14-23S-32E
TD: -18,451'
NGL McCloy Central
24-23S-32E
TD: -18,533'
NGL Minuteman
16-24S-33E
TD: -18,196'
NGL Asroc
06-25S-34E
TD: -18,890'
30-015-44416
Striker 2 SWD #1
23-24S-31E
TD: 18,100'
30-015-41649
Cotton Draw SWD 181
36-24S-31E
TD: 16,700'
30-025-26158
State 29 J #1
29-24S-33E
TD: 17,652'
30-025-25604
Government L #1
18-24S-34E
TD: 17,620'
NGL Harpoon
27 24S-34E
TD: ~18,850'
30-025-24683
Fairview Mills Fed #1
14-25S-34E
TD: 20,840'
30-025-26867
Reno Com #001
11-25S-35E
TD: 19,170'
30-025-25046
West Jal B Deep #001
17-25S-36E
TD: 18,945'
Mississ. Ls
Woodford Sh.
Woodford Shale
"Devonian"
Fusselman
Montoya
Simpson
Ellenburger
GR
neutron
spectr. density & neutron
sonic log
CNL poros. & bulk dens.
100'



Northwest
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36-24S-31E
TD: 16,700'
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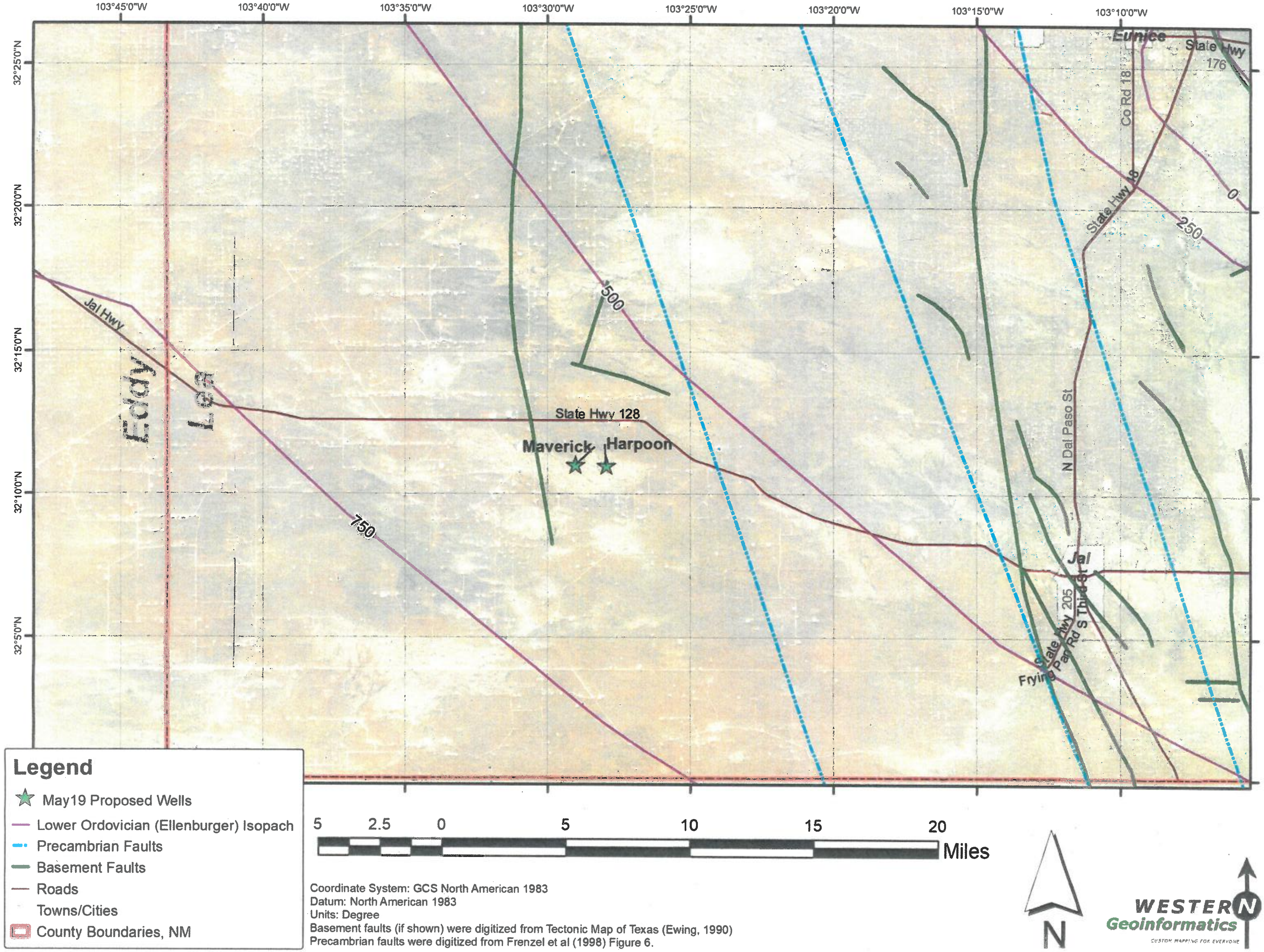
Woodford Shale
"Devonian"
Fusselman
Montoya
Simpson
Ellenburger
GR
neutron
spectr. density & neutron
sonic log
CNL poros. & bulk dens.
100'

Isopach, Faults, and Well Locations



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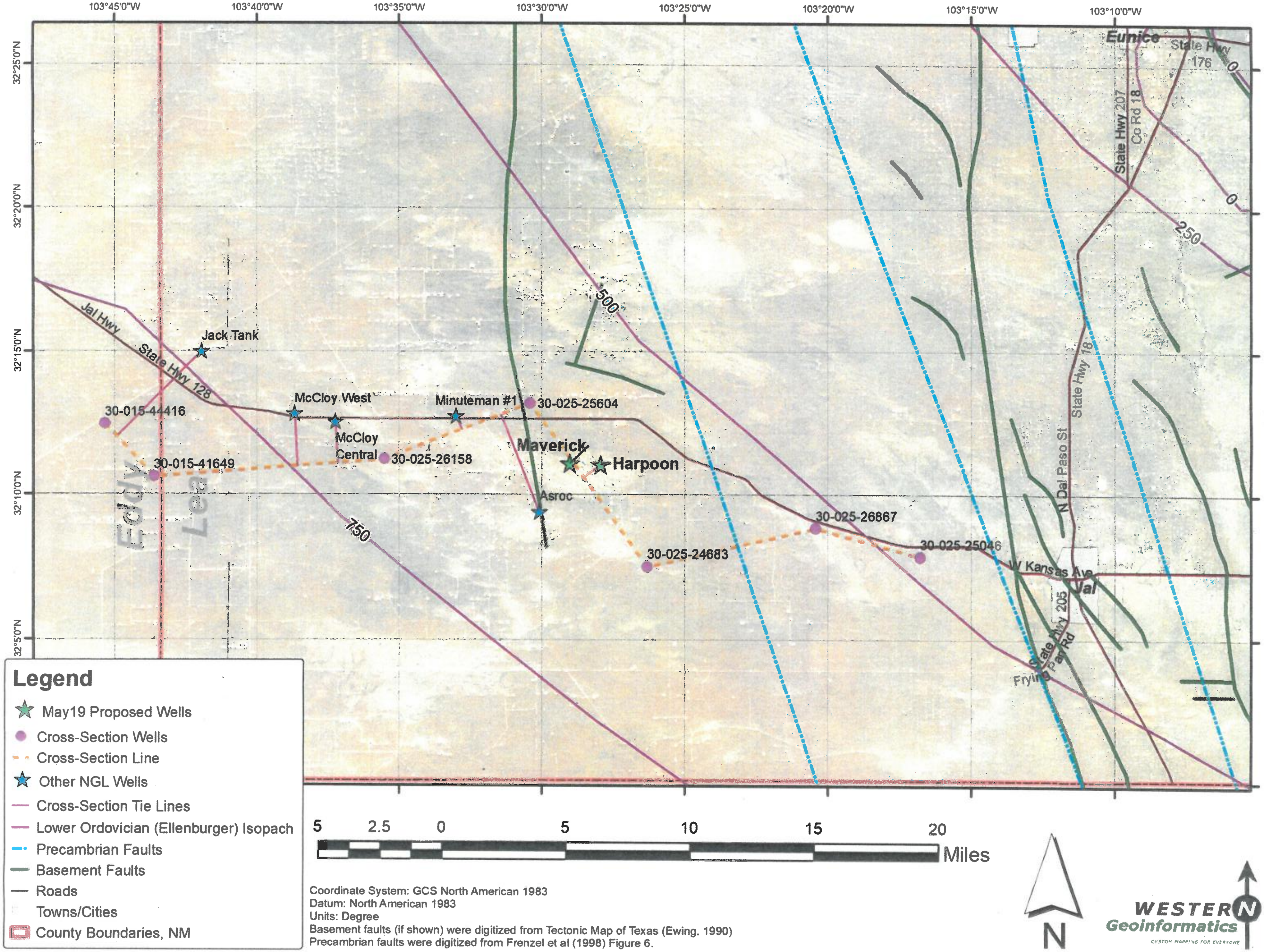
Datum: North American 1983
Units: Degree
Basement faults (if shown) were digitized from Tectonic Map of Texas (Ewing, 1990)
Precambrian faults were digitized from Frenzel et al (1998) Figure 6.

Isopach, Faults, and Well Locations



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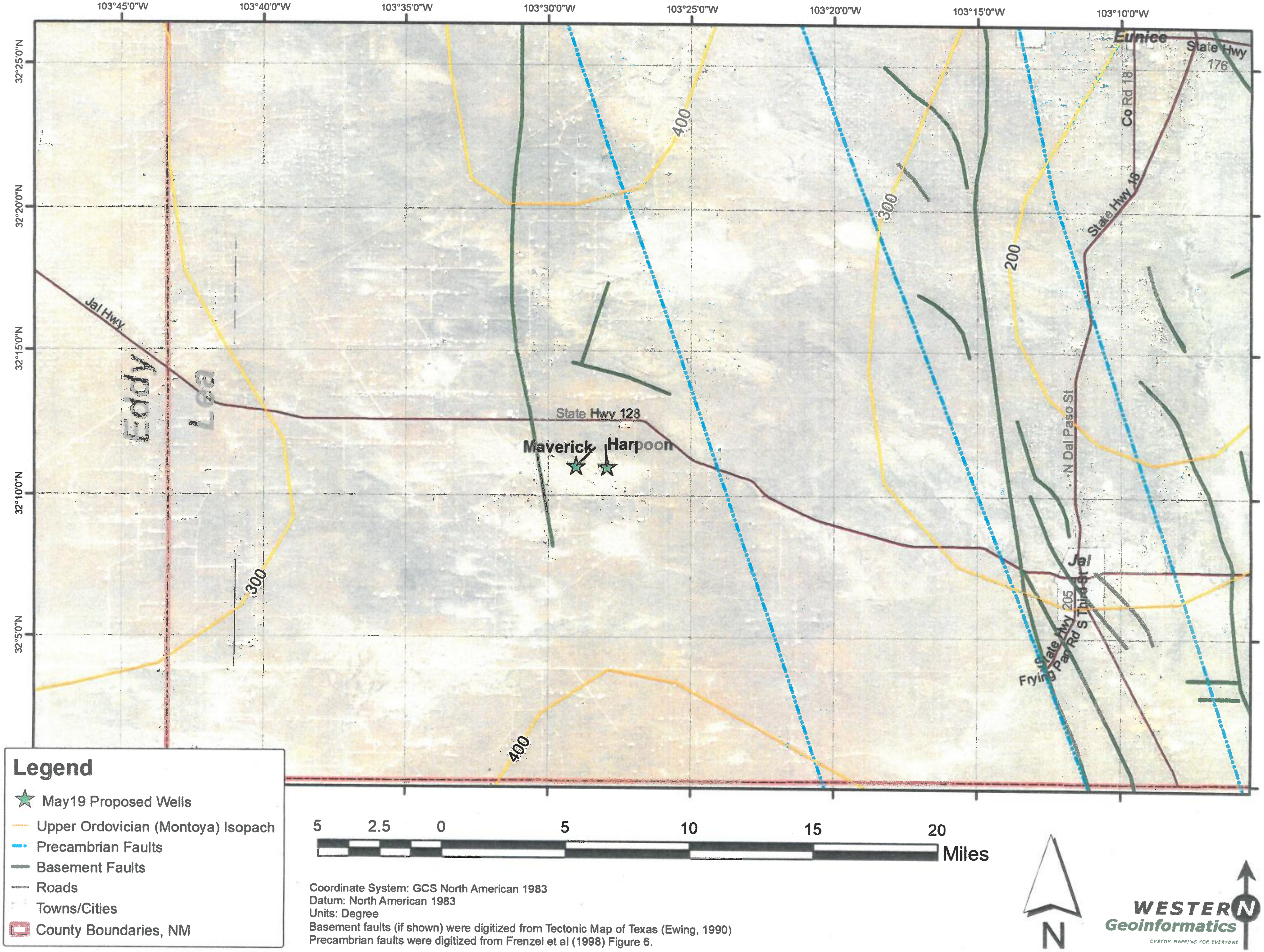

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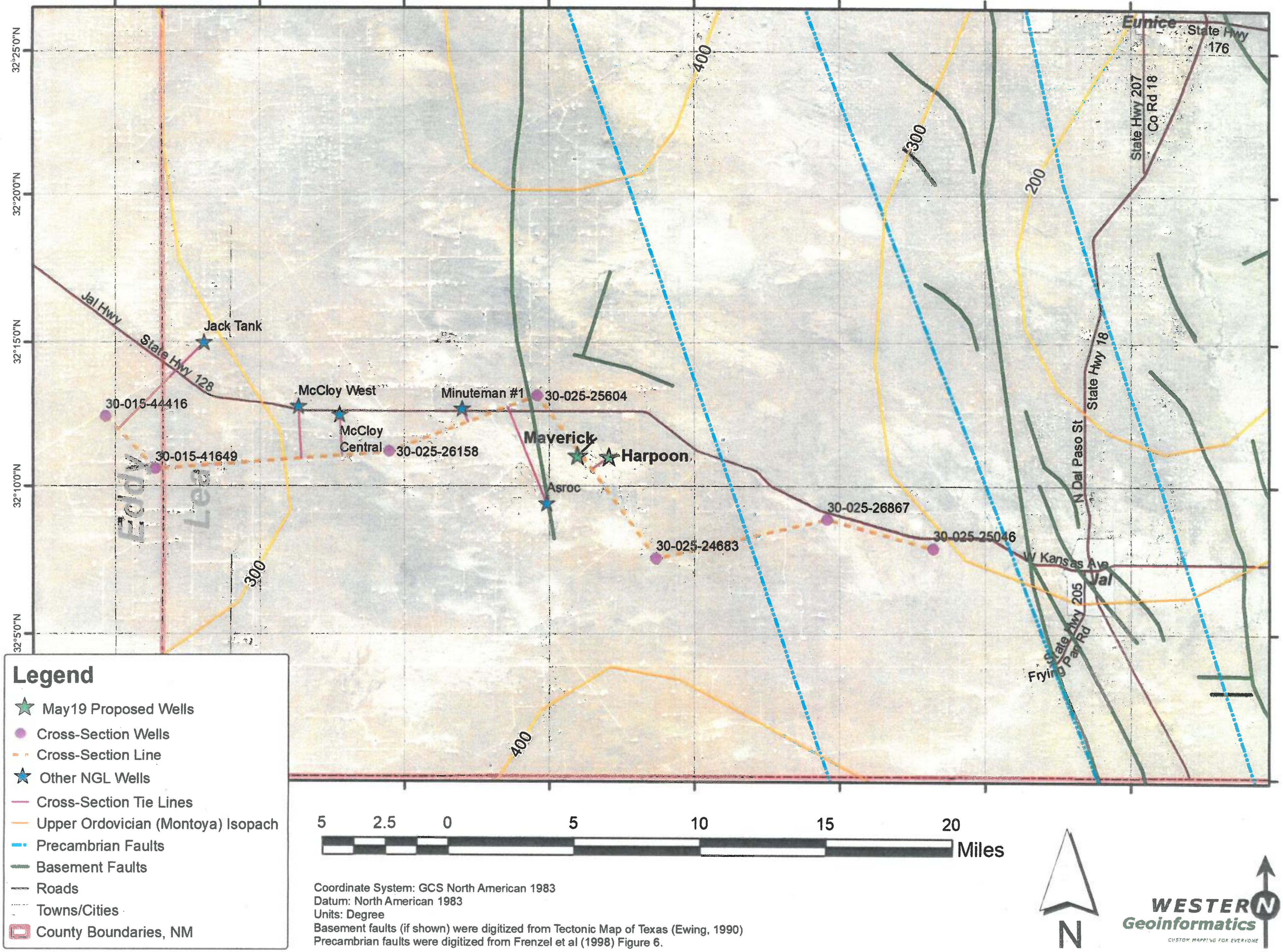
WESTERN Geoinformatics
CUSTOM MAPPING FOR EVERYONE

Isopach, Faults, and Well Locations



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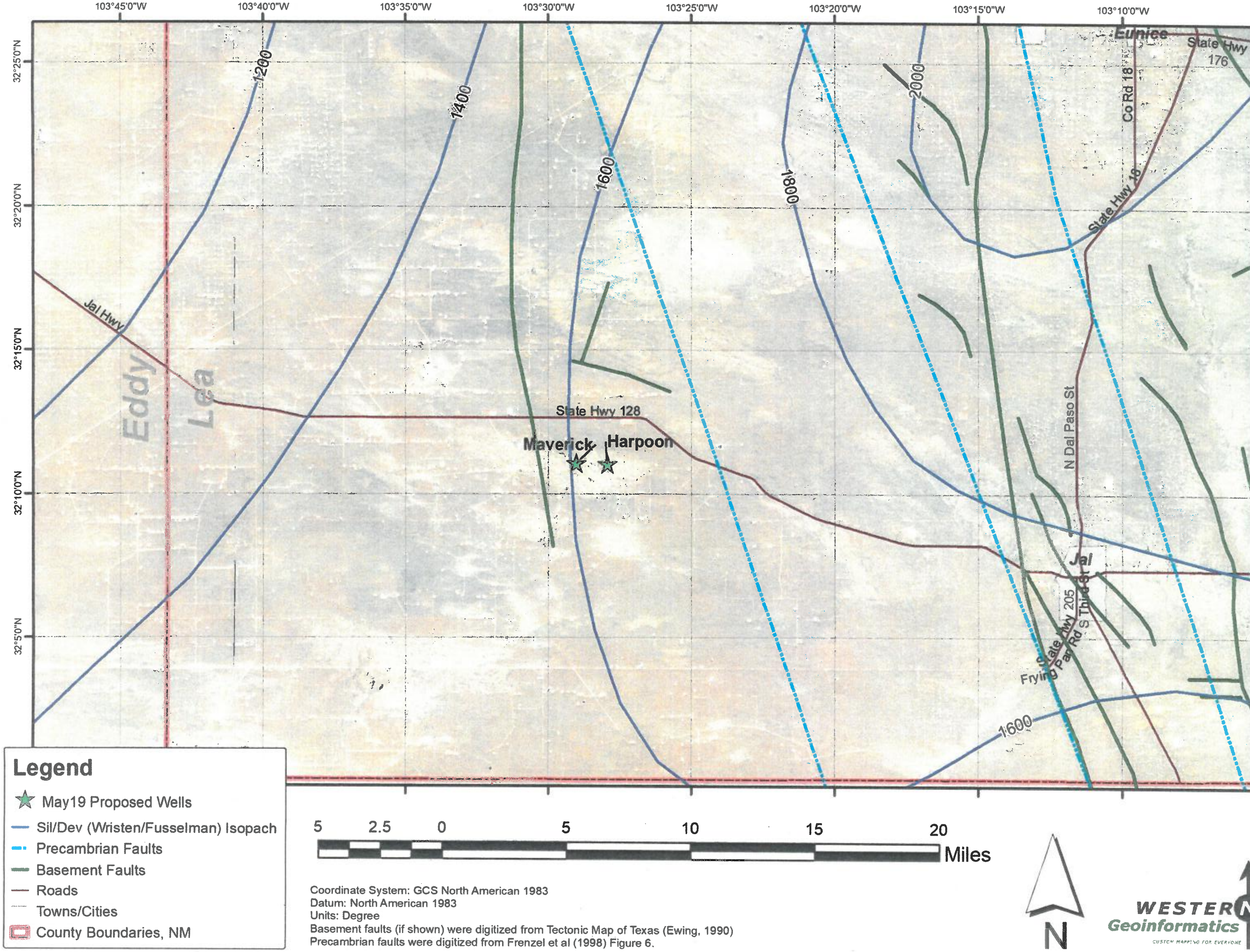

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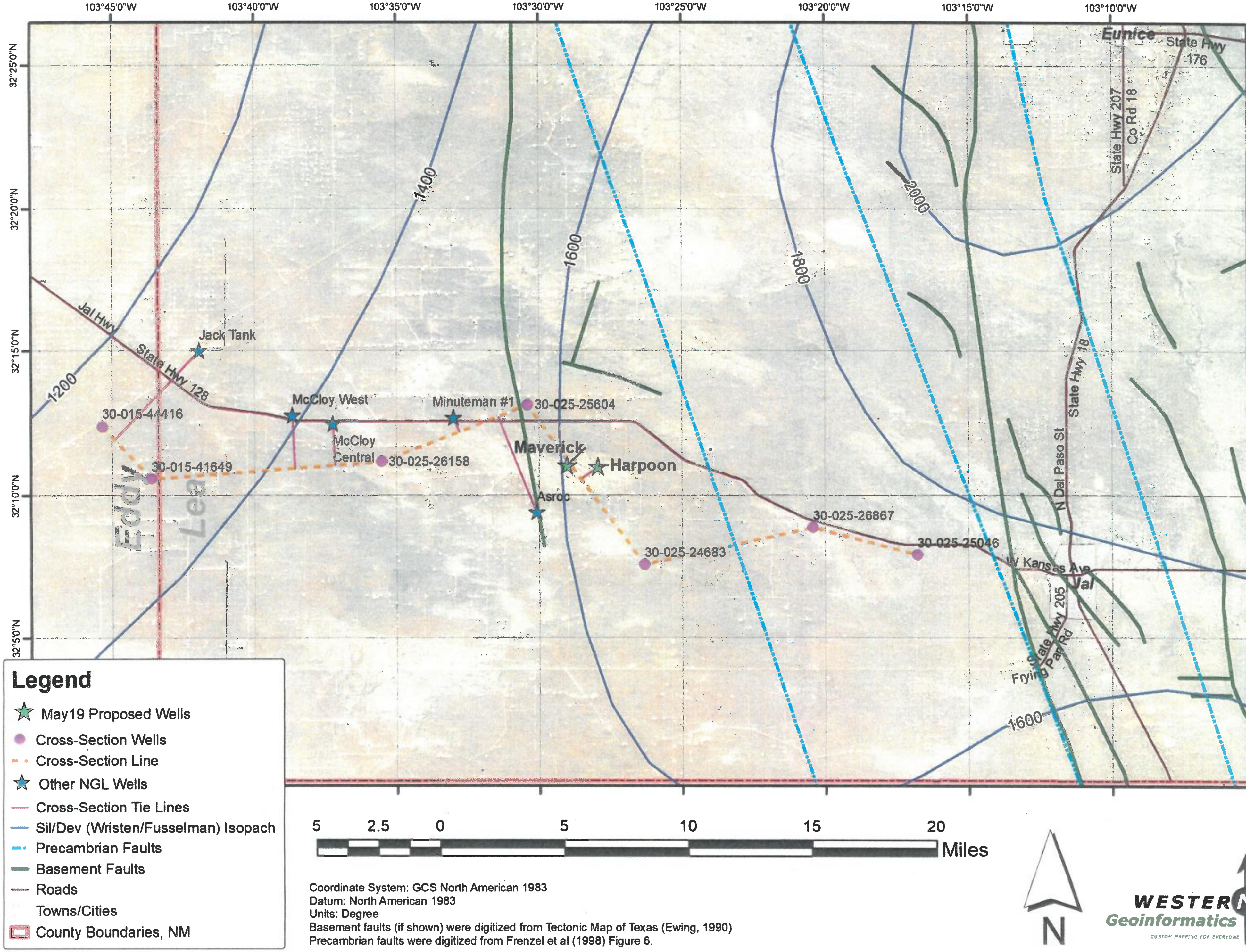

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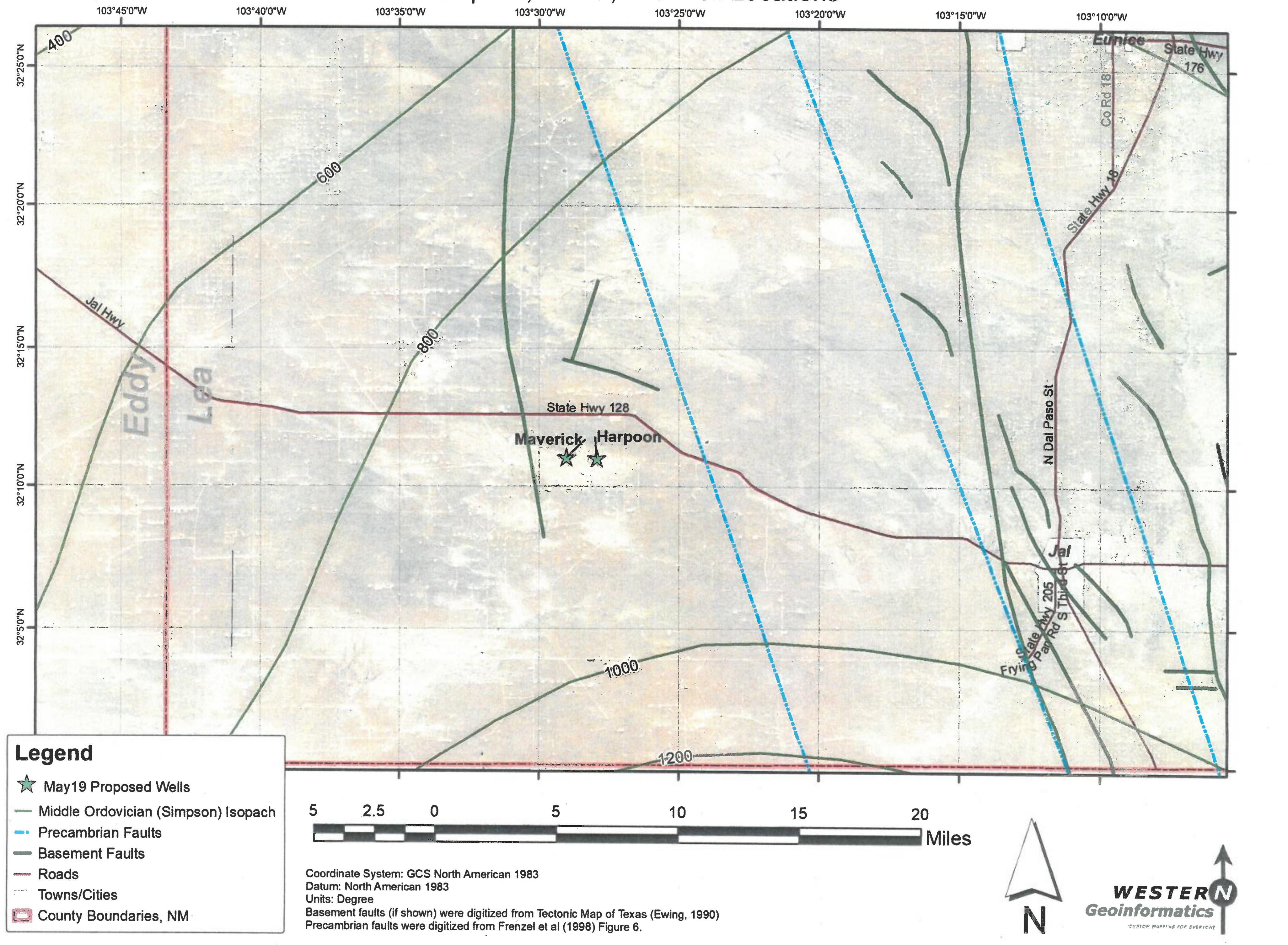
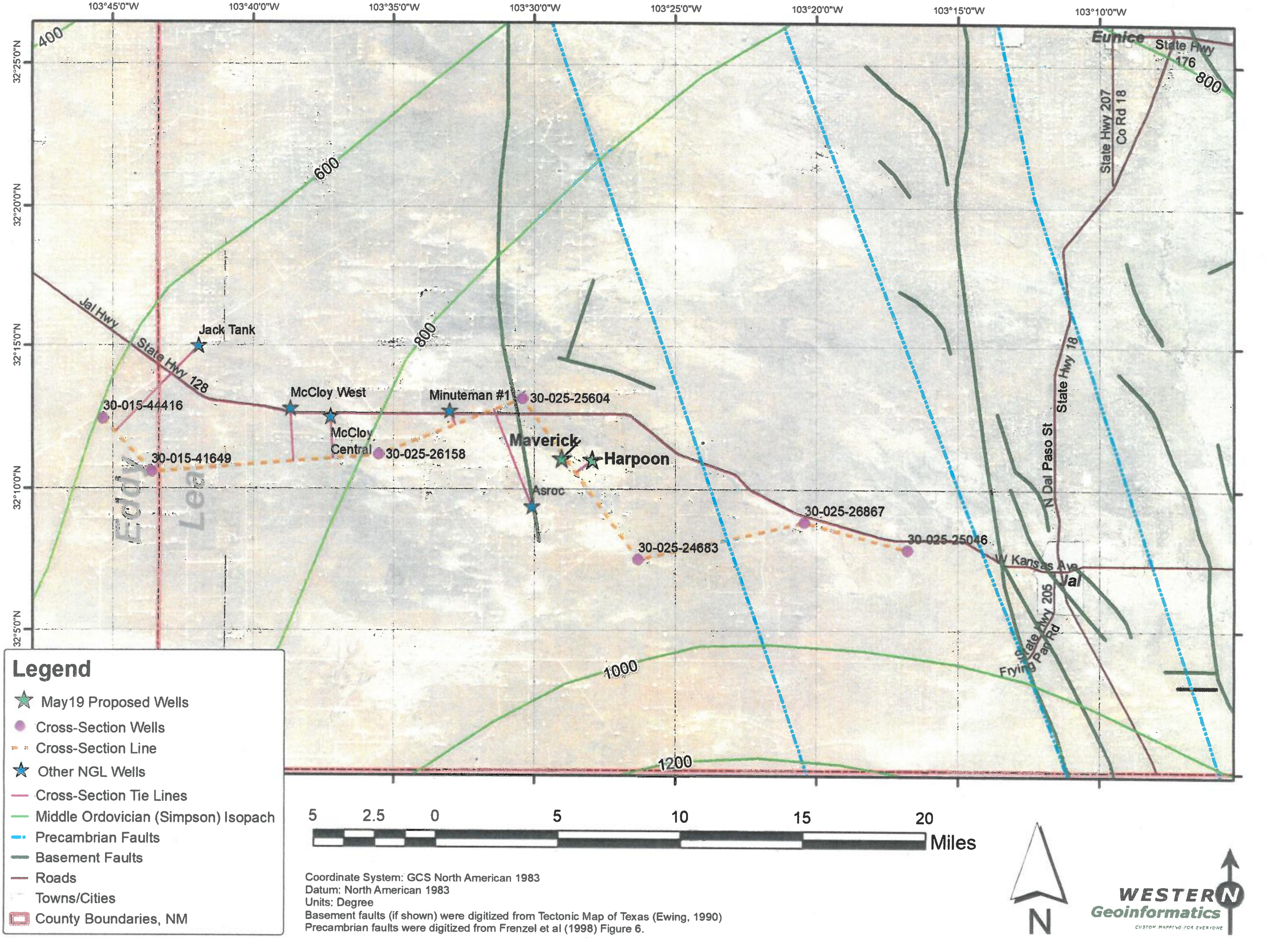


Isopach, Faults, and Well Locations



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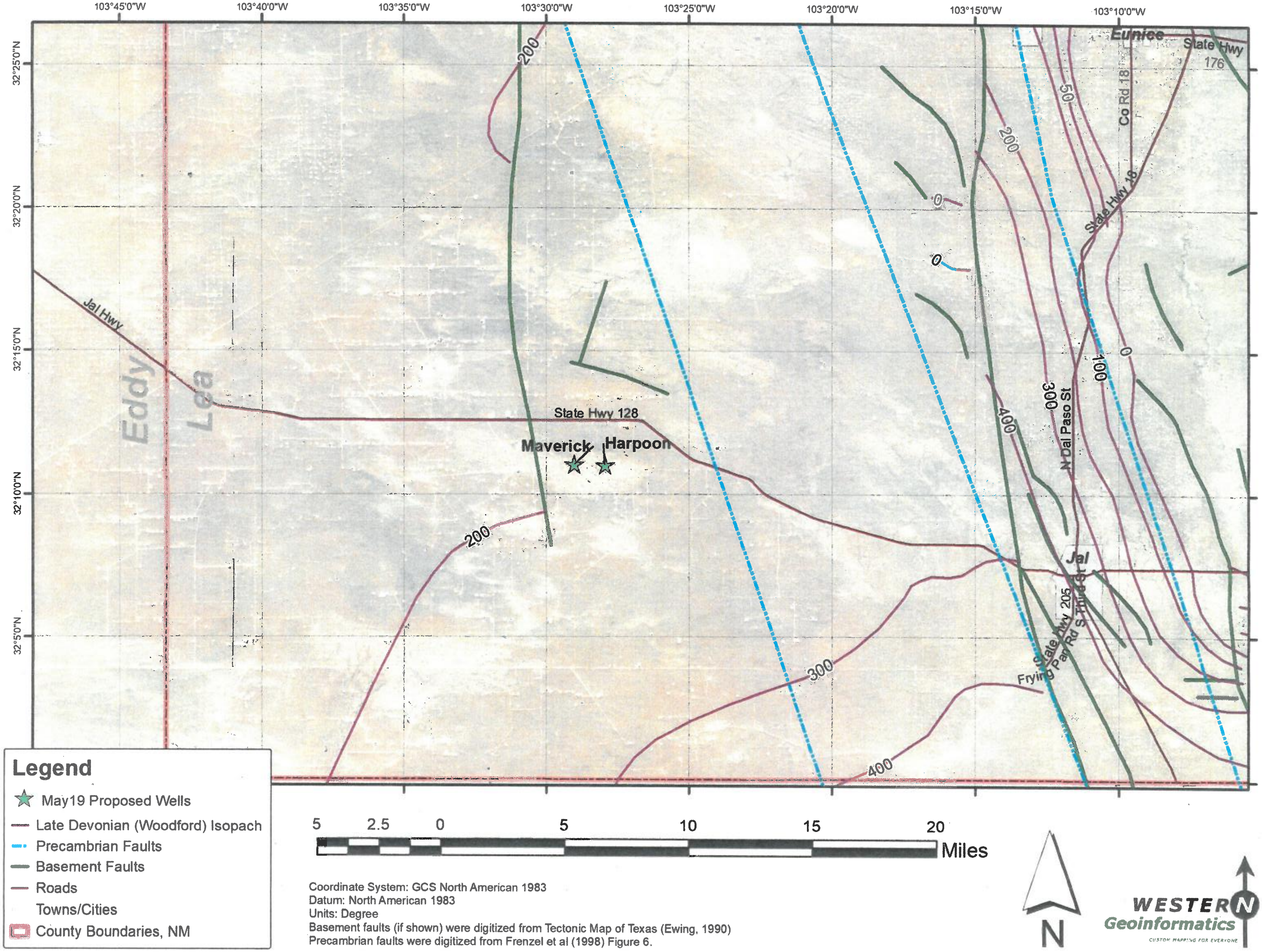
Isopach, Faults, and Well Locations



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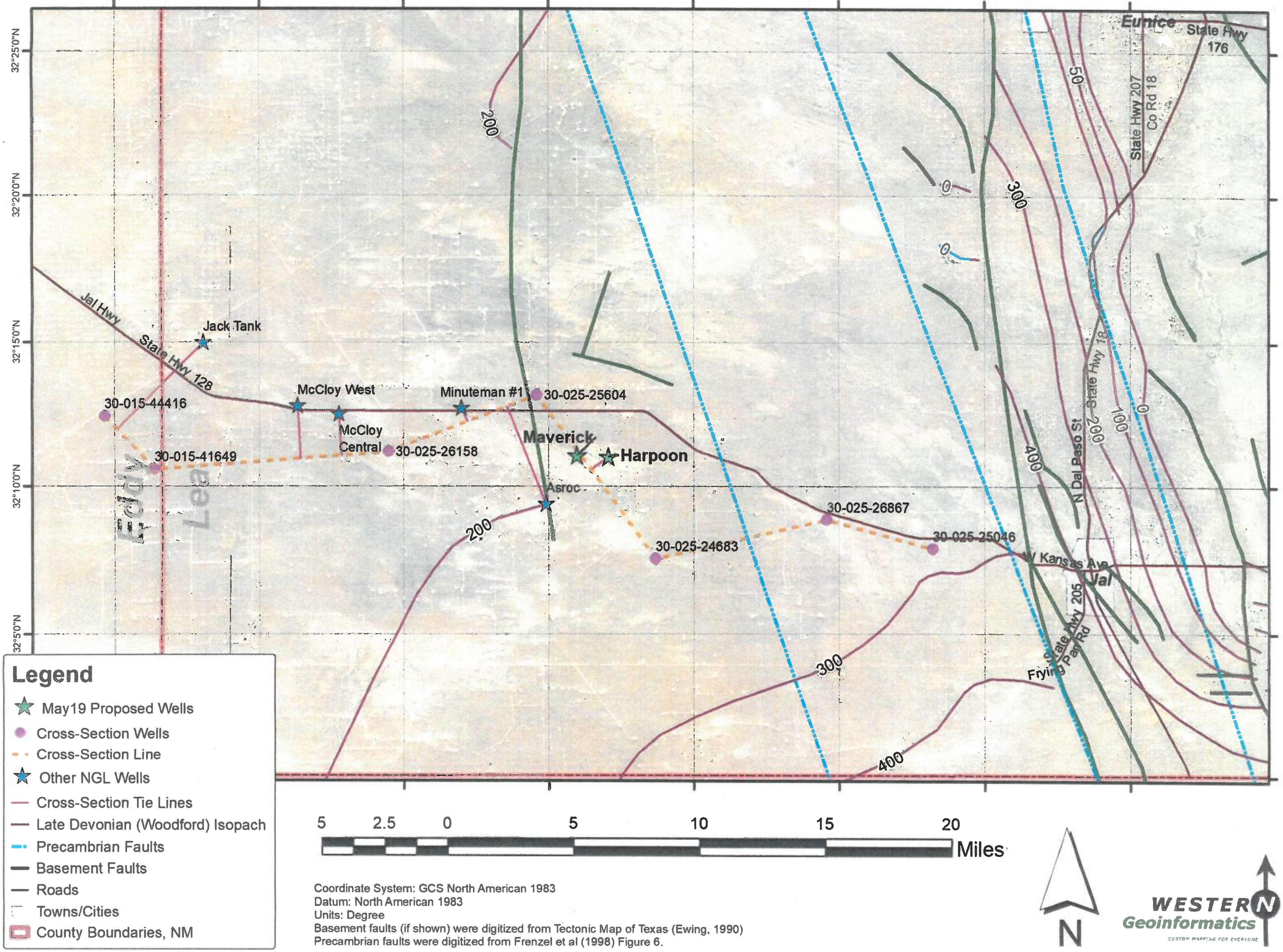

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Exhibit 6

Exhibits of Dr. Steven Taylor
On Behalf of NGL Water Solutions Permian, LLC

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

AMENDED APPLICATION OF NGL WATER SOLUTIONS PERMIAN, LLC FOR APPROVAL OF SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO

CASE NO. 16506 (HARPOON)

AMENDED APPLICATION OF NGL WATER SOLUTIONS PERMIAN, LLC FOR APPROVAL OF SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO

CASE NO. 20150 (MAVERICK)

AFFIDAVIT OF DR. STEVEN TAYLOR

STATE OF NEW MEXICO)
) ss.
COUNTY OF __________)

I, Dr. Steven Taylor, make the following affidavit based upon my own personal knowledge.

1. I am over eighteen (18) years of age and am otherwise competent to make the statements contained herein.

2. I have worked at the Los Alamos National Labs from 1991 to 2006. I currently am the secretary of GeoEnergy Monitoring Systems, Inc., a company that builds and conducts seismic monitoring.

3. I have obtained a Bachelor of Science degree in geology at Ohio University (1975) and a Ph.D. in Geophysics at the Massachusetts Institute of Technology (1980).

4. I am familiar with the amended applications that NGL Water Solutions Permian, LLC ("NGL") has filed in these matters and I have conducted a study related to the areas which is the subject matter of the applications.

5. The applicant, NGL (OGRID No. 372338), seeks an order approving the Harpoon SWD #1 well (Case No. 16506), which is a salt water disposal well.

6. The applicant, NGL (OGRID No. 372338), seeks an order approving the Maverick SWD #1 well (Case No. 20150), which is a salt water disposal well.

7. The approved injection zone for the wells is located below the base of the Woodford Shale formation and above the Ordovician formation, which consists of significant shale deposits.

8. The closest known fault line is located approximately 2 to 20 miles away from where the wells are located.

9. I have studied seismic catalogs, unpublished catalogs and USGS catalogs for the time period of 2010 – 2017 selective events within 50 km of one the Striker SWD wells. Attached as Exhibit A is a copy of my study. My study concludes that there is very little seismic activity in the areas where the wells are located.

10. I have also reviewed information provided by FTI Platt Sparks involving several different fault slip probability analysis conducted, using a tool created by Stanford University. These fault slip potential models showed low probability of slip or earthquakes to known mapped faults located closest to the wells. A copy of the studies are attached hereto as Exhibit B.

11. I attest that the information provided herein is correct and complete to the best of my knowledge and belief.

Dr. Steven Taylor

SUBSCRIBED AND SWORN to before me this 30th day of April, 2019 by Dr. Steven Taylor.

Notary Public

My commission expires: 3/17/2020

OFFICIAL SEAL
MARGARET BARRAZA
Notary Public
State of New Mexico
My Comm. Expires 3/17/2020

Seismic Catalog Analysis Within 50 km of Maverick and Harpoon SWD Wells

Prepared for NGL-Permian
by
GeoEnergy Monitoring Systems
April 11, 2019

Analysis is based on NMT seismic catalogs, unpublished catalogs and USGS catalogs for the time period 2010-2017 selecting events within 50 km of the Maverick and Harpoon SWD wells. Additionally, seismic monitoring through March 31, 2019 from the three NGL seismic stations installed at Striker 2, Striker 3 and Striker 6 SWD wells on September 6, 2018. NGL/GeoEMS installed a seismic monitor at the Salty Dog SWD well (SDOG) in Texas just across New Mexico border on March 28, 2019 that will help constrain locations in southeastern NM.

Striker Two (STR2), Sand Dunes well, Lat/Long: 32.2072820/-103.7557370
Striker Three (STR3), Gossett well, Lat/Long: 32.2551110/-104.0868610
Striker Six (STR6), Madera well, Lat/Long: 32.2091150/-103.5359570
Salty Dog (SDOG), Salty Dog well, Lat/Long: 32.22531/ -103.045212

Figure 1 shows seismic station locations with estimated detection levels for M 1.0 (green circles) and M 1.5 (red circles) along with NGL-Permian stations (yellow pushpins). **Figure 2** shows seismicity listed in Table 1 shown as red circles and additional regional stations from TexNet and NMT (green pushpins). These regional stations are used along with the 3 Striker SWD seismic stations for regional monitoring.

The USGS reports only two events in the vicinity since 2010. New Mexico Tech runs a seismic network (SC) north of the wells for the DOE Waste Isolation Plant (only short-period vertical components). There are a total of seven seismic events in this time period ranging in magnitude from 1.0 to 3.1. Since the seismic deployment, there have been event detections listed in Table 2 having preliminary locations using available regional data (**Figure 3**). Due to the small magnitudes, the signal-to-noise levels are low so the locations have large uncertainty and there is little constraint on depth.

Table 1: Seismicity Within 50 km of Striker SWD Wells 2010-2017

Date	Origin Time GMT	Latitude	Longitude	Depth (km)	Magnitude
20111227	23:10:37	32.37	-103.95	NaN	1.6
20120318	10:57:22	32.281	-103.892	5.0	3.1
20170211	14:34:27	32.29	-103.92	NaN	1.5
20170302	11:38:53	32.37	-103.88	NaN	1.7
20170325	22:46:01	32.13	-103.77	NaN	1
20170503	17:47:21	32.082	-103.023	5.0	2.6
20170814	01:09:56	32.39	-103.56	NaN	1.2

EXHIBIT
tabbies
A

Table 2. New Mexico Area Reporting Period Seismicity (km units)

Date	Origin Time (GMT)	Lat	Long	Depth	Loc Error	M	(+/-)
09/10/18	23:35:43.942	32.1793	-103.5283	1	5.58	1.25	0.23
09/14/18	06:57:47.614	32.1540	-103.5030	1	5.58	1.11	0.41
09/15/18	16:48:21.041	32.1630	-103.5211	1	5.37	1.50	0.00
10/13/18	22:07:22.259	32.0998	-103.4560	6	5.64	1.60	0.12
11/18/18	09:04:52.707	32.2526	-103.7853	5	3.77	1.75	0.20
12/09/18	18:51:00.805	32.3634	-103.8510	1	2.09	1.44	0.08
01/03/19	09:15:48.809	32.2761	-103.6732	6	5.64	1.63	0.00
01/03/19	23:05:33.122	32.2599	-103.7654	4	5.51	1.60	0.25
01/04/19	09:45:38.943	32.2346	-103.7798	4	4.34	1.98	0.38
01/09/19	10:18:54.389	32.2255	-103.7166	5	2.80	1.47	0.41
01/27/19	07:33:47.127	32.2219	-103.7220	5	3.53	1.72	0.31
02/19/19	09:35:15.109	32.2443	-103.6898	1	4.17	1.20	0.00

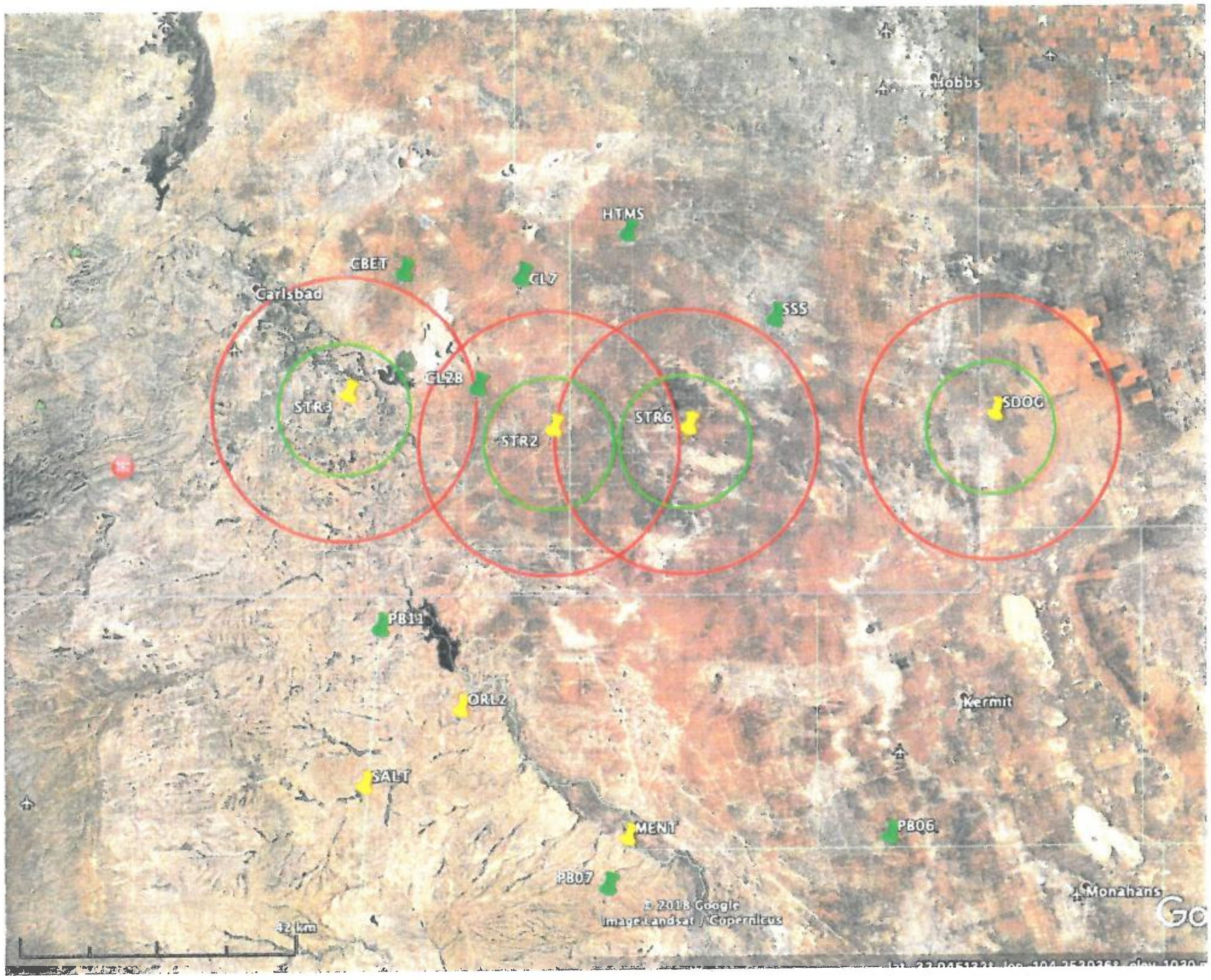

Figure 1. Striker SWD wells seismic station locations and existing NGL-Permian seismic stations (yellow pushpins). Green and red circles around stations show approximate detection levels for ML 1.0 and 1.5, respectively.

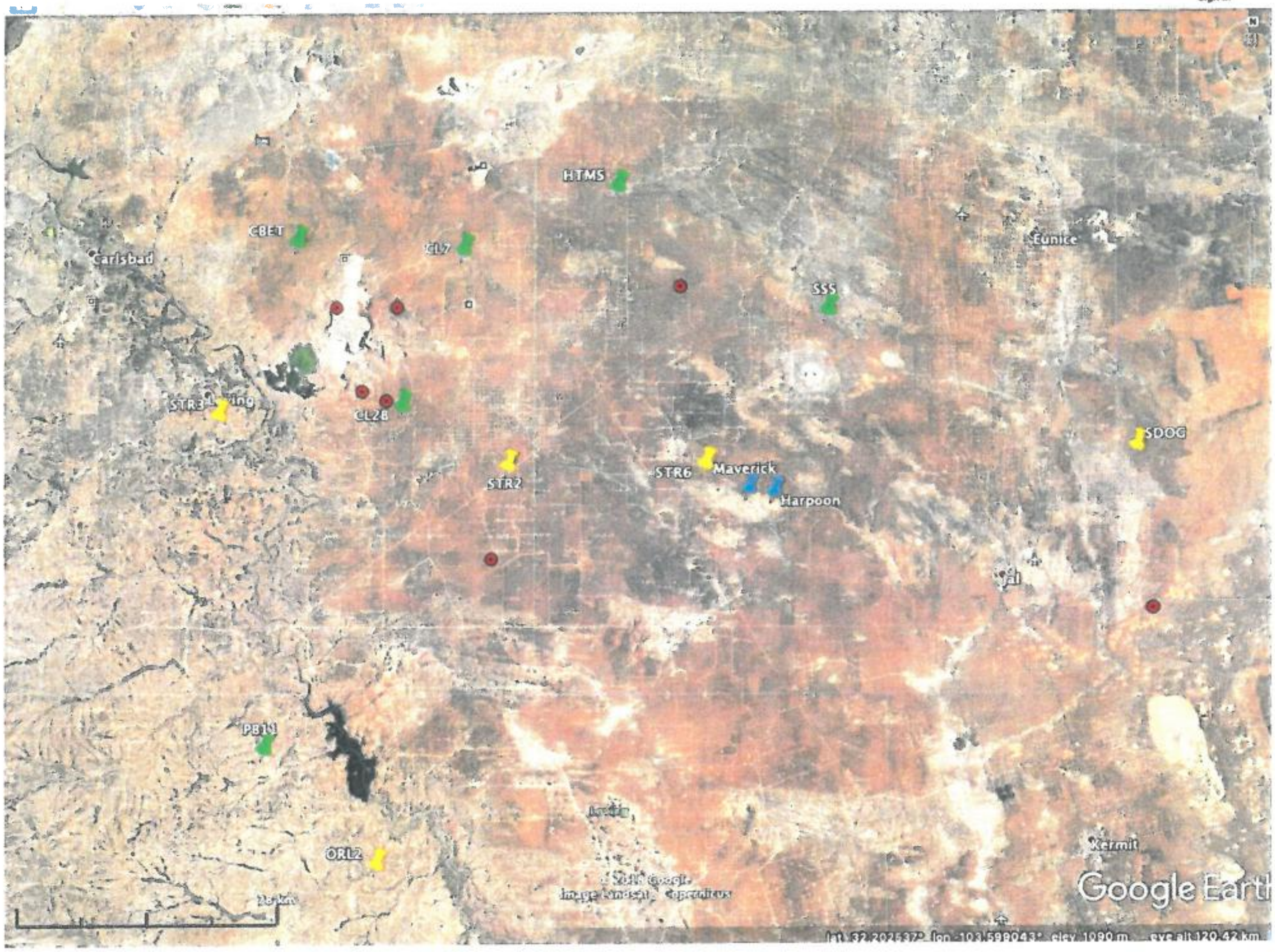

Figure 2. Striker SWD wells seismic station locations (yellow push pins) and existing NGL-Permian seismic stations (yellow pushpins). Other regional seismic stations run by TexNet and New Mexico Tech are shown as green pushpins. Historic seismicity listed in Table 1 shown as red circles. Maverick and Harpoon SWD wells are shown as blue pushpins.

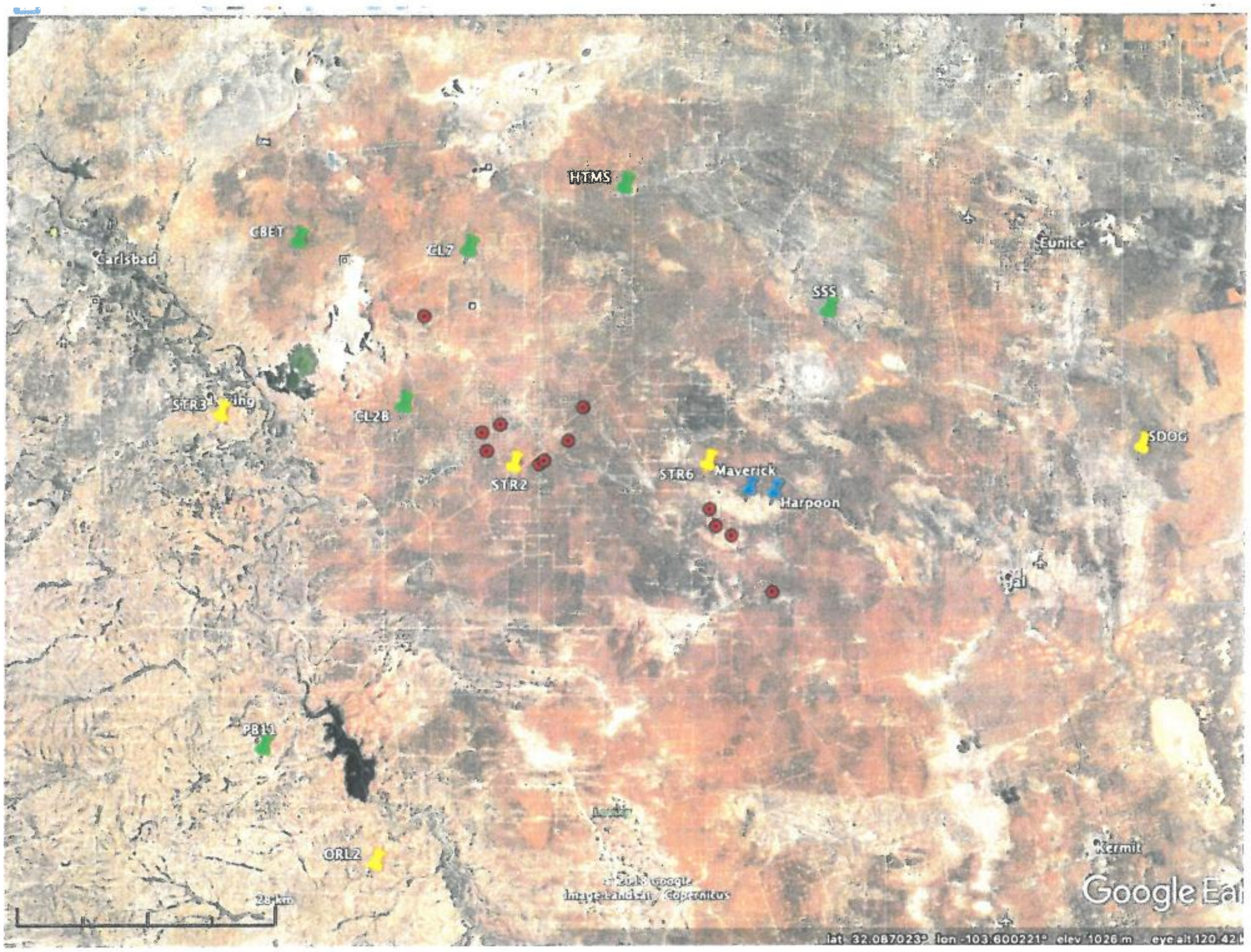

Figure 3. Seismic events in between September 6 and March 31, 2019 as red circles (Table 2). Seismic stations as yellow (NGL) or green (NMT and TexNet) pushpins. Maverick and Harpoon SWD wells are shown as blue pushpins.

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Texas Registered Engineering Firm No F - 16381

May 1, 2019

RE: FSP Analysis
NGL Water Solutions Permian, LLC **(Harpoon SWD #1)**
Eddy County, New Mexico

FSP Analysis

The FSP software used for this analysis was jointly developed by Stanford University, Exxon Mobil and XTO Energy as a tool for estimating fault slip potential resulting from fluid injection.

I have reviewed the geology, seismic activity, injection history and future proposed injection in the Subject Area and I would conclude that the Proposed **Harpoon SWD #1** well does not pose a risk of increasing seismicity in the area. The primary risk reduction factor is that the faults are not optimally oriented to slip, and significant pressure increases would be necessary to initiate slip on the faults analyzed.

Fault slip potential (FSP) was analyzed in the area of review shown on **Exhibit No. 1.** The analysis integrates the proposed well location as well as any existing injection wells in order to fully assess the pressure implications of injection in the area and the potential for slip along existing faults. There are no historical USGS earthquake locations within the review area. (see **Exhibit No. 1)**

Exhibit No. 2 shows the FSP input parameters for the local stress, average reservoir depth, pressure gradients and reservoir characteristics. Depths and reservoir characteristics were derived from nearby well logs and stress values were derived from the Lund Snee and Zoback (2018) paper related to Stress in the Permian Basin.

Exhibit No. 3 shows the location of existing wells and locations of the Proposed SWD well relative to the faults documented in this area. The faults are sourced from the Texas Bureau of Economic Geology

EXHIBIT
tabbies
B-1

and these are also the fault traces shown in the referenced Snee/Zoback paper (Figure 3 in the paper) and shown as **Exhibit No. 4** in my report. The Snee/Zoback paper only considers fault orientation relative to the stress orientation in determination of fault slip potential. Based on their limited analysis of the area they concluded the faults have low slip potential based on orientation/azimuth.

In my own independent subsurface mapping of the area and from review of other fault sources (Geomap), I have modified the fault traces to better fit more recently acquired data.

My analysis further incorporates the injection history and future injection projections and the injection reservoir characteristics to fully assess the potential for slip along these faults. Existing wells were incorporated into the analysis using their injection volume histories and holding them constant into the future at their last reported monthly injection volume. The Subject well was modelled at 40,000 bbls/day and held constant for the life of the analysis (+25 years). Well that have not been drilled or are currently pending were input in the model at +30,000 bbls/day.
(Only wells within the 10 km radius are used in the model)

The wells in the model: (**Exhibit No. 3 and Exhibit No. 1)**

VD	23895
MD	42448
S6	44291
AR	Asroc SWD
HP	Harpoon SWD
MV	Maverick SWD
SR	Sparrow SWD
TH	Tomahawk SWD
TD	Trident SWD
VP	Viper SWD
SW	Sidewinder SWD
Mo	Moab SWD 1
PT	Patriot SWD 1
MM	Minuteman SWD
JV	Javelin SWD
TL	Telluride Fed SWD
AS	Aspen SWD

Exhibit No. 5 illustrates the geomechanical properties of the fault segments in the area of review. It should be noted that the FSP software only calculates a single pressure change along a fault (at the fault mid-point) so it is critical that faults are broken into multiple segments to get a true evaluation of the pressure increases associated with injection. **Exhibit No. 5** also shows the direction of max hor. stress as denoted by the grey arrows outside the circle on the stereonet in the lower right portion of this exhibit. Faults that align parallel or closer to this orientation will have the highest potential for slip or lowest ΔP to slip. Faults 1-9 have very low potential for slip.

Exhibit No. 6 shows that the input stress and fault values were varied by +/-10% to allow for uncertainty in the input parameters. Even considering the variability of the inputs the model results show low probability for slip on the faults in the area of review. An increase of 800 psi still only results in a 10% probability of fault slip along the most critical fault segment (F14)

Exhibit No. 7 takes a closer look at Fault 14. The sensitivity analysis is highlighted in the lower right portion of this exhibit and shows that without any variability of inputs the ΔP needed to slip is 1,170 psi along this fault. A 10% change in the fault friction coefficient could lower ΔP needed to slip to 800 psi. Fault 13 fails at slightly higher values (1,174 and 820). All other faults require higher ΔP to slip and pressures do not approach failure values by the year 2045.

Exhibit No. 8 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2020. This map indicates ΔP pressure increase of 26 psi at F14.

Exhibit No. 9 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2025. This map indicates ΔP pressure increase of 108 psi at F14.

Exhibit No. 10 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2030. This map indicates ΔP pressure increase of 254 psi at F14.

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Exhibit No. 11 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2035. This map indicates ΔP pressure increase of 416 psi at F14. Note that this pressure is still well below the pressure that could initiate fault slip, which takes +800 psi. Pressure is building along the N-S fault segments F4 – F7 with pressure of 1,265 psi at F5, however these faults require ΔP pressures of +4,000 psi to fail.

Exhibit No. 12 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2040. This map indicates ΔP pressure increase of 574 psi at F14. Note that this pressure is still well below the pressure that could initiate fault slip, which takes +800 psi. Pressure is building along the N-S fault segments F4 – F7 with pressure of 1,508psi at F5, however these faults require ΔP pressures of +4,000 psi to fail.

Exhibit No. 13 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2045 This map indicates ΔP pressure increase of 723 psi at F14. Note that this pressure is approaching the pressure that could initiate fault slip, which takes +800 psi. Pressure is building along the N-S fault segments F4 – F7 with pressure of 1,719 psi at F5, however these faults require ΔP pressures of +4,000 psi to fail.

The pressure analysis over time shows that pressure is expected to increase along the faults however pressures remain below critical levels. The table below shows the ΔP pressure increases needed to imitate fault slip along each fault segment and the corresponding ΔP pressure increases as of 2045:

Fault Segment	ΔP to slip (fixed inputs)	ΔP to slip (10% varied inputs)	ΔP at 2045
F1	3,913	1,950	24
F2	4,844	2,500	104
F3	6,349	3,850	422
F4	6,255	3,800	1,365
F5	6,494	3,970	1,719
F6	6,353	3,850	1,622
F7	6,353	3,850	1,346
F8	6,353	3,850	933
F9	6,507	3,970	964
F10	5,897	3,500	1,117
F11	5,121	2,850	1,370
F12	3,572	1,850	665
F13	1,174	820	755
F14	1,170	800	723
F15	1,269	900	697
F16	1,359	1,100	394
F17	1,359	1,100	127
F18	2,893	1,600	667
F19	6,446	3,900	512
F20	6,953	4,500	327
F21	5,836	3,500	171
F22	3,884	1,900	59

TABLE 1

This analysis demonstrates that there is a low likelihood of injection induced seismicity in the Subject Area.

Conclusion

Most of the faults and fault trends in the area of review are not optimally oriented to slip. The orientation of the faults requires significant pressure changes (ΔP +6,000 psi) based on the fixed input parameters and the ΔP increase at these faults only reaches 1,719 psi by 2045. Faults F13 – F15 approach critical levels by 2045 if inputs are varied by 10% or more. It is unlikely that these faults reach these levels because the model assumes relatively high injection rates held constant for +25 years and very few wells have demonstrated that the formation will accept rates this high.

This model assumes constant injection rates over the next +25 years which is not a typical scenario as SWD wells tend to decrease injection volumes over time as the well ages and disposal demand decreases in the area. If injection volumes are lower over time than the model represents, then the risk for fault slip is lowered.

In the event seismicity should occur in the future, the wells closest to the faults (proposed and existing) should be the wells considered for modification or reduction of injection rates. At this time there is no evidence to support rate reduction for any of the existing or proposed wells.

Should you have any questions, please do not hesitate to call me at (512) 327-6930 or email me at todd.reynolds@ftiplattsparks.com.

Regards,

Todd W. Reynolds – Geologist/Geophysicist
Managing Director, Economics/FTI Platt Sparks

Todd W. Reynolds

FTI Platt Sparks
512.327.6930 office

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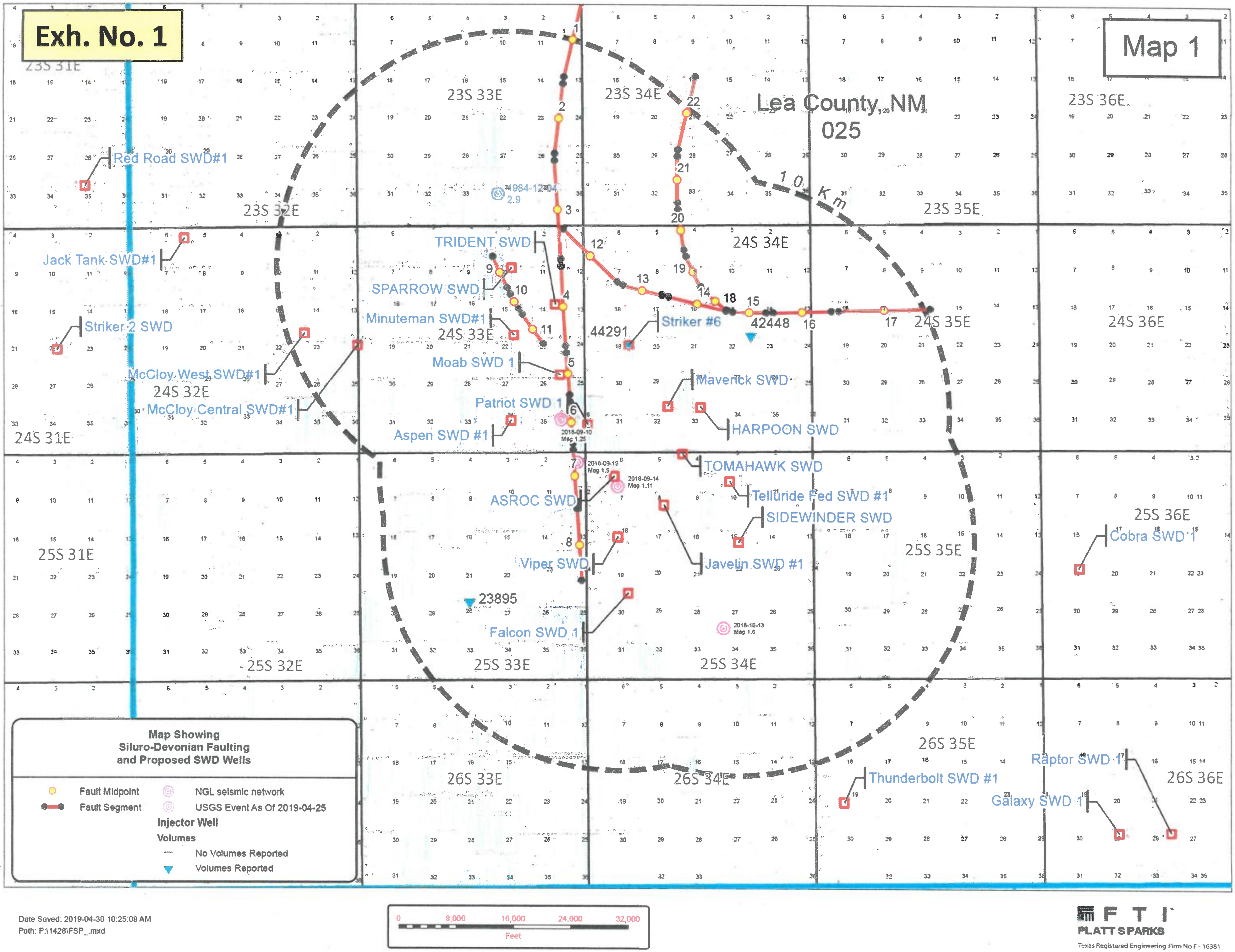

Date Saved: 2019-04-30 10:25:08 AM
Path: P:\1428\FSP_.mxd

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Texas Registered Engineering Firm No F - 16381

Exh. No. 2

FSP INPUT PARAMETERS

Stress Data

Vertical Stress Gradient [psi/ft]	1.1
Max Hor Stress Direction [deg N CW]	75
Reference Depth for Calculations [ft]	17450
Initial Res. Pressure Gradient [psi/ft]	0.46
Min Horiz. Stress Gradient [psi/ft]	0.66517
Max Horiz. Stress Gradient [psi/ft]	0.92607
A Phi Parameter	0.6
Reference Friction Coefficient mu	0.6

OK

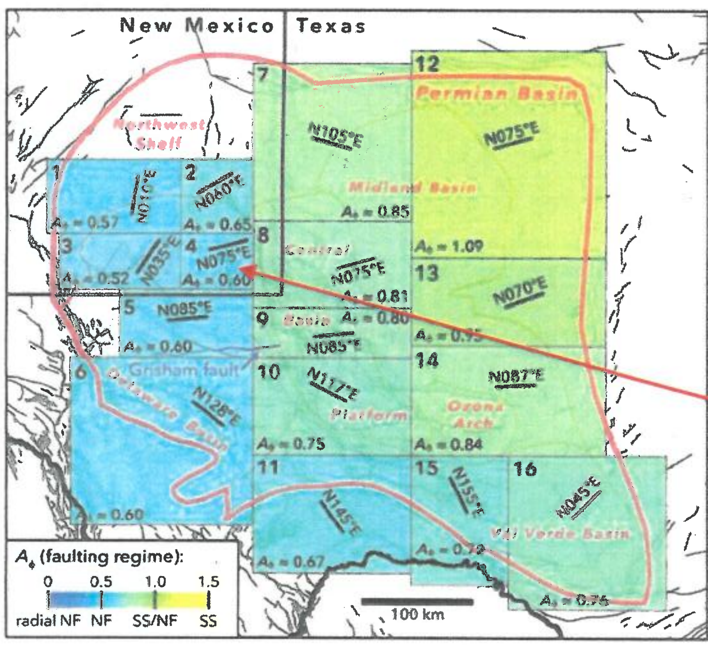
Hydrology Data

- Enter Hydrologic Parameters
- Load External Hydrologic Model

Aquifer Thickness [ft]	975
Porosity [%]	4
Permeability [mD]	20

Fault dips assumed – 80 deg

OK



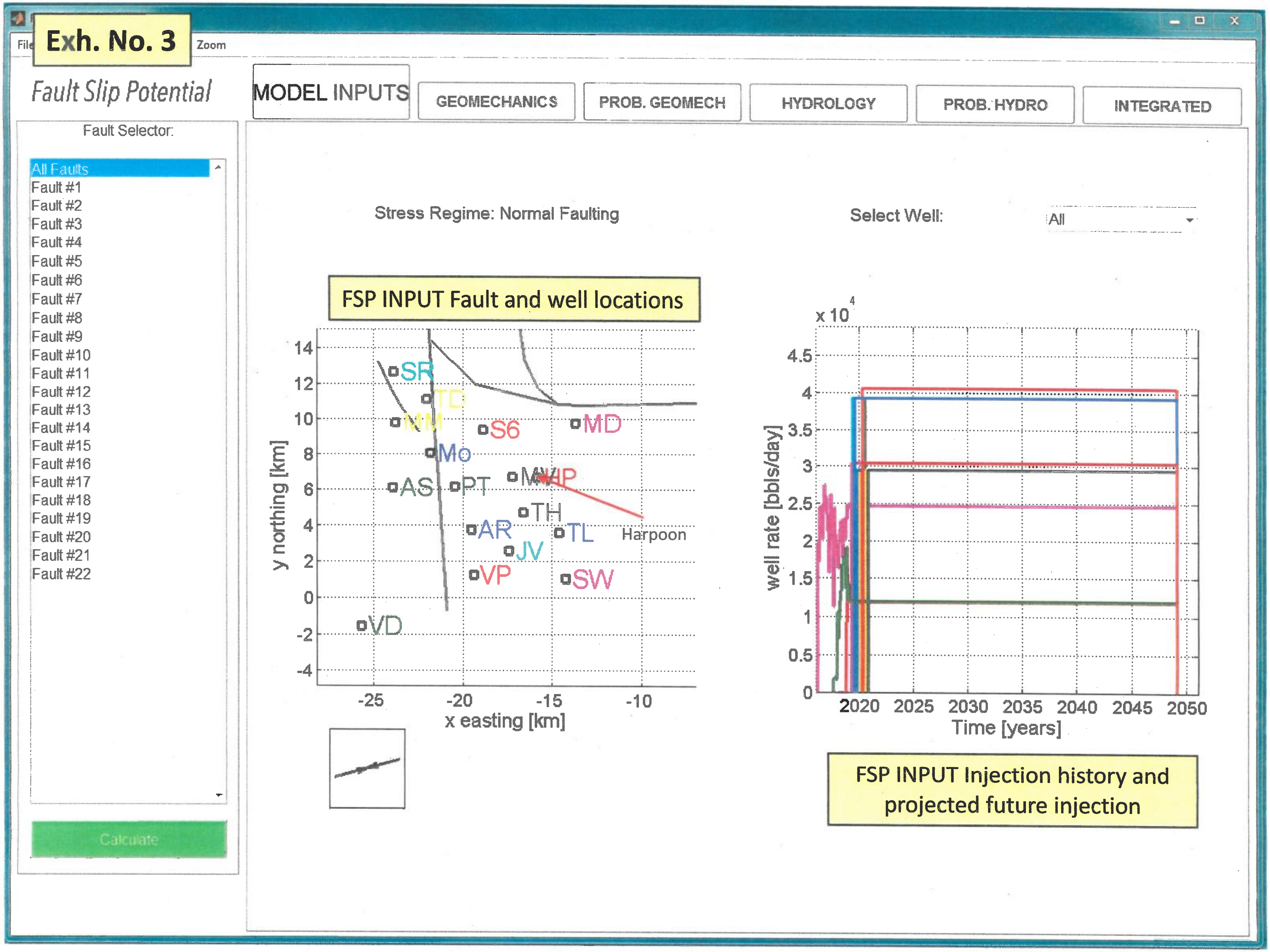
Input Parameter Comments

Hydrologic Parameters – Derived from nearby logs

Stress Gradients – Derived from A Phi parameter from Snee/Zoback paper (.60)

Max Hor. Stress Direction - Derived from Snee/Zoback paper (N60E)

Exh. No. 3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Zoom
Fault Slip Potential
MODEL INPUTS
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HYDROLOGY
PROB. HYDRO
INTEGRATED
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All Faults
Fault #1
Fault #2
Fault #3
Fault #4
Fault #5
Fault #6
Fault #7
Fault #8
Fault #9
Fault #10
Fault #11
Fault #12
Fault #13
Fault #14
Fault #15
Fault #16
Fault #17
Fault #18
Fault #19
Fault #20
Fault #21
Fault #22
Calculate
Stress Regime: Normal Faulting
Select Well:
All
FSP INPUT Fault and well locations
y northing [km]
x easting [km]
SR
TD
MM
S6
MD
Mo
AS
PT
TH
AR
TL
Harpoon
JV
VP
SW
VD
x 10^4
well rate [bbls/day]
Time [years]
FSP INPUT Injection history and projected future injection

Exh. No. 4

Area of Review

Low slip potential based on fault orientation (green faults)

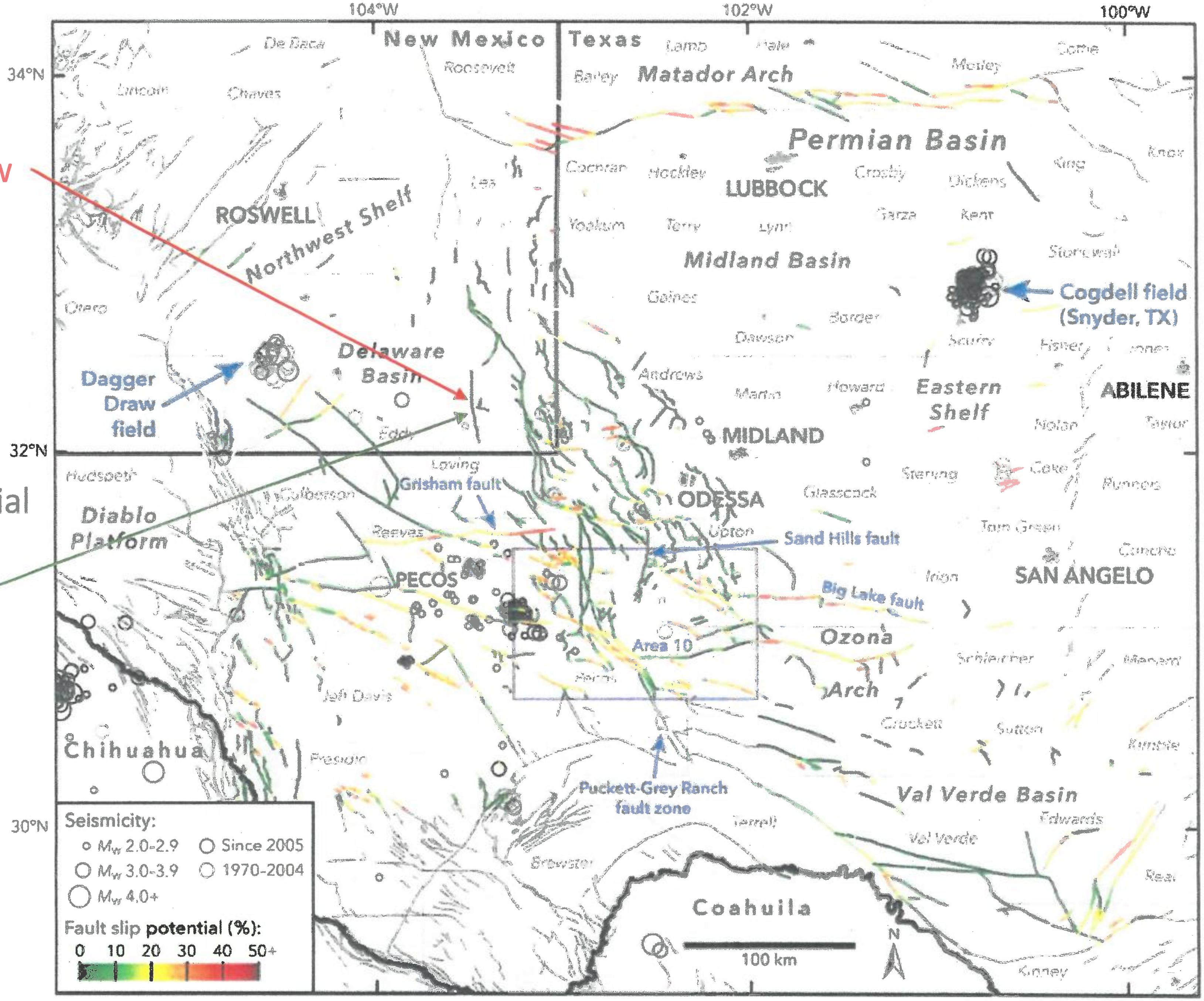
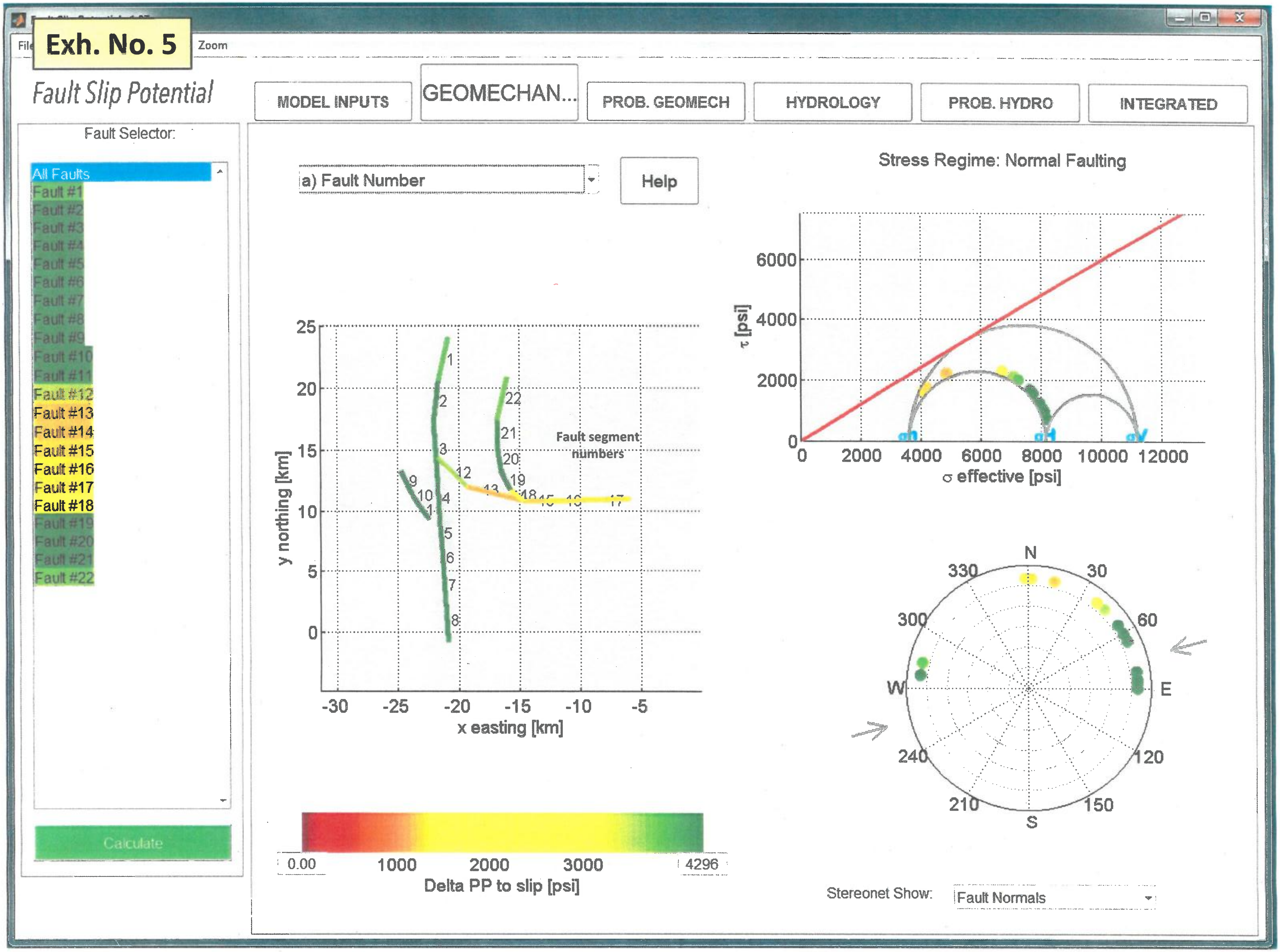


Figure 3. Results of our probabilistic FSP analysis across the Permian Basin. Data sources are as in Figures 1 and 2.

From Lund Snee and Zoback (2018)

Exh. No. 5



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Zoom
Fault Slip Potential
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HYDROLOGY
PROB. HYDRO
INTEGRATED
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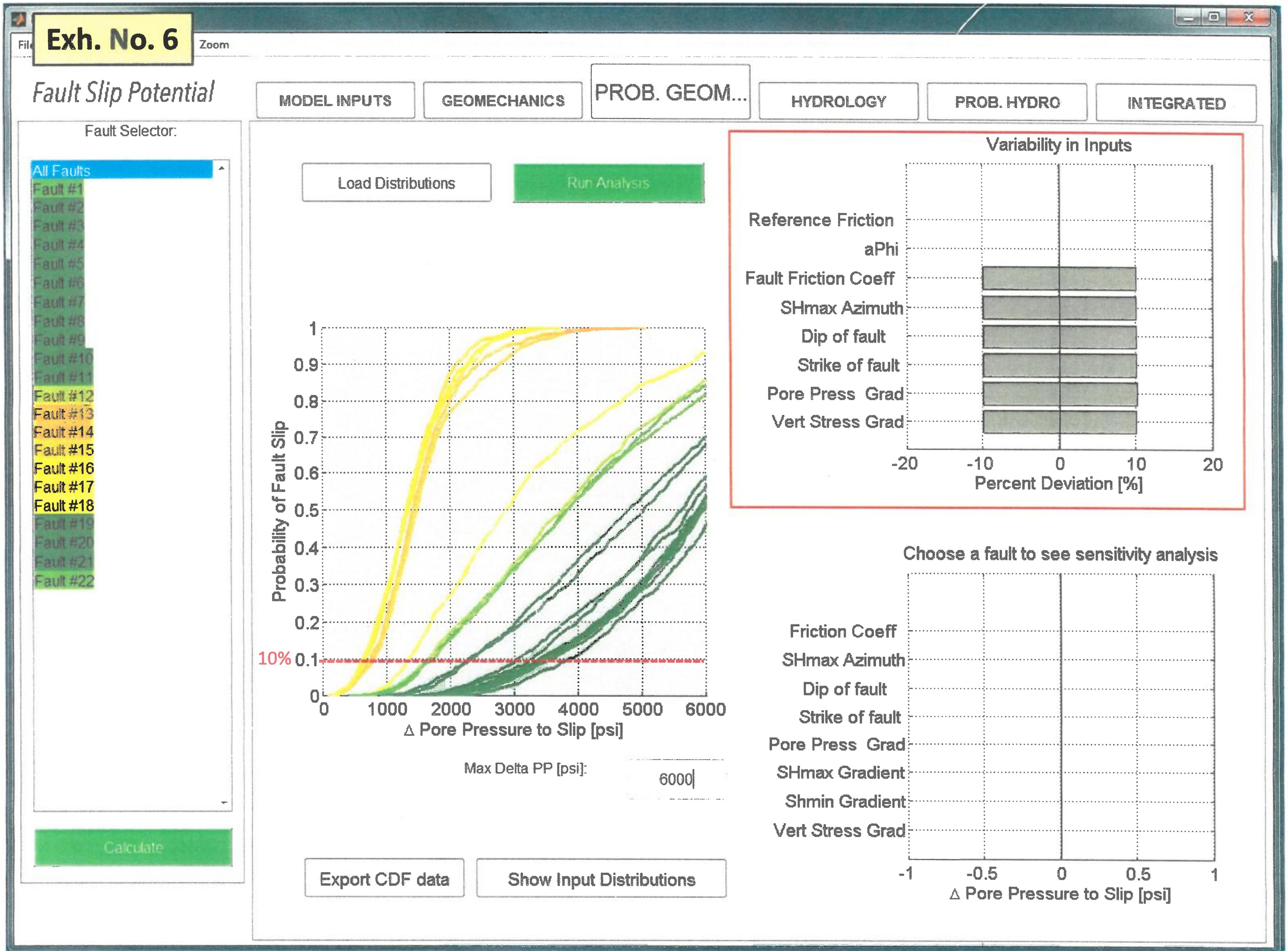
Fault #1
Fault #2
Fault #3
Fault #4
Fault #5
Fault #6
Fault #7
Fault #8
Fault #9
Fault #10
Fault #11
Fault #12
Fault #13
Fault #14
Fault #15
Fault #16
Fault #17
Fault #18
Fault #19
Fault #20
Fault #21
Fault #22
Calculate
a) Fault Number
Help
Fault segment numbers
y northing [km]
x easting [km]
25
20
15
10
5
0
-30
-25
-20
-15
-10
-5
0.00
1000
2000
3000
4296
Delta PP to slip [psi]
Stress Regime: Normal Faulting
τ [psi]
6000
4000
2000
0
0
2000
4000
6000
8000
10000
12000
σ effective [psi]
N
30
60
E
120
150
S
210
240
W
300
330
Stereonet Show:
Fault Normals

Exh. No. 6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Fault #4
Fault #5
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Fault #10
Fault #11
Fault #12
Fault #13
Fault #14
Fault #15
Fault #16
Fault #17
Fault #18
Fault #19
Fault #20
Fault #21
Fault #22
Calculate
Load Distributions
Run Analysis
Probability of Fault Slip
10%
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1000
2000
3000
4000
5000
6000
Δ Pore Pressure to Slip [psi]
Max Delta PP [psi]:
6000
Export CDF data
Show Input Distributions
Variability in Inputs
Reference Friction
aPhi
Fault Friction Coeff
SHmax Azimuth
Dip of fault
Strike of fault
Pore Press Grad
Vert Stress Grad
-20
-10
0
10
20
Percent Deviation [%]
Choose a fault to see sensitivity analysis
Friction Coeff
SHmax Azimuth
Dip of fault
Strike of fault
Pore Press Grad
SHmax Gradient
Shmin Gradient
Vert Stress Grad
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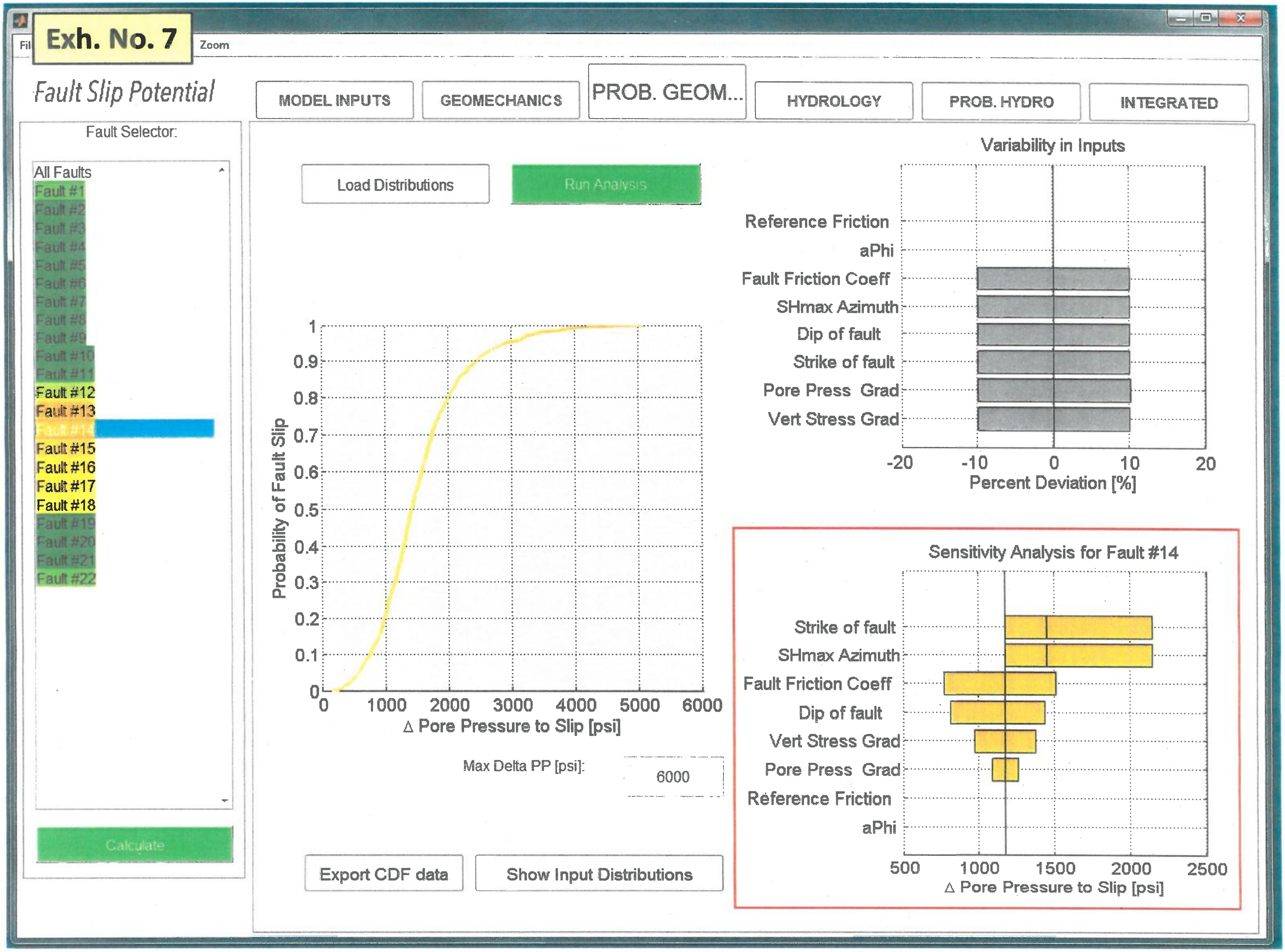
0
0.5
1
Δ Pore Pressure to Slip [psi]

Exh. No. 7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Zoom
Fault Slip Potential
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HYDROLOGY
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INTEGRATED
Fault Selector:
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Fault #12
Fault #13
Fault #15
Fault #16
Fault #17
Fault #18
Fault #22
Calculate
Load Distributions
Run Analysis
Probability of Fault Slip
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1000
2000
3000
4000
5000
6000
Δ Pore Pressure to Slip [psi]
Max Delta PP [psi]:
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Export CDF data
Show Input Distributions
Variability in Inputs
Reference Friction
aPhi
Fault Friction Coeff
SHmax Azimuth
Dip of fault
Strike of fault
Pore Press Grad
Vert Stress Grad
-20
-10
0
10
20
Percent Deviation [%]
Sensitivity Analysis for Fault #14
Strike of fault
SHmax Azimuth
Fault Friction Coeff
Dip of fault
Vert Stress Grad
Pore Press Grad
Reference Friction
aPhi
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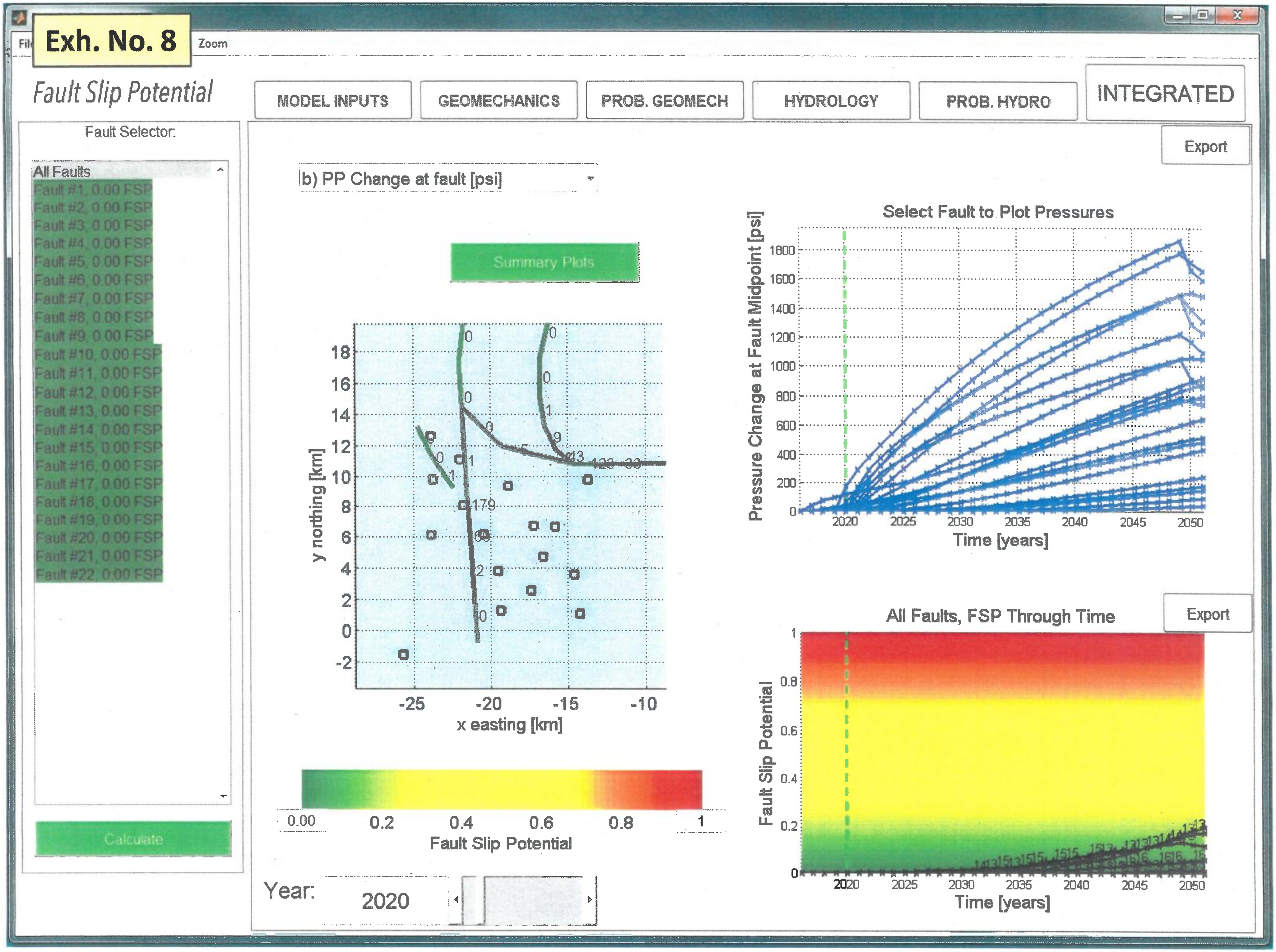
1000
1500
2000
2500
Δ Pore Pressure to Slip [psi]

Exh. No. 8



Zoom
Fault Slip Potential
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PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
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Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
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Fault #18, 0.00 FSP
Fault #19, 0.00 FSP
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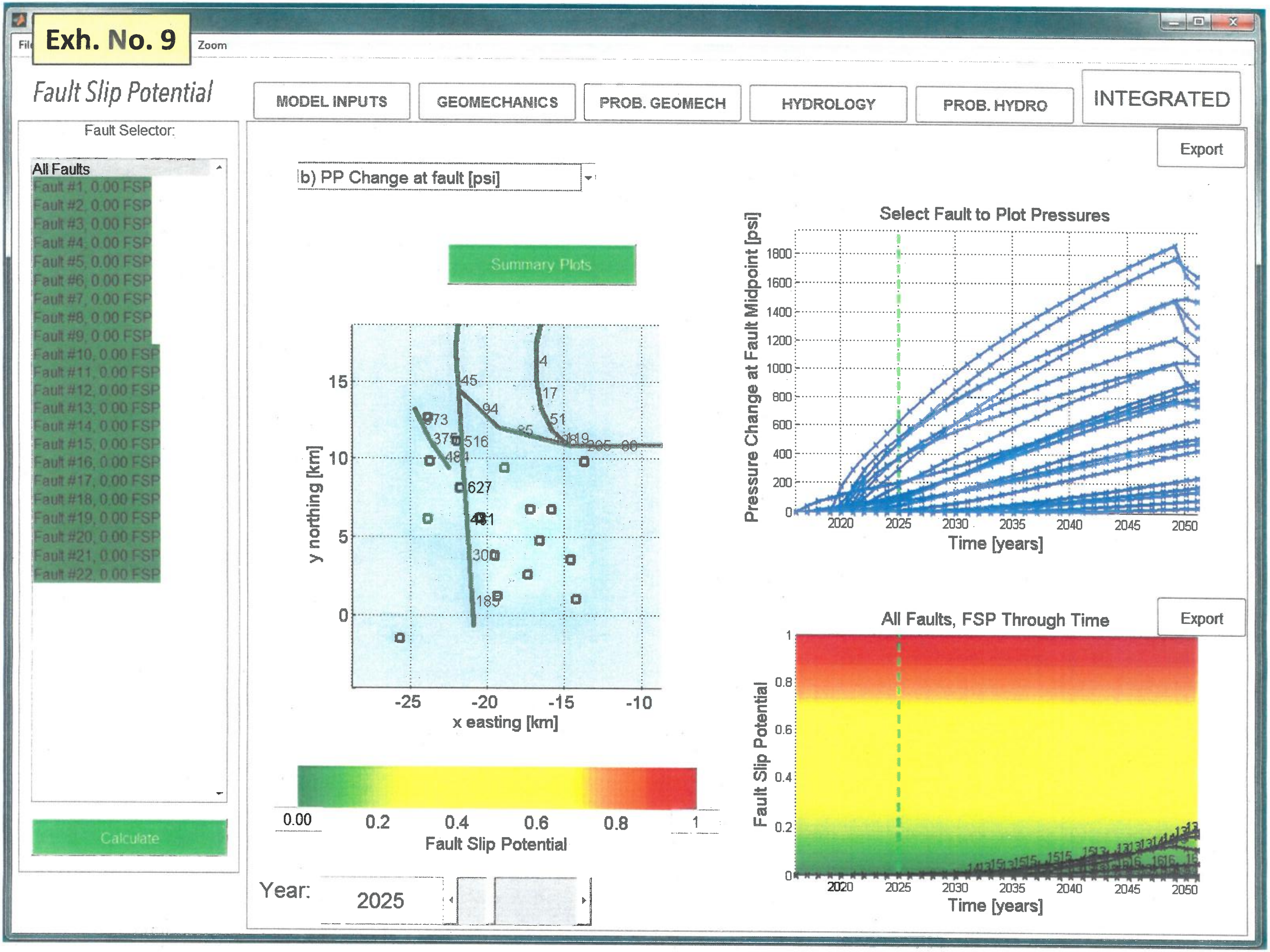
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
Year:
2020
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
Export
All Faults, FSP Through Time
Fault Slip Potential
Time [years]


Exh. No. 9
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HYDROLOGY
PROB. HYDRO
INTEGRATED
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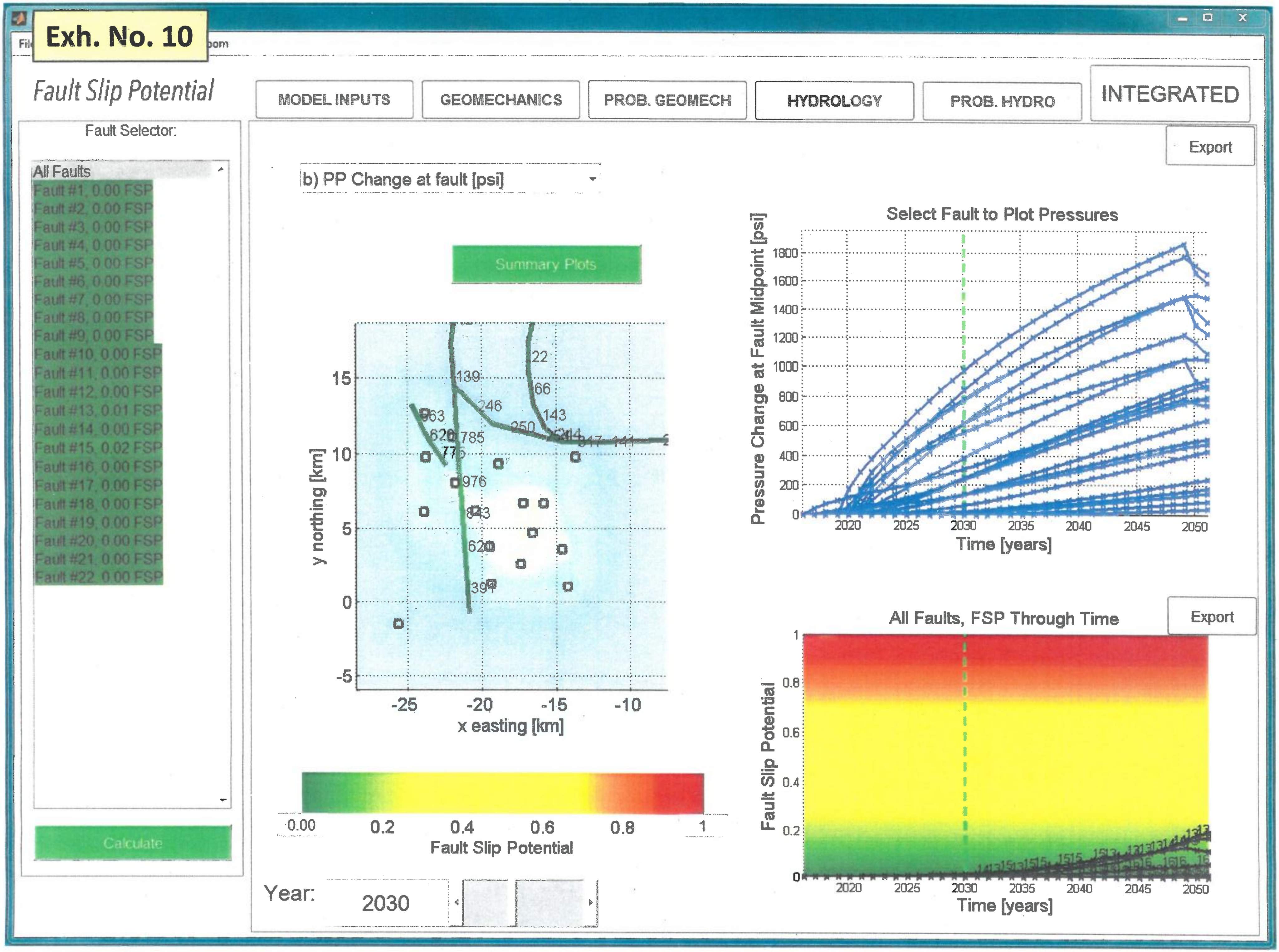
Fault #18, 0.00 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
Year:
2025
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
Export
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

Exh. No. 10



Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
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Fault #2, 0.00 FSP
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Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
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Fault #11, 0.00 FSP
Fault #12, 0.00 FSP
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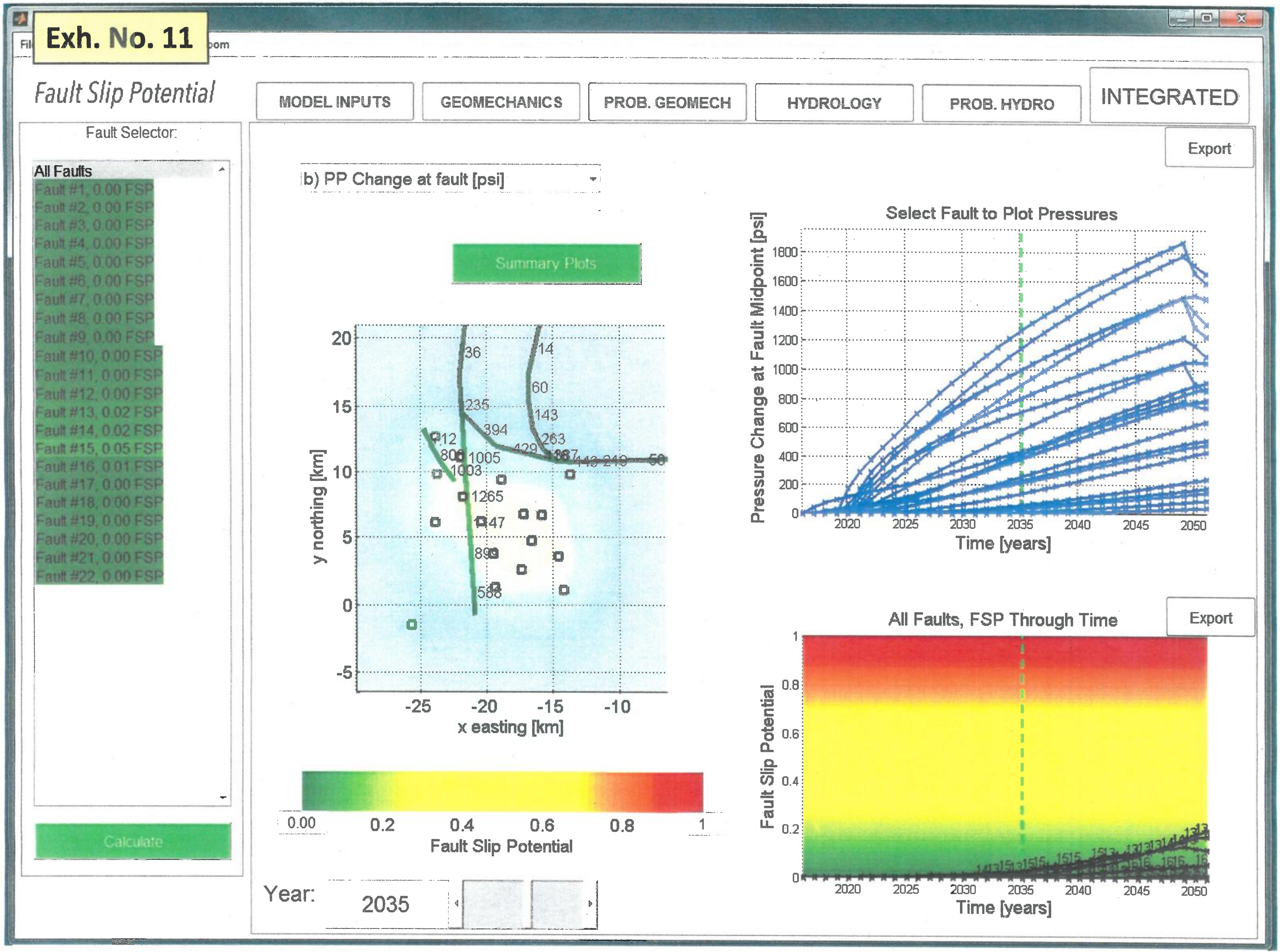
Fault #14, 0.00 FSP
Fault #15, 0.02 FSP
Fault #16, 0.00 FSP
Fault #17, 0.00 FSP
Fault #18, 0.00 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
Year: 2030
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
Export
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

Exh. No. 11


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
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Fault #12, 0.00 FSP
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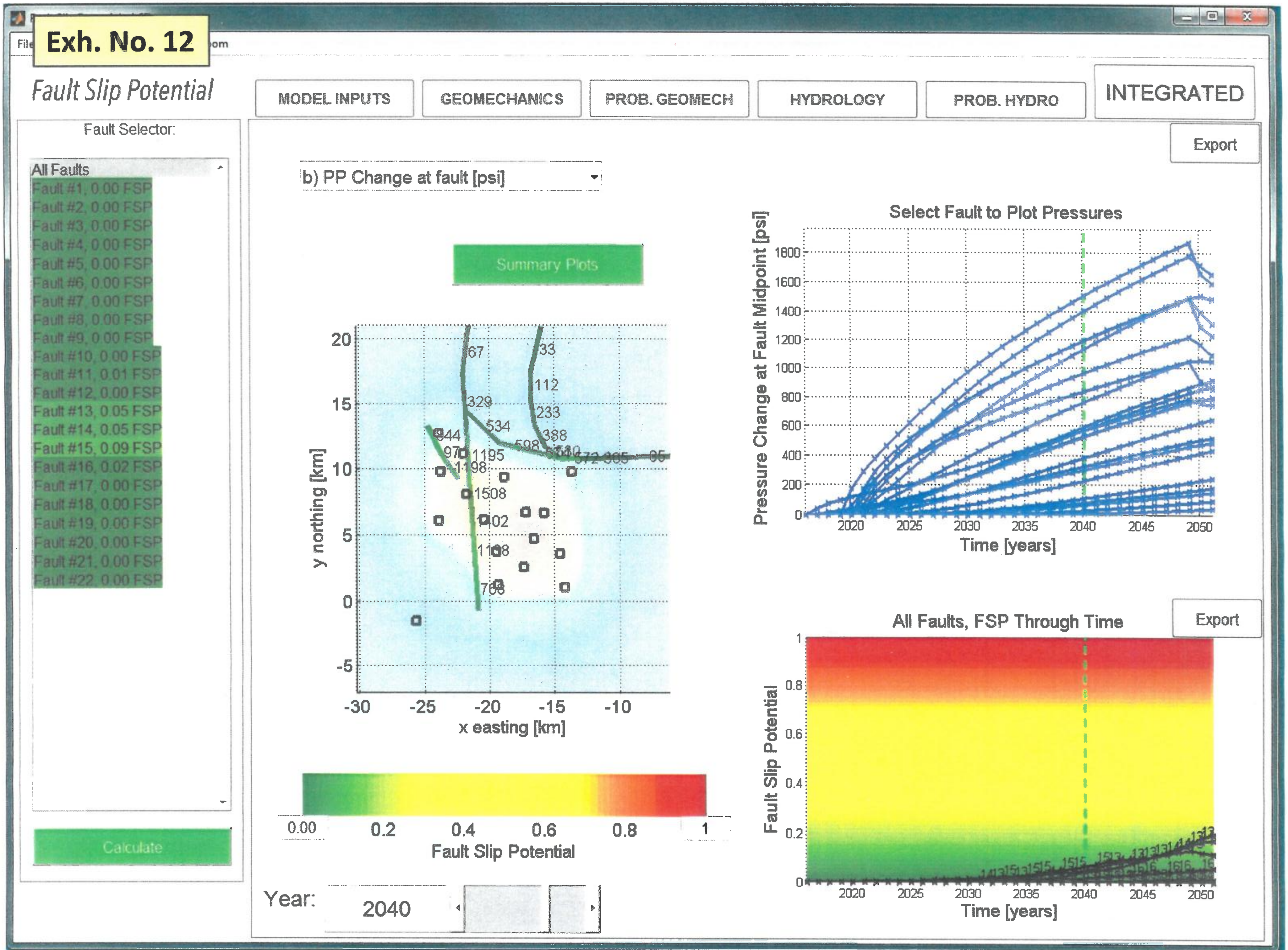
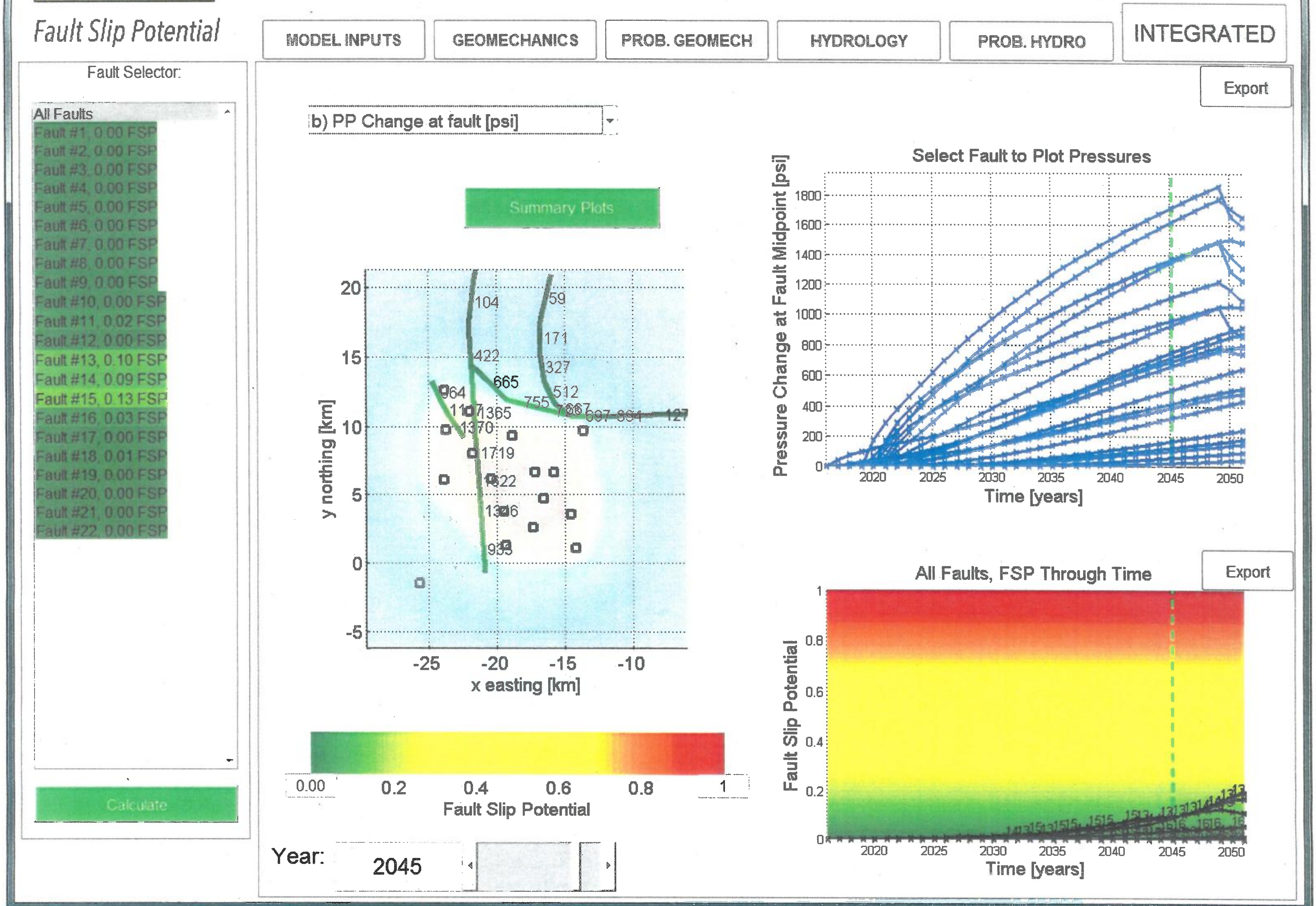
Fault #18, 0.00 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
Year: 2035
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

Exh. No. 12


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
Fault #11, 0.01 FSP
Fault #12, 0.00 FSP
Fault #13, 0.05 FSP
Fault #14, 0.05 FSP
Fault #15, 0.09 FSP
Fault #16, 0.02 FSP
Fault #17, 0.00 FSP
Fault #18, 0.00 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
Year:
2040
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

Exh. No. 13



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
Fault #11, 0.02 FSP
Fault #12, 0.00 FSP
Fault #13, 0.10 FSP
Fault #14, 0.09 FSP
Fault #15, 0.13 FSP
Fault #16, 0.03 FSP
Fault #17, 0.00 FSP
Fault #18, 0.01 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
0.00
0.2
0.4
0.6
0.8
1
Year:
2045
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
Export
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

FTI™
PLATT SPARKS
Texas Registered Engineering Firm No F – 16381

May 1, 2019

RE: FSP Analysis
NGL Water Solutions Permian, LLC **(Maverick SWD #1)**
Eddy County, New Mexico

FSP Analysis

The FSP software used for this analysis was jointly developed by Stanford University, Exxon Mobil and XTO Energy as a tool for estimating fault slip potential resulting from fluid injection.

I have reviewed the geology, seismic activity, injection history and future proposed injection in the Subject Area and I would conclude that the Proposed **Maverick SWD #1** well does not pose a risk of increasing seismicity in the area. The primary risk reduction factor is that the faults are not optimally oriented to slip, and significant pressure increases would be necessary to initiate slip on the faults analyzed.

Fault slip potential (FSP) was analyzed in the area of review shown on **Exhibit No. 1.** The analysis integrates the proposed well location as well as any existing injection wells in order to fully assess the pressure implications of injection in the area and the potential for slip along existing faults. There are no historical USGS earthquake locations within the review area. (see **Exhibit No. 1)**

Exhibit No. 2 shows the FSP input parameters for the local stress, average reservoir depth, pressure gradients and reservoir characteristics. Depths and reservoir characteristics were derived from nearby well logs and stress values were derived from the Lund Snee and Zoback (2018) paper related to Stress in the Permian Basin.

Exhibit No. 3 shows the location of existing wells and locations of the Proposed SWD well relative to the faults documented in this area. The faults are sourced from the Texas Bureau of Economic Geology

EXHIBIT B-2

and these are also the fault traces shown in the referenced Snee/Zoback paper (Figure 3 in the paper) and shown as **Exhibit No. 4** in my report. The Snee/Zoback paper only considers fault orientation relative to the stress orientation in determination of fault slip potential. Based on their limited analysis of the area they concluded the faults have low slip potential based on orientation/azimuth.

In my own independent subsurface mapping of the area and from review of other fault sources (Geomap), I have modified the fault traces to better fit more recently acquired data.

My analysis further incorporates the injection history and future injection projections and the injection reservoir characteristics to fully assess the potential for slip along these faults. Existing wells were incorporated into the analysis using their injection volume histories and holding them constant into the future at their last reported monthly injection volume. The Subject well was modelled at 40,000 bbls/day and held constant for the life of the analysis (+25 years). Well that have not been drilled or are currently pending were input in the model at +30,000 bbls/day.
(Only wells within the 10 km radius are used in the model)

The wells in the model: (**Exhibit No. 3 and Exhibit No. 1)**

VD	23895
MD	42448
S6	44291
AR	Asroc SWD
HP	Harpoon SWD
MV	Maverick SWD
SR	Sparrow SWD
TH	Tomahawk SWD
TD	Trident SWD
VP	Viper SWD
SW	Sidewinder SWD
Mo	Moab SWD 1
PT	Patriot SWD 1
MM	Minuteman SWD
JV	Javelin SWD
TL	Telluride Fed SWD
AS	Aspen SWD

Exhibit No. 5 illustrates the geomechanical properties of the fault segments in the area of review. It should be noted that the FSP software only calculates a single pressure change along a fault (at the fault mid-point) so it is critical that faults are broken into multiple segments to get a true evaluation of the pressure increases associated with injection. **Exhibit No. 5** also shows the direction of max hor. stress as denoted by the grey arrows outside the circle on the stereonet in the lower right portion of this exhibit. Faults that align parallel or closer to this orientation will have the highest potential for slip or lowest ΔP to slip. Faults 1-9 have very low potential for slip.

Exhibit No. 6 shows that the input stress and fault values were varied by +/-10% to allow for uncertainty in the input parameters. Even considering the variability of the inputs the model results show low probability for slip on the faults in the area of review. An increase of 800 psi still only results in a 10% probability of fault slip along the most critical fault segment (F14)

Exhibit No. 7 takes a closer look at Fault 14. The sensitivity analysis is highlighted in the lower right portion of this exhibit and shows that without any variability of inputs the ΔP needed to slip is 1,170 psi along this fault. A 10% change in the fault friction coefficient could lower ΔP needed to slip to 800 psi. Fault 13 fails at slightly higher values (1,174 and 820). All other faults require higher ΔP to slip and pressures do not approach failure values by the year 2045.

Exhibit No. 8 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2020. This map indicates ΔP pressure increase of 26 psi at F14.

Exhibit No. 9 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2025. This map indicates ΔP pressure increase of 108 psi at F14.

Exhibit No. 10 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2030. This map indicates ΔP pressure increase of 254 psi at F14.

Exhibit No. 11 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2035. This map indicates ΔP pressure increase of 416 psi at F14. Note that this pressure is still well below the pressure that could initiate fault slip, which takes +800 psi. Pressure is building along the N-S fault segments F4 – F7 with pressure of 1,265 psi at F5, however these faults require ΔP pressures of +4,000 psi to fail.

Exhibit No. 12 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2040. This map indicates ΔP pressure increase of 574 psi at F14. Note that this pressure is still well below the pressure that could initiate fault slip, which takes +800 psi. Pressure is building along the N-S fault segments F4 – F7 with pressure of 1,508psi at F5, however these faults require ΔP pressures of +4,000 psi to fail.

Exhibit No. 13 illustrates the ΔP pressure in a "heat map" and shows ΔP pressure increases at the faults as of 1/1/2045 This map indicates ΔP pressure increase of 723 psi at F14. Note that this pressure is approaching the pressure that could initiate fault slip, which takes +800 psi. Pressure is building along the N-S fault segments F4 – F7 with pressure of 1,719 psi at F5, however these faults require ΔP pressures of +4,000 psi to fail.

The pressure analysis over time shows that pressure is expected to increase along the faults however pressures remain below critical levels. The table below shows the ΔP pressure increases needed to imitate fault slip along each fault segment and the corresponding ΔP pressure increases as of 2045:

Fault Segment	ΔP to slip (fixed inputs)	ΔP to slip (10% varied inputs)	ΔP at 2045
F1	3,913	1,950	24
F2	4,844	2,500	104
F3	6,349	3,850	422
F4	6,255	3,800	1,365
F5	6,494	3,970	1,719
F6	6,353	3,850	1,622
F7	6,353	3,850	1,346
F8	6,353	3,850	933
F9	6,507	3,970	964
F10	5,897	3,500	1,117
F11	5,121	2,850	1,370
F12	3,572	1,850	665
F13	1,174	820	755
F14	1,170	800	723
F15	1,269	900	697
F16	1,359	1,100	394
F17	1,359	1,100	127
F18	2,893	1,600	667
F19	6,446	3,900	512
F20	6,953	4,500	327
F21	5,836	3,500	171
F22	3,884	1,900	59

TABLE 1

This analysis demonstrates that there is a low likelihood of injection induced seismicity in the Subject Area.

Conclusion

Most of the faults and fault trends in the area of review are not optimally oriented to slip. The orientation of the faults requires significant pressure changes (ΔP +6,000 psi) based on the fixed input parameters and the ΔP increase at these faults only reaches 1,719 psi by 2045. Faults F13 – F15 approach critical levels by 2045 if inputs are varied by 10% or more. It is unlikely that these faults reach these levels because the model assumes relatively high injection rates held constant for +25 years and very few wells have demonstrated that the formation will accept rates this high.

This model assumes constant injection rates over the next +25 years which is not a typical scenario as SWD wells tend to decrease injection volumes over time as the well ages and disposal demand decreases in the area. If injection volumes are lower over time than the model represents, then the risk for fault slip is lowered.

In the event seismicity should occur in the future, the wells closest to the faults (proposed and existing) should be the wells considered for modification or reduction of injection rates. At this time there is no evidence to support rate reduction for any of the existing or proposed wells.

Should you have any questions, please do not hesitate to call me at (512) 327-6930 or email me at todd.reynolds@ftiplattsparks.com.

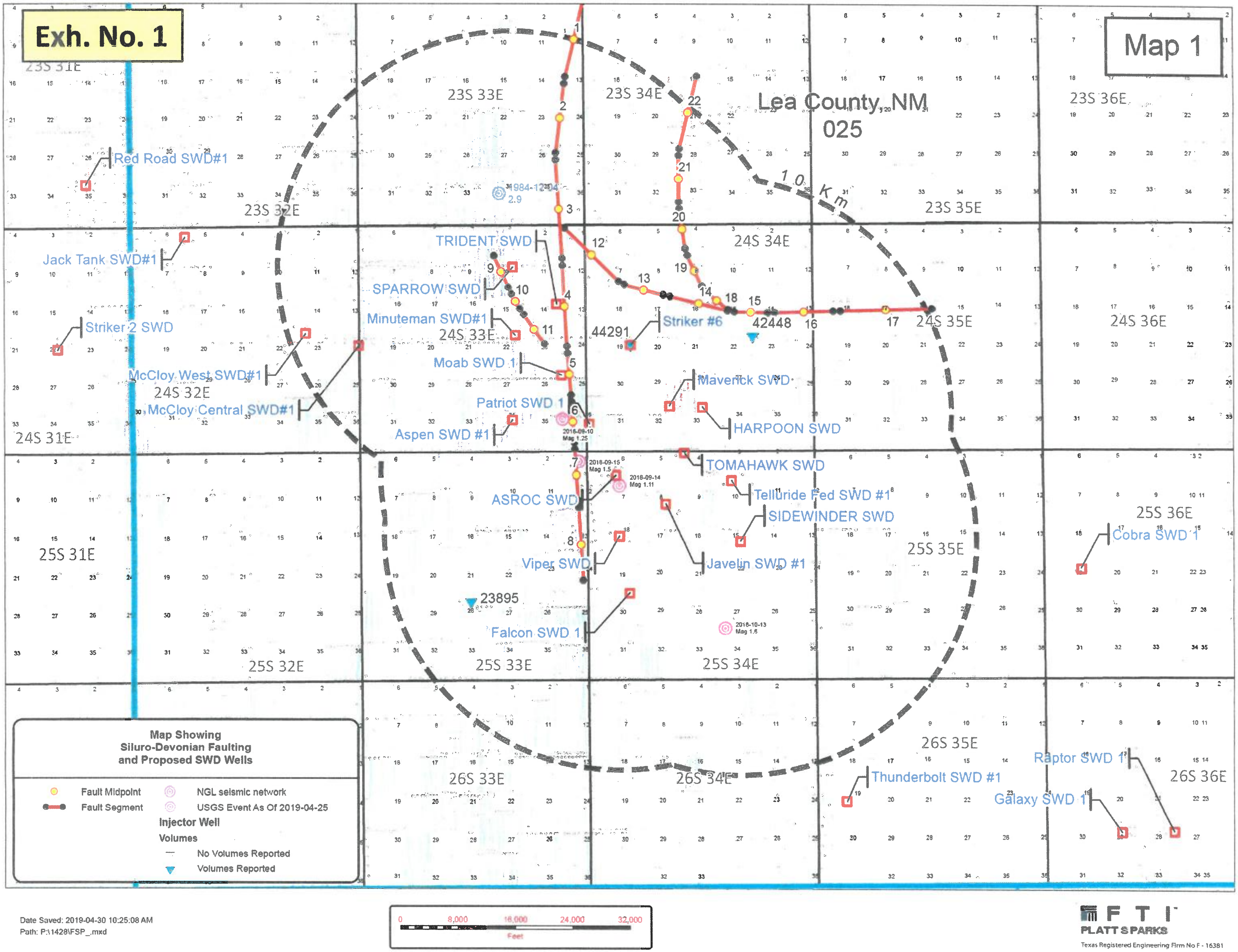
Regards,

Todd W. Reynolds – Geologist/Geophysicist
Managing Director, Economics/FTI Platt Sparks

Todd W. Reynolds

FTI Platt Sparks
512.327.6930 office

FTI PLATT SPARKS



Date Saved: 2019-04-30 10:25:08 AM
Path: P:\1428\FSP_.mxd

Exh. No. 2

FSP INPUT PARAMETERS

Stress Data

Vertical Stress Gradient [psi/ft]	1.1
Max Hor Stress Direction [deg N CW]	75
Reference Depth for Calculations [ft]	17450
Initial Res. Pressure Gradient [psi/ft]	0.46
Min Horiz. Stress Gradient [psi/ft]	0.66517
Max Horiz. Stress Gradient [psi/ft]	0.92607
A Phi Parameter	0.6
Reference Friction Coefficient mu	0.6

OK

Hydrology Data

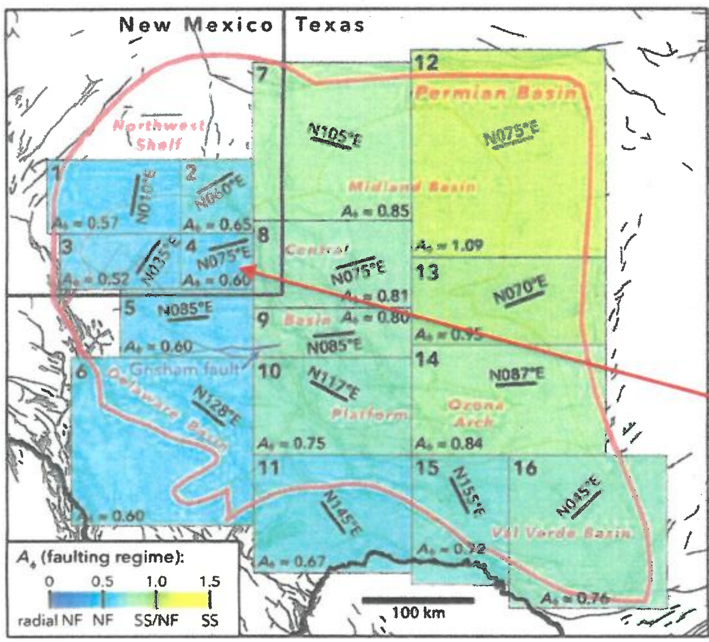
Enter Hydrologic Parameters

Load External Hydrologic Model

Aquifer Thickness [ft]	975
Porosity [%]	4
Permeability [mD]	20

Fault dips assumed – 80 deg

OK



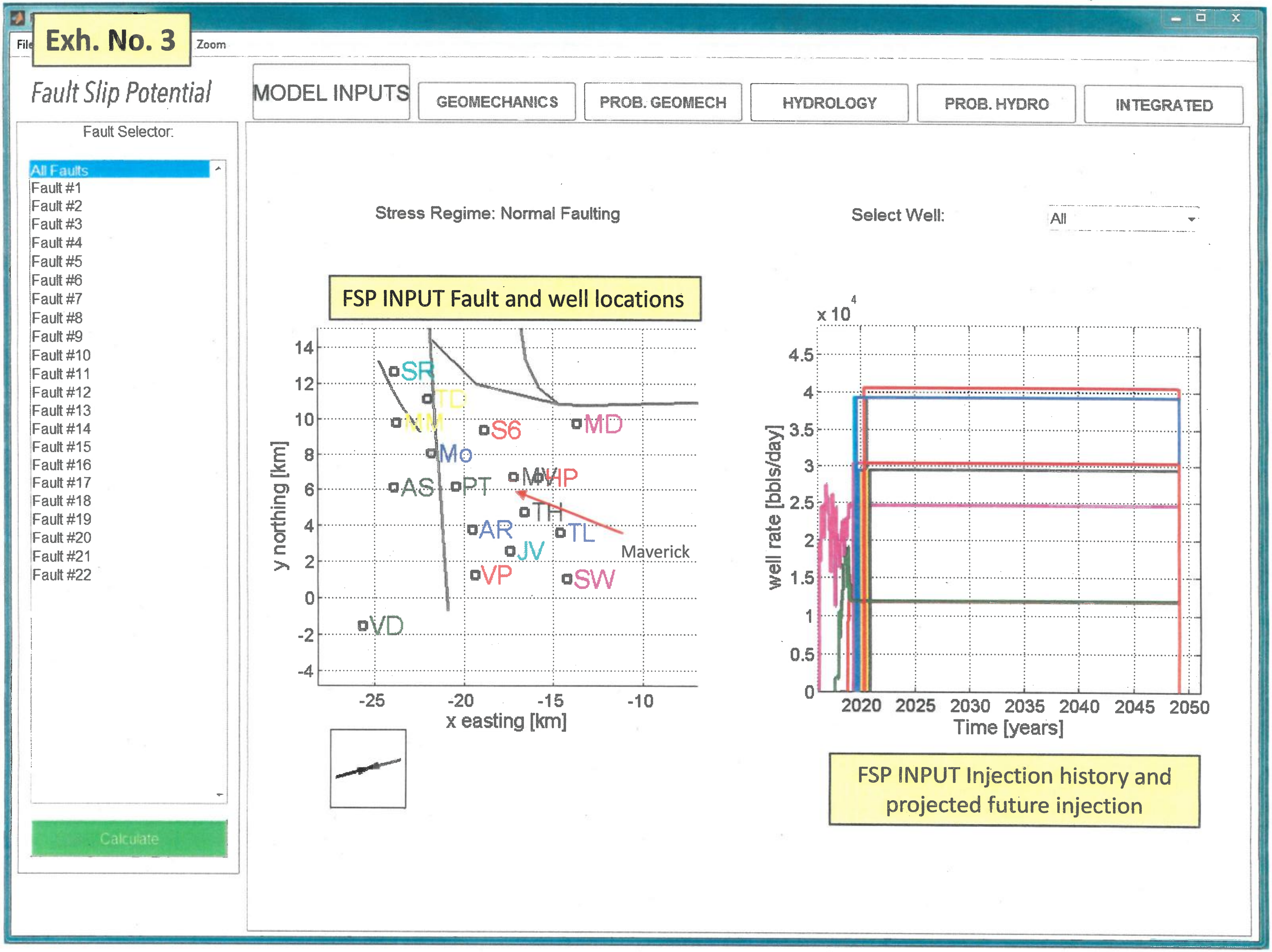
Input Parameter Comments

Hydrologic Parameters – Derived from nearby logs

Stress Gradients – Derived from A Phi parameter from Snee/Zoback paper (.60)

Max Hor. Stress Direction - Derived from Snee/Zoback paper (N60E)

Exh. No. 3


File
Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1
Fault #2
Fault #3
Fault #4
Fault #5
Fault #6
Fault #7
Fault #8
Fault #9
Fault #10
Fault #11
Fault #12
Fault #13
Fault #14
Fault #15
Fault #16
Fault #17
Fault #18
Fault #19
Fault #20
Fault #21
Fault #22
Calculate
Stress Regime: Normal Faulting
Select Well:
All
FSP INPUT Fault and well locations
SR
TD
MM
S6
MD
Mo
AS
PT
MV
HP
TH
AR
TL
JV
Maverick
VP
SW
VD
y northing [km]
x easting [km]
14
12
10
8
6
4
2
0
-2
-4
-25
-20
-15
-10
x 10^4
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
well rate [bbls/day]
2020
2025
2030
2035
2040
2045
2050
Time [years]
FSP INPUT Injection history and projected future injection

Exh. No. 4

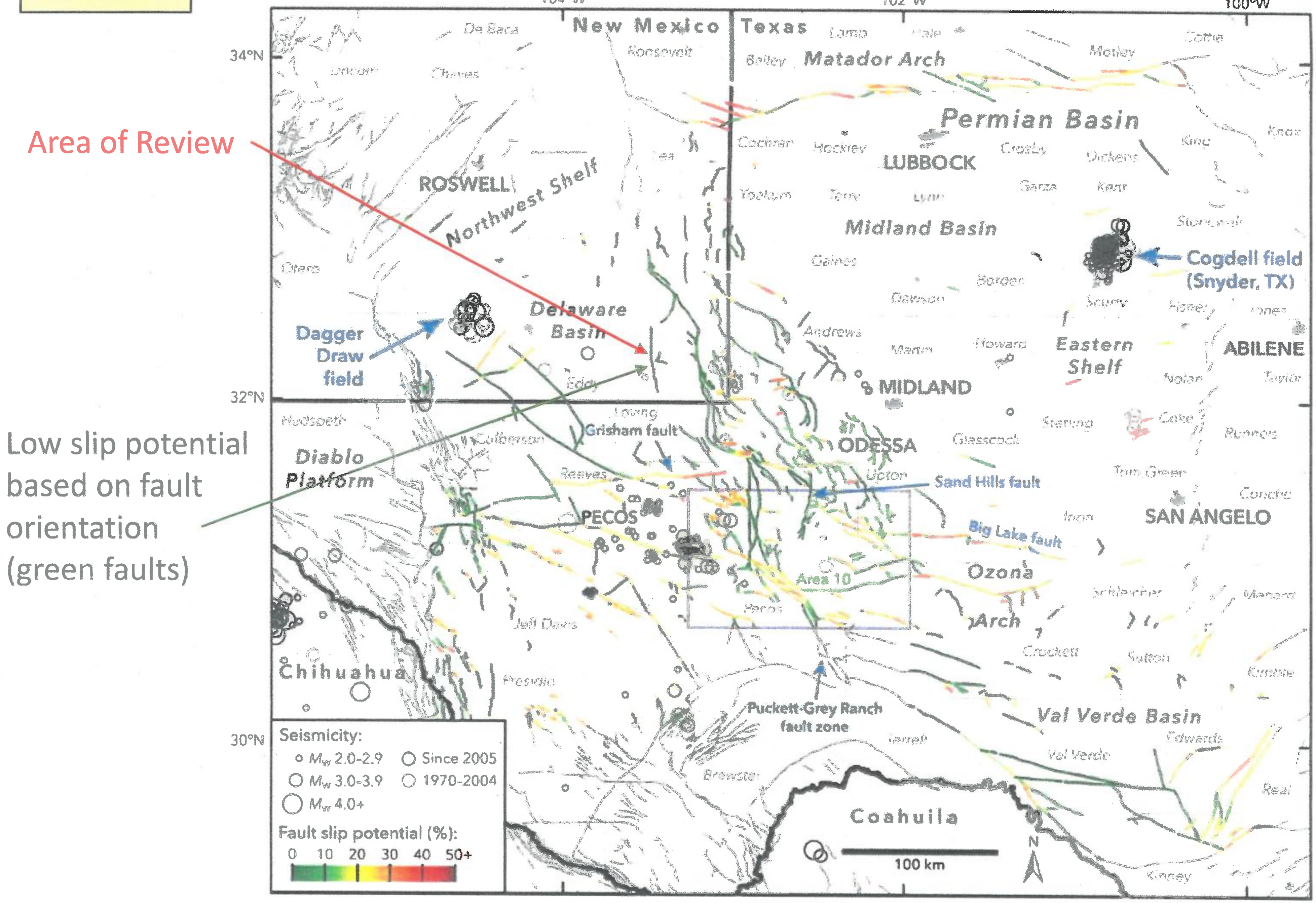
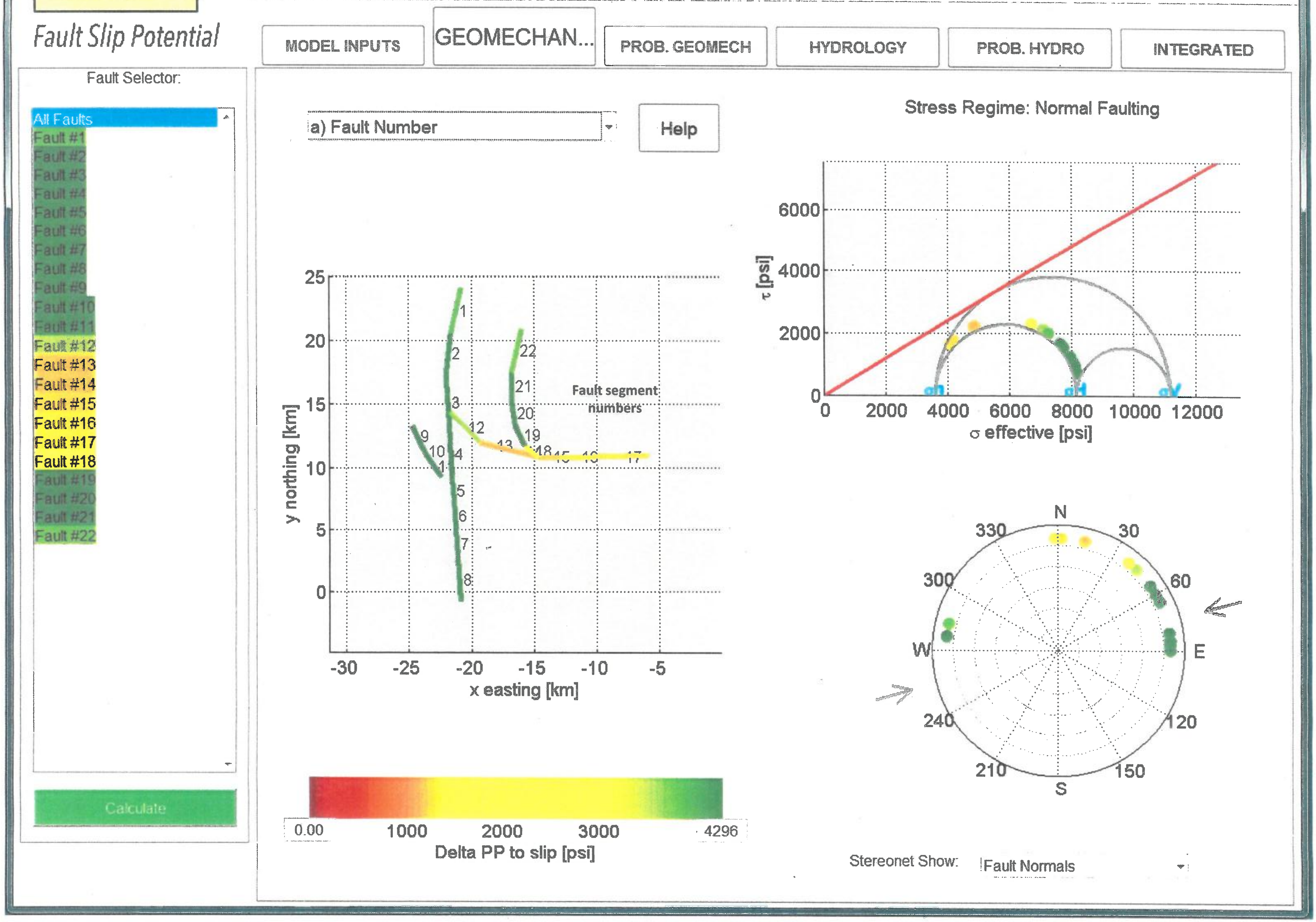


Figure 3. Results of our probabilistic FSP analysis across the Permian Basin. Data sources are as in Figures 1 and 2.

From Lund Snee and Zoback (2018)

Exh. No. 5



File
Zoom
Fault Slip Potential
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PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
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All Faults
Fault #1
Fault #2
Fault #3
Fault #4
Fault #5
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Fault #9
Fault #10
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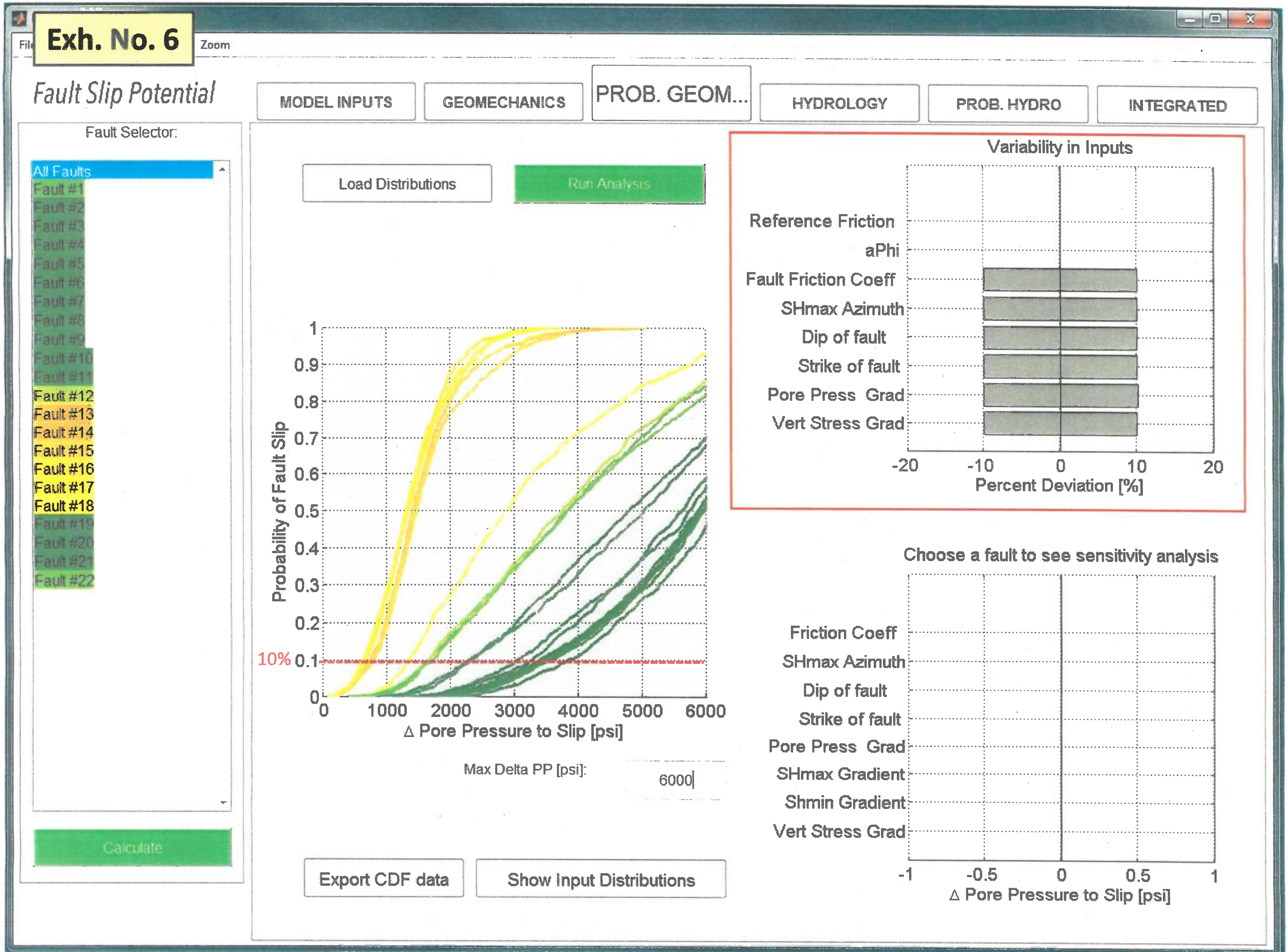
Fault #12
Fault #13
Fault #14
Fault #15
Fault #16
Fault #17
Fault #18
Fault #19
Fault #20
Fault #21
Fault #22
Calculate
a) Fault Number
Help
Fault segment numbers
y northing [km]
x easting [km]
0.00
1000
2000
3000
4296
Delta PP to slip [psi]
Stress Regime: Normal Faulting
τ [psi]
σ effective [psi]
N
30
60
E
120
150
S
210
240
W
300
330
Stereonet Show:
Fault Normals

Exh. No. 6



File
Zoom
Fault Slip Potential
MODEL INPUTS
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HYDROLOGY
PROB. HYDRO
INTEGRATED
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Fault #2
Fault #3
Fault #4
Fault #5
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Fault #8
Fault #9
Fault #10
Fault #11
Fault #12
Fault #13
Fault #14
Fault #15
Fault #16
Fault #17
Fault #18
Fault #19
Fault #20
Fault #21
Fault #22
Calculate
Load Distributions
Run Analysis
Probability of Fault Slip
10%
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 5000 6000
Δ Pore Pressure to Slip [psi]
Max Delta PP [psi]:
6000
Export CDF data
Show Input Distributions
Variability in Inputs
Reference Friction
aPhi
Fault Friction Coeff
SHmax Azimuth
Dip of fault
Strike of fault
Pore Press Grad
Vert Stress Grad
-20 -10 0 10 20
Percent Deviation [%]
Choose a fault to see sensitivity analysis
Friction Coeff
SHmax Azimuth
Dip of fault
Strike of fault
Pore Press Grad
SHmax Gradient
Shmin Gradient
Vert Stress Grad
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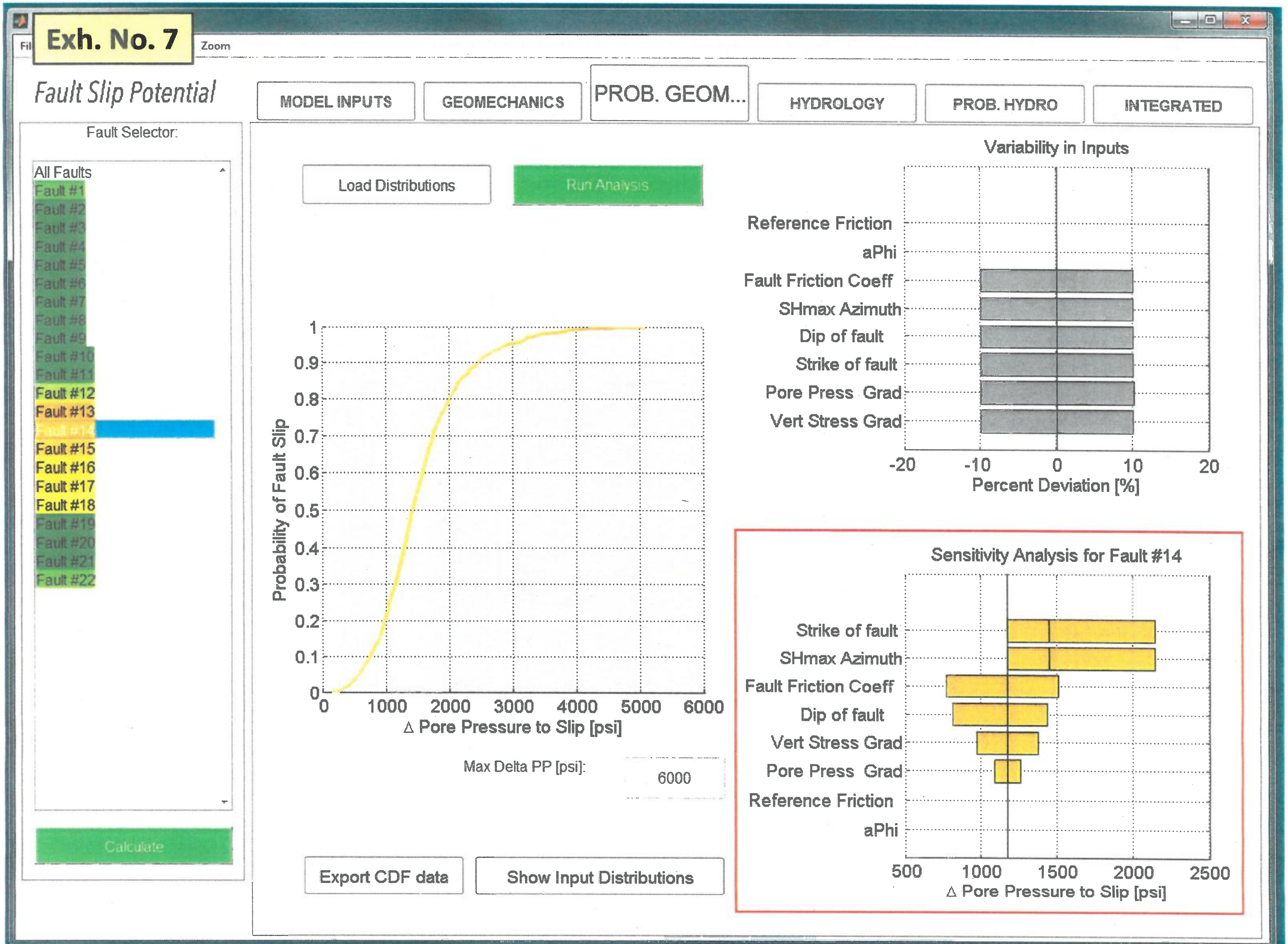
Δ Pore Pressure to Slip [psi]

Exh. No. 7



Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOM...
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1
Fault #2
Fault #3
Fault #4
Fault #5
Fault #6
Fault #7
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Fault #10
Fault #11
Fault #12
Fault #13
Fault #14
Fault #15
Fault #16
Fault #17
Fault #18
Fault #19
Fault #20
Fault #21
Fault #22
Calculate
Load Distributions
Run Analysis
Probability of Fault Slip
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 5000 6000
Δ Pore Pressure to Slip [psi]
Max Delta PP [psi]:
6000
Export CDF data
Show Input Distributions
Variability in Inputs
Reference Friction
aPhi
Fault Friction Coeff
SHmax Azimuth
Dip of fault
Strike of fault
Pore Press Grad
Vert Stress Grad
-20 -10 0 10 20
Percent Deviation [%]
Sensitivity Analysis for Fault #14
Strike of fault
SHmax Azimuth
Fault Friction Coeff
Dip of fault
Vert Stress Grad
Pore Press Grad
Reference Friction
aPhi
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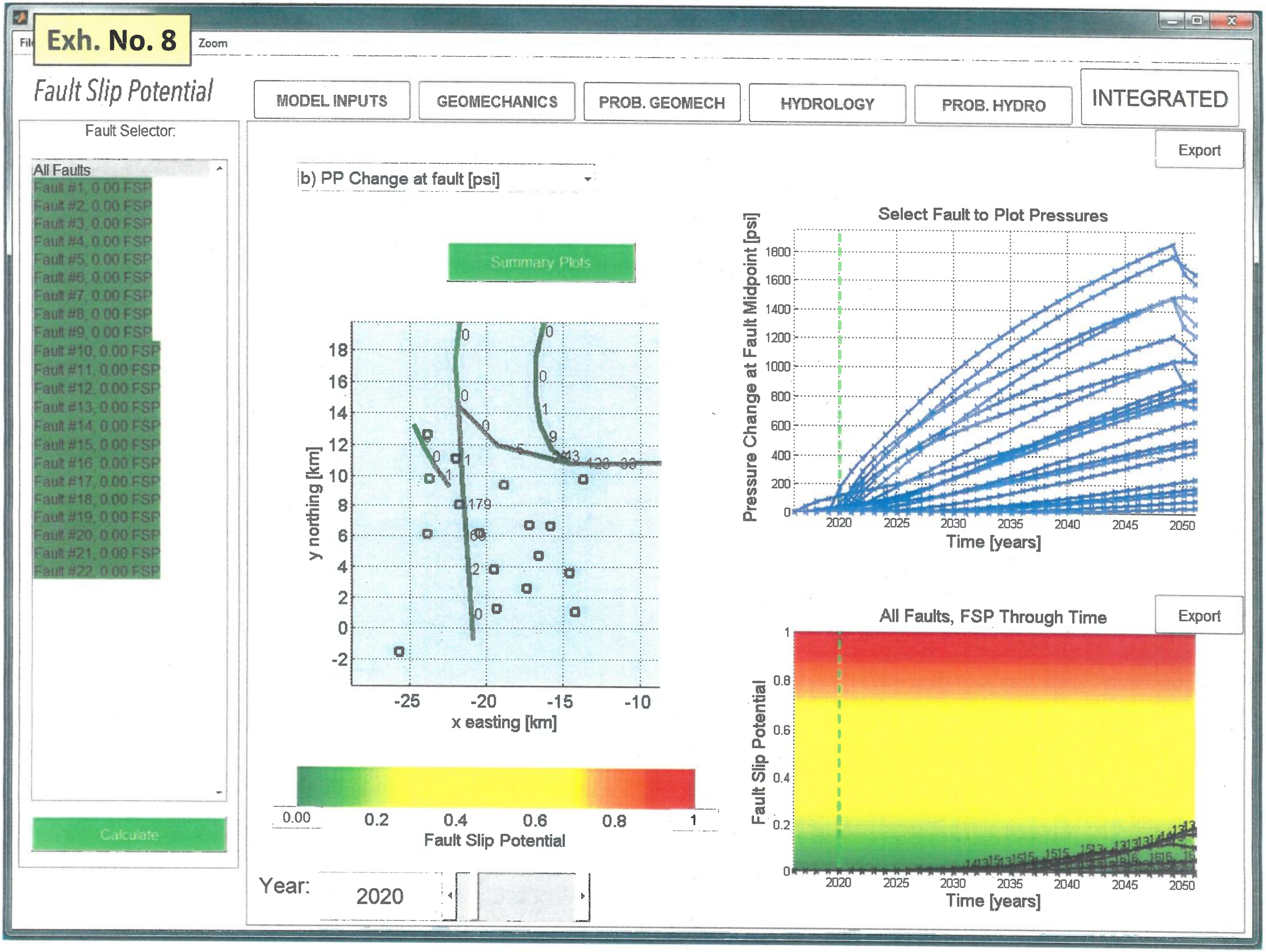
Δ Pore Pressure to Slip [psi]



Exh. No. 8
Zoom
Fault Slip Potential
MODEL INPUTS
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
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
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
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Fault #13, 0.00 FSP
Fault #14, 0.00 FSP
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Fault #16, 0.00 FSP
Fault #17, 0.00 FSP
Fault #18, 0.00 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
Year:
2020
Export
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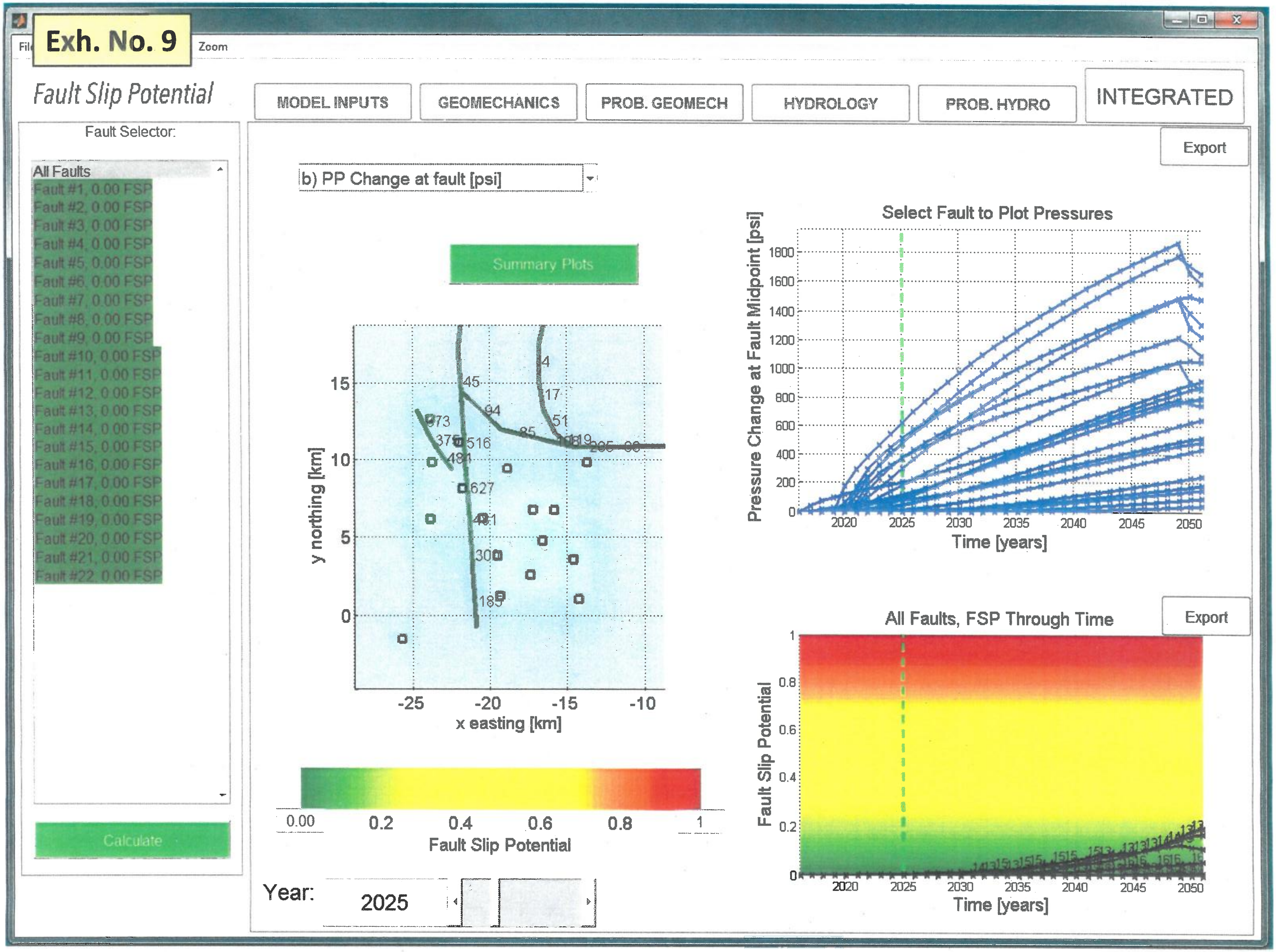
Pressure Change at Fault Midpoint [psi]
Time [years]
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

Exh. No. 9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Fault Slip Potential
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HYDROLOGY
PROB. HYDRO
INTEGRATED
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All Faults
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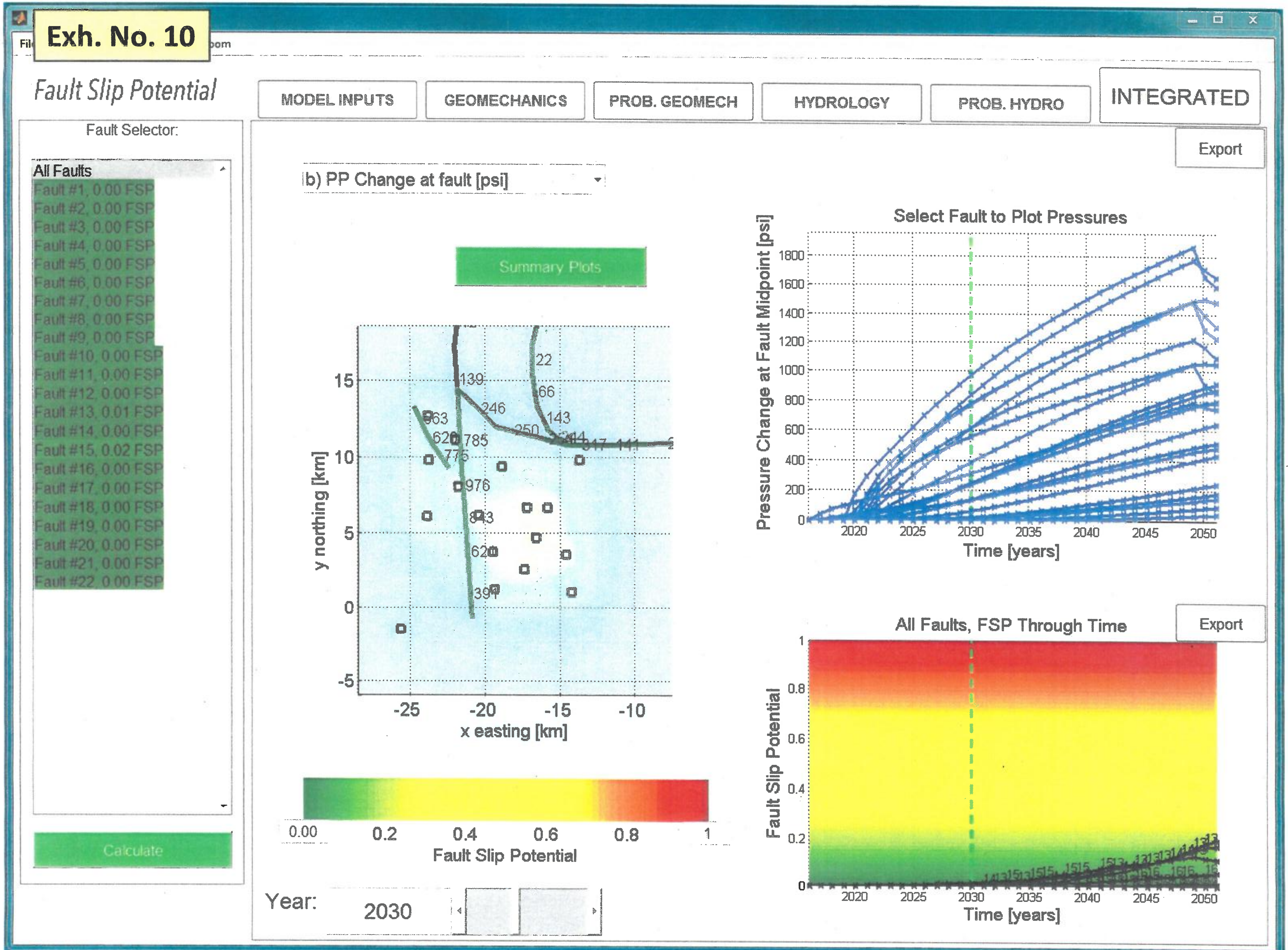
Fault #17, 0.00 FSP
Fault #18, 0.00 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
Year:
2025
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
Export
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

Exh. No. 10


Fault Slip Potential
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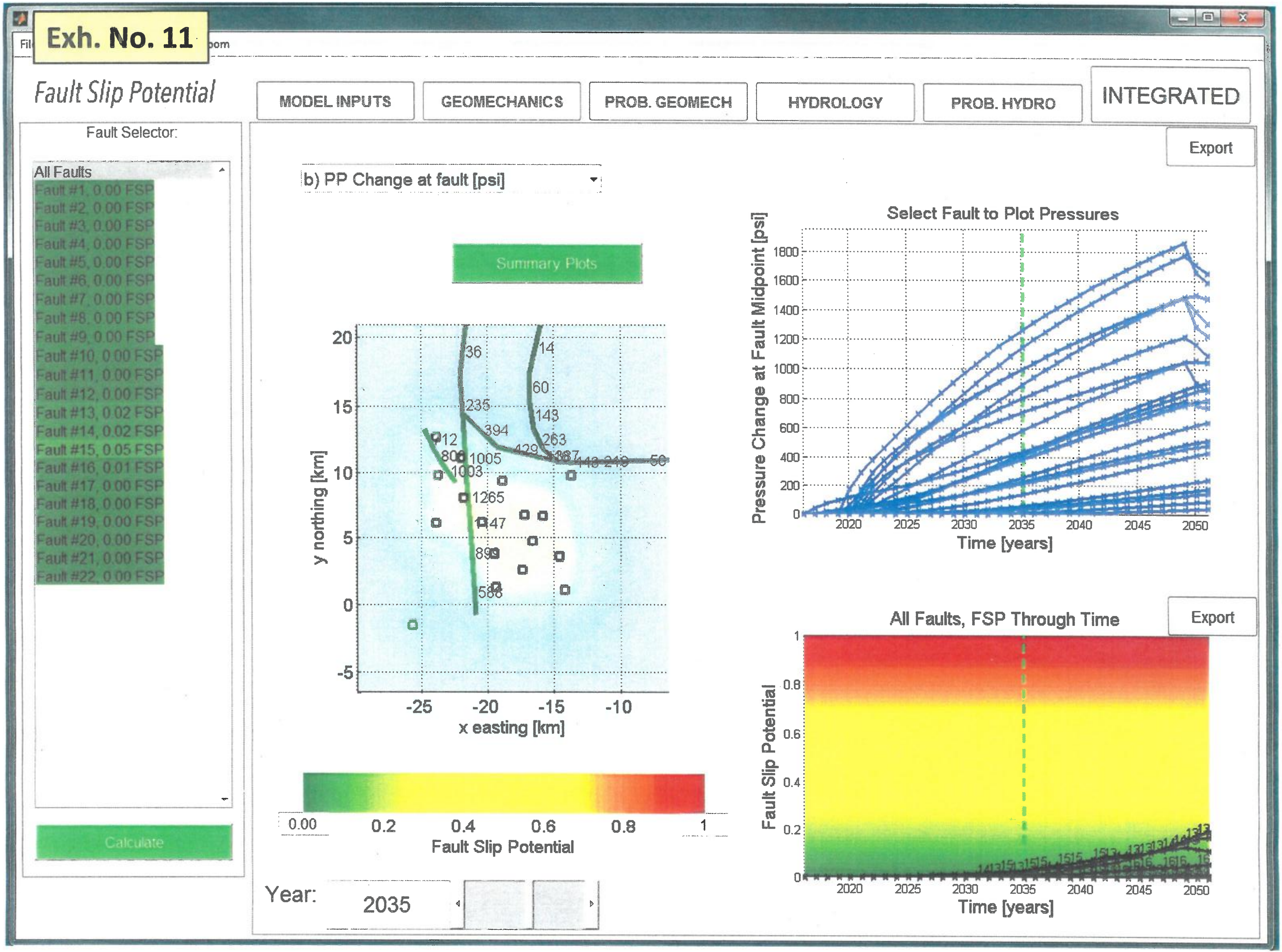
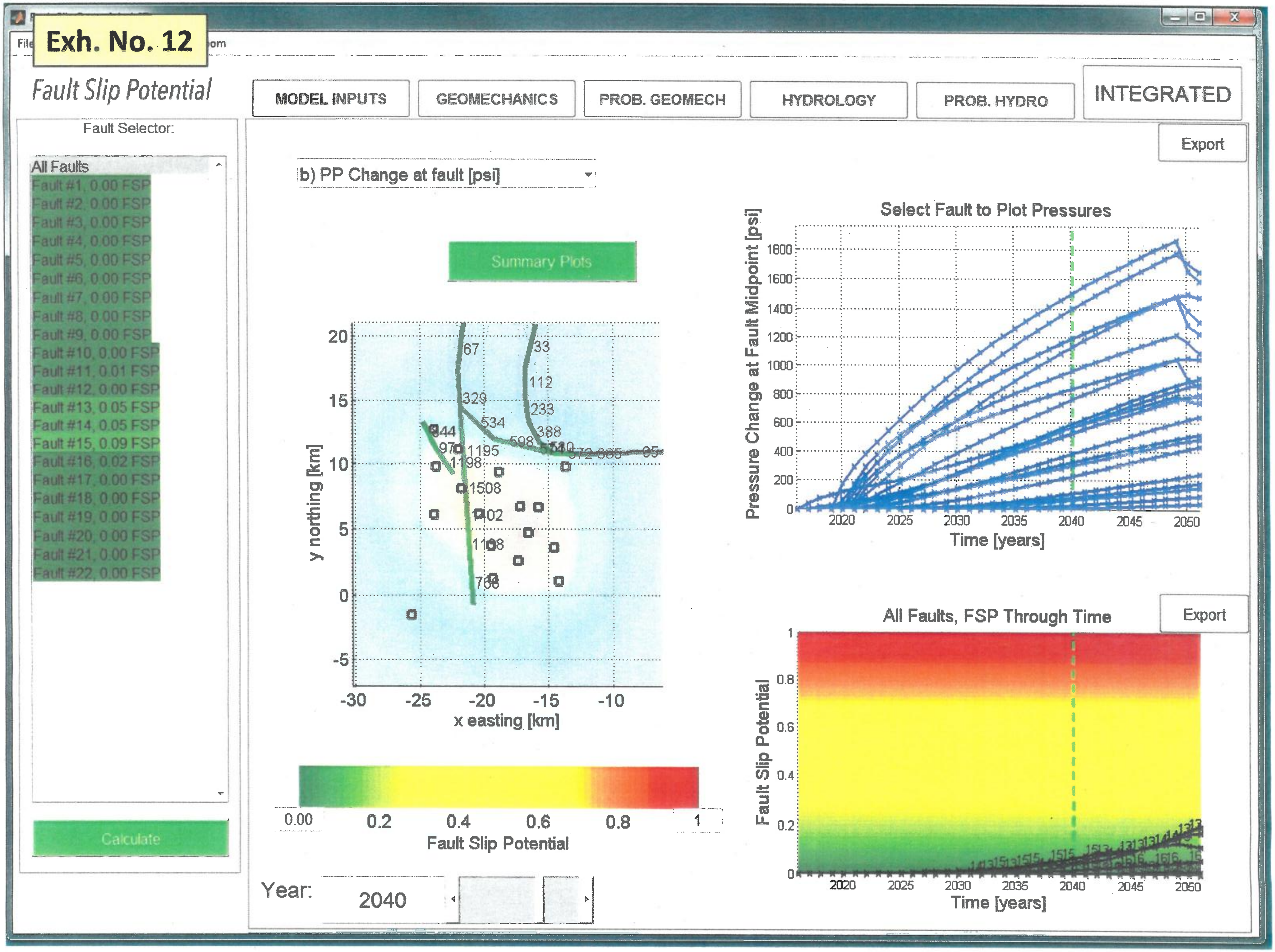
GEOMECHANICS
PROB. GEOMECH
HYDROLOGY
PROB. HYDRO
INTEGRATED
Fault Selector:
All Faults
Fault #1, 0.00 FSP
Fault #2, 0.00 FSP
Fault #3, 0.00 FSP
Fault #4, 0.00 FSP
Fault #5, 0.00 FSP
Fault #6, 0.00 FSP
Fault #7, 0.00 FSP
Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
Fault #10, 0.00 FSP
Fault #11, 0.00 FSP
Fault #12, 0.00 FSP
Fault #13, 0.01 FSP
Fault #14, 0.00 FSP
Fault #15, 0.02 FSP
Fault #16, 0.00 FSP
Fault #17, 0.00 FSP
Fault #18, 0.00 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
Year: 2030
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
Export
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

Exh. No. 11


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
Fault #11, 0.00 FSP
Fault #12, 0.00 FSP
Fault #13, 0.02 FSP
Fault #14, 0.02 FSP
Fault #15, 0.05 FSP
Fault #16, 0.01 FSP
Fault #17, 0.00 FSP
Fault #18, 0.00 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
0.00 0.2 0.4 0.6 0.8 1
Year: 2035
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
Export
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

Exh. No. 12



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
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Fault #8, 0.00 FSP
Fault #9, 0.00 FSP
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Fault #14, 0.05 FSP
Fault #15, 0.09 FSP
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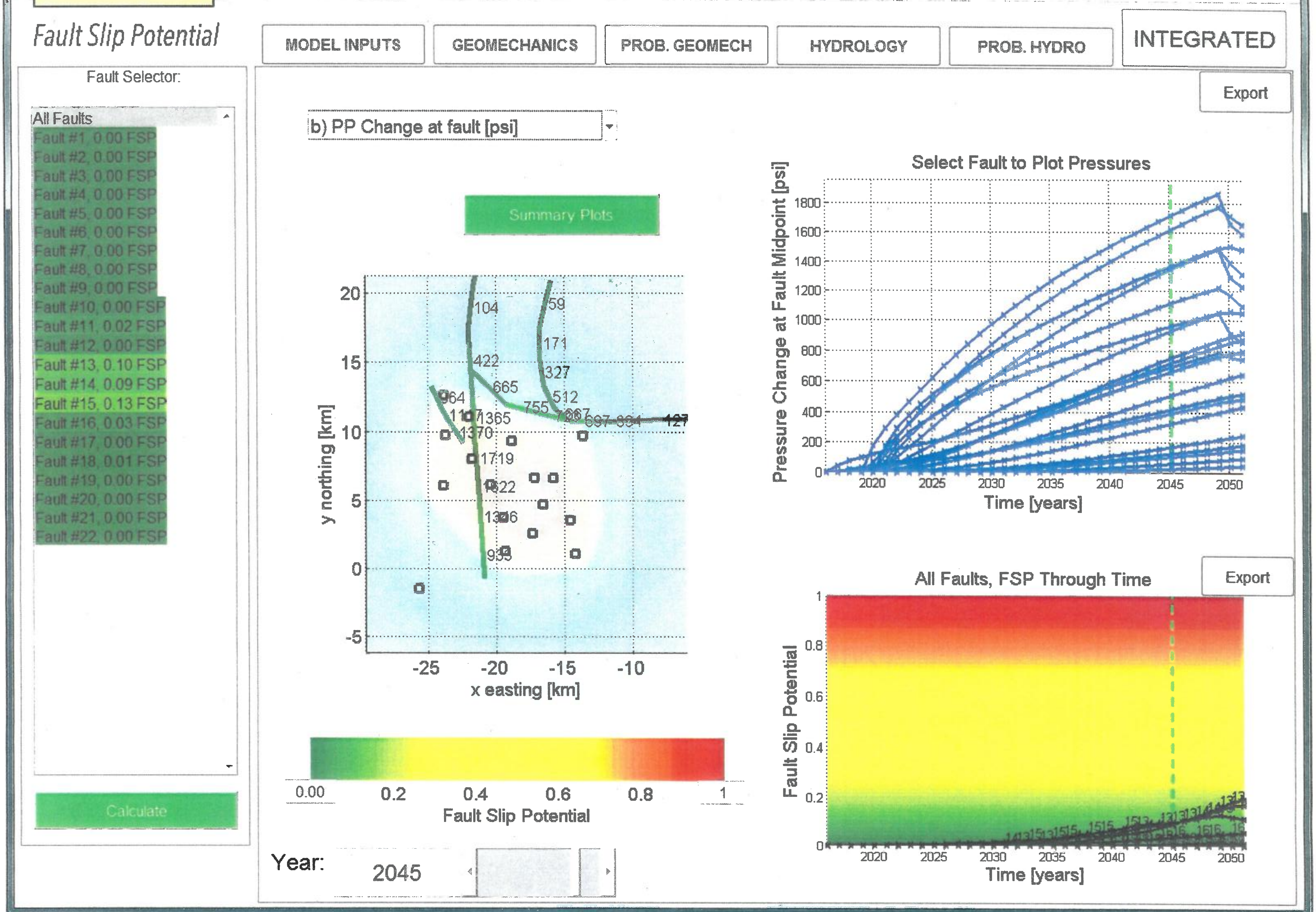
Fault #17, 0.00 FSP
Fault #18, 0.00 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
Year:
2040
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

Exh. No. 13



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
Fault #11, 0.02 FSP
Fault #12, 0.00 FSP
Fault #13, 0.10 FSP
Fault #14, 0.09 FSP
Fault #15, 0.13 FSP
Fault #16, 0.03 FSP
Fault #17, 0.00 FSP
Fault #18, 0.01 FSP
Fault #19, 0.00 FSP
Fault #20, 0.00 FSP
Fault #21, 0.00 FSP
Fault #22, 0.00 FSP
Calculate
b) PP Change at fault [psi]
Summary Plots
y northing [km]
x easting [km]
Fault Slip Potential
Year:
2045
Export
Select Fault to Plot Pressures
Pressure Change at Fault Midpoint [psi]
Time [years]
Export
All Faults, FSP Through Time
Fault Slip Potential
Time [years]

Exhibit 7

Declaration of Stephan Nave
On Behalf of NGL Water Solutions Permian, LLC

DECLARATION OF STEVEN NAVE

I, Steven Nave, declare under penalty of perjury under the law of New Mexico that the following is true and correct to the best of my knowledge and belief.

1. I am over eighteen (18) years of age and am otherwise competent to make this declaration.

2. I am the president of Nave Oil and Gas, which is a fishing tool company that performs fishing operations in several areas, including the area of Southeastern, New Mexico.

3. I worked as a fisherman for Star Tool Company, a fishing tool company, from 1980 until 2001. I later became a partner in Star Tool Company until that company was sold. I then later started my own company, Nave Oil and Gas, which also performs fishing operations. Over the years, I have developed expertise in fishing operations and I have performed fishing operations on Devonian salt water disposal wells located within Southeastern, New Mexico.

4. I am familiar with tubing and casing design requested by NGL Water Solutions Permian, LLC which consists of using tapered string tubing that is 7" x 5 1/2".

5. I have been informed that NGL's wells will be isolated to the Devonian and Silurian formations and will have four strings of casing protecting the fresh water, the salt interval, the Permian aged rocks through the Wolfcamp formation, and the depths to the top of the Devonian. There is a liner, and the deepest casing is 7 5/8", which will be cemented and cement will be circulated.

6. Based on my experience as a fisherman, it is my opinion that there is sufficient clearance between the 7 5/8" 39 pounds per foot or less casing and the proposed 5 ½" tubing to

perform fishing operations. My company regularly performs fishing operations in situations involving similar dimensions and clearances.

7. Fishing can be performed through different methods when 7 5/8" 39 pounds per foot or less casing and the proposed 5 ½" tubing is utilized; such as through the use of overshot tools, spear fishing tools, and (if needed) cutting tools.

8. The use of 7 5/8" 39 pounds per foot or less casing and the proposed 5 ½" tubing will actually allow for the use of a wider variety of fishing tools that cannot typically be used within salt water disposal wells equipped with smaller tubing and casing sizes. This is because there is more room to run tools through the inside of the tubing. Additionally, it is my opinion that it is easier to perform fishing operations when 5 ½" tubing is used.

9. Recently, I supervised a fishing job which involved a horizontal Wolfcamp well which was equipped with casing with a diameter of 7 5/8" 39 pounds per foot or less and casing with a diameter of 5 ½". In that situation, my company was able to mill off the collar and use overshot tools to latch on to the piping that needed to be fished out of the well.

10. In my opinion, fishing operations could be successfully performed even at deeper depths for Devonian disposal wells provided that a sufficient rig is obtained for the operation.

[Signature Page Follows.]

Steven Nave

STEPHAN NAVE

Exhibit 8

Notice Affidavit

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

AMENDED APPLICATION OF NGL WATER SOLUTIONS PERMIAN, LLC FOR APPROVAL OF SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO

CASE NO. 16506

AMENDED APPLICATION OF NGL WATER SOLUTIONS PERMIAN, LLC FOR APPROVAL OF SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO

CASE NO. 20150

<u>AFFIDAVIT</u>

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

Deana M. Bennett, attorney in fact and authorized representative of NGL Water Solutions Permian LLC, the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Amended Applications were provided under a notice letter and that proof of receipt is attached hereto.

Deana M. Bennett

SUBSCRIBED AND SWORN to before me this 30th day of April, 2019 by Deana M. Bennett.

OFFICIAL SEAL
Karlene Schuman
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 02/27/2021

Karlene Schuman

Notary Public

My commission expires:________________

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

PS Form 3877

Type of Mailing: CERTIFIED
03/28/2019

Harpoon

Firm Mailing Book ID: 163899

Line	Article Number	Name, Street & P.O. Address	Postage	Fee	R.R.Fee	Reference	Rest.Del.Fee Contents
1	9314 8699 0430 0057 4570 73	Oil Conservation Division District IV 1220 South St. Francis Drive Santa Fe NM 87505	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
2	9314 8699 0430 0057 4570 80	Oil Conservation Division District I - Hobbs 1625 N. French Drive Hobbs NM 88240	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
3	9314 8699 0430 0057 4570 97	NGL WATER SOLUTIONS PERMIAN, LLC attn: Joe Vargo 1509 W Wall St., Ste. 306 Midland TX 79701	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
4	9314 8699 0430 0057 4571 03	NEW MEXICO STATE LAND OFFICE P.O. Box 1148, Santa Fe Santa Fe NM 87504	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
5	9314 8699 0430 0057 4571 10	BUREAU OF LAND MGMT 301 Dinosaur Trail Santa Fe NM 87508	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
6	9314 8699 0430 0057 4571 27	EOG RESOURCES INC P.O. Box 2267 Midland TX 79702	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
7	9314 8699 0430 0057 4571 34	Fortis Minerals II, LLC 1111 Bagby St., Suite 2150 Houston TX 77002	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
8	9314 8699 0430 0057 4571 41	Yates Brothers, a Partnership 105 South Fourth Street Artesia NM 88210	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
9	9314 8699 0430 0057 4571 58	EOG Resources, Inc. 5509 Champions Drive Midland TX 79706	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
10	9314 8699 0430 0057 4571 65	EOG Resources Y, Inc. 5509 Champions Drive Midland TX 79706	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
11	9314 8699 0430 0057 4571 72	EOG Resources M, Inc. 5509 Champions Drive Midland TX 79706	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
12	9314 8699 0430 0057 4571 89	EOG Resources A, Inc. 5509 Champions Drive Midland TX 79706	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
13	9314 8699 0430 0057 4571 96	EOG Resources Assets LLC 5509 Champions Drive, Midland, TX 79706 Midland TX 79706	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
14	9314 8699 0430 0057 4572 02	Centennial Resource Production, LLC 1001 17th Street, Suite 1800 Denver CO 80202	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
15	9314 8699 0430 0057 4572 19	Novo Oil and Gas Northern Delaware, LLC 105 N. Hudson Avenue, Suite 500 Oklahoma City OK 73102	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice

NEW MEXICO
MAR 2 9 2019

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

PS Form 3877

Type of Mailing: CERTIFIED
03/28/2019

Firm Mailing Book ID: 163899

Line	Article Number	Name, Street & P.O. Address	Postage	Fee	R.R.Fee	Reference	Rest.Del.Fee Contents
16	9314 8699 0430 0057 4572 26	Black Mountain Operating LLC 500 Main St., Suite 1200 Fort Worth TX 76102	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
17	9314 8699 0430 0057 4572 33	Jetstream Oil and Gas Partners, LP P.O. Box 471396, Fort Worth, TX 76147 Fort Worth TX 76147	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
18	9314 8699 0430 0057 4572 40	Energen Resources Corporation 605 Richard Arrington, Jr. Boulevard North Birmingham AL 35203	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
19	9314 8699 0430 0057 4572 57	COG Operating, LLC One Concho Center, 600 West Illinois Midland TX 79701	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
20	9314 8699 0430 0057 4572 64	Sugarberry Oil & Gas Corporation 5950 Cedar Springs Road, Suite 230 Dallas TX 75235	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
21	9314 8699 0430 0057 4572 71	Fredericksburg Royalty, Ltd. 5111 Broadway San Antonio TX 78209	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
22	9314 8699 0430 0057 4572 88	Marathon Oil Permian LLC 5555 San Felipe St Houston TX 77056	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
23	9314 8699 0430 0057 4572 95	Advance Energy Partners, LLC 11490 Westheimer Road, Ste 950 Houston TX 77077	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
24	9314 8699 0430 0057 4573 01	MRC Permian Company LBJ Freeway, Suite 1500 Dallas TX 75240	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
25	9314 8699 0430 0057 4573 18	Pegasus Resources, LLC PO BOX 470698 Fort Worth TX 76147	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
26	9314 8699 0430 0057 4573 25	Tap Rock Resources, LLC 602 Park Point Drive, Suite 200 Golden CO 80401	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
27	9314 8699 0430 0057 4573 32	AGS OG HOLDINGS #2 INC 4400 S FEDERAL BLVD STE 2D Englewood CO 80110	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
28	9314 8699 0430 0057 4573 49	AGS OG HOLDINGS INC 4400 S FEDERAL BLVD STE 2D Englewood CO 80110	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
29	9314 8699 0430 0057 4573 56	MIDWEST RES 2006-1 O&G INCOME PO BOX 76 Elm Grove WI 53122	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
30	9314 8699 0430 0057 4573 63	MIDWEST RES 98-1 O&G INCOME LP PO BOX 76 Elm Grove WI 53122	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice

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

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Type of Mailing: CERTIFIED
03/28/2019

Firm Mailing Book ID: 163899

Line	Article Number	Name, Street & P.O. Address	Postage	Fee	R.R.Fee	Reference	Rest.Del.Fee Contents
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32	9314 8699 0430 0057 4573 87	AGS OG VENTURES INC 4400 S FEDERAL BLVD STE 2D Englewood CO 80110	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
33	9314 8699 0430 0057 4573 94	AGS OG 2005 LLLP 4400 S FEDERAL BLVD STE 2D Englewood CO 80110	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
34	9314 8699 0430 0057 4574 00	TE-RAY RESOURCES INC 1105 SOVEREIGN ROW UNIT C Oklahoma City OK 73108	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
		Totals:	$54.40	$119.00	$54.40		$0.00
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List Number of Pieces Listed by Sender	Total Number of Pieces Received at Post Office	Postmaster: Name of receiving employee	Dated:
34			

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Transaction Report Details - CertifiedPro.net
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9314869904300057457141	2019-03-28 1:49 PM	Yates Brothers, a Partnership		105 South Fourth Street	Artesia	NM	88210	Delivered	Return Receipt - Electronic	04-02-2019
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9314869904300057457127	2019-03-28 1:49 PM	EOG RESOURCES INC		P.O. Box 2267	Midland	TX	79702	Delivered	Return Receipt - Electronic	04-02-2019
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9314869904300057457080	2019-03-28 1:49 PM	Oil Conservation Division District I - Hobbs		1625 N. French Drive	Hobbs	NM	88240	Delivered	Return Receipt - Electronic	04-02-2019
9314869904300057457073	2019-03-28 1:49 PM	Oil Conservation Division District IV		1220 South St. Francis Drive	Santa Fe	NM	87505	Delivered	Return Receipt - Electronic	04-01-2019

Maverick

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

PS Form 3877

Type of Mailing: CERTIFIED
03/29/2019

Firm Mailing Book ID: 163935

Line	Article Number	Name, Street & P.O. Address	Postage	Fee	R.R.Fee	Reference	Rest.Del.Fee Contents
1	9314 8699 0430 0057 4760 98	Oil Conservation Division District I - Hobbs 1625 N. French Drive Hobbs NM 88240	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
2	9314 8699 0430 0057 4761 04	NGL WATER SOLUTIONS PERMIAN, LLC attn: Joe Vargo 1509 W Wall St., Ste. 306 Midland TX 79701	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
3	9314 8699 0430 0057 4761 11	NEW MEXICO STATE LAND OFFICE P.O. Box 1148, Santa Fe Santa Fe NM 87504	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
4	9314 8699 0430 0057 4761 28	BUREAU OF LAND MGMT 301 Dinosaur Trail Santa Fe NM 87508	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
5	9314 8699 0430 0057 4761 35	EOG RESOURCES INC P.O. Box 2267 Midland TX 79702	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
6	9314 8699 0430 0057 4761 42	EOG RESOURCES INC 333 CLAY ST #4200 Houston TX 77002	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
7	9314 8699 0430 0057 4761 59	Leta T. Dillon Family Limited Partnership c/o James Patrick Knight P.O. Box 2343 South Padre Island TX 78597	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
8	9314 8699 0430 0057 4761 66	Oil Conservation Division District IV 1220 South St. Francis Drive Santa Fe NM 87505	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
9	9314 8699 0430 0057 4761 73	Centennial Resource Production, LLC 1001 17th St., Suite 1800 Denver CO 80202	$1.60	$3.50	$1.60	87806-0003	$0.00 Notice
		Totals:	**$14.40**	**$31.50**	**$14.40**		**$0.00**
						Grand Total:	**$60.30**

USPS ALBUQUERQUE, NEW MEXICO 87101 MAR 29 2019

List Number of Pieces Listed by Sender	Total Number of Pieces Received at Post Office	Postmaster: Name of receiving employee	Dated:
9			

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

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Type of Mailing: CERTIFIED
12/17/2018

KS

Firm Mailing Book ID: 157478

Line	Article Number	Name, Street & P.O. Address	Postage	Fee	R.R.Fee	Reference	Rest.Del.Fee Contents
1	9314 8699 0430 0054 0066 56	Oil Conservation Division District I - Hobbs 1625 N. French Drive Hobbs NM 88240	$1.63	$3.45	$1.50	87806-0003	$0.00 Notice
2	9314 8699 0430 0054 0066 63	NGL WATER SOLUTIONS PERMIAN, LLC attn: Joe Vargo 1509 W Wall St., Ste. 306 Midland TX 79701	$1.63	$3.45	$1.50	87806-0003	$0.00 Notice
3	9314 8699 0430 0054 0066 70	NEW MEXICO STATE LAND OFFICE P.O. Box 1148, Santa Fe Santa Fe NM 87504	$1.63	$3.45	$1.50	87806-0003	$0.00 Notice
4	9314 8699 0430 0054 0066 87	BUREAU OF LAND MGMT 301 Dinosaur Trail Santa Fe NM 87508	$1.63	$3.45	$1.50	87806-0003	$0.00 Notice
5	9314 8699 0430 0054 0066 94	EOG RESOURCES INC P.O. Box 2267 Midland TX 79702	$1.63	$3.45	$1.50	87806-0003	$0.00 Notice
6	9314 8699 0430 0054 0067 00	EOG RESOURCES INC 333 CLAY ST #4200 Houston TX 77002	$1.63	$3.45	$1.50	87806-0003	$0.00 Notice
7	9314 8699 0430 0054 0067 17	Leta T. Dillon Family Limited Partnership c/o James Patrick Knight P.O. Box 2343 South Padre Island TX 78597	$1.63	$3.45	$1.50	87806-0003	$0.00 Notice
		Totals:	$11.41	$24.15	$10.50		$0.00
						Grand Total:	$46.06

USPS ALBUQUERQUE NM 87 DEC 1 2018

List Number of Pieces Listed by Sender	Total Number of Pieces Received at Post Office	Postmaster: Name of receiving employee	Dated:
7			

Transaction Report Details - CertifiedPro.net
Firm Mail Book ID= 163935
Generated: 4/29/2019 3:37:36 PM

USPS Article Number	Date Created	Reference Number	Name 1	Name 2	Address	City	State	Zip	Mailing Status	Service Options	Mail Delivery Date
9314869904300057476173	2019-03-29 8:23 AM	87806-0003	Centennial Resource Production, LLC		1001 17th St., Suite 1800	Denver	CO	80202	Delivered	Return Receipt - Electronic	04-01-2019
9314869904300057476166	2019-03-29 8:23 AM	87806-0003	Oil Conservation Division District IV		1220 South St. Francis Drive	Santa Fe	NM	87505	Delivered	Return Receipt - Electronic	04-01-2019
9314869904300057476159	2019-03-29 8:23 AM	87806-0003	Leta T. Dillon Family Limited Partnership	c/o James Patrick Knight	P.O. Box 2343	South Padre Island	TX	78597	Delivered	Return Receipt - Electronic	04-01-2019
9314869904300057476142	2019-03-29 8:23 AM	87806-0003	EOG RESOURCES INC		333 CLAY ST #4200	Houston	TX	77002	Delivered	Return Receipt - Electronic	04-03-2019
9314869904300057476135	2019-03-29 8:23 AM	87806-0003	EOG RESOURCES INC		P.O. Box 2267	Midland	TX	79702	Delivered	Return Receipt - Electronic	04-02-2019
9314869904300057476128	2019-03-29 8:23 AM	87806-0003	BUREAU OF LAND MGMT		301 Dinosaur Trail	Santa Fe	NM	87508	To be Mailed	Return Receipt - Electronic	
9314869904300057476111	2019-03-29 8:23 AM	87806-0003	NEW MEXICO STATE LAND OFFICE		P.O. Box 1148, Santa Fe	Santa Fe	NM	87504	Delivered	Return Receipt - Electronic	04-01-2019
9314869904300057476104	2019-03-29 8:23 AM	87806-0003	NGL WATER SOLUTIONS PERMIAN, LLC	attn: Joe Vargo	1509 W Wall St., Ste. 306	Midland	TX	79701	Delivered	Return Receipt - Electronic	04-01-2019
9314869904300057476098	2019-03-29 8:23 AM	87806-0003	Oil Conservation Division District I - Hobbs		1625 N. French Drive	Hobbs	NM	88240	Delivered	Return Receipt - Electronic	04-01-2019

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

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

Beginning with the issue dated
December 26, 2018
and ending with the issue dated
December 26, 2018.

Publisher

Sworn and subscribed to before me this 26th day of December 2018.

Business Manager

My commission expires
January 29, 2019
(Seal)

OFFICIAL SEAL
GUSSIE BLACK
Notary Public
State of New Mexico
My Commission Expires 1-29-19

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 LEGAL LEGAL

LEGAL NOTICE
DECEMBER 26, 2018

CASE NO. 16443: Notice to all affected parties, as well as the heirs and devisees of BUREAU OF LAND MGMT; NEW MEXICO STATE LAND OFFICE; EOG RESOURCES; EOG RESOURCES INC; EOG M RESOURCES INC; EOG A RESOURCES; OXY Y-1 COMPANY; MARATHON OIL PERMIAN LLC; SANTO OPERATING LLC; JOAN G. PHILLIPS C/O DOUGLAS G. MCCORMICK; MRC PERMIAN COMPANY; ONEENERGY PARTNERS OPERATING, LLC; BLACK MOUNTAIN OIL AND GAS; COG OPERATING, LLC; AMEREDEV NEW MEXICO, LLC; MBOE, INC.; ROBERT LANDRETH; DUER WAGNER, JR., INDIVIDUALLY AND AS TRUSTEE OF THE RUTH WAGNER TRUST; SHANNON SPROWLS, INDIVIDUALLY AND UNDER THE SHANNON R. SPROWLS 2012 TRUST; JOHN T. NEISLER, INDIVIDUALLY AND UNDER THE JOHN T. NEISLER 2012 TRUST; SPRINGBOK ENERGY PARTNERS II, LLC; SILVER SPUR RESOURCES, LLC; CHEVRON USA, INC.; FORTIS MINERALS II, LLC; KATY PIPELINE AND PRODUCTION CORPORATION; SUGARBERRY OIL & GAS CORPORATION; ENERGEN RESOURCES CORPORATION; COG OPERATING, LLC; THE ALLAR CO; SUSAN DUFF; HOMMENSEN INVESTMENT COMPANY; JOHN V. MCCARTHY, III; BATES FAMILY INVESTMENT COMPANY, LLC; THE TRUST COMPANY OF OKLAHOMA; DUARD B. THOMAS, PR OF THE ESTATE OF WARREN J. BATES; TEXAS STATE BANK TRUSTEE OF THE LUCILLE CHISM BATES TESTAMENTARY TRUST; ROBERT F. FLEET REVOCABLE TRUST; RAE ANN FLEET GOSSETT; B.H.C.H. MINERAL, LTD. & FREDERICKSBURG ROYALTY, LTD.; JAMES RAY BATES; MARGARET HELEN KALMAR CHILDREN'S TRUST; PAWN ENTERPRISES, LTD.; D. MORGAN FIRESTONE; RAN CORP.; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an amended application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this amended application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Sidewinder SWD #1** well at a surface location 1756 feet from the North line and 16 feet from the East line of Section 15, Township 25 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. The target injection interval is the Devonian and Silurian formations at a depth of 17,157 - 19,067'. 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 daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 22 miles west of Jal, New Mexico.

CASE NO. 20139: Notice to all affected parties, as well as the heirs and devisees of NEW MEXICO STATE LAND OFFICE; BUREAU OF LAND MGMT; EOG RESOURCES INC; LETA T. DILLON FAMILY LIMITED PARTNERSHIP C/O JAMES PATRICK KNIGHT; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an amended application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Aztec SWD #1** well at a surface location 2017 feet from the South line and 1450 feet from the East line of Section 8, Township 25 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 17,020' to 18,890'. 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 daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 19 miles west of Jal, New Mexico.

CASE NO. 20141: Notice to all affected parties, as well as the heirs and devisees of NEW MEXICO STATE LAND OFFICE; BUREAU OF LAND MGMT; COG OPERATING LLC; MATADOR PRODUCTION COMPANY; DEVON ENERGY PRODUCTION COMPANY, LP; KAISER-FRANCIS OIL CO; EOG Y RESOURCES, INC; EOG RESOURCES INC; TAP ROCK OPERATING, LLC; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an amended application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Sparrow SWD #1** well at a surface location 405 feet from the North line and 297 feet from the West line of Section 11, Township 24 South, Range 33 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,940' - 18,668'. 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 daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 22.6 miles northwest of Jal, New Mexico.

CASE NO. 20142: Notice to all affected parties, as well as the heirs and devisees of BUREAU OF LAND MGMT; COG OPERATING LLC; MATADOR PRODUCTION COMPANY; DEVON ENERGY PRODUCTION COMPANY, LP; KAISER-FRANCIS OIL CO; LUCID ENERGY DELAWARE, LLC; DEVON ENERGY PRODUCTION CO LP; ONEENERGY PARTNERS OPERATING, LLC; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an amended application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Trident SWD #1** well at a surface location 240 feet from the North line and 1120 feet from the West line of Section 13, Township 24 South, Range 33 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,320' - 18,093'. 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 daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 21 miles northwest of Jal, New Mexico.

CASE NO. 20143: Notice to all affected parties, as well as the heirs and devisees of NEW MEXICO STATE LAND OFFICE; BUREAU OF LAND MGMT; EOG RESOURCES INC; MARATHON OIL PERMIAN LLC; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an amended application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Viper SWD #1** well at a surface location 962 feet from the North line and 1003 feet from the East line of Section 18, Township 25 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 17,180' - 19,050'. 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 daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 18 miles west of Jal, New Mexico.

CASE NO. 20150: Notice to all affected parties, as well as the heirs and devisees of NEW MEXICO STATE LAND OFFICE; BUREAU OF LAND MGMT; EOG RESOURCES INC; EOG RESOURCES INC; LETA T. DILLON FAMILY LIMITED PARTNERSHIP C/O JAMES PATRICK KNIGHT; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Maverick SWD #1** well at a surface location 1246 feet from the South line and 1627 feet from the East line of Section 29, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,645' to 18,265'. 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 daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 18 miles northwest of Jal, NM.

CASE NO. 20151: Notice to all affected parties, as well as the heirs and devisees of NEW MEXICO STATE LAND OFFICE; BUREAU OF LAND MGMT; EOG RESOURCES INC; AGS OG HOLDINGS #2 INC; AGS OG HOLDINGS INC; MIDWEST RES 2006-1 O&G INCOME; MIDWEST RES 99-1 O&G INCOME LP; MIDWEST RES 99-1 O&G INCOME LP; AGS OG VENTURES INC; AGS OG 2005 LLLP; TE-RAY RESOURCES INC; ENERGEN RESOURCES CORPORATION; MARATHON OIL PERMIAN LLC; COG OPERATING LLC; ADVANCE ENERGY PARTNERS, LLC; EOG RESOURCES Y, INC; EOG RESOURCES M, INC; EOG RESOURCES A, INC; WAYNE NEWKUMET, ETUX LINDA NEWKUMET; ROBERT E. LANDRETH, ETUX DONNA LANDRETH; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Tomahawk SWD #1** well at a surface location 220 feet from the North line and 2420 feet from the East line of Section 4, Township 25 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,805' to 18,475'. NGL further seeks approval of the use of 7 inch tubing [illegible]

Beginning with the issue dated
December 26, 2018
and ending with the issue dated
December 26, 2018.

[signature]
Publisher

Sworn and subscribed to before me this
26th day of December 2018.

[signature: Gussie Black]
Business Manager

My commission expires
January 29, 2019
(Seal)

OFFICIAL SEAL
GUSSIE BLACK
Notary Public
State of New Mexico
My Commission Expires 1-29-19

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

Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an amended application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In the amended application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Sidewinder SWD #1** well at a surface location 1755 feet from the North line and 18 feet from the East line of Section 15, Township 25 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. The target injection interval is the Devonian and Silurian formations at a depth of 17,157' - 19,067'. 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 daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 22 miles west of Jal, New Mexico.

CASE NO. 20139: Notice to all affected parties, as well as the heirs and devisees of NEW MEXICO STATE LAND OFFICE; BUREAU OF LAND MGMT; EOG RESOURCES INC; LETA T. DILLON FAMILY LIMITED PARTNERSHIP C/O JAMES PATRICK KNIGHT; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an amended application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Aztec SWD #1** well at a surface location 2017 feet from the South line and 1420 feet from the East line of Section 6, Township 25 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 17,020' to 18,890'. NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 19 miles west of Jal, New Mexico.

CASE NO. 20141: Notice to all affected parties, as well as the heirs and devisees of NEW MEXICO STATE LAND OFFICE, BUREAU OF LAND MGMT; COG OPERATING LLC; MATADOR PRODUCTION COMPANY; DEVON ENERGY PRODUCTION COMPANY, LP; KAISER-FRANCIS OIL CO; EOG Y RESOURCES, INC; EOG RESOURCES INC; TAP ROCK OPERATING, LLC; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an amended application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Sparrow SWD #1** well at a surface location 405 feet from the North line and 297 feet from the West line of Section 11, Township 24 South, Range 33 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,940' - 18,658'. NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 22.6 miles northwest of Jal, New Mexico.

CASE NO. 20142: Notice to all affected parties, as well as the heirs and devisees of BUREAU OF LAND MGMT; COG OPERATING LLC; MATADOR PRODUCTION COMPANY; DEVON ENERGY PRODUCTION COMPANY, LP; KAISER-FRANCIS OIL CO; LUCID ENERGY DELAWARE, LLC; DEVON ENERGY PRODUCTION CO LP; ONEENERGY PARTNERS OPERATING, LLC; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an amended application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Trident SWD #1** well at a surface location 240 feet from the North line and 1120 feet from the West line of Section 13, Township 24 South, Range 33 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,820' - 18,093'. NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 21 miles northwest of Jal, New Mexico.

CASE NO. 20143: Notice to all affected parties, as well as the heirs and devisees of NEW MEXICO STATE LAND OFFICE; BUREAU OF LAND MGMT; EOG RESOURCES INC; MARATHON OIL PERMIAN LLC; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an amended application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Viper SWD #1** well at a surface location 962 feet from the North line and 1003 feet from the East line of Section 18, Township 25 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 17,180' - 19,050'. NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 18 miles west of Jal, New Mexico.

CASE NO. 20150: Notice to all affected parties, as well as the heirs and devisees of NEW MEXICO STATE LAND OFFICE; BUREAU OF LAND MGMT; EOG RESOURCES INC; EOG RESOURCES INC; LETA T. DILLON FAMILY LIMITED PARTNERSHIP C/O JAMES PATRICK KNIGHT; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Maverick SWD #1** well at a surface location 1248 feet from the South line and 1627 feet from the East line of Section 29, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,625' to 18,265'. NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 18 miles northwest of Jal, NM.

CASE NO. 20151: Notice to all affected parties, as well as the heirs and devisees of NEW MEXICO STATE LAND OFFICE; BUREAU OF LAND MGMT; EOG RESOURCES INC; AGS OG HOLDINGS #2 INC; AGS OG HOLDINGS INC; MIDWEST RES 2005-1 O&G INCOME; MIDWEST RES 98-1 O&G INCOME LP; MIDWEST RES 99-1 O&G INCOME LP; AGS OG VENTURES INC; AGS OG 2005 LLLP; TE-RAY RESOURCES INC; ENERGEN RESOURCES CORPORATION; MARATHON OIL PERMIAN LLC; EOG OPERATING LLC; ADVANCE ENERGY PARTNERS, LLC; EOG RESOURCES Y, INC; EOG RESOURCES M, INC; EOG RESOURCES A, INC; WAYNE NEWKUMET, ETUX LINDA NEWKUMET; ROBERT E LANDRETH, ETUX DONNA LANDRETH; NGL Water Solutions Permian, LLC, 1509 W. Wall Street, Suite 306, Midland, Texas 79701 is filing an application for hearing along with a C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for approval of 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 January 10, 2019, to consider this application. In this application, NGL seeks an order approving disposal into the Silurian-Devonian formation through the **Tomahawk SWD #1** well at a surface location 220 feet from the North line and 2420 feet from the East line of Section 4, Township 25 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,805' to 18,475'. NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 18.9 miles northwest of Jal, New Mexico.

#33573

Transaction Report Details - CertifiedPro.net
Firm Mail Book ID= 157478
Generated: 4/29/2019 3:43:26 PM

USPS Article Number	Date Created	Name 1	Name 2	Address	City	State	Zip	Mailing Status	Service Options	Mail Delivery Date
9314869904300054006717	2018-12-17 9:20 AM	Leta T. Dillon Family Limited Partnership	c/o James Patrick Knight	P.O. Box 2343	South Padre Island	TX	78597	Delivered	Return Receipt - Electronic	12-21-2018
9314869904300054006700	2018-12-17 9:20 AM	EOG RESOURCES INC		333 CLAY ST #4200	Houston	TX	77002	Delivered	Return Receipt - Electronic	12-26-2018
9314869904300054006694	2018-12-17 9:20 AM	EOG RESOURCES INC		P.O. Box 2267	Midland	TX	79702	Delivered	Return Receipt - Electronic	12-21-2018
9314869904300054006687	2018-12-17 9:20 AM	BUREAU OF LAND MGMT		301 Dinosaur Trail	Santa Fe	NM	87508	Lost	Return Receipt - Electronic	
9314869904300054006670	2018-12-17 9:20 AM	NEW MEXICO STATE LAND OFFICE		P.O. Box 1148, Santa Fe	Santa Fe	NM	87504	Delivered	Return Receipt - Electronic	12-20-2018
9314869904300054006663	2018-12-17 9:20 AM	NGL WATER SOLUTIONS PERMIAN, LLC	attn: Joe Vargo	1509 W Wall St., Ste. 306	Midland	TX	79701	Delivered	Return Receipt - Electronic	12-20-2018
9314869904300054006656	2018-12-17 9:20 AM	Oil Conservation Division District I - Hobbs		1625 N. French Drive	Hobbs	NM	88240	Delivered	Return Receipt - Electronic	12-20-2018