

# Trove Energy and Water, a NM LLC

Established 2016

Net Asset Value \$55 million

\$8 million/yr revenue since inception

EXHIBIT

1

TROVE ENERGY AND WATER, LLC

Exhibit Nos. 1, 2, 3, 4, 5A, 6, 7, 8, and 9

Common to Case Nos. 20751, 20752, 20753, 29754, 29757, and 20760

## AOR (Area of Review) – 7 townships identified by Trove for water logistics development

- New water – after a comprehensive review of the area, Trove determined the injection capacity to be severely deficient to support the planned horizontal oil development of this 7 township region.
- New SWD capacity is also dramatically constrained by availability of suitable locations for SWD. All future locations are reserved.
- Even with all 24 Trove locations approved and drilled, the AOR will be chronically short of disposal capacity by 700,000 barrels/day in 2020 and 500,000 barrels/day by 2023.

23S 31E  
24S 30E  
24S 32E  
25S 31E  
24S 31E  
25S 33E

24S 33E  
25S 32E  
25S 34E

26S 31E  
26S 32E  
26S 33E  
26S 34E





# Trove Energy and Water, LLC

Prospect Development,

C-108 Preparation

And

Other Permitting Efforts and Activities

EXHIBIT

2

~ References LARGE FIGURE Pages ~



# Prospect Development

- Trove seeks to target activity-rich areas where the disposal need is forecast to be greatest
- Current prospecting efforts are focused on Federal lands
- State and Fee lands will be prospected in future development phases
- Forward looking plans 3 to 5 years prospecting and development – 35 to 40 years facility life.

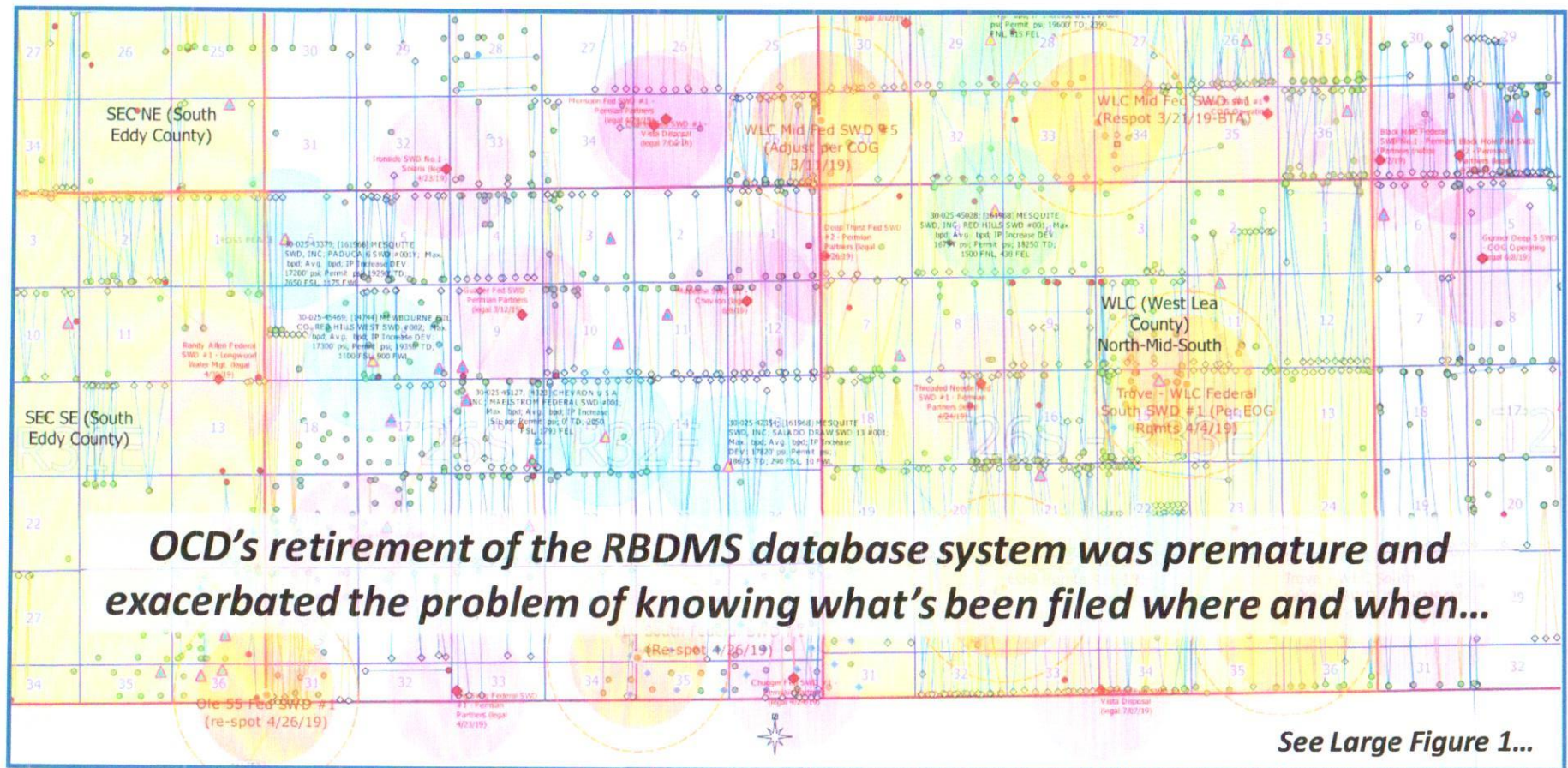
## LOCATION CRITERIA

- **Proximity** to Existing, Permitted or Applied-for SWD Locations
- **Surface issues** – drainage and arroyos, other such as pipelines or electric, other infrastructure
- **Horizontal completions** – subsurface lateral runs
- Operators' & Lessees' current and future **Development Plans**
- **Road Access** when possible (minimize new roads)



# Prospecting Challenges

*Trove does not consider other SWD operators **EXCEPT** to completely avoid any competitors' SWDs  $\frac{3}{4}$ -mile AOR bubble – other infrastructure is generally not known.*

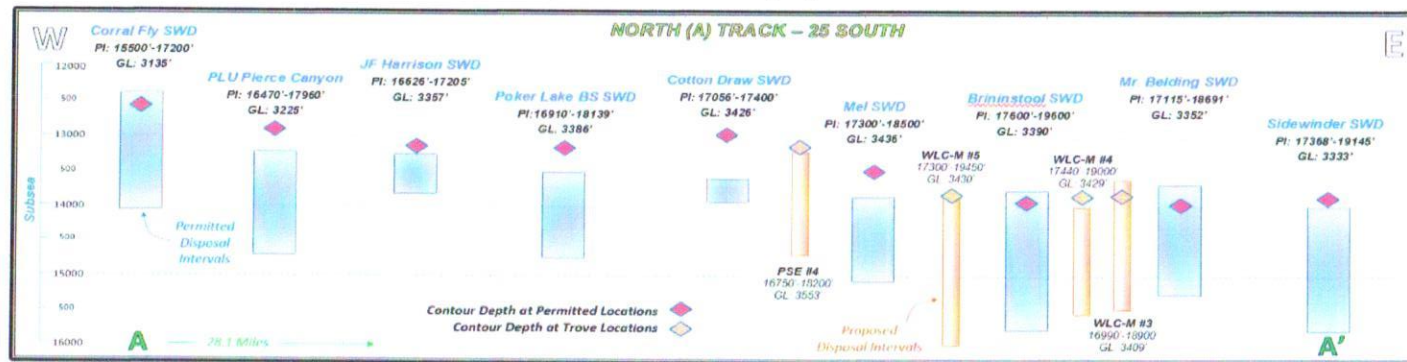




# Disposal Interval Determination

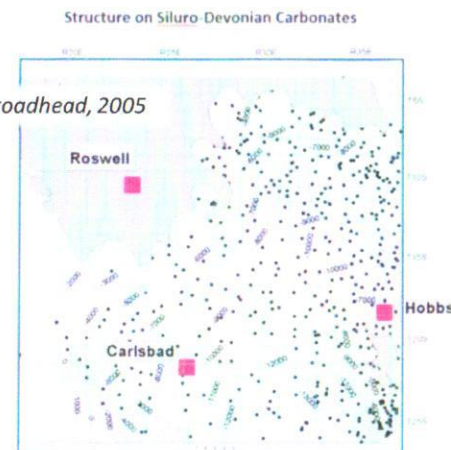
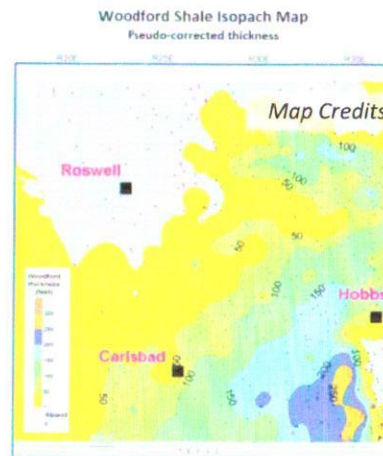
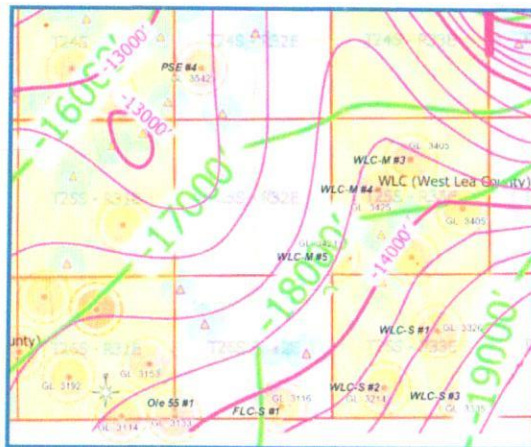
(and Confining Strata Layers)

*Devonian-Silurian and Precambrian Contours and nearby SWDs were used to determine the appropriate interval for each site; Isopachs approximate thickness*



Stratigraphic Column

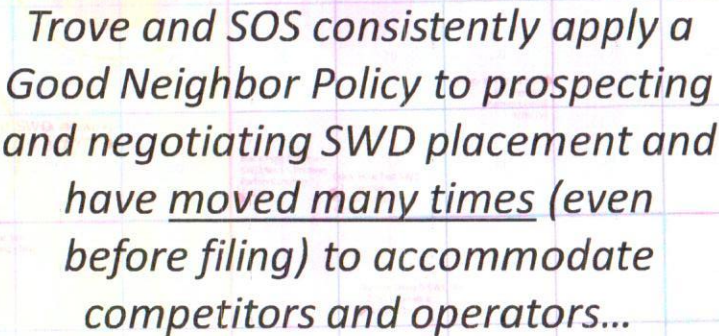
Age		Strata
PERMIAN	TRIASSIC	Chinle
		Santa Rosa
		Dewey Lake
		Rustler
		Salado
	Ochoan	Castile
		Bell Canyon
		Cherry Canyon
		Brushy Canyon
		Cutoff Fm.
PENNSYLVANIAN	Guadalupian	Bone Spring
		Hueco ("Wolfcamp")
	Leonardian	Cisco
		Canyon
		Strawn
	Wolfcampian	Atoka
		Morrow
		Barnett
		Undivided Limestones
		Woodford
DEVONIAN	MISSISSIPPIAN	Upper
		Middle
		Lower
	DEVONIAN/SILURIAN TARGET INTERVAL	Upper
		Middle
		Lower
SILURIAN	Fuselman	Upper
		Middle
		Lower
	Simpson	Upper
		Middle
		Lower
ORDOVICIAN	Bliss	Upper
		Middle
		Lower
	Cambrian	Upper
		Middle
		Lower
PRECAMBRIAN	Igneous, metamorphic, volcanics	Upper
		Middle
		Lower
	Precambrian	Upper
		Middle
		Lower



See Large Figures 2, 3, 4, 5...



*NMOCD's unwritten but currently mandated ¾-mile Area of Review for Devonian SWDs helped create the 'Gold Rush mentality' to lock up quickly diminishing real estate available for SWD placement.*



- 4 -

# Trove and SOS

## Permitting Effort and Approach

### ***SWD Permit – NMOCD C-108***

UIC Program Centric – Authorize and Secure SWD Spot

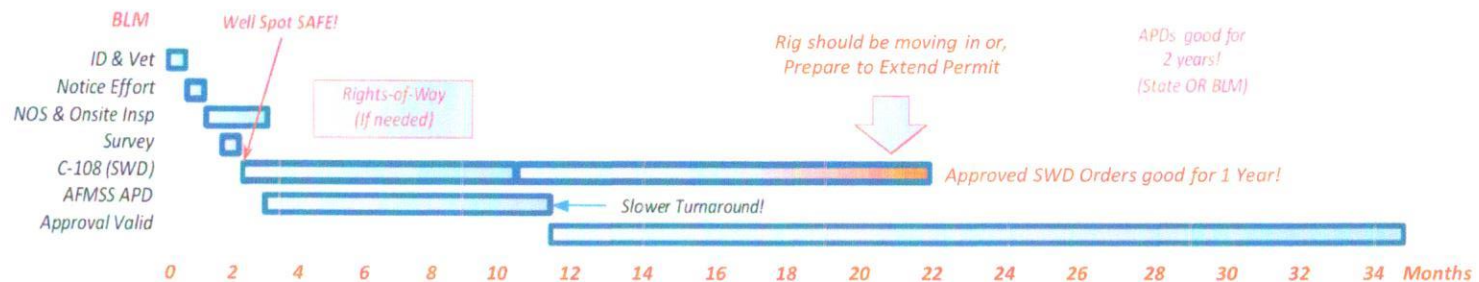
### ***APD – BLM Form 3160-003 – AFMSS 2***

Well & Construction Detail / Other Physical Specifics

### ***Rights-of-Way/ SWD Easement – SF-299***

Roads, Pipelines, Electrical ***AND*** SWD Facility Pad and Use

#### ***GRAPHIC TIMELINE (Typical)***





# UIC Program Guidance

- EPA, under the auspices of the Safe Water Drinking Act's Underground Injection Control Program, awarded Primacy to NMOCD in 1981 for its existing injection well permitting and monitoring program
- Class II designation emphasizes the protection of USDWs through appropriate injection well design and,
- Protects Correlative Rights and the Environment
- Provides that casing strings be effectively cemented to prevent migration between strata
- Provides for water analyses (area fresh water and injected produced water & RCRA Exempt) and,
- Provides appropriate monitoring, inspection and corrective action compliance measures

# Trove and SOS Permitting Philosophy

- Fully support goals and intent of UIC and C-108 Requirements with appropriate\* level of detail
- C-108 focuses on Well Spot Siting, Area of Review, Zone Identification and Affected Party Notification
- Estimate formation depths for suitable and approximate casing and downhole design
- Generate supporting exhibits for AOR – identify and document wells which penetrate target zone
- ID fresh water wells if applicable – analyses, verify no probable conduit or fault for migration to USDW
- Appropriate geologic target description – additional info – cross-sections and seismic as needed

\* *Much of the C-108 well information is estimated – APDs vastly more specific*



# Trove and SOS - C-108s (cont.)

- Operational narrative should be well developed and contain appropriate detail (*pressures, rates, security, etc.*)
- Research, document and illustrate as needed to fully present the proposed operation as clearly and comprehensively as possible
- Consult and communicate with regulators and affected parties as necessary to address comments, questions or concerns - Strive to address any issues as quickly as possible
- After 'Suspense' period, ***move towards APD*** activities and requirements, surveys, etc.

# Trove and SOS - C-108s (cont.)

- Trove and SOS Consulting agree with much of industry and are concerned that NMOCD is struggling to meet its regulatory responsibilities in a timely manner
- Requirements should be promulgated as Rules
- Rules should be adhered to and consistent on both sides (*AORs and suspense dates are examples; has tubing size precedence been set?*)
- NMOCD should help to foster cooperation, good neighbor policies and communication; anti-competitive and *free-for-all* protests should be discouraged
- SLO's *Pore Space-Correlative Rights Issue* is ill-conceived and will have unintended, far-reaching consequences



# Trove and SOS - APDs

- APDs and SWD Applications are inherently different in detail – ***as they should be***
- APD Well Construction Details (*formations, pipe, cement, mud, fluids, wastes and surface issues*) are covered in **exhaustive** detail – ***as they should be***
- AFMSS 2 is utilized for Notice of Staking and leads to the full APD application effort
  - Surveys, on-site inspections (BLM and company reps) and rights-of-way needs are addressed
  - APDs at BLM go through a rigorous chain review process by many individuals with specialized areas of focus (*casing design, geology*)
- APD submittal (for Trove) is contingent upon a reasonable assurity that the SWD permit is forthcoming (***suspense x 3***)
- The \$10K BLM APD fee is NOT an insignificant amount, regardless of operator size

# Trove and SOS – Well Detail

## *Full Dataset - Circle Back to OCD Attention*

- Mud logs confirm disposal interval, other well logs (*Cement Bond, G/R, Res, Den, CNL*) provided to NMOCD
- 'As-Built' Well Specs documented on BLM 3160-4 (*exact depths of casing, formation, cement volumes, etc.*), cc'd OCD
- Progress (*spud, casing set*) and required adjustments reported via BLM sundry (*pipe setting depths, cement*) copied to OCD
- Upon completion, well is tested for mechanical integrity (MIT) and witnessed by OCD and BLM inspectors – BHP recorded – injectivity may be tested
- SWD Well is tied into facility and injection commences



# Trove Energy and Water, LLC

## SOS Consulting, LLC

### Summary and Conclusion

- Prospect for Appropriate and Quality SWD Sites
- Work with the Operator / Lessee to locate suitable sites that do not interfere with Development Plans
- Research and document all required data pertinent to Area of Review, Well Design and Operation
- Notify all Affected Parties and Publish Legal Notice
- Assemble a quality, easy to read C-108 presentation
- Send it to Santa Fe OCD Office, Engineering Bureau, cross fingers and hope for the best
- Move towards other permitting needs and activities



# Trove Energy and Water, LLC

Prospect Development,

C-108 Preparation

And

Other Permitting Efforts and Activities

EXHIBIT

2

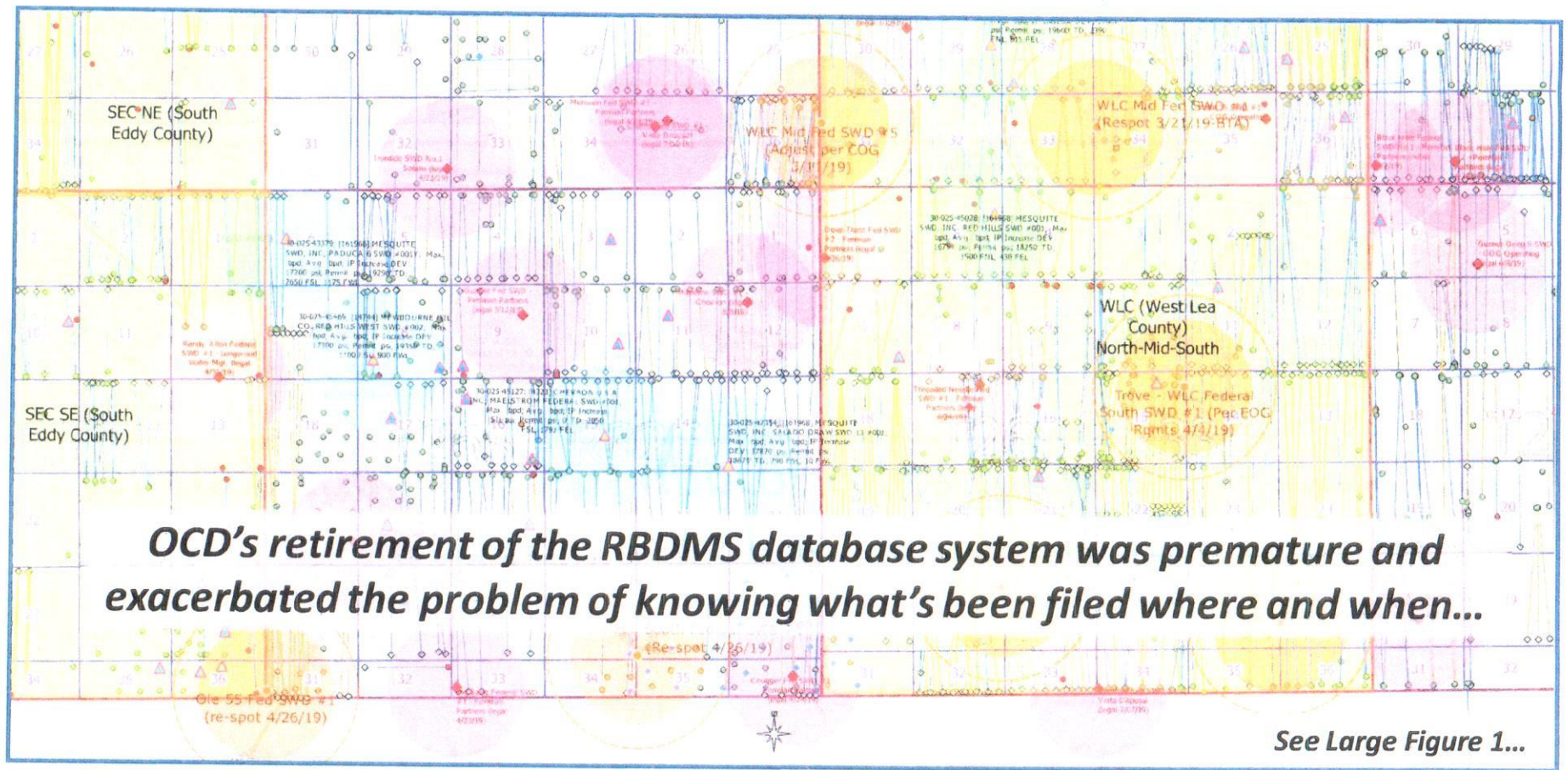
~ References LARGE FIGURE Pages ~





# Prospecting Challenges

*Trove does not consider other SWD operators **EXCEPT** to completely avoid any competitors' SWDs  $\frac{3}{4}$ -mile AOR bubble – other infrastructure is generally not known.*





# Intense Competition

*NMOCD's unwritten but currently mandated ¾-mile Area of Review for Devonian SWDs helped create the 'Gold Rush mentality' to lock up quickly diminishing real estate available for SWD placement.*



*Trove and SOS consistently apply a Good Neighbor Policy to prospecting and negotiating SWD placement and have moved many times (even before filing) to accommodate competitors and operators...*

**See Large Figures 6 & 7...**



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## SOS Consulting, LLC

### Summary and Conclusion

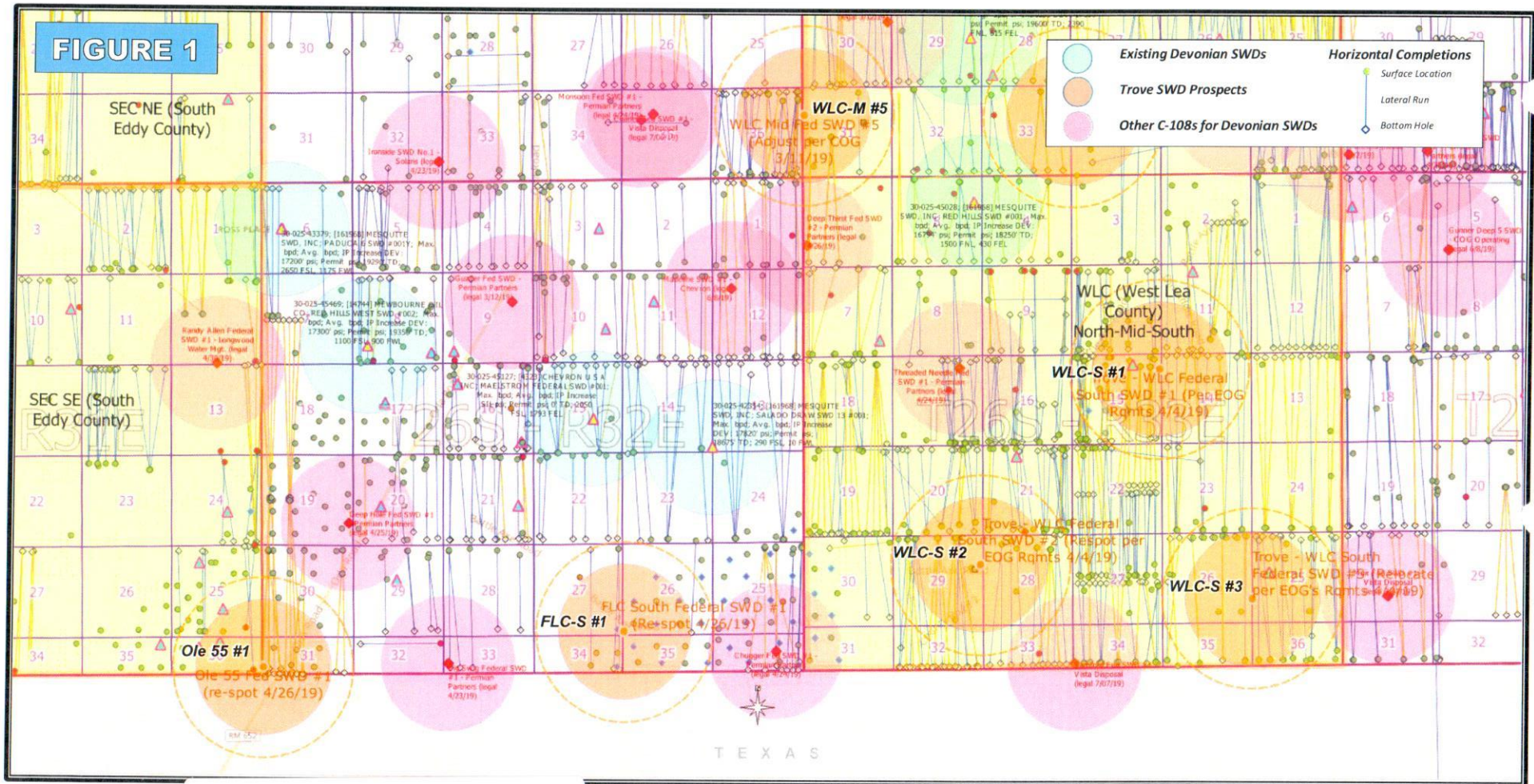
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- Notify all Affected Parties and Publish Legal Notice
- Assemble a quality, easy to read C-108 presentation
- Send it to Santa Fe OCD Office, Engineering Bureau, cross fingers and hope for the best
- Move towards other permitting needs and activities



## Trove Project Areas Prospecting Challenges

Existing Devonian SWDs,  
New C-108s and Trove Prospects

**Notes** – Southern Lea and Eddy Counties remain very active for horizontal completions in the Bone Spring and Wolfcamp plays. These prolific formations offer multiple target depths for completions and while activity has plateaued somewhat, it is expected to remain at the forefront of investment for many operators for years to come. Trove's prospecting approach was to identify available areas to maintain appropriate distances from existing SWDs and other operators' C-108s recently submitted. Trove would then communicate with the operator (lessee) to vet spots suitable to their staff and the company's future development plans. Upon approval, the C-108 application package was submitted. Trove did not consider offsetting SWD operators except to completely avoid any of their SWD  $\frac{3}{4}$  - mile radius bubbles.





**Trove Project Areas  
Southeast New Mexico**

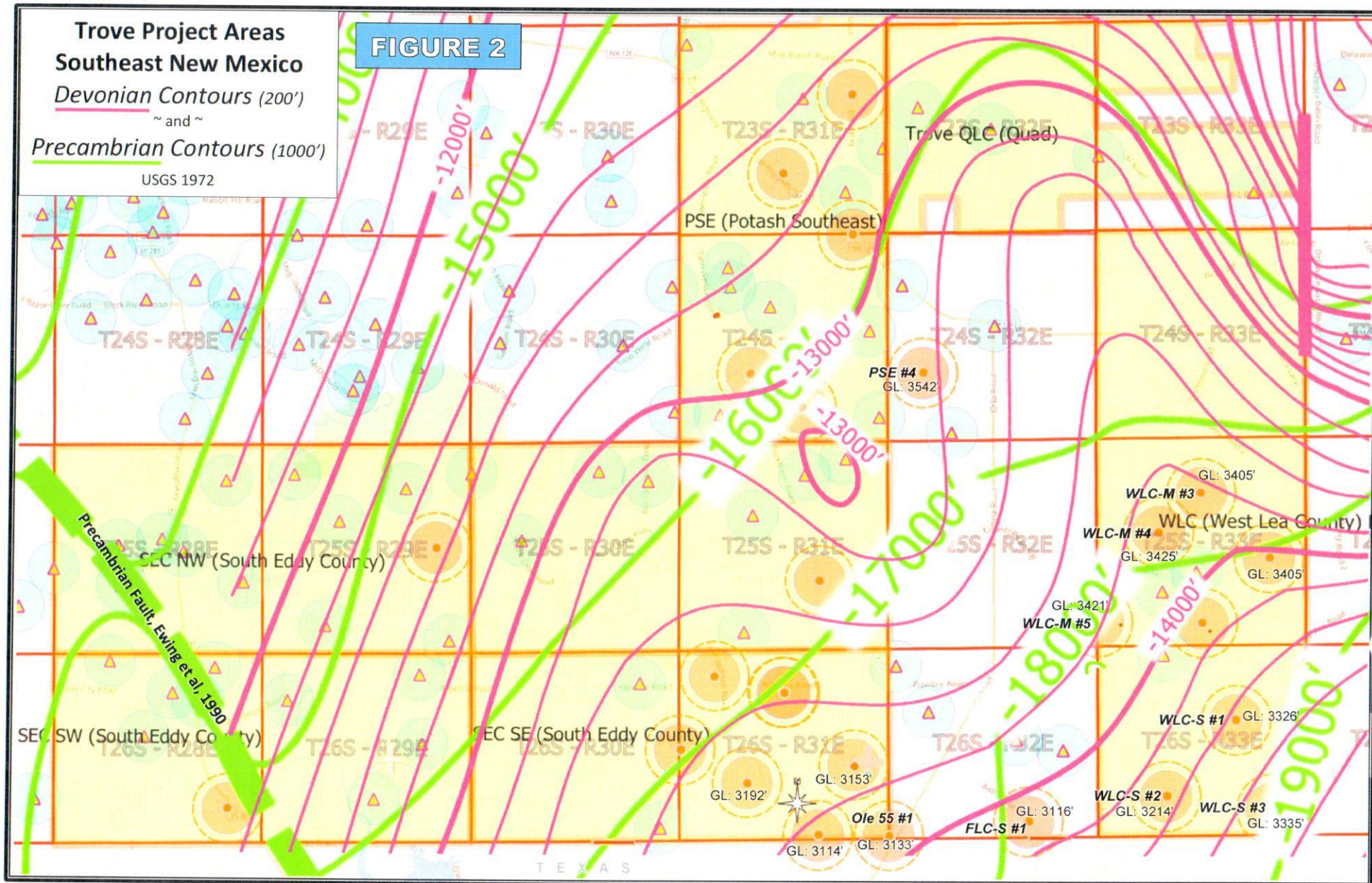
Devonian Contours (200')

~ and ~

Precambrian Contours (1000')

USGS 1972

**FIGURE 2**





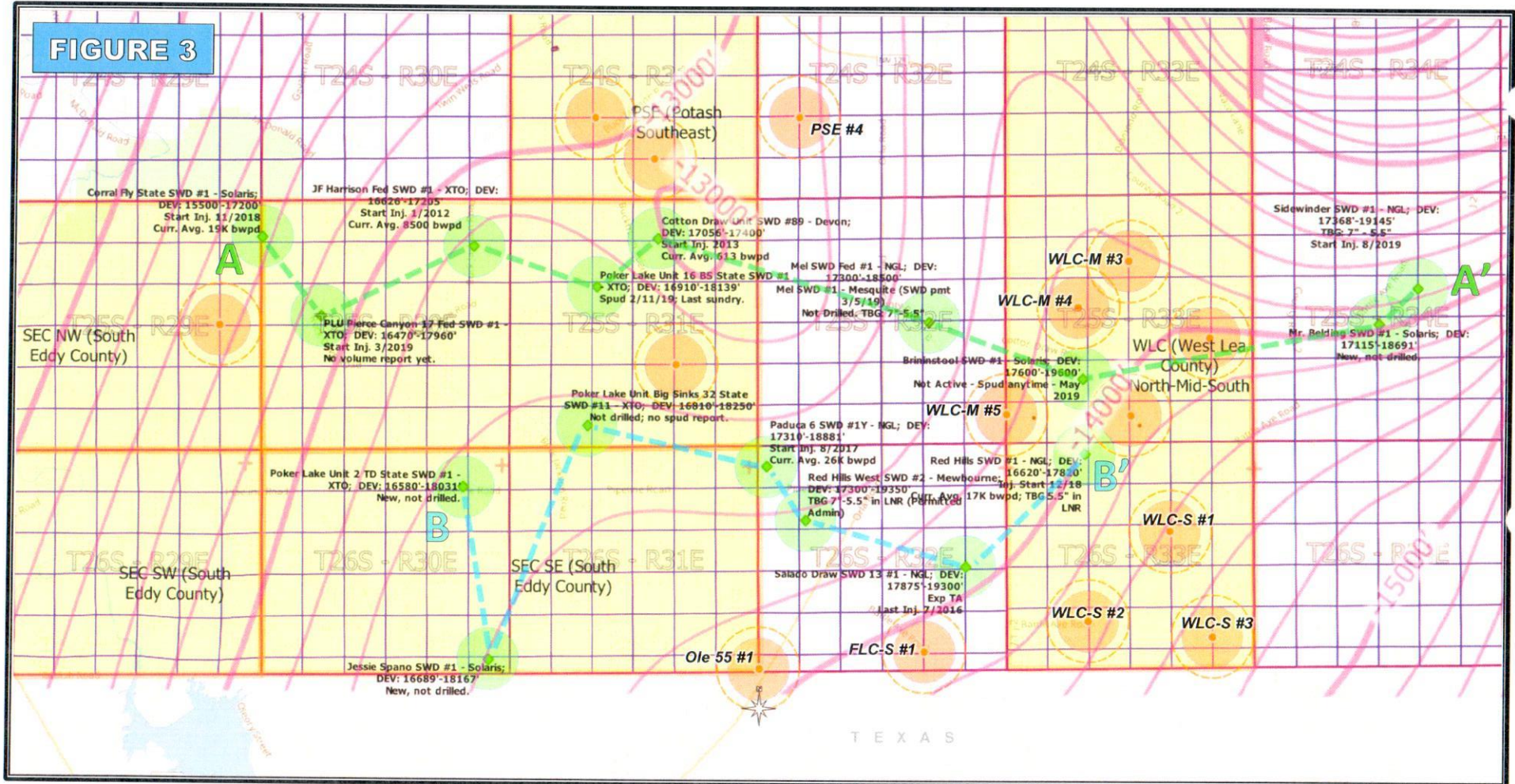
## Trove Project Areas

Depth Interval Cross Sections  
Permitted SWDs in  
25 and 26 South  
(Devonian Contour Overlay)

## Notes

Recently permitted and/or completed Devonian SWDs are correlated to a depth graph on the next page. These permitted intervals (top and bottom) were used in conjunction with Devonian contours and Precambrian contours to establish an approximate target interval for Trove prospects. Two tracks were run west to east across Townships 25 South (A) and 26 South (B). A 200 to 300-foot buffer was applied to the interval in most cases.

**FIGURE 3**



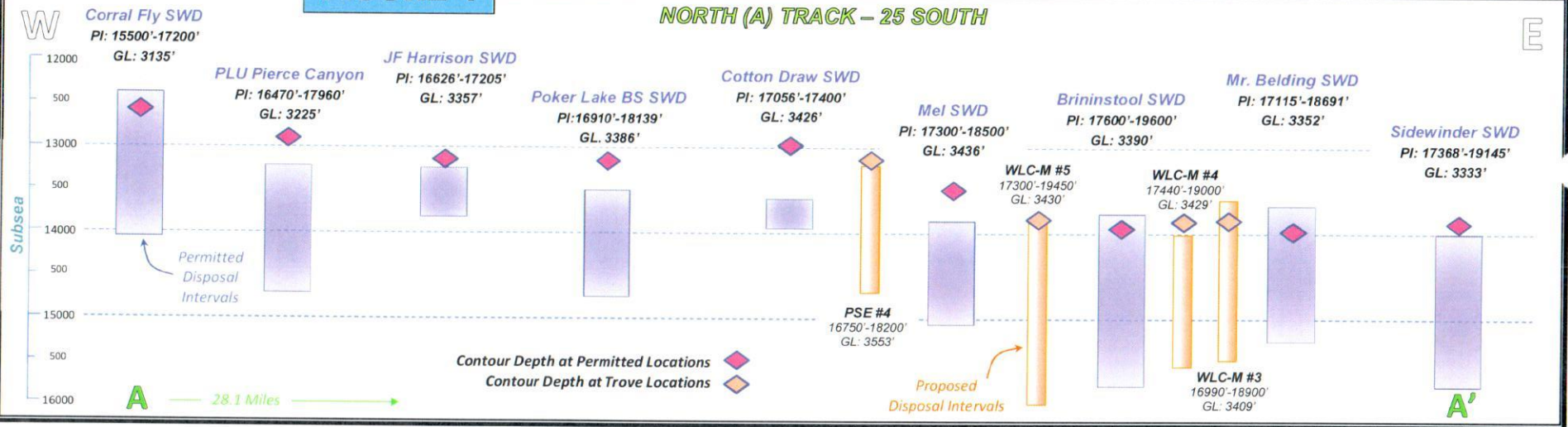


## Trove Project Areas Depth Graph – Cross Section

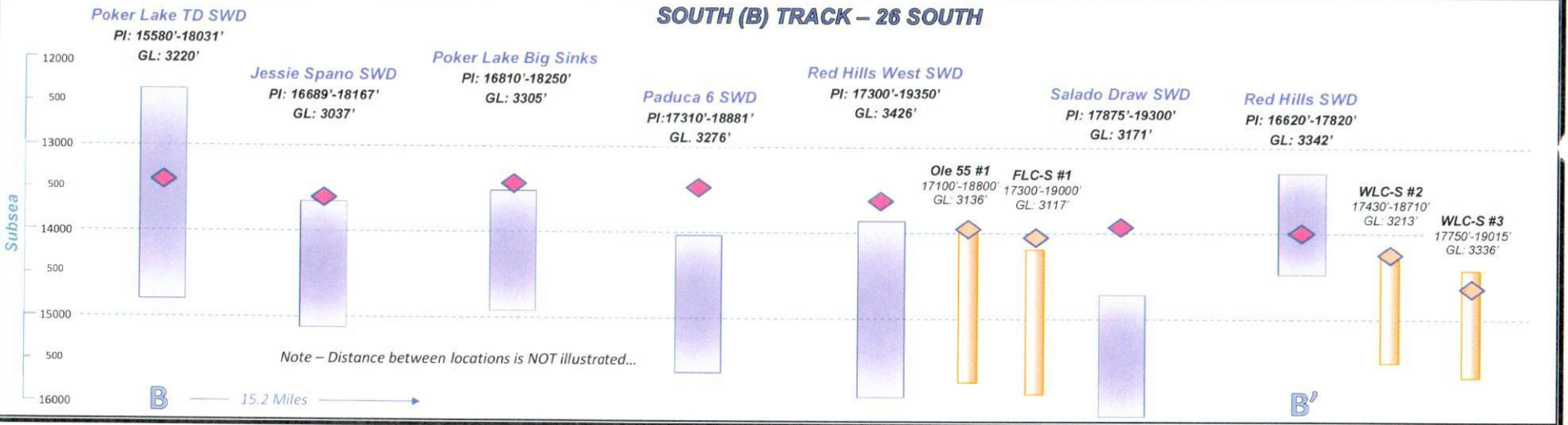
**Notes** - Recently permitted and/or completed Devonian SWDs are correlated to a depth graph adjusted to subsea. These permitted intervals (PI) are shown in conjunction with Devonian contour depths for each respective location. Trove prospect SWDs are inserted in appropriate areas relative to the permitted and/or existing SWDs.

**FIGURE 4**

### NORTH (A) TRACK – 25 SOUTH



### SOUTH (B) TRACK – 26 SOUTH



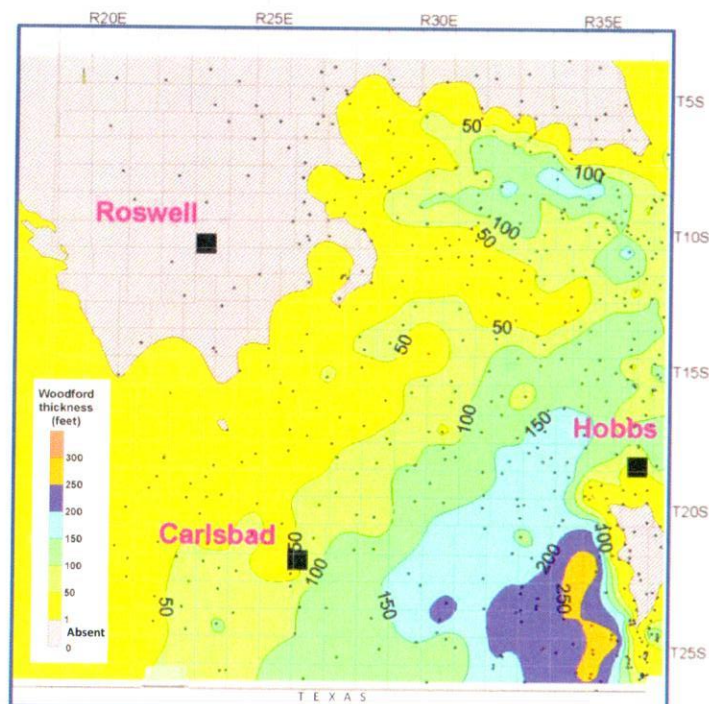


## Disposal Zone Determination – Confining Strata, Structure, Stratigraphy

**FIGURE 5**

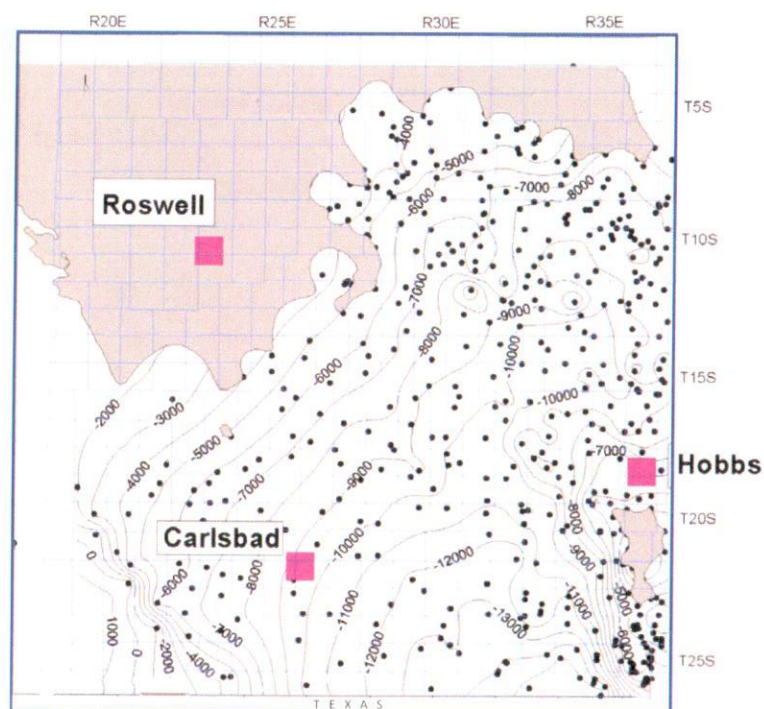
**Note** - All Trove SWD prospects are overlain by 100 – 200 feet of Woodford Shale followed by lower Mississippian and Barnett Shale. Some prospects MAY include the upper 20 – 90 feet of the Fusselman. All are underlain by the Montoya, Simpson and Ellenburger (Ordovician) formations.

**Woodford Shale Isopach Map**  
Pseudo-corrected thickness



Isopach map of the Woodford Shale constructed by correcting apparent thickness to true thickness in wells with dipmeter logs and by omitting wells with local anomalous and overly thick Woodford.

**Structure on Siluro-Devonian Carbonates**



Structure contours on Siluro-Devonian carbonate strata (Wristen Group and Thirtyone Formation) in southeastern New Mexico. The northerly limit of contours coincides with the northern extent of the Woodford Shale.

**Stratigraphic Column**

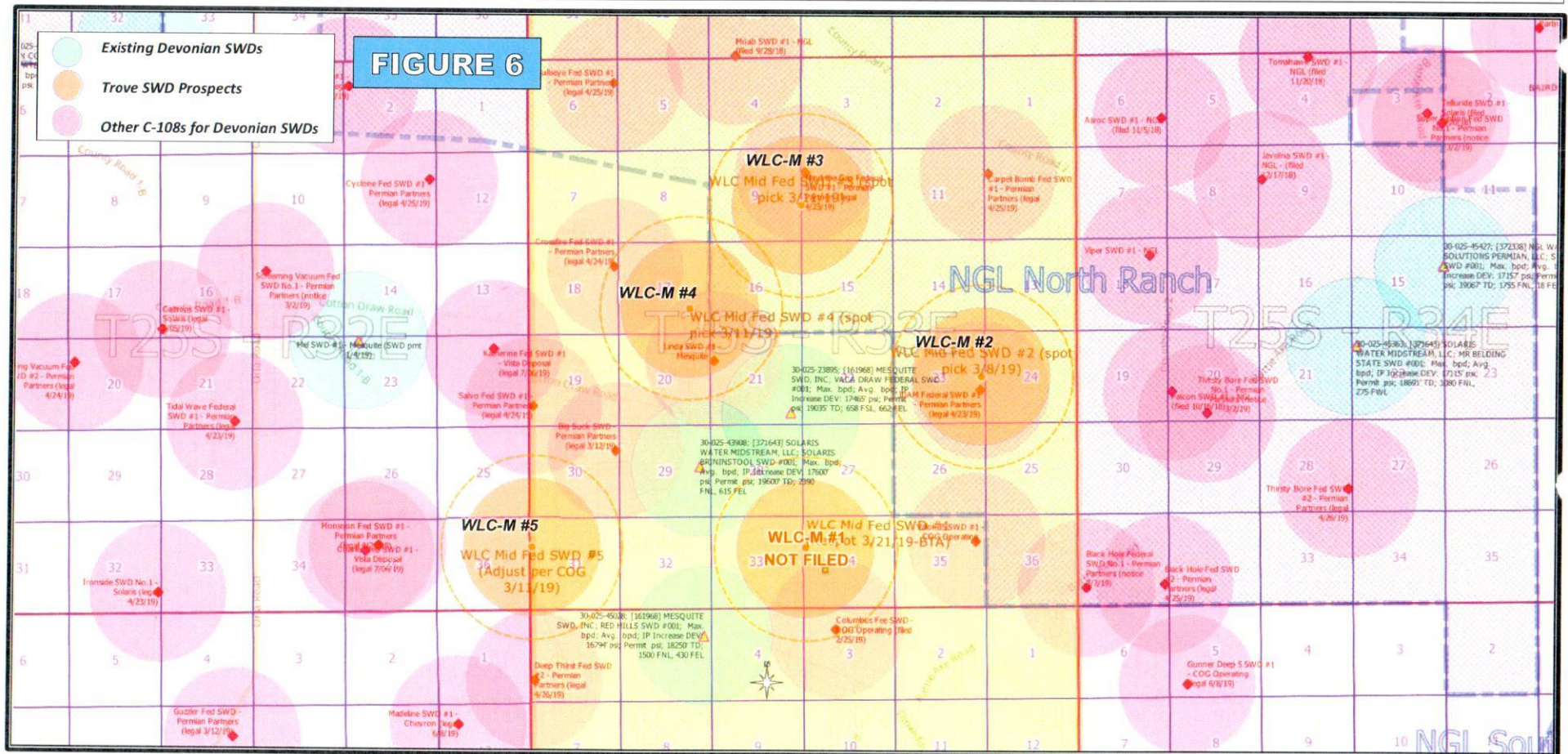
		Age	Strata
PERMIAN	TRIASSIC		Chinle
			Santa Rosa
			Dewey Lake
			Rustler
			Salado
	Ochoan		Castile
			Bell Canyon
			Cherry Canyon
			Brushy Canyon
			Cutoff Fm.
PENNSYLVANIAN	Guadalupian		Bone Spring
			Hueco ("Wolfcamp")
			Leonardian
			Wolfcampian
			Virgilian
	Missourian		Cisco
			Canyon
			Des Moinesian
			Strawn
			Atokan
MISSISSIPPIAN	Morrowan		Morrow
			Barnett
			Undivided limestones
			Woodford
			DEVONIAN/ SILURIAN TARGET INTERVAL
	Upper		Fusselman
			Montoya
			Simpson
			Ellenburger
			Bliss
ORDOVICIAN	Upper		Bliss
			Bliss
			Bliss
			Bliss
			Bliss
	Middle		Bliss
			Bliss
			Bliss
			Bliss
			Bliss
CAMBRIAN	Upper		Bliss
			Bliss
			Bliss
			Bliss
			Bliss
	Middle		Bliss
			Bliss
			Bliss
			Bliss
			Bliss
PRECAMBRIAN	Lower		Bliss
			Bliss
			Bliss
			Bliss
			Bliss
	Upper		Bliss
			Bliss
			Bliss
			Bliss
			Bliss

Above Figures from *Regional aspects of the Wristen petroleum system, southeastern New Mexico*; Ronald F. Broadhead, 2005



**Trove Project Area**  
**WLC Mid Federal**  
**Prospect Locations**  
 ~ And ~  
**Competitive**  
**SWD Locations**

**Notes** — This view of Trove's WLC Mid Federal Project Area (25S-33E) reflects the current highly competitive nature of SWD prospecting in southeast New Mexico. The situation is fostered by demand for disposal capacity and in part by the New Mexico Oil Conservation Division's currently mandated ¾-mile Area of Review for Devonian SWDs. This mandate helped to create the 'gold rush mentality' to lock up quickly diminishing real estate available for SWD placement. Trove and SOS Consulting have documented numerous relocation efforts to avoid conflicts and overlaps in ¾-mile AOR bubbles. A more appropriate policy focused on fault location and other pertinent data might help temper the aggressive pace and more well-thought-out, good neighbor development of future salt water disposal well locations and facilities.

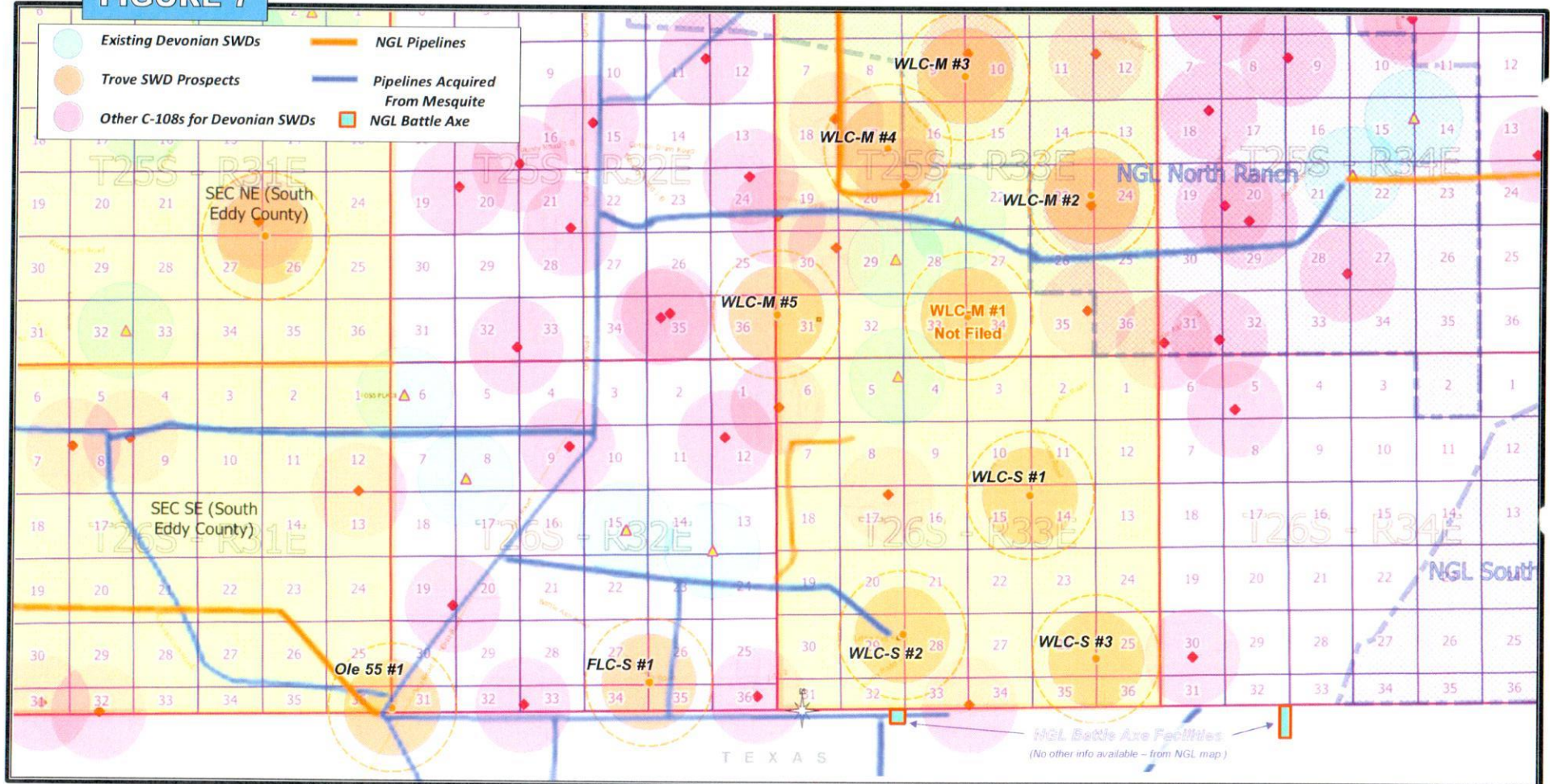




**Trove Project Areas**  
**NGL Water Permian**  
**Pipeline Infrastructure**  
 ~ And ~  
 NGL North and South Ranches

**Notes** — Pipeline routes depicted are an image overlay, registered as accurately as possible. The overlay was digitized from a document image file and while the routes were accurately recorded, the map geographical reference points were likely stretched and tilted on the original document. Trove and SOS Consulting acquired a portion of the information after a discussion with NGL personnel in April 2019. A subsequent search for additional supporting data turned up some 'investor presentation' materials from NGL's website. Trove SWD prospect locations were picked in late 2018/ early 2019.

**FIGURE 7**





## WELL SCHEMATIC - PROPOSED

### Trove Generic SWD Well No.123

(This illustration is based on the original Ole 55 SWD #1)

API 30-025-xxxxx

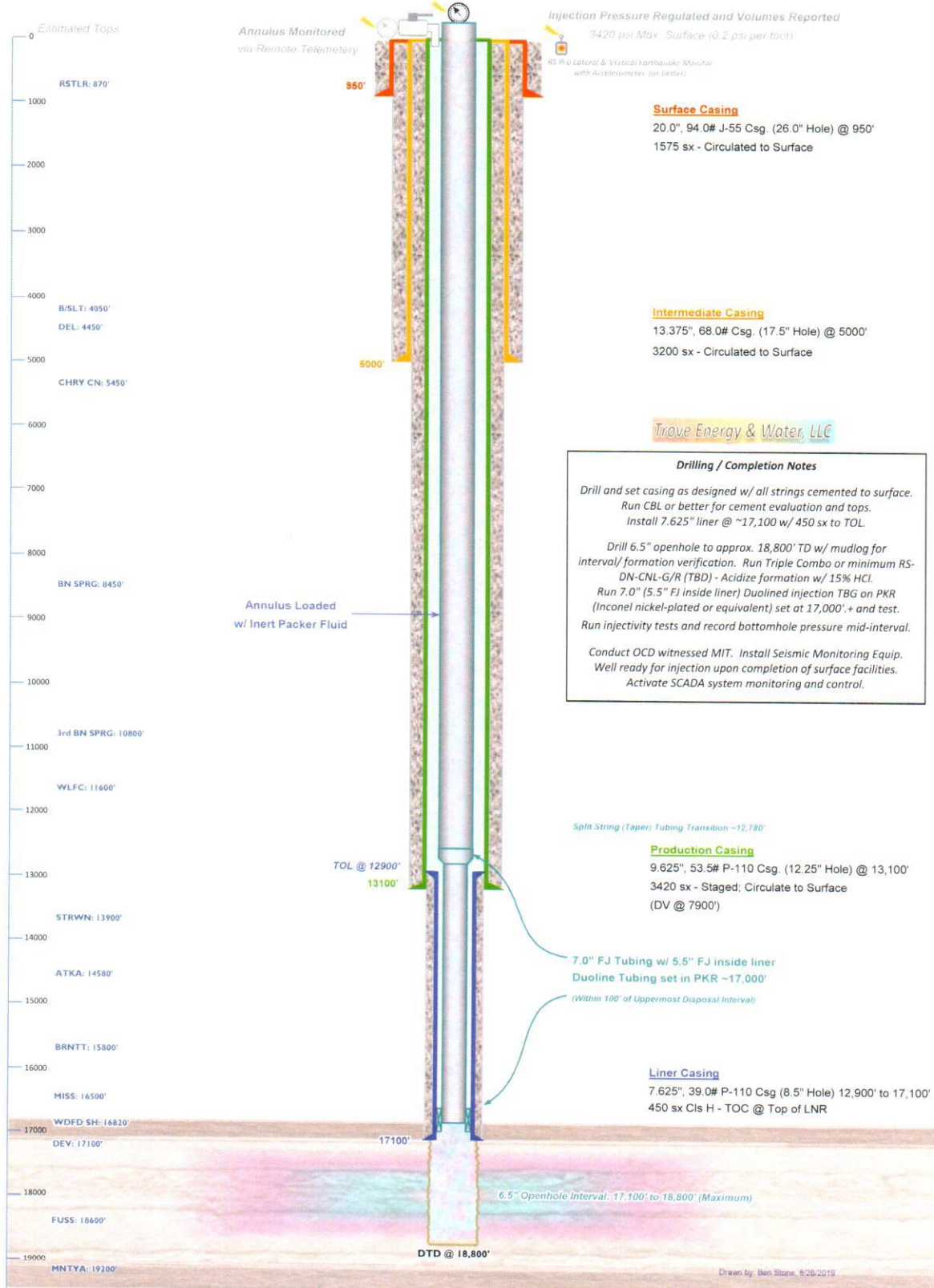
1700' FNL & 5' FWL, SEC. 31-T26S-R32E

LEA COUNTY, NEW MEXICO

SWD: Devonian-Silurian (97889)

Spud Date: 1/15/2020

SWD Config Dt: 3/01/2020





# Trove Energy and Water, LLC

## **ADDENDUM INFORMATION for Protested C-108 Applications**

**NMOCD Examiner Hearing, September 5, 2019**

### **CONTENTS**

Trove Prospect Development Overview (pg.1)

WLC Mid and WLC South Federal Project Areas (pg.2)

Protested C-108s – Prospect Development Details (pg.6)

WLC South Federal #2 (pg.6)

WLC South Federal #3 (pg.8)

WLC Mid Federal #3 (pg.9)

WLC Mid Federal #4 (pg.10)

WLC Mid Federal #5 (pg.11)

Ole 55 Federal #1 (pg.12)

FLC South Federal #1 (pg.14)

Prospecting Challenges – Sample Documentation (pg.15)

Sample of Prospecting Communications with Operator (pg.17)

Sample of Vetting and Approval of Prospect Sites by Operator (pg.20)

PSE Federal #4 (pg.24)

Groundwater Information – Additional (pg.25)

Protest Letters (emails, pg.27)

EXHIBIT

4

## Trove Energy and Water, LLC

### ***Prospect Development Overview***

Trove Energy and Water contacted SOS Consulting for a possible exclusive arrangement for prospecting SWD sites in southeast New Mexico and to file any and all necessary applications required to fully permit the wells. The agreement started in earnest in February 2019.

Trove's desire was to target activity-rich areas where the need for additional disposal capacity was anticipated to be greatest now and in the future. Initially, Trove is looking at federal lands only but will include NM state lands in an upcoming phase. Fee and private land will be considered but is becoming scarce with regards to SWD siting and the current spacing dictated by the NM Oil Conservation Division. Forward looking plans are for the 3 to 5-year range.

***Based on information from the BLM and other sources, criteria used for the Trove prospecting approach is to consider:***

- 1) Proximity to Existing, Permitted or Applied-for SWD locations<sup>1</sup> ;***
- 2) Surface issues particularly regarding arroyos and other drainage patterns and obvious obstructions such as pipelines or electrical;***
- 3) Horizontal completions below a prospective site and ultimately,***
- 4) The operators' or lessees' current and future development plans.***

All prospects were sited initially using Google Earth, internal and external GIS systems and other available data. When a satisfactory site was determined using the above parameters, a map was generated and provided to the operator and/or the lessee with pertinent information as spotted. The operator would either vet and approve or negotiate a new spot acceptable to their interests. Most operators have an *SWD Review Group* to look for geologic and other subsurface concerns, land and development plans for the lease(es) and other infrastructure that may come into play.

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<sup>1</sup> Trove and SOS are sensitive to the OCD's authority to implement a  $\frac{3}{4}$ -mile Area of Review for proposed Devonian SWDs and the effective 1.5 mile spacing as implied. Other than avoiding obvious pipeline rights-of-way or similarly occupied land, we did not account for competitors' other facilities or infrastructure. New Mexico regulatory agencies have no jurisdiction to accommodate competitive advantages in oil and gas leases, easements or other regulatory instruments.



Trove project areas were located and internally named as *(in order of prospect development and C-108 submittal generally)*; WLC Mid and South (West Lea Corridor), FLC South (Far Lea County), PSE (Potash Southeast), SEC SE, SW, NW and NE (South Eddy County).

It should be noted that several of the prospects were moved or otherwise adjusted to accommodate not only operators' or lessees' concerns but also to just avoid a competitor's spot that may have beat us to the punch in a certain area. (Three Trove prospects were relocated or dropped altogether based on the operator's identification of a fault very near the prospect site.)

*Trove and SOS made the decision that if a published legal notice was made for a competitor's SWD that would interfere with a prospect site being worked on, the assumption would be that the competitor was either days away from submitting or, had already submitted a C-108 application. However; if our C-108 for a prospect was already well underway and just a few days from submittal, we would go ahead with the submittal as a great deal of effort had been put into prospect development and preparation of the C-108 so, it was worth the risk of whether ours was filed first or not.*

*This approach we believed, demonstrated our desire to employ good-neighbor policies towards operators AND competitors. Many SWD operators are employing similar approaches, some are not.*

***According to our records, to date, Trove has had twenty protests on fifteen C-108s – seven have been negotiated and resolved, four are being negotiated and the remainder are the subjects of these hearings on eight Trove C-108s.***

Nine C-108s continue to move through the administrative process and are well beyond the normal suspense period of 15-days as cited in the rules and regulations of the New Mexico Oil Conservation Division.

Additional Trove SWD prospect sites are under development in accordance with applicable rules and regulations of the New Mexico Oil Conservation Division, Bureau of Land Management and the New Mexico State Land Office.



# Trove Energy and Water, LLC

## Prospect Development Overview

### WLC Mid (25S-33E) and WLC South (26S-33E) Federal Project Areas

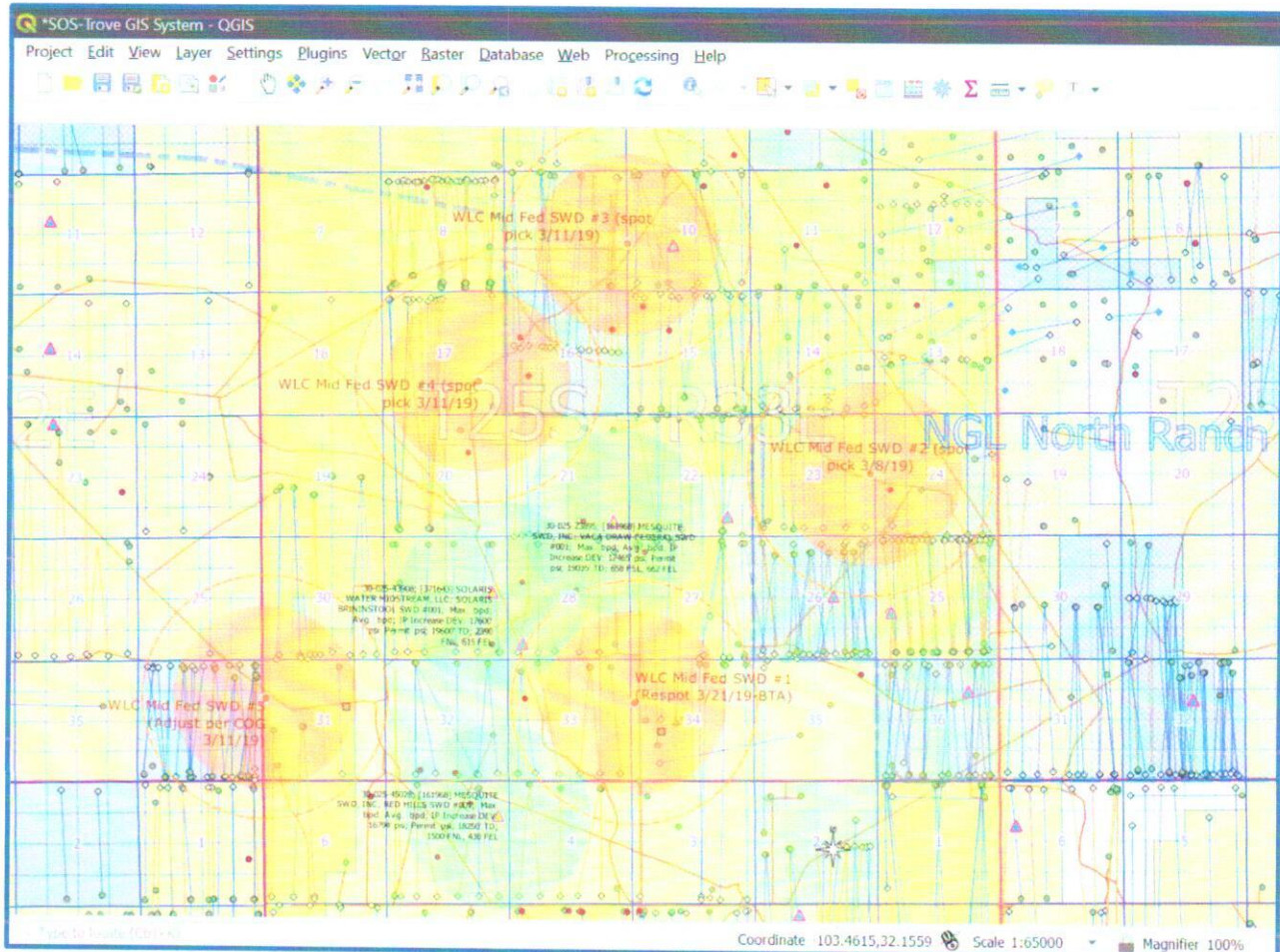
The WLC (West Lea Corridor) Project Areas were the first project defined by Trove Energy and Water. The two townships represented by the areas are currently very active and anticipated to be high growth development areas by several operators. Those include EOG Resources, BTA Oil Producers, COG Operating and others.

In addition to several producing leases, there are two permitted, commercial SWDs in 25 South (Mesquite Vaca Draw SWD #1 and Solaris Brininstool SWD #1) and one in 26 South (Mesquite Red Hills SWD #1). All three are completed in the Devonian.

#### **Basic Stats** (from OCD Online; as reported)

SWD	Start Date	Current Avg. Rate	Current Avg. Surf. Pressure
Vaca Draw	5/2017	~10K bwpd	1500 psi
Brininstool	Scheduled to Spud	n/a	n/a
Red Hills	12/2018	~17K	1650 psi

**Figure 1 – WLC Fed Project Area; Existing/ Permitted SWDs**





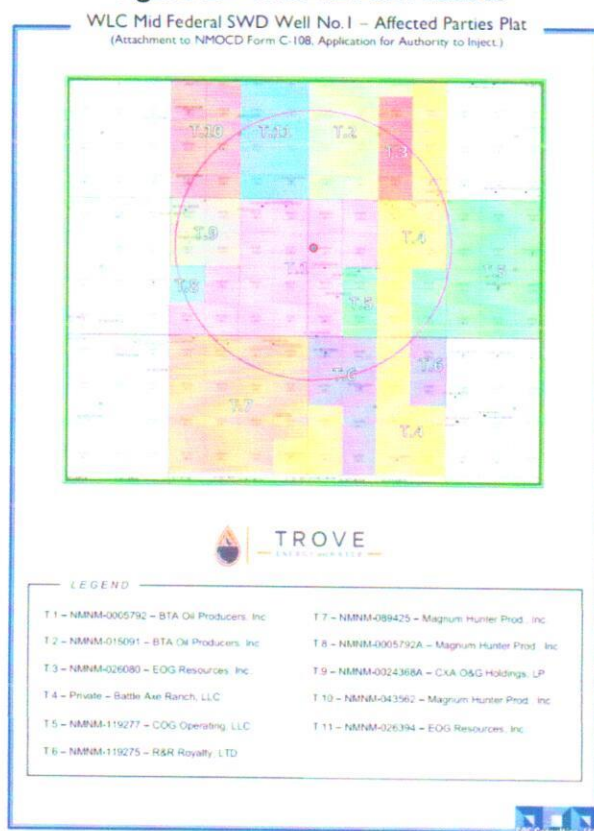
## Notes for WLC Mid Fed Project Area

The **WLC Mid Fed SWD #1** depicted in **Figure 1** was an original prospective location, vetted and adjusted to BTA Oil Producers' desires. Published legal notice was made in the Hobbs News-Sun on 3/22/19. The full C-108 application was submitted on 4/12/19. Upon reviewing the legal notice, Solaris Water Midstream contacted SOS Consulting about concerns with the location on 4/16/19, that perhaps the location was too close to their Brininstool SWD location. Mr. Drew Dixon was informed that the  $\frac{3}{4}$  mile radii of the two locations overlapped very slightly; approximately 150'. I told him that I thought OCD would possibly allow this and there was no intent to step on Solaris' already staked location and that I was willing to relocate as possible to the east if BTA Oil Producers could accommodate an adjustment. There was an element too of continued confusion on the  $\frac{3}{4}$  and 1-mile Area of Review requirements and such – I relayed to him that the current understanding is that the full AOR review has been pulled back to  $\frac{3}{4}$ -mile while notice remains at 1-mile for whatever reason.

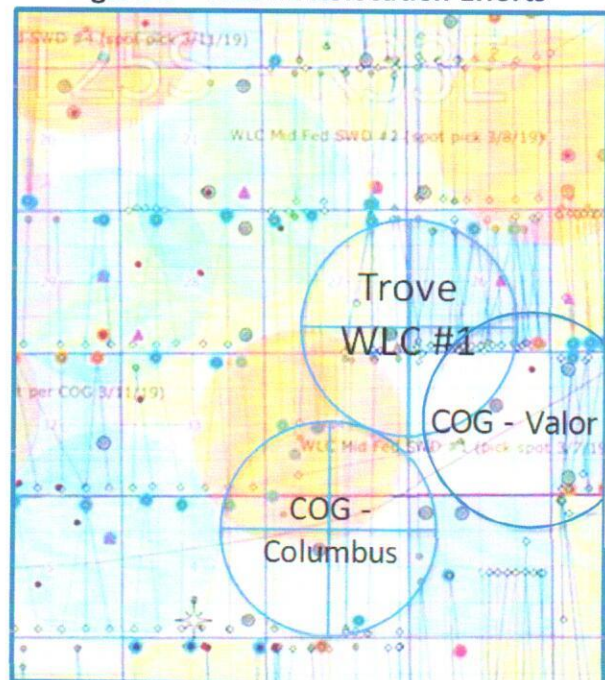
Shortly after the discussion with Solaris, Mr. Brad Holland with COG Operating called and said the WLC Mid Fed #1 location would overlap AOR radius 'bubbles' with a C-108 they filed for the Columbus Fee SWD #1 in February 2019. I told him I would look at possible alternative locations. He did recommend a possible alternative site as shown in **Figure 3**. Upon investigating this site, it was noted that COG also had the Valor SWD C-108 filed previously which effective killed the spot.

The C-108 for the WLC Mid Federal SWD #1 was WITHDRAWN on 4/18/19; to date the prospect has not been relocated nor a new C-108 application filed.

**Figure 2 – WLC #1 AOR Leases**



**Figure 3 – WLC #1 Relocation Efforts**



Note: This view depicts the FIRST prospective location (vs. the Figure 1 view) for the WLC Mid Fed #1 – it was never applied for.

## **Protested Trove Energy and Water SWD Prospects**

*Prospect Development Details*

*for Each Protested C-108*

*Follow This Page.*



Trove Energy and Water, LLC

***Prospect Development Details***

**WLC South Federal SWD No.2**

(aka WLC-S #2)

***Location:*** 1740' FNL & 150' FEL, H-29-26S-33E

***Site vetted with:*** EOG Resources, Inc. (3 spot adjustments to get vetted/ approval and file.)

***Interval and Determination:*** 17,430' – 18,710'; Area SWDs and contours

***C-108 File Date:*** April 25, 2019

***Protest date and reason:*** April 25, 2019 (1 hour after C-108 PDF email submission) NGL Policy - proximity to NGL infrastructure or activities (anti-competitive.)

***Presentation:*** Standard C-108, Seismic Evaluation, Upsize Tubing Request

***Subsequent AOR Review:*** After communicating with NGL (Matthias Sayer) about nature of protest, I looked for whatever available information there was on NGL infrastructure, pipelines and facilities. Only source was some new publication illustrations and NGL investor slides. SOS was able to combine a couple of maps and digitize in NGL pipelines including those acquired from Mesquite for GIS display. This was the first indication of how close the WLC-S #2 spot was to a section of NGL pipeline. Positioning was coincidental as SOS had no knowledge of any NGL infrastructure during the prospecting phase.

***Affected Party Notice:*** Full one-mile radius; initial C-108 notification and follow up for hearing notification to include protestors. (See attachment 'Hearing Notification Service List'.)

## WLC South Federal SWD No.2 (cont.)

(aka WLC-S #2)

SOS received notice of the protest from OCD on April 25, 2019. On April 26<sup>th</sup>, SOS reached out to NGL (Deana Bennett) to inquire as to the nature of the protest. Ms. Bennet replied on April 28<sup>th</sup> said she forwarded my request to NGL. On May and gave me the contact information for Matthias Sayer. Emailed Mr. Sayer on May 13<sup>th</sup>, I replied to Ms. Bennett that I has not heard from NGL – she replied that she would follow up. On May 16<sup>th</sup> I received an email from Matthias Sayer asking for a good time to visit – I was out of town and we finally communicated on May 23<sup>rd</sup> when I received the email below.

The email states that ***“NGL is protesting any commercial disposal within 1.5 miles of our facilities (regardless of depth), and the S. Fed 2 [sic] is within that distance from our Battle Axe facility (see image)”***.

I replied one time about the NGL policy and pointed out that the regulatory agencies had no jurisdiction over or concerning ‘corporate policy’. I received no further communication from NGL.

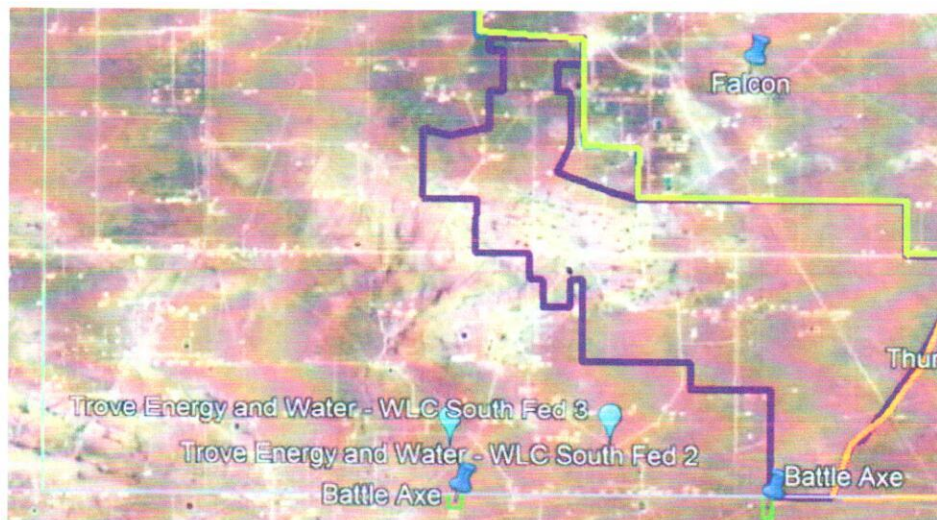
[ben@sosconsulting.us](mailto:ben@sosconsulting.us)

---

**From:** Matthias Sayer <Matthias.Sayer@nglep.com>  
**Sent:** Thursday, May 23, 2019 10:40 AM  
**To:** [ben@sosconsulting.us](mailto:ben@sosconsulting.us)  
**Cc:** Deana M. Bennett  
**Subject:** RE: NGL

Ben,

Regarding the Trove S. Fed 2 application, NGL is protesting any commercial disposal within 1.5 miles of our facilities (regardless of depth), and the S. Fed 2 is within that distance from our Battle Axe facility (see image).



Regarding the OI 55 application, that proposed facility is extremely close to assets NGL just acquired from Mesquite — pipeline and booster station, and consequently, objectionable to NGL.



Trove Energy and Water, LLC

***Prospect Development Details***

**WLC South Federal SWD No.3**

(aka WLC-S #3)

***Location:*** 1420' FSL & 15' FEL, I-29-26S-33E

***Site vetted with:*** EOG Resources, Inc. (3 spot adjustments to get approval and file.)

***Interval and Determination:*** 17,750' – 19,015'; Area SWDs and contours

***C-108 File Date:*** April 25, 2019

***Protest date and reason:*** April 25, 2019 (NGL, 1 hour after C-108 PDF email submission, NGL Policy - proximity to NGL infrastructure or activities (anti-competitive.)

***Presentation:*** Standard C-108, Seismic Evaluation, Upsize Tubing Request

***Subsequent AOR Review:*** Nothing additional found. ***Proximity to NGL's Battle Axe facility*** as noted previously from communications with Matthias Sayer.

***Affected Party Notice:*** Full one-mile radius; initial C-108 notification and follow up for hearing notification to include protestors. (See attachment 'Hearing Notification Service List'.)

## Trove Energy and Water, LLC

### ***Prospect Development Details***

#### **WLC Mid Federal SWD No.3**

(aka WLC-M #3)

***Location:*** 2075' FSL & 2' FWL, H-10-25S-33E

***Site vetted with:*** BTA Oil Producers, Inc. (2 spot adjustments to get approval and file.)

***Interval and Determination:*** 16,990' – 18,900'; Area SWDs and contours

***C-108 File Date:*** March 26, 2019

***Protest date and reason:*** April 18, 2019 (SLO – within ½ mile of state trust lands.)

***Presentation:*** Standard C-108, Seismic Evaluation, Upsize Tubing Request

***Subsequent AOR Review:*** Nothing additional found. NGL Ranches GIS layer was digitized and added to SOS-Trove GIS system on June 21, 2019. The WLC-M #3 is located on NGL grazing leases in an area acquired from McCloy Ranch and now known as NGL North Ranch. With the April addition of the NGL pipeline layer, ***this prospect is approximately 2 miles east of an NGL pipeline run.***

***Affected Party Notice:*** Full one-mile radius; initial C-108 notification and follow up for hearing notification to include protestors. (See attachment 'Hearing Notification Service List'.)



Trove Energy and Water, LLC

***Prospect Development Details***

**WLC Mid Federal SWD No.4**

(aka WLC-M #4)

***Location:*** 1470' FSL & 1170' FEL, I-17-25S-33E

***Site vetted with:*** Reached out to Oxy on 6 attempts – made email contact w/ 3 reps – never did reply one way or the other. *(2 spot adjustments for [BLM] surface drainage, etc, filed.)*

***Interval and Determination:*** 17,440' – 19,000'; Area SWDs and contours

***C-108 File Date:*** March 22, 2019

***Protest date and reason:*** April 18, 2019 (SLO – within ½ mile of state trust lands.)

***Presentation:*** Standard C-108, Seismic Evaluation, Upsize Tubing Request

***Subsequent AOR Review:*** Nothing additional found. NGL Ranches GIS layer was digitized and added to SOS-Trove GIS system on June 21, 2019. The WLC-M #3 is located on NGL grazing leases in an area acquired from McCloy Ranch and now known as NGL North Ranch. With the April addition of the NGL pipeline layer, ***this prospect is approximately 1 mile east of an NGL pipeline run.*** *Note: this prospect appears to be close, but it is difficult to know without real coordinate data for the NGL infrastructure – pipeline rights-of-way are clearly evident in Google Earth but it's unknown when a pipeline may have been installed and the actual date of the satellite imagery.*

***Affected Party Notice:*** Full one-mile radius; initial C-108 notification and follow up for hearing notification to include protestors. *(See attachment 'Hearing Notification Service List'.)*

## Trove Energy and Water, LLC

### ***Prospect Development Details***

#### **WLC Mid Federal SWD No.5**

(aka WLC-M #5)

***Location:*** 1613' FNL & 150' FWL, E-31-25S-33E

***Site vetted with:*** COG Operating, LLC – (1 spot adjustment per COG and filed.)

***Interval and Determination:*** 17,350' – 19,450'; Area SWDs and contours

***C-108 File Date:*** March 22, 2019

***Protest date and reason:*** April 18, 2019 (SLO – within ½ mile of state trust lands.)

***Presentation:*** Standard C-108, Seismic Evaluation, Upsize Tubing Request

***Subsequent AOR Review:*** Nothing additional found. NGL Ranches GIS layer was digitized and added to SOS-Trove GIS system on June 21, 2019. The WLC-M #3 is located on NGL grazing leases in an area acquired from McCloy Ranch and now known as NGL North Ranch. With the April addition of the NGL pipeline layer, ***this prospect is approximately 1.75 miles east of an NGL pipeline run and 1.75 miles south of another run.***<sup>2</sup>

***Affected Party Notice:*** Full one-mile radius; initial C-108 notification and follow up for hearing notification to include protestors. (See attachment 'Hearing Notification Service List'.)

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<sup>2</sup> SOS and Trove have made every effort to avoid conflict with competitor's facilities, particularly actual SWD locations and Expanded Areas of Review. Distance to pipelines or other infrastructure is based on inaccurate and incomplete data – these data are not generally available to outside parties. Above noted distances are an approximation of what is available. Care was given to layer registration but is NOT geo-referenced to coordinates.



## **Ole 55 Federal SWD No.1**

**Location:** 1700' FNL & 5' FWL, E-31-26S-32E

**Site vetted with** ConocoPhillips, LLC – Hannah Wasserman and Lakeiva Noel  
(2 spot adjustments per ConocoPhillips and then filed C-108.)

**Interval and Determination:** 17,100' – 18,800'; Area SWDs and contours

**C-108 File Date:** May 9, 2019

**Protest date and reason:** May 9, 2019; NGL – Protest is actually for the original and previous spot on the east side of the section and was based on legal notice publication as a C-108 was never filed for that location. Timing appears coincidental.

**Presentation:** Standard C-108, Seismic Evaluation, Upsize Tubing Request

**Subsequent AOR Review:** Nothing additional found.

**Protest** – May 23<sup>rd</sup> communication with Matthais Sayer. Below is a screenshot used by Mr. Sayer in addressing NGL's concerns with the Ole 55 Fed No.1 location. It was initially believed that NGL's protest was to the first location but upon further review, the spot depicted in the photo was never a proposed spot for the Ole 55 SWD prospect.



Let me know if you have any questions.

Matthias



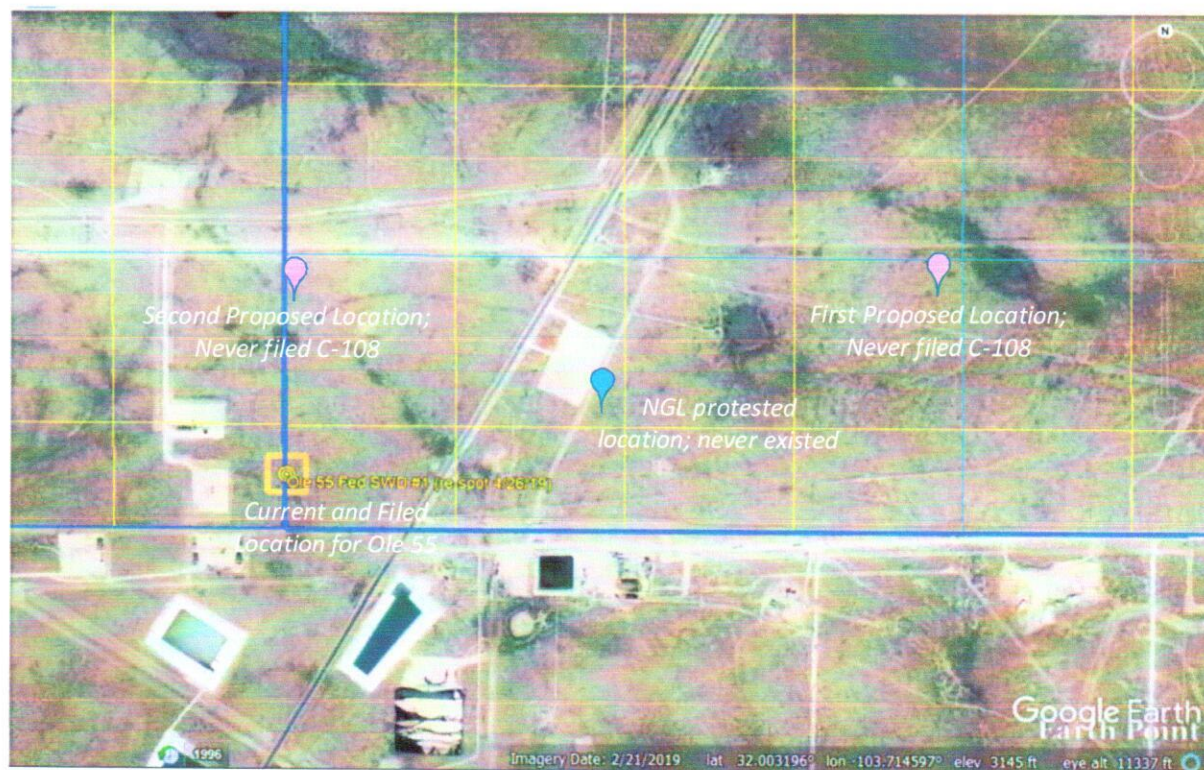
**MATTHIAS SAYER**  
Vice President, Legal – Regulatory Compliance, Policy, and Environment  
Mobile: (307) 365-1814  
[matthias.sayer@nngen.com](mailto:matthias.sayer@nngen.com)  
[www.nglenergypartners.com](http://www.nglenergypartners.com)



Below is a screenshot from a current Google Earth aerial view. The Ole 55 Fed #1 prospect and filed C-108 location is 1700' FNL x 5' FWL, section 31, 26S, 32E in Lea County.

Two other locations were proposed to the ConocoPhillips SWD review team. Those were 150' FNL x 150' FEL in section 31. The second was 200' FNL x 5' FWL. ConocoPhillips asked that we move the prospect as far to the south as possible and that 5 feet off the west section line was good. The 1700' spot was proposed and accepted as a workable spot for ConocoPhillips.

This spot was given approval via email on April 30, 2019 by Hannah Wasserman in the Houston office.



**Affected Party Notice:** Full one-mile radius; initial C-108 notification and follow up for hearing notification to include protestors. (See attachment 'Hearing Notification Service List'.)



Trove Energy and Water, LLC

***Prospect Development Details***

**FLC South Federal SWD No.1**

(aka FLC-S #1)

***Location:*** 225' FSL & 50' FWL, P-26-26S-32E

***Site vetted with*** ConocoPhillips, LLC – Hannah Wasserman and Lakeiva Noel (2 spot adjustments per ConocoPhillips and then filed C-108.)

This spot was given approval via email on May 6, 2019 by Hannah Wasserman in the Houston office.

***Interval and Determination:*** 17,300' – 19,000'; Area SWDs and contours

***C-108 File Date:*** May 9, 2019

***Protest date and reason:*** NO PROTEST NOTICE RECEIVED FROM OCD OR NGL. (Assumption is that NGL will protest based on similar proximity issues as Ole 55 #1.)

***Presentation:*** Standard C-108, Seismic Evaluation, Upsize Tubing Request

***Subsequent AOR Review:*** Nothing additional found.

***Affected Party Notice:*** Full one-mile radius; initial C-108 notification and follow up for hearing notification to include protestors. (See attachment 'Hearing Notification Service List'.)

# Trove Energy and Water, LLC

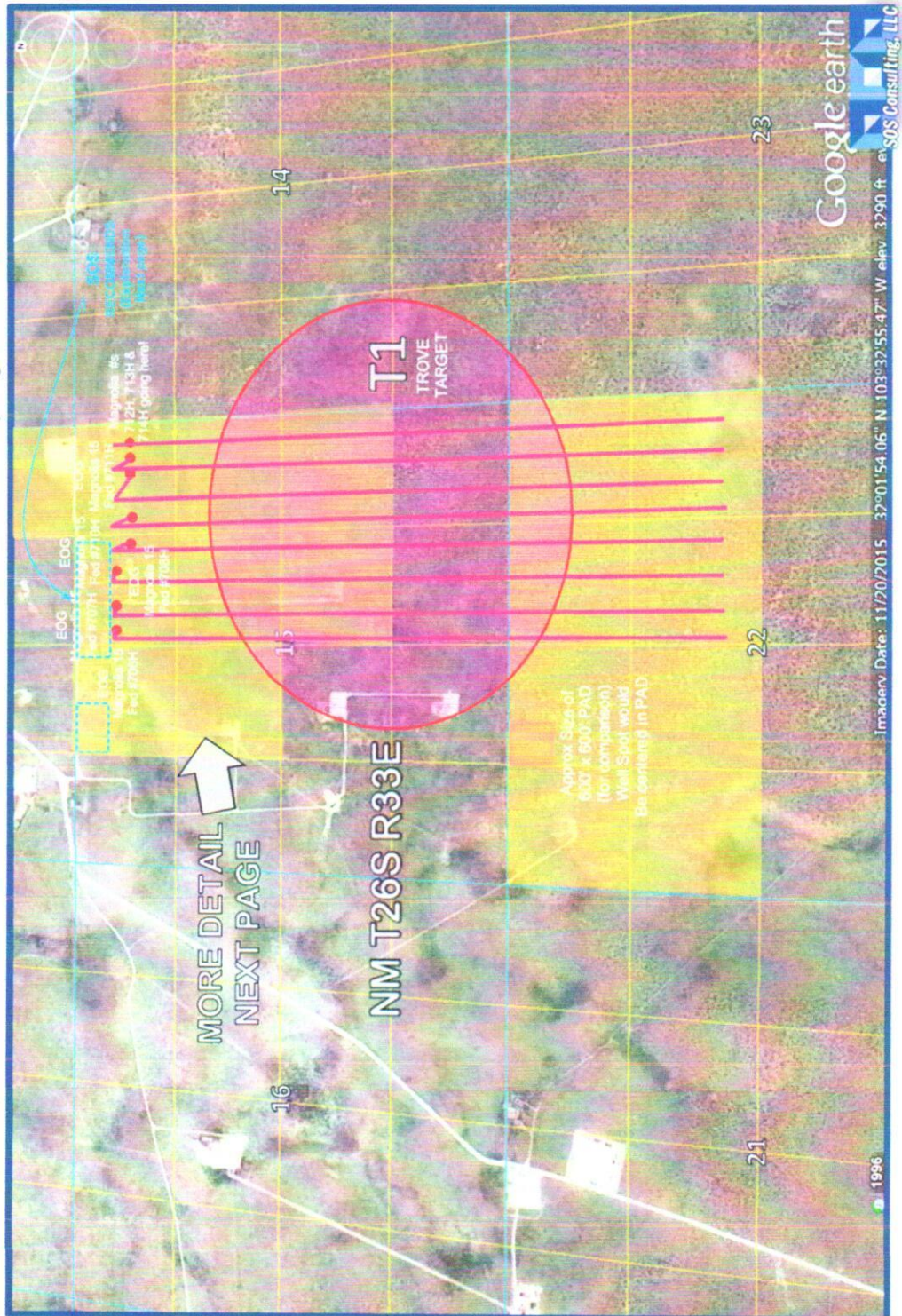
## Prospecting Challenges – Sample Documentation



### TROVE – WLC Pod 1 in 26S-33E (SOS Mapped 2/01/19, Pg.1)

#### T 1 (Sec 15) Detail View... Challenges in spotting.

When considering spacing to avoid collision w/ laterals, also must consider the well pad – well spot being centered on pad. If that happens to border private (or state) that would put our minimum distance off the lease line at 300'. This is why it's good to shoot for corners of sections.





# Trove Energy and Water, LLC

## Prospecting Challenges – Sample Documentation



### TROVE – WLC Pod 1 in 26S-33E (SOS Mapped 2/03/19, Pg.2)

T 1 (Sec 15, NENE) Detail View... *Challenges in spotting.*



AREA – NE Portion of Section 15-T26S-R33E (Yellow shading = Federal)

**Subject:** From previous page, attempt to located DEV SWD in T1 Trove Target Area.

Pink lines – Existing OR Permitted horizontal lateral runs;  
Teal dashed lines – anticipated future producing acreage exploitation.

- Mandatory:**
- 1) Locate Prospects on Federal Acreage (surface & minerals)
  - 2) Keep MINIMUM 150 feet off any lateral (or future) for collision avoidance.
  - 3) Well spot must be Centered on 300' x 300' Drilling Pad – No overlap of other locations.  
(not sure about overlapping road...)
  - 4) Operations Pad extends to 600' x 600' but may overlap roads or other locations.
  - 5) Locate near roads as possible to minimize new road rights-of-way.

**T1 Target Area Conclusion:** After identifying laterals, the available areas remaining which meet the above criteria are in the Blue-Dashed Rectangles. From the North line of Section 15, a standard 330' depth remains that should meet with operators' requirements for locating a deep SWD. Footage calls would be 150' to 180' FNL and whatever E/W footage desired to spot within rectangles.

**NOTE:** *It's conceivable to locate inside the tracks of laterals but would require analyzing the As Built Directional Surveys...*

**The Green-Dashed Rectangles within the Blue appear to be the most advantageous spots for Prospect Location...**

**Risks:** With the sharp direction turnarounds on several of the permitted wells shown, even the suggested prospect rectangles MAY interfere with operators' future development plans.

**Operators include:** EOG, Mewbourne and RKI. Others may be pulled into the full one-mile Area of Review and will be noticed for the C-108 SWD application.



# Trove Energy and Water, LLC

## Sample of Prospecting Communications with Operator

### DEVONIAN SWD PROSPECTS – NEW RE-SPOTS; Trove Energy and Water

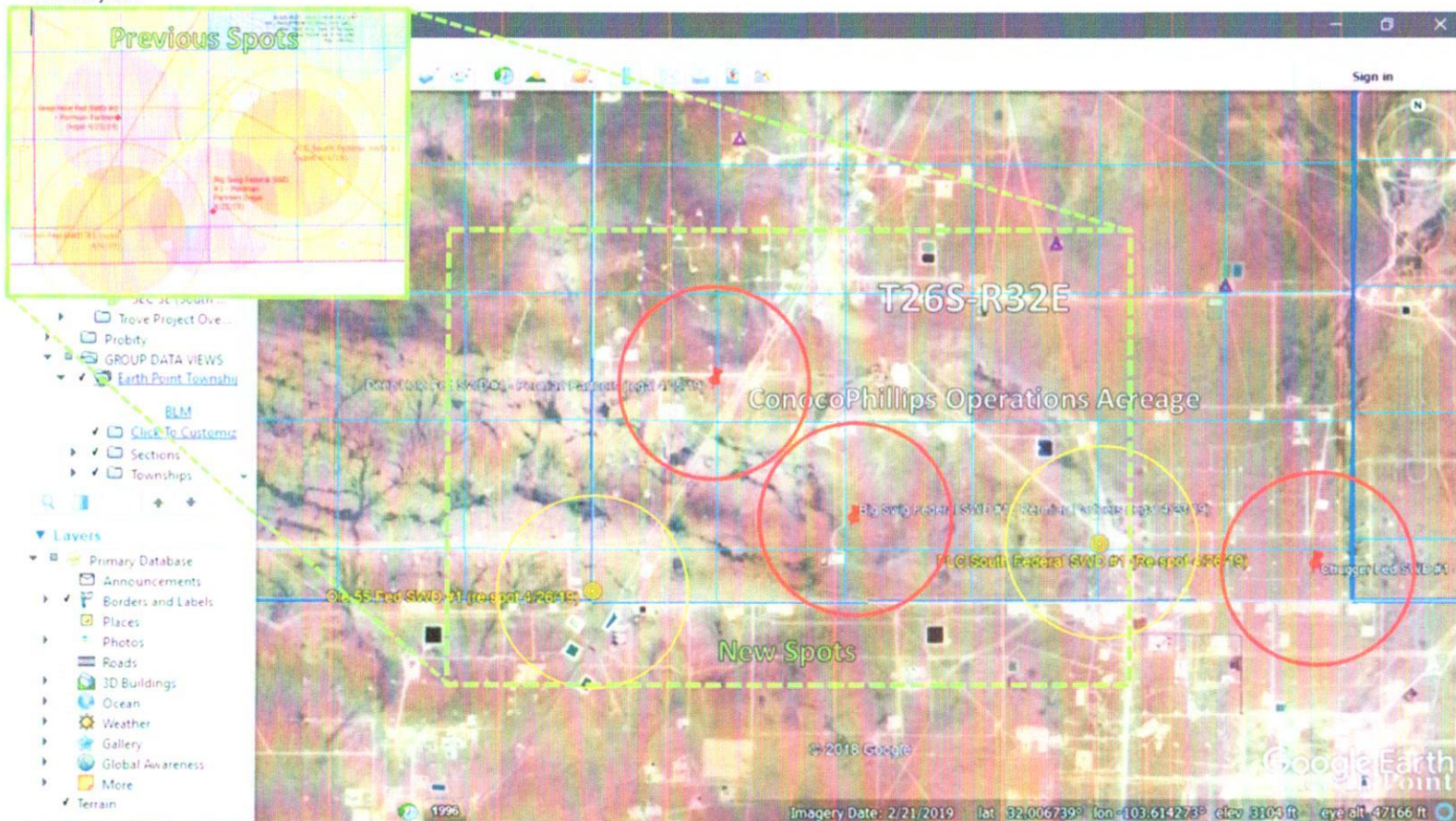
Ole 55 Fed SWD #1 - 1700' FNL and 5' FWL, 31-26S-32E (spot pick 4/26/19)

FLC South Fed #1 – 225' FSL and 50' FWL, 26-26S-32E (spot pick 4/26/19)

*Clear w/ ConocoPhillips – Hannah, if we can get a quick approval of these locations, I can get the applications in and maybe STOP the hopscotch of avoiding competitors' spotting... as advertised this week – pink bubbles in Outset View, upper left; orange circles Main View.*

Please contact Ben Stone, SOS Consulting; [ben@sosconsulting.us](mailto:ben@sosconsulting.us), 903-488-9850

Thank you!





# Trove Energy and Water, LLC

## Sample of Prospecting Communications with Operator

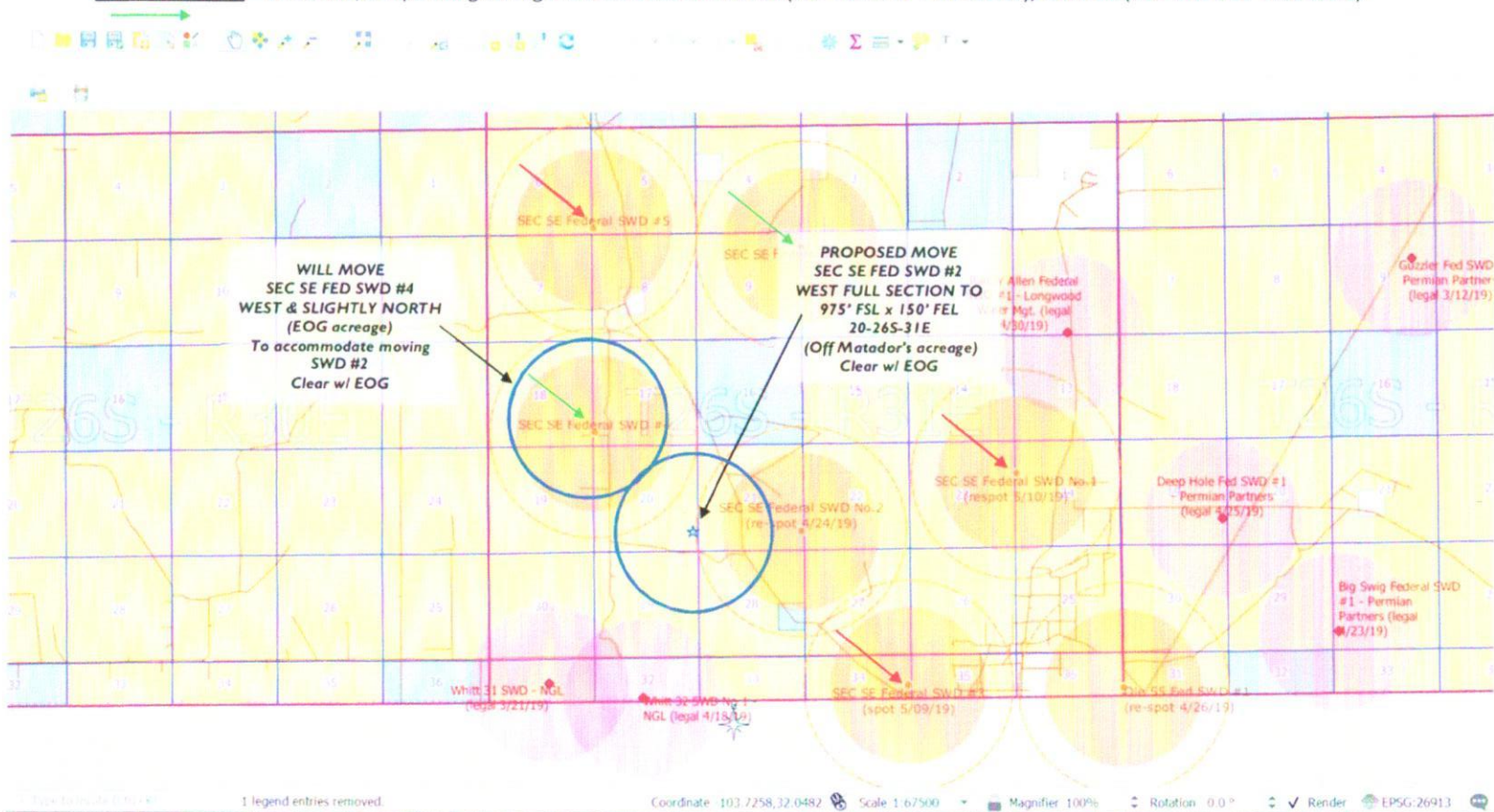
### Request from Trove Energy and Water, LLC

Please contact: Ben Stone, SOS Consulting, LLC 903-488-9850

### SWD Prospecting – Clearance Review of Locations for Future Development Plans in 26S-31E, Eddy County, NM...

**ConocoPhillips** – Leases and/or operating acreage: SEC SE Federal SWD #2 (975' FSL x 150' FEL Sec.21); SWD #3 (1600' FNL x 50' FWL Sec.34);  
 → SWD #5 (330' FSL x 50' FWL Sec.5);

**EOG Resources** – Lease and/or operating acreage: SEC SE Federal SWD #4 (700' FSL x 50' FWL Sec.17); SWD #6 (700' FNL x 50' FWL Sec.9)



# Trove Energy and Water, LLC

## Sample of Prospecting Communications with Operator

**To: Hannah Wasserman, ConocoPhillips (SWD review)**  
**From: Ben Stone, SOS Consulting – Trove Energy and Water**  
**4/24/19** (In reply to Hannah's remarks via email on 4/22/19)

DEVONIAN SWD PROSPECT; Trove Energy and Water – Ole 55 Fed SWD #1 - 150' FNL and 150' FEL, 31-26S-32E

- CONOCOPHILLIPS preferred location would be as close to the Stateline as you can get, preferably ~1500' to the south of the currently planned location.

Trove is very happy to accommodate ConocoPhillips' desire to adjust locations to suit future plans.

**Ole 55 Fed SWD #1** - Our thinking in the original location was to not impact safety negatively – avoiding yet another turnoff off the Orla highway. The original spot is nearly ½ mile down a well-established oilfield road. If ConocoPhillips can work with this location by adjusting south by a lesser amount, that would be best from an operational/ safety point. And as you know, we're hugging the section line closely.

Alternatively, we could locate over to the east side of the section – the lease road is not as good but, Trove would assume responsibility to improve that road if and when this SWD was installed.

Additional ideas/ comments are much appreciated.





# Trove Energy and Water, LLC

## *Sample of Vetting and Approval of Prospect Sites by Operator (EOG Resources, Inc.)*

**ben@sosconsulting.us**

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**From:** Charles Moran <Charles\_Moran@eogresources.com>  
**Sent:** Tuesday, April 23, 2019 7:03 PM  
**To:** ben@sosconsulting.us  
**Subject:** RE: Protest SWD Applications - WLC South Federal SWD #1 (15-26S-33E) and WLC South Federal SWD #2 (28-26S-33E)  
**Attachments:** image001.jpg

Ben: I went looking for email and I may have the answers on three moved SWDs.

1. On WLC South Federal SWD No. 2- revised location 1740' FNL & 150' FEL, 29-26S-33E – EOG will work with this and remove any protest.
2. On WLC South Fed SWD No. 3 – revised location 1420' FSL & 15' FEL, Sec. 26-26S-33E– EOG will work with this and remove any protest.
3. On WLC South Fed SWD No. 1 – revised location 900' FNL & 100' FEL – Sec. 15-26S-33E - EOG will work with this and remove any protest.

So in working with you,

Sorry of for the delay in getting back to you.

**Chuck Moran**

**EOG Resources, Inc. – Midland Division**  
432-686-3684

**From:** ben@sosconsulting.us <ben@sosconsulting.us>  
**Sent:** Tuesday, April 23, 2019 1:09 PM  
**To:** Charles Moran <Charles\_Moran@eogresources.com>  
**Subject:** RE: Protest SWD Applications - WLC South Federal SWD #1 (15-26S-33E) and WLC South Federal SWD #2 (28-26S-33E)

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Chuck,

Only relevant in that we're still hoping to get EOG's sign-off on the location maps (aerials) that I had sent to you.

Last I heard was you guys had got through your quarterly meeting and the team could direction some time back to this... I think that would have been last week maybe?...

But yes, still need to get EOG clearance on these... may have others soon.

Thanks.  
Ben

## Trove Energy and Water, LLC

### *Sample of Vetting and Approval of Prospect Sites by Operator (ConocoPhillips)*

**ben@sosconsulting.us**

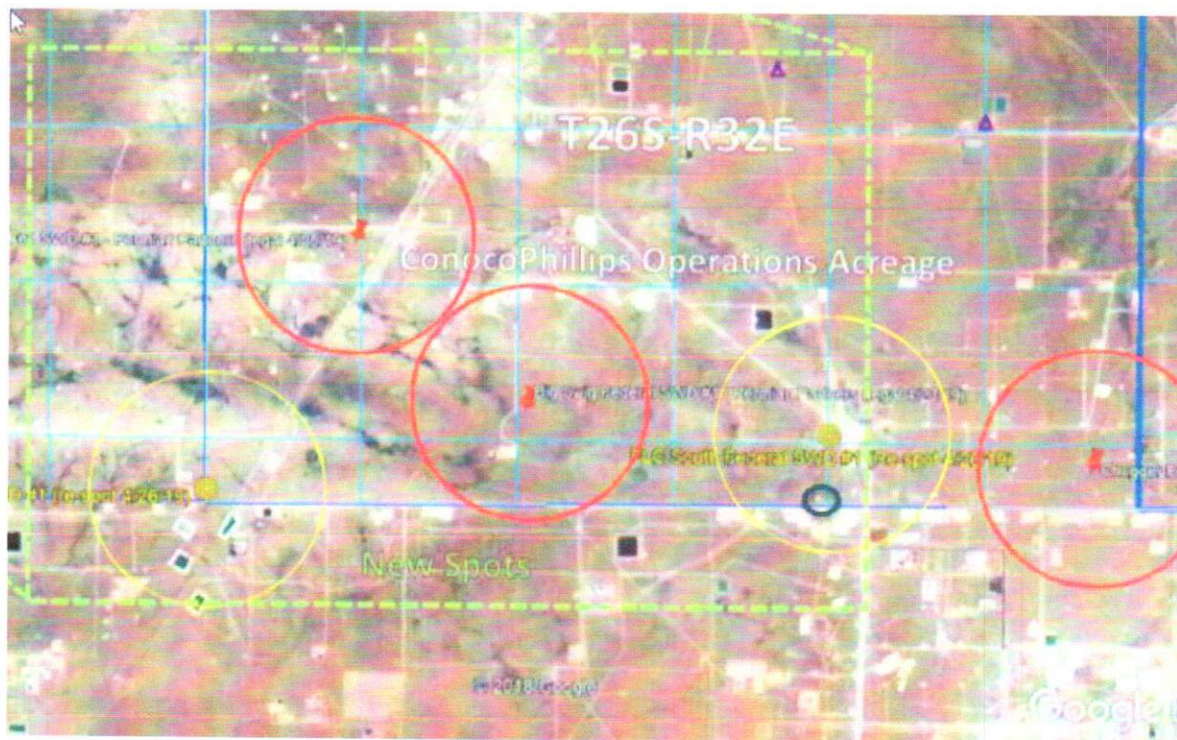
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**From:** Wasserman, Hannah N <Hannah.N.Wasserman@conocophillips.com>  
**Sent:** Tuesday, April 30, 2019 10:17 PM  
**To:** ben@sosconsulting.us  
**Subject:** RE: [EXTERNAL]RE: SWD siting guidance on federal acreage - ConocoPhillips op areas

Ben,

The Ole 55 FED is in an approved location for ConocoPhillips.

For the FLC....can we stick as close to the New Mexico/Texas state line as possible in section 34 (federal land)? See image below....Ideally where the black circle is.



I'll be in the field tomorrow, if you would like me to quality check a revised location for the FLC.

Thanks,

*Hannah Wasserman*  
ConocoPhillips  
Senior Geologist – Delaware Basin  
925 N Eldridge Pkwy



## Trove Energy and Water, LLC

### *Sample of Vetting and Approval of Prospect Sites by Operator (BTA Oil Producers, Inc.)*

**ben sosconsulting.us**

---

**From:** Nick Eaton <NEaton@btaoil.com>  
**Sent:** Thursday, March 21, 2019 2:04 PM  
**To:** ben@sosconsulting.us  
**Subject:** RE: C108 for WLC-Mid Fed #1

This works and yes 150' would be better if the spacing allows it.

-Nick

**From:** ben@sosconsulting.us <ben@sosconsulting.us>  
**Sent:** Thursday, March 21, 2019 2:01 PM  
**To:** Nick Eaton <NEaton@btaoil.com>  
**Subject:** RE: C108 for WLC-Mid Fed #1

\*\*\*\*\* EXTERNAL EMAIL - Please use caution and **DO NOT** open attachments or click links from unknown or unexpected emails. \*\*\*\*\*

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Hi Nick – I didn't post it since COG objected... this is the one I'm trying to relocate to your preferences... best I can do (to stay off the existing SWD bubbles) is ~1870' FNL and 200' FWL... I know that was your max off the west line and we could probably do 150' FWL... do you think that would work? Please see attachment...

Thanks,  
Ben

**From:** Nick Eaton <NEaton@btaoil.com>  
**Sent:** Thursday, March 21, 2019 1:52 PM  
**To:** ben@sosconsulting.us  
**Subject:** C108 for WLC-Mid Fed #1

Ben,

The C-108 for the above well isn't loading on the website, will you send a copy?

Thank you,  
Nick Eaton

# Trove Energy and Water, LLC

## Sample of Vetting and Approval of Prospect Sites by Operator (Devon Energy Production Co.)

ben@sosconsulting.us

**From:** Schroder, Brent <Brent.Schroder@dvn.com>  
**Sent:** Wednesday, May 29, 2019 7:46 AM  
**To:** ben@sosconsulting.us  
**Cc:** Cain, James; Bruening, Josh  
**Subject:** RE: FW: [EXTERNAL] Inquiry from Trove Energy re Devon protest of Application to Inject -PSE Federal SWD Well No. 2 Devon

Ben, we would not protest your revised proposed location for the PSE #2. On a side note we just acquired a Devonian well-bore in a trade with XTO (SEC 18 T23S R32E) not a few miles from your PSE proposal, is this something Trove would be interested in purchasing from Devon? I'm CC'ing Josh Bruening (Water Lead Engineer) and James Cain (Lead Asset Reservoir Engineer) as I am taking a new position with the company and will not be responsible for water going forward. Thanks and good luck!

Brent S.

Devon - Internal

**From:** ben@sosconsulting.us <ben@sosconsulting.us>  
**Sent:** Tuesday, May 28, 2019 12:28 PM  
**To:** Schroder, Brent <Brent.Schroder@dvn.com>  
**Subject:** RE: FW: [EXTERNAL] Inquiry from Trove Energy re Devon protest of Application to Inject -PSE Federal SWD Well No. 2 Devon

Hi Brent,

Still hoping you can clear this one for me... PSE Fed SWD #2 - I've moved the prospective location over to 6-23S-32E... HARD to tell from what's available from OCD on what's been filed but I THINK this is still open.

Please let me know if Devon can work with a location in the SW portion shown by a rectangle on the attached map. If you're generally good with the area, I'll get some footage calls to you to comply w/ Devon's specs.

Thanks,  
Ben

**From:** ben@sosconsulting.us <ben@sosconsulting.us>  
**Sent:** Wednesday, April 24, 2019 9:03 AM  
**To:** 'Schroder, Brent' <Brent.Schroder@dvn.com>  
**Subject:** RE: FW: [EXTERNAL] Inquiry from Trove Energy re Devon protest of Application to Inject -PSE Federal SWD Well No. 2 Devon

Hi Brent,

I thought I'd sent this to you... maybe I did but I suffered a near catastrophe actually got it sent.

Anyway, I've attached a proposed relocation for the PSE Fed SWD #2... also, I've outlined a possible area and hope you can let me know what Devon wants the first 880' clear and then the next 880' would be for SWD placer

Take a look and let me know or if you have any questions.

Thank you,  
Ben

**From:** Schroder, Brent <Brent.Schroder@dvn.com>  
**Sent:** Wednesday, April 17, 2019 7:31 AM  
**To:** ben@sosconsulting.us  
**Subject:** RE: FW: [EXTERNAL] Inquiry from Trove Energy re Devon protest of Application to Inject -PSE Federal SWD Well No. 2 Devon

Ben, we reviewed possible locations for Trove a couple of times and we have no problem with the PSE 1 as long as it stays within the 330' offset of the West Section line of 27. As far as the PSE 2 we have plans to take up every square inch of the drill islands up there and we honestly don't see room for a SWD. We will continue to protest any SWD application in this area no matter the SWD company. Sorry we couldn't be more help but these drill islands are a bear... If there are any other areas you are looking at that I can help with let me know. Thanks

Brent

Devon - Internal

**From:** ben@sosconsulting.us <ben@sosconsulting.us>  
**Sent:** Tuesday, April 16, 2019 3:05 PM  
**To:** Schroder, Brent <Brent.Schroder@dvn.com>  
**Subject:** RE: FW: [EXTERNAL] Inquiry from Trove Energy re Devon protest of Application to Inject -PSE Federal SWD Well No. 2 Devon

Hi Brent - just checking in 😊 thanks!  
Ben

**From:** Schroder, Brent <Brent.Schroder@dvn.com>  
**Sent:** Friday, April 12, 2019 3:47 PM  
**To:** ben@sosconsulting.us  
**Subject:** RE: FW: [EXTERNAL] Inquiry from Trove Energy re Devon protest of Application to Inject -PSE Federal SWD Well No. 2 Devon

Hey Ben, sorry to push this out another day but our Reservoir Engineer was sick the later half of this week. We have a meeting Monday morning to review and I will send over what we come up with as soon as I can. Thanks

Brent

Devon - Internal

**From:** ben@sosconsulting.us <ben@sosconsulting.us>  
**Sent:** Tuesday, April 9, 2019 3:30 PM  
**To:** Schroder, Brent <Brent.Schroder@dvn.com>  
**Subject:** RE: FW: [EXTERNAL] Inquiry from Trove Energy re Devon protest of Application to Inject -PSE Federal SWD Well No. 2 Devon

Thanks for the visit Brent! If you can help me get these couple spotted up by sliding them around a little, that would be great and, I'll try not to bug you for a while!

Thanks again,  
Ben



Trove Energy and Water, LLC

***Prospect Development Details***

**PSE Federal SWD No.4**

***Location:*** 145' FNL & 5' FEL, A-30-24S-32E

***Site vetted with:*** XTO and COG Operating, LLC – (1 spot adjustments per XTO due to fault – original spot in 31E; then with COG in 32E and filed.)

***Interval and Determination:*** 16,750' – 18,200'; Area SWDs and contours

***C-108 File Date:*** April 2, 2019

***Protest date and reason:*** May 8, 2019, Blackbuck (Assumed anti-competition; emailed Ernie Padilla, attorney, to inquire about nature of protest – no reply. 36 days, full 3 weeks after suspense period.)

***Presentation:*** Standard C-108, Seismic Evaluation, ~~Upsize Tubing Request~~ Not requesting upsize tubing as the immediate area is saturated w/ SWD prospects.

***Subsequent AOR Review:*** Nothing additional found.

***Affected Party Notice:*** Full one-mile radius; initial C-108 notification and follow up for hearing notification to include protestors. (See attachment 'Hearing Notification Service List'.)

***UPDATE:*** After parsing available data as to active C-108s (administrative or hearing), SOS found that Owl SWD Operating had previously spotted a prospect known as the 'Cotton Draw SWD No.1', filed 10/25/18 and is located approximately 4225 feet from the PSE Fed SWD #4 spot.

***Blackbuck is the protestor (the Owl site and Blackbuck sites are also in conflict), SOS recommends withdrawing this application at the start of hearing proceedings.***

# Trove Energy and Water, LLC

## SWD Prospects – Protested

### Additional Groundwater and Water Well Info

For OCD Examiner Hearing, September 5, 2019

#### Overview

In all areas of Trove Energy and Water, LLC's SWD prospects, fresh water is generally available from the Rustler, Santa Rosa and Cenozoic Alluvium formations. State Engineer's records show water wells in the area with a depth to groundwater of 125 to 405 feet. Several of the prospect sites have NO water wells within one mile of the proposed SWD.

<i>Trove Prospect</i>	<i>Location</i>	<i>Water Wells in AOR*</i>	<i>Analysis from Area?</i>
<b>WLC-M #3</b>	2075' FSL & 2' FWL 10-25S-33E	0	No
<b>WLC-M #4</b>	1470' FSL & 1170' FEL 17-25S-33E	0	No
<b>WLC-M #5</b>	1613' FNL & 150' FWL 31-25S-33E	0	No
<b>WLC-S #2</b>	1740' FNL & 150' FEL 29-26S-33E	0	No
<b>WLC-S #3</b>	1420' FSL & 15' FEL 26-26S-33E	0	Yes
<b>FLC-S #1</b>	225' FSL & 50' FWL 26-26S-32E	0	No
<b>Ole 55 #1</b>	1700' FNL & 5' FWL 31-26S-32E	1	Pending
<b>PSE #4</b>	5' FNL & 2494' FEL 3-24S-31E	0	No

*\*According to NM Office of the State Engineer's online data.*

The Rustler Formation is present in most of the Delaware Basin. The thickness ranges from about 200 to 500 feet. Water quality is generally poor, with total dissolved-solids (TDS) concentrations ranging from 286 milligrams per liter (mg/l) in southeast New Mexico to 157,000 mg/l in Winkler County, Texas. Chloride concentrations range from 15 mg/l in southeast New Mexico to 89,700 mg/l in Winkler County. Where the water quality is satisfactory, water can be used for irrigating salt-tolerant crops.

The Santa Rosa Sandstone is generally present in all the Delaware and usually consists of reddish-brown and gray, medium- to coarse-grained, cross-stratified sandstone. The maximum thickness is 520 feet. The Santa Rosa Sandstone in Eddy County, New Mexico, crops out in north-trending scarps a few miles to the west of the Eddy-Lea County line and in the south-facing scarps of Paduca Breaks in the extreme southwest corner of Lea County. The general dip of the Triassic rocks in Lea County is toward the south and east. In eastern Eddy County and the western third of Lea County, the Santa Rosa Sandstone is the principal aquifer. Water quality is variable. Where the Santa Rosa Sandstone is a distinct entity, chloride concentrations range from 10 mg/l to nearly 5,000 mg/l. Dissolved-solids concentrations range from 205 mg/l to nearly 3,000 mg/l.



Aquifers in Cenozoic alluvium are present in every county in the Delaware Basin. They consist of clastic deposits from surrounding uplands, Pecos River and other fluvial deposits, caliche, gypsite, conglomerates, terrace deposits, windblown sand, and playa deposits. The maximum saturated thickness can be more than 1,400 feet. The Cenozoic alluvium is used extensively throughout most of the Delaware Basin for public water supply, irrigation, industry, livestock, and rural domestic use. The water quality in aquifers in Cenozoic alluvium including the Pecos aquifer can be highly variable due to the local presence of evaporite deposits, recharge by highly mineralized water from irrigation and the Pecos River, and saline intrusion caused by extensive pumping. TDS range from 188 to 15,000 mg/l. Chloride concentrations range from 5 to 7,400 mg/l.

#### ***Average Concentrations of TDS and Chlorides***

<b>TDS</b>	<i>Rustler Formation</i>	<i>Santa Rosa SS</i>	<i>Cenozoic Alluvium</i>
Wells sampled	37	34	315
<b>Avg mg/L</b>	<b>16,110</b>	<b>984</b>	<b>2,319</b>
<b>Chlorides</b>			
Wells sampled	40	37	360
<b>Avg mg/L</b>	<b>6,472</b>	<b>258</b>	<b>327</b>

Credits: Portions of text and table excerpted and paraphrased from *Geohydrology of the Delaware Basin and Vicinity, Texas and New Mexico*, USGS 1985, Richey, Wells and Stephens

#### **Deep Injection – Threat to Groundwater**

The consensus generally is that disposal by injection at depths of Devonian SWD completions poses little to no risk to underground sources of drinking water (USDWs). In the Delaware Basin and greater Permian Basin, water typically becomes less potable with depth. With Devonian salt water disposal occurring at depths of 14,000 feet and more and with several boundaries of low permeability strata between these zones and USDWs, there's no likelihood of negative impact from disposal operations. By virtue of sheer distance/ depth (2-3 miles) and many interspersed shale layers in and between producing strata, 4-string casing design with 3 strings fully cemented to surface, these deep wells pose a significant risk reduction from older and typically much shallower injection wells. Shallow wells (Delaware and shallower) may have frequently had available conduits through poor cement or potential fracturing or, may have been in an area with high water flow, either naturally such as in the Ogallala Aquifer or as a result of long-term waterflooding, fracture jobs and poor well construction.

#### **Prospect / Well Review – Affirmative Statement**

In the process of prospect development and C-108 preparation, SOS Consulting reviews wells and other available data in the subject area of review. If there are any old waterfloods or other injection wells, additional research would be conducted to see if there was any reference to or, supporting well file documentation that may have indicated some hydrologic connection between USDWs and completed intervals. When satisfied of no historic problems and based on new Devonian SWD well design and depth, this was so signed as an affirmative statement.

**McMillan, Michael, EMNRD**

---

**From:** Antillon, Andrea <aantillon@slo.state.nm.us>  
**Sent:** Thursday, May 2, 2019 10:35 AM  
**To:** McMillan, Michael, EMNRD; Goetze, Phillip, EMNRD; Davidson, Florene, EMNRD  
**Cc:** Crosby, Faith; Marks, Allison; Kessler, Jordan  
**Subject:** RE: [EXT] SLO protest to Trove Energy and Water, LLC

The proposed well location is 1420' FSL and 15' FEL, Sec 26, T26S, R33E, Lea County, NM  
Andrea

---

**From:** McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]  
**Sent:** Thursday, May 2, 2019 10:34 AM  
**To:** Antillon, Andrea <aantillon@slo.state.nm.us>; Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Davidson, Florene, EMNRD <florene.davidson@state.nm.us>  
**Cc:** Crosby, Faith <fcrosby@slo.state.nm.us>; Marks, Allison <amarks@slo.state.nm.us>; Kessler, Jordan <jkessler@slo.state.nm.us>  
**Subject:** RE: [EXT] SLO protest to Trove Energy and Water, LLC

Trove has been known to change the well name before the time the OCD receives the application.  
An you provide footage calls for the well?

Mike

---

**From:** Antillon, Andrea <aantillon@slo.state.nm.us>  
**Sent:** Thursday, May 2, 2019 10:31 AM  
**To:** Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>; Davidson, Florene, EMNRD <florene.davidson@state.nm.us>  
**Cc:** Crosby, Faith <fcrosby@slo.state.nm.us>; Marks, Allison <amarks@slo.state.nm.us>; Kessler, Jordan <jkessler@slo.state.nm.us>  
**Subject:** [EXT] SLO protest to Trove Energy and Water, LLC

Hello,  
The State Land Office hereby objects to the WLC South Federal SWD Well No. 3 C-108, which has been submitted to the OCD by Trove Energy and Water, LLC. Please let me know if you need any additional information.  
Kind Regards,  
Andrea

**Andrea Antillon**  
*Associate Counsel*  
*Office of the General Counsel*  
Phone 505.827.5752  
New Mexico State Land Office  
310 Old Santa Fe Trail  
P.O. Box 1148  
Santa Fe, NM 87504-1148  
[aantillon@slo.state.nm.us](mailto:aantillon@slo.state.nm.us)  
[nmstatelands.org](http://nmstatelands.org)





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---

**McMillan, Michael, EMNRD**

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**From:** Kessler, Jordan <jkessler@slo.state.nm.us>  
**Sent:** Wednesday, April 17, 2019 5:34 PM  
**To:** Goetze, Phillip, EMNRD; Jones, William V, EMNRD; McMillan, Michael, EMNRD  
**Cc:** Davidson, Florene, EMNRD; Marks, Allison; Antillon, Andrea  
**Subject:** [EXT] Protest to Trove Energy & Water, LLC SWDs

Good evening,

The State Land Office recently received notification and hereby protests the following SWD applications filed by Trover Energy & Water, LLC:

- WLC Mid Federal SWD No. 5 (No API No. assigned)
- WLC Mid Federal SWD No. 4 (No API No. assigned)
- WLC Mid Federal SWD No. 3 (No API No. assigned)

Please let us know if you need any additional information.

Best,  
Jordan

**Jordan Lee Kessler**  
*Assistant Commissioner of  
Minerals and Royalties*  
505.827.5746  
New Mexico State Land Office  
310 Old Santa Fe Trail  
P.O. Box 1148  
Santa Fe, NM 87504-1148



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**From:** Deana M. Bennett <dmb@modrall.com>  
**Sent:** Wednesday, April 10, 2019 11:14 AM  
**To:** Goetze, Phillip, EMNRD; McMillan, Michael, EMNRD; Jones, William V, EMNRD  
**Subject:** [EXT] RE: NGL Protests of Trove SWD applications  
**Attachments:** NGL running list of protests (W3401084x7A92D).docx

Hello,

I am submitting a protest on behalf of NGL for three recently filed Trove applications:

4/10/19	Trove	WLC South Federal SWD Well No.2 (1740' FNL and 150' FEL, Section 29, Township 26 South, Range 33 East, Lea County, New Mexico)
4/10/19	Trove	WLC South Federal SWD Well No.3 (1420' FSL and 15' FEL, Section 26, Township 26 South, Range 33 East, Lea County, New Mexico)
4/10/19	Trove	Ole 55 Federal SWD Well No.1 (200' FNL and 5' FWL, Section 31, Township 26 South, Range 32 East, Lea County, New Mexico)

Based on a conversation with Mike at last week's hearing, I have also attached a running list of NGL's protests. My plan is to update that list every time I submit a protest. As you will see on the attachment, these three Trove applications are highlighted at the bottom of the table in the attachment. Each time I submit a protest, I will highlight the newest protest on the attached table and include the updated table with my protest for your convenience.

To the extent the attached table may be inconsistent with the protests I have filed, the filed protests control and not the table (i.e., if I inadvertently put in the wrong date or description on the attached table).

Also, I have created a column identifying whether I have received confirmation of protests from OCD. Some of the protests pre-date me, and so Jennifer may have the confirmation email. Others that I have protested I do not have confirmation emails yet, but I imagine those will be forthcoming.

Please let me know if you have questions, and Mike, if this isn't a helpful format for you, I am happy to adjust.

Thanks,

Deana



Deana M. Bennett

Lawyer

Modrall Sperling | [www.modrall.com](http://www.modrall.com)

P.O. Box 2168 | Albuquerque, NM 87103-2168

500 4<sup>th</sup> St. NW, Ste. 1000 | Albuquerque, NM 87102

D: 505.848.1834 | O: 505.848.1800

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ben@sosconsulting.us

---

**From:** Matthias Sayer <Matthias.Sayer@nglep.com>  
**Sent:** Thursday, May 23, 2019 10:40 AM  
**To:** ben@sosconsulting.us  
**Cc:** Deana M. Bennett  
**Subject:** RE: NGL

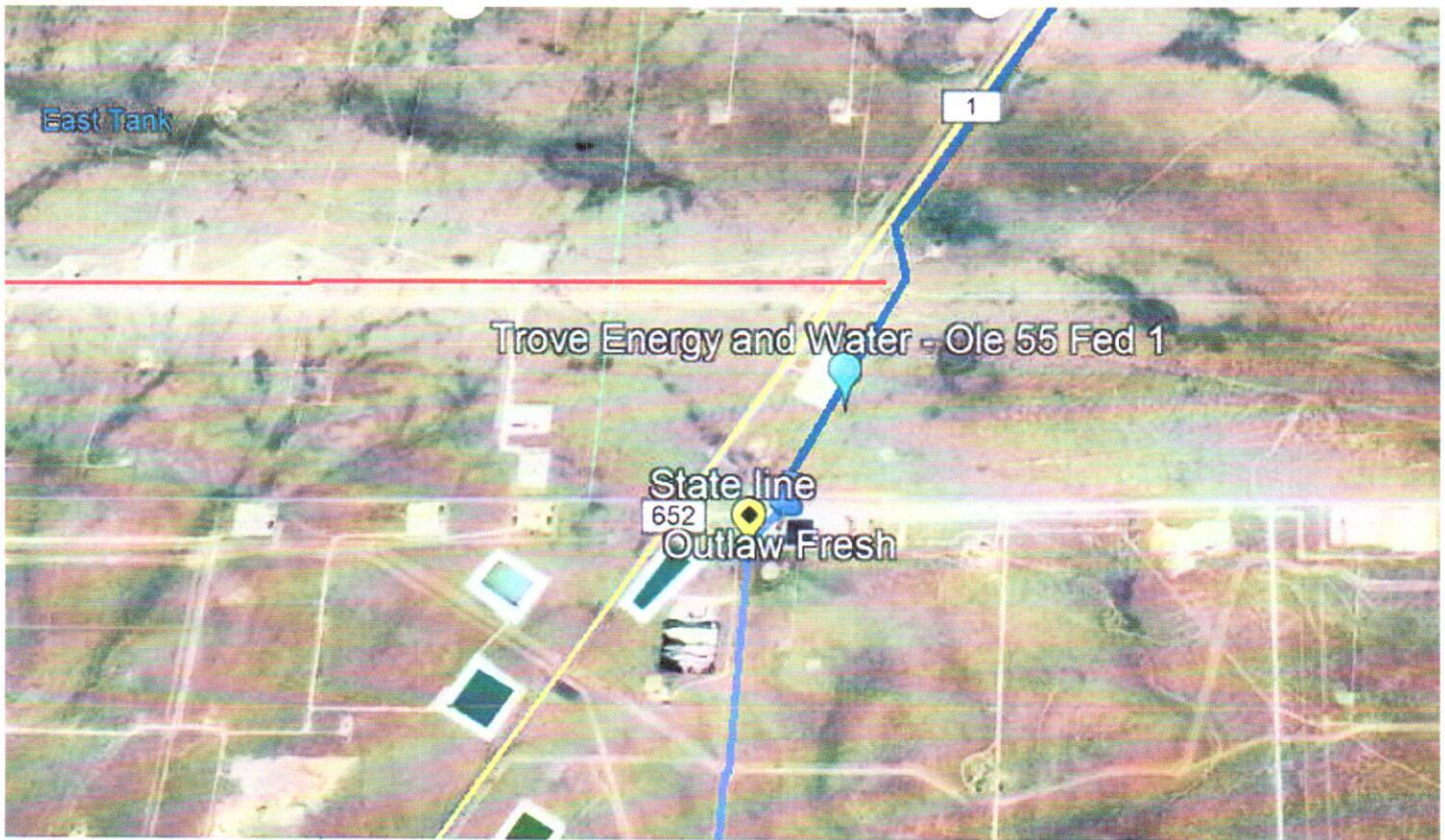
Ben,

Regarding the Trove S. Fed 2 application, NGL is protesting any commercial disposal within 1.5 miles of our facilities (regardless of depth), and the S. Fed 2 is within that distance from our Battle Axe facility (see image).



Regarding the OI 55 application, that proposed facility is extremely close to assets NGL just acquired from Mesquite—pipeline and booster station, and consequently, objectionable to NGL.





Let me know if you have any questions.

Matthias



**MATTHIAS SAYER**

Vice President, Legal – Regulatory Compliance, Policy, and Environment

Mobile: (307) 365-1814

[matthias.sayer@nlepp.com](mailto:matthias.sayer@nlepp.com)

[www.nlepp.com](http://www.nlepp.com)

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**From:** ben@sosconsulting.us [mailto:ben@sosconsulting.us]

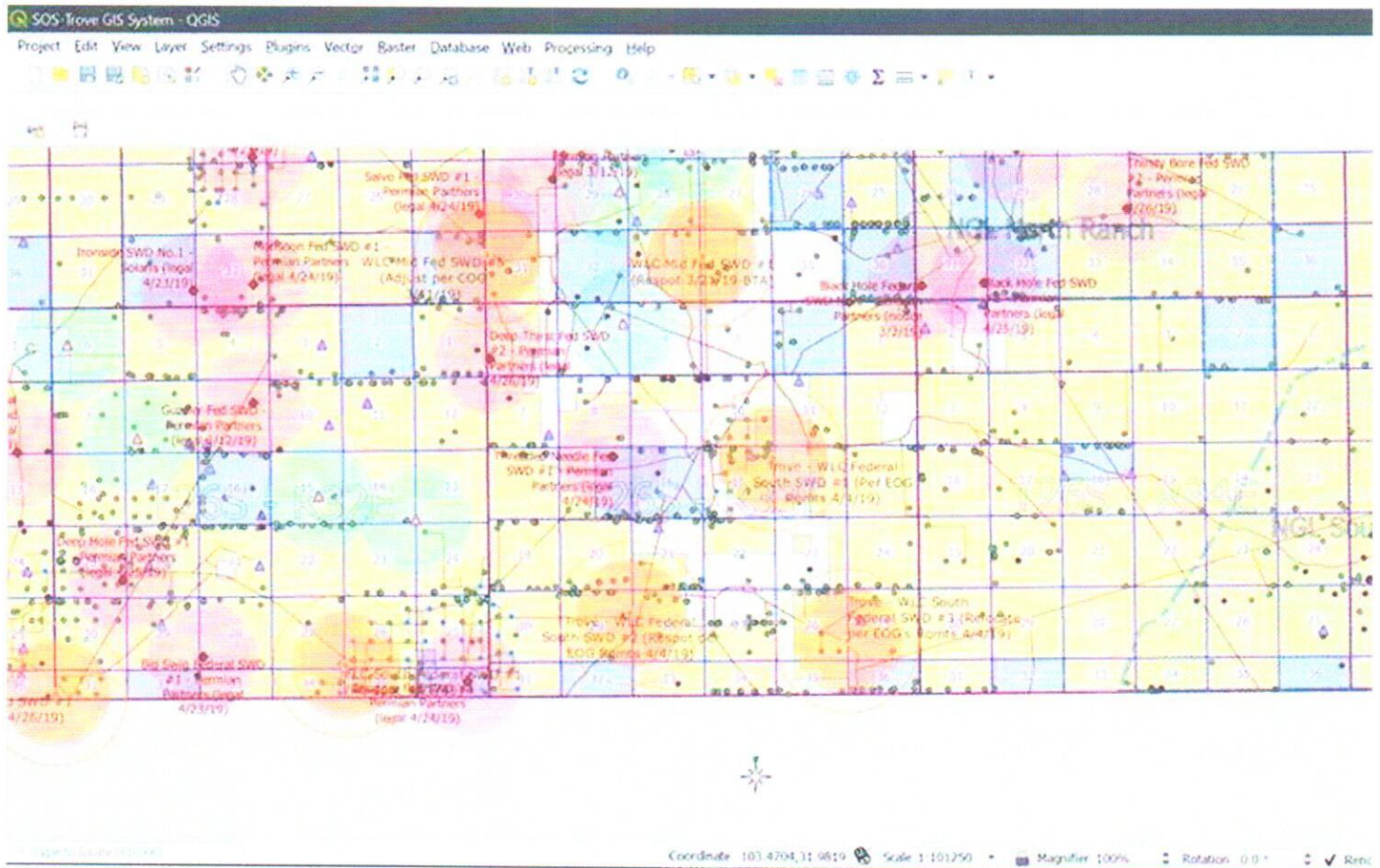
**Sent:** Tuesday, May 21, 2019 9:45 AM

**To:** Matthias Sayer

**Subject:** RE: NGL

For discussion – map attached below w/ prospects WLC #2 & 3 (center, bottom); NGL South Ranch in view...





**From:** Matthias Sayer <Matthias.Sayer@nglep.com>  
**Sent:** Tuesday, May 21, 2019 8:22 AM  
**To:** ben@sosconsulting.us  
**Subject:** Re: NGL

10:00 MDT?

Sent from my iPhone

On May 21, 2019, at 7:04 AM, "[ben@sosconsulting.us](mailto:ben@sosconsulting.us)" <[ben@sosconsulting.us](mailto:ben@sosconsulting.us)> wrote:

Good morning Matthias,

I'm back in the office – please let me know what a good time to call and visit might be.

Thanks,  
 Ben

**From:** Matthias Sayer <[Matthias.Sayer@nglep.com](mailto:Matthias.Sayer@nglep.com)>  
**Sent:** Thursday, May 16, 2019 11:59 AM  
**To:** [ben@sosconsulting.us](mailto:ben@sosconsulting.us)  
**Cc:** Deana M. Bennett <[dmb@modrall.com](mailto:dmb@modrall.com)>  
**Subject:** NGL

Ben,

Let me know if there is a time when you are available to discuss our concerns with your WLC South Fed SWDs #2 and #3 C-108s.

Thanks,

Matthias

<image001.png>

**MATTHIAS SAYER**

Vice President, Legal – Regulatory Compliance, Policy, and Environment

Mobile: (307) 365-1814

[matthias.sayer@nglep.com](mailto:matthias.sayer@nglep.com)

[www.nglenergypartners.com](http://www.nglenergypartners.com)

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**McMillan, Michael, EMNRD**

---

**From:** epadillapl@qwestoffice.net  
**Sent:** Wednesday, May 8, 2019 3:06 PM  
**To:** Goetze, Phillip, EMNRD; McMillan, Michael, EMNRD  
**Subject:** [EXT] Administrative Application of Trove Energy & Water (pMAM1910038589) PSE Federal SWD No. 4, Unit A, 145 FNL-5FEL, Section 30, T24S, R32E

Gentlemen:

Please be advised that Blackbuck Resources LLC opposes the above-referenced application.

Ernest L. Padilla  
PADILLA LAW FIRM, P.A.  
P.O. Box 2523  
Santa Fe, New Mexico 87504-2523  
T: 505-988-757  
F: 505-988-7592

E: [epadillapl@qwestoffice.net](mailto:epadillapl@qwestoffice.net); (office) [padillalaw@qwestoffice.net](mailto:padillalaw@qwestoffice.net)

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# Trove Energy and Water, LLC

## REQUEST FOR INCREASED TUBING SIZE

*Applicable to all Trove Energy and Water, LLC's C-108s  
brought to Examiner Hearing September 5, 2019*

<i>C-108 Project</i>	<i>Location</i>	<i>Case No.</i>
PSE #4	5' FNL & 2494' FEL 3-24S-31E	20752
WLC-M #3	2075' FSL & 2' FWL 10-25S-33E	20753
WLC-M #4	1470' FSL & 1170' FEL 17-25S-33E	20760
WLC-M #5	1613' FNL & 150' FWL 31-25S-33E	20754
WLC-S #2	1740' FNL & 150' FEL 29-26S-33E	20755
WLC-S #3	1420' FSL & 15' FEL 26-26S-33E	20756
FLC-S #1	225' FSL & 50' FWL 26-26S-32E	20751
Ole 55 #1	1700' FNL & 5' FWL 31-26S-32E	20757

### Justification

EXHIBIT

5A

### ***Anticipated Need for Disposal Capacity***

Daily produced water will INCREASE annually and by 2025, expectations are for an additional 1.1 million barrels per day **over current volumes**. It is estimated that 50 new SWDs need to be brought online in the Delaware Basin every year to meet the demand.

### ***More Capacity – Fewer Wells – Increased Safety***

Going from currently approved 5 ½-inch tubing strings to a full 7-inch string (5 ½" inside liner only) reduces friction by 300%; if upsizing from a 4 ½-inch string, friction is reduced by nearly 1000%. In any case, this allows operators to achieve the 40K to 50K bpd daily volumes with less horsepower and minimizing stress-induced mechanical failures from the tank battery, through the pump system and manifolds, to the well head and downhole. Lowering the chance for mechanical failure also enhances personnel safety. *(See All Figures.)*

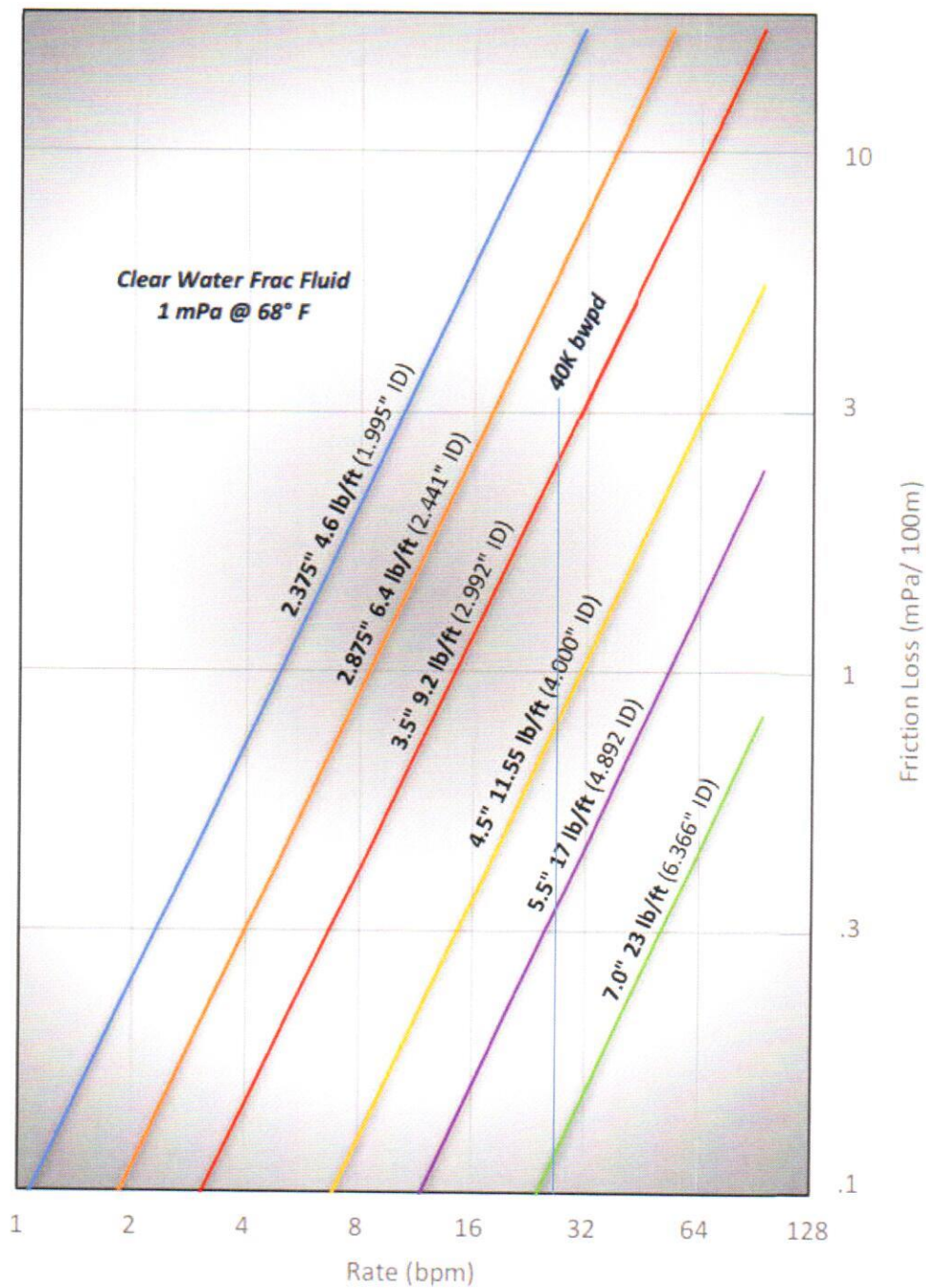
### ***Larger Tubing Just Makes Sense for Today's Requirements***

The risk of having to fish large diameter tubing from liner with close tolerance is challenging but, it has previously been well documented to the NMOCD that it can and has been performed successfully in many scenarios. Fishing tool companies have the tools to perform these jobs should the need arise. Some fishing jobs are tricky to be sure however; a sequence of events for 5 ½" tubing to be dropped inside a 7 5/8" liner is rare – the benefits far outweigh the risks.



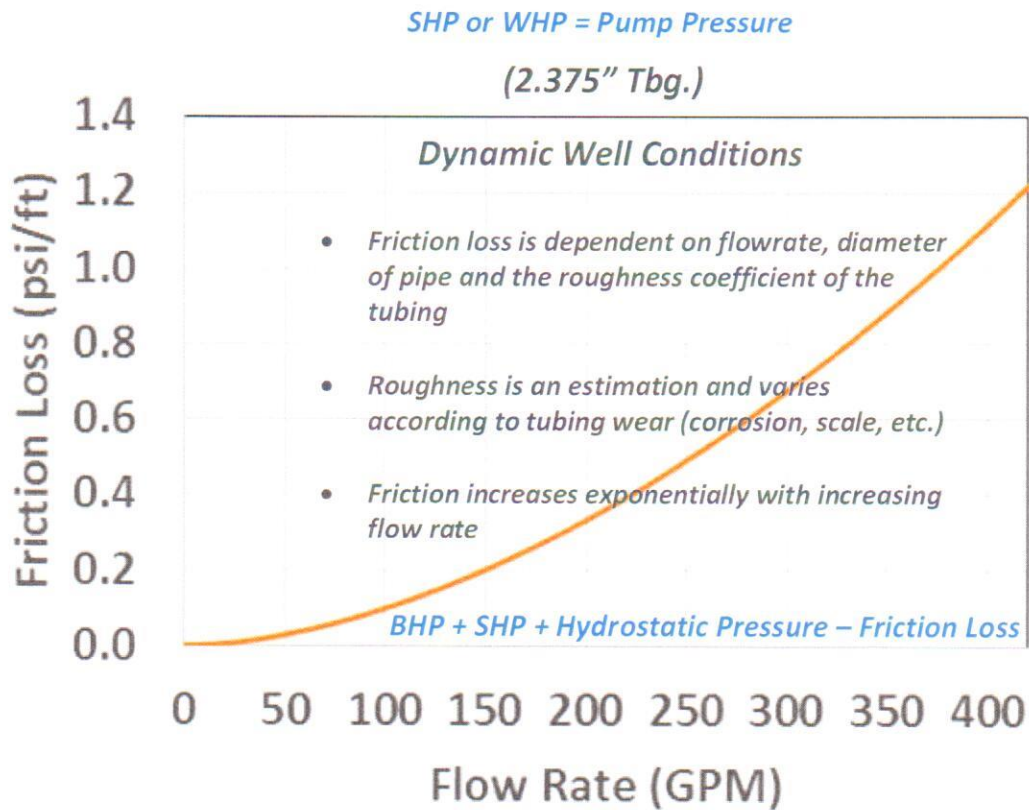
Figure 1

### Injection Tubing: Friction Loss vs Rate



Following the 40K bwpd line, it is apparent that attempting to obtain this rate even with 3.5" tubing is unrealistic – equipment failures occur. The 7.0 tubing offers minimal friction loss thereby allowing increased rates downhole and less impact to equipment. A comfortable rate for 3.5" might be about 6.5 bpm or, less than 10K bwpd as an example.

Figure 2  
Friction Loss Curve



Bourgoyne, Millhelm, Chenevert, Young, *Applied Drilling Engineering*, 1991

Figure 3

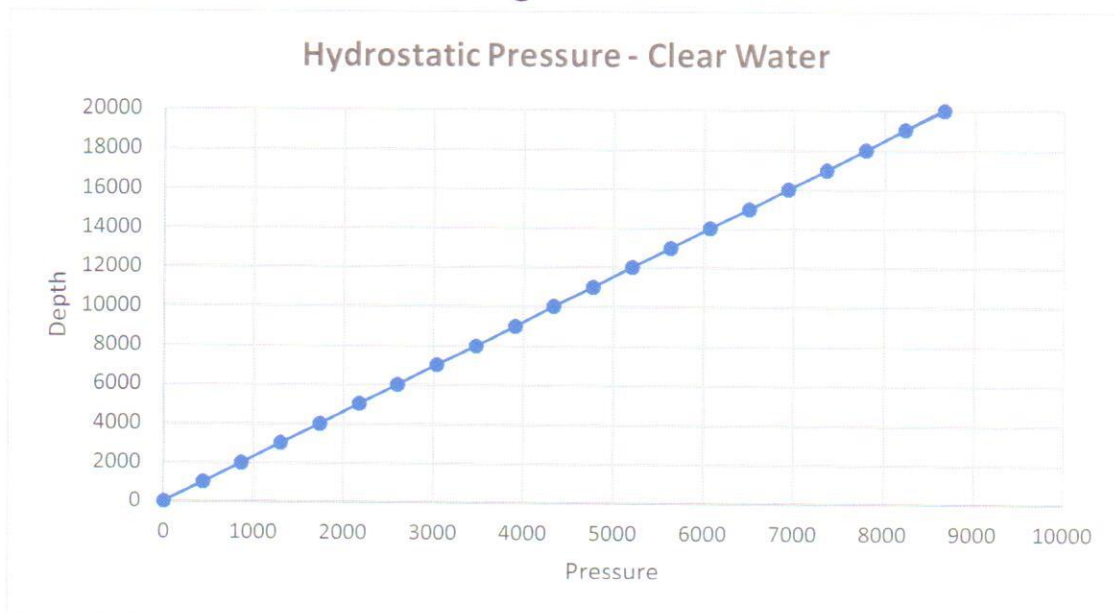
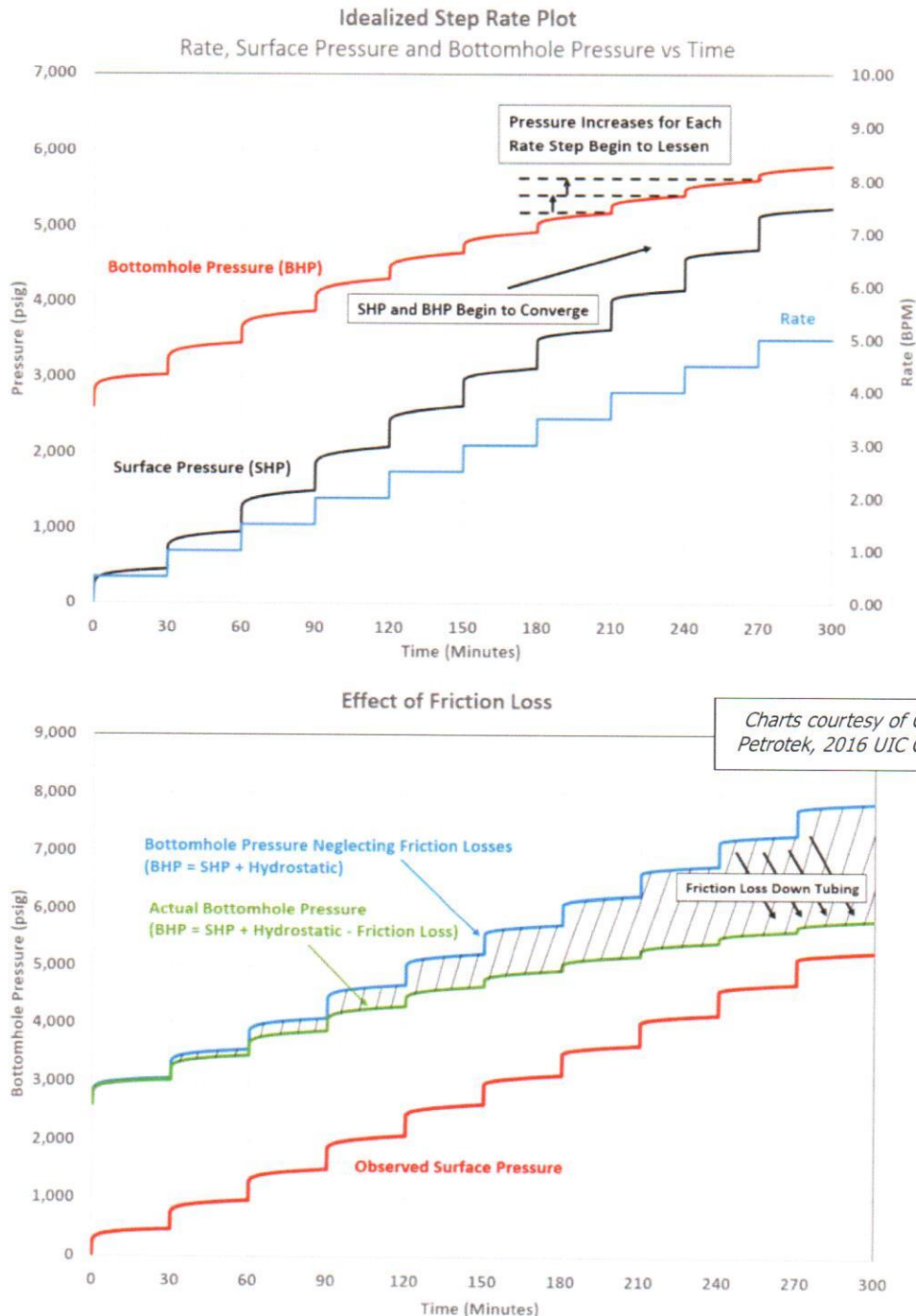




Figure 4

## Step Rate Test Charts Depict Friction Loss



The above charts are theoretical (*shallow/ 2.375" TBG*) but clearly depict the relationship between surface and bottomhole pressures; the top chart compares to rate and the bottom chart to friction loss. As shown in **Figure 1**, increasing tubing size reduces friction allowing a greater rate to reach the intended disposal interval and by using less horsepower.

## Tubing Configuration Inside Liner

The larger 7" casing is run to within 3 joints of the liner-top so the reduced friction benefits are realized. Then, to get to the packer setting depth (within 100 feet of the liner shoe; top of openhole interval) the tubing is swaged and reduced to the final 2,000 to 4000 feet. Friction goes up but, the shorter final length keeps it manageable while delivering the needed volumes. *(See Large Figure – Trove Generic Proposed Well Schematic)*

### Specs – Tubing Inside Liner

5.5" 17.0# HCP-110 FJ	OD	ID	Drift	Lined ID	Flare Drift
	5.500	4.982	4.767	4.520	4.275
				Wall Thickness	5.5" FJ Clearance
7.625" 39.0# P-110 Liner	7.625	6.625	6.500	0.500	1.125

## Fishing Procedures

A 6.625" O.D. Bowen Series 150 overshot (Assembly 8625) with a spiral grapple or equivalent would be utilized to perform an overshot operation. *(Note: The 6.625" O.D. will be turned down to 6.500" O.D. prior to commencing operation.)* Details on the overshot are shown below.

Outside Diameters 5.7/8" – 6.7/8" inclusive.

Complete Assembly with Spiral Parts	Ref.	0588	0593	0638	0651	0662	0663	0687
		C5171	5737	6655	4773	C4825	8625	C5174
Type		SH	FS	SH	SH	FS	SH	FS
Maximum Catch Size (Spiral)		5"	4.5/8"	5.1/4"	5.3/8"	5"	5.1/2"	5.1/4"
Maximum Catch Size (Basket)		4.1/2"	4"	4.5/8"	4.3/4"	4.1/4"	4.7/8"	4.1/2"
Assembly Weight (lbs.)		140	150	176	182	192	185	211
Overshot O'Dia.		5.7/8"	5.15/16"	6.3/8"	6.1/2"	6.5/8"	6.5/8"	6.7/8"
Top Sub		0588.1	0593.1	0638.1	0651.1	0662.1	0663.1	0687.1
		A5172	5738	6656	4774	B4826	8626	A5175
Bowl		0588.2	0593.2	0638.2	0651.2	0662.2	0663.2	0687.2
		B5173	5735	4503	9205	B4827	8617	B4519
Standard Guide		0588.3	0593.3	0638.3	0651.3	0662.3	0663.3	0687.3
		B4371	192	4504	4775	L1074	8621	A4474
Spiral Grapple		0588.4	0593.4	0638.4	0651.4	0662.4	0663.4	0687.4
		B4369	196	4498	9207	M1071	8619	B4472
Spiral Grapple Control		0588.5	0593.5	0638.5	0651.5	0662.5	0663.5	0687.5
		B4370	193	4499	9208	M1072	8620	A4473
Packer		0588.6	0593.6	0638.6	0651.6	0662.6	0663.6	0687.6
		L5950	195	4505	9209	L4505	8618	B4520
Basket Grapple		0588.7	0593.7	0638.7	0651.7	0662.7	0663.7	0687.7
		B4369	196	4498	9207	M1071	8619	B4472
Basket Grapple Control		0588.8	0593.8	0638.8	0651.8	0662.8	0663.8	0687.8
		B4370	193	4499	9208	M1072	8620	A4473
Control Packer		0588.9	0593.9	0638.9	0651.9	0662.9	0663.9	0687.9
		L5950R	195R	4505R	9209R	M4505RS	8618R	B4520R
Mill Control Packer		0588.10	0593.10	0638.10	0651.10	0662.10	0663.10	0687.10
		L5950R	195R	4505R	9209R	M4505RS	8618R	B4520R

*(Note: Similar fishing tools are available from various manufactures; Bowen is a major manufacturer of many downhole tools and considered a standard.)*



## **Fishing Procedure – Other Circumstances**

### ***Connection Break***

If dressing is needed, trip in hole with a mill and mill connection to allow for turned-down overshot to be latched onto the body of the tubing. If no milling is required, trip in hole with overshot and latch onto fish. Once latched, pick up string weight and pull to release packer. Once packer is released, trip out of hole with fish.

### ***Tubing Body Break***

If dressing is needed, trip in hole with a mill and mill tubing to allow for turned-down overshot to be latched onto the body of the tubing. If no milling is required, trip in hole with turned-down overshot and latch onto fish. Once latched, pick up string weight and pull 1-2 points over hanging weight to release the packer (turn to release depending on model). Once packer is released, trip out of hole with fish. *(Note: Wash pipe and mill may be substituted for dressing-off a break to ensure pipe stabilization and that the casing is not damaged due to milling.)*

### ***Mill Cannot be Used***

If an inadequate fishing neck is looking up and a mill cannot be used to dress the fish, a cutting tool may be utilized to cut off the damaged portion of tubing and a spear used to retrieve the cut-off piece. Once the cut-off piece is retrieved, the turned-down overshot may be used to retrieve the fish and release the packer. *(Note: If pipe is severely damaged, this procedure may be repeated to retrieve the pipe in sections.)*

### ***Spear Fishing Procedure***

If a turned-down overshot cannot be used or the fishing neck is inadequate, a spear may be used to spear into the fish. In the case of insert-lined pipe, a smaller spear will be utilized to go inside the insert-liner and retrieve the lining. Once the lining has been removed, trip out of hole and pick up the proper sized spear for the subject pipe. Trip in hole with tubing spear, spear the fish, pick up string weight and pull 1-2 points over hanging weight to release the packer (turn to release depending on model). Trip out of hole with fish and packer assembly.

### ***Abandonment Procedure***

If all attempts to fish fail, the operator may decide to abandon the zone or well. The tubing would be perforated with squeeze holes. A cement retainer or other seal assemble would be set at the top of the pipe and cement pumped to fill the annulus between the tubing and liner. The zone would be abandoned and sealed from fluid migration. The operator may decide to sidetrack from an appropriate depth and retry.

### ***Summary***

An increase in tubing size to a 7" x 5.5" (inside liner) for Trove Energy and Water's above-mentioned proposed SWDs will likely NOT result in increased potential for seismic activity in the region nor cause mechanical problems in the event tubing must be fished. Upsizing tubing diameters will reduce the number of SWDs required to accommodate the disposal needs of the industry in southeastern New Mexico.

# Trove Energy and Water, LLC

## REQUEST FOR INCREASED TUBING SIZE

*Applicable to all Trove Energy and Water, LLC's C-108s  
brought to Examiner Hearing September 5, 2019*

<i>C-108 Project</i>	<i>Location</i>	<i>Case No.</i>
PSE #4	5' FNL & 2494' FEL 3-24S-31E	20752
WLC-M #3	2075' FSL & 2' FWL 10-25S-33E	20753
WLC-M #4	1470' FSL & 1170' FEL 17-25S-33E	20760
WLC-M #5	1613' FNL & 150' FWL 31-25S-33E	20754
WLC-S #2	1740' FNL & 150' FEL 29-26S-33E	20755
WLC-S #3	1420' FSL & 15' FEL 26-26S-33E	20756
FLC-S #1	225' FSL & 50' FWL 26-26S-32E	20751
Ole 55 #1	1700' FNL & 5' FWL 31-26S-32E	20757

### Justification

EXHIBIT

5A

### ***Anticipated Need for Disposal Capacity***

Daily produced water will INCREASE annually and by 2025, expectations are for an additional 1.1 million barrels per day **over current volumes**. It is estimated that 50 new SWDs need to be brought online in the Delaware Basin every year to meet the demand.

### ***More Capacity – Fewer Wells – Increased Safety***

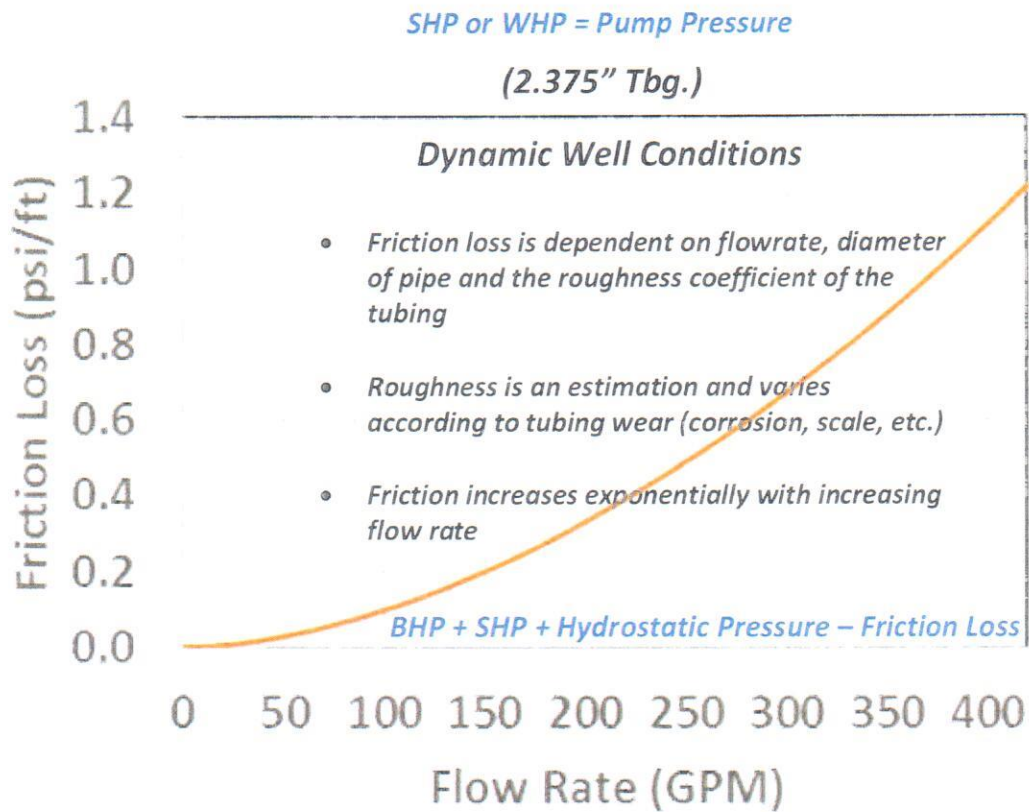
Going from currently approved 5 ½-inch tubing strings to a full 7-inch string (5 ½" inside liner only) reduces friction by 300%; if upsizing from a 4 ½-inch string, friction is reduced by nearly 1000%. In any case, this allows operators to achieve the 40K to 50K bpd daily volumes with less horsepower and minimizing stress-induced mechanical failures from the tank battery, through the pump system and manifolds, to the well head and downhole. Lowering the chance for mechanical failure also enhances personnel safety. *(See All Figures.)*

### ***Larger Tubing Just Makes Sense for Today's Requirements***

The risk of having to fish large diameter tubing from liner with close tolerance is challenging but, it has previously been well documented to the NMOCD that it can and has been performed successfully in many scenarios. Fishing tool companies have the tools to perform these jobs should the need arise. Some fishing jobs are tricky to be sure however; a sequence of events for 5 ½" tubing to be dropped inside a 7 5/8" liner is rare – the benefits far outweigh the risks.

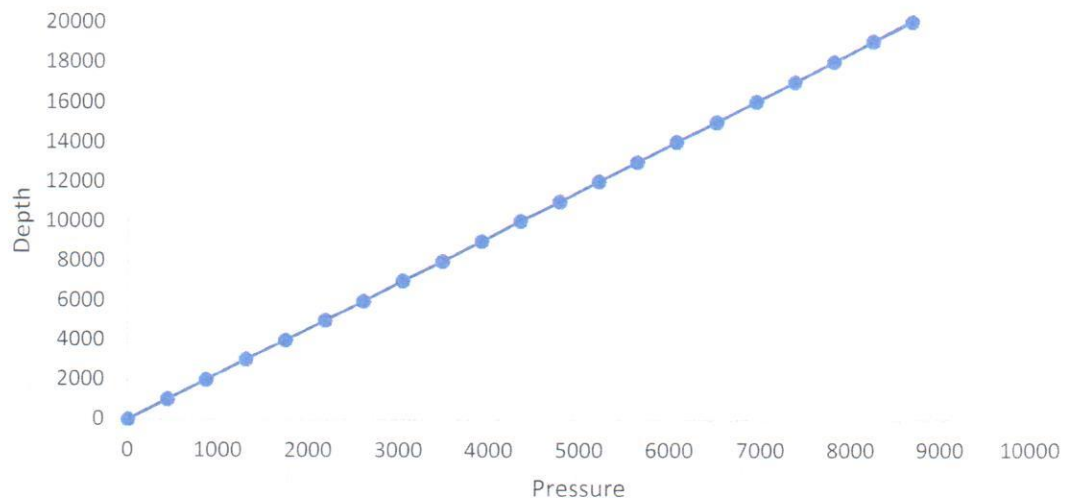


Figure 2  
Friction Loss Curve



Bourgoyne, Millhelm, Chenevert, Young, *Applied Drilling Engineering*, 1991

Figure 3  
Hydrostatic Pressure - Clear Water



# HEARING NOTIFICATION SERVICE LIST

## AFFECTED PARTIES LIST

**Following are the Notified Affected Party Addressees  
For Each Trove Energy and Water Protested C-108  
Set for September 5, 2019 Examiner Hearing**

"AFFECTED PERSON" MEANS THE DIVISION DESIGNATED OPERATOR; IN THE ABSENCE OF AN OPERATOR, A LESSEE WHOSE INTEREST IS EVIDENCED BY A WRITTEN CONVEYANCE DOCUMENT EITHER OF RECORD OR KNOWN TO THE APPLICANT AS OF THE DATE THE APPLICANT FILES THE APPLICATION; OR IN THE ABSENCE OF AN OPERATOR OR LESSEE, A MINERAL INTEREST OWNER WHOSE INTEREST IS EVIDENCED BY A WRITTEN CONVEYANCE DOCUMENT EITHER OF RECORD OR KNOWN TO THE APPLICANT AS OF THE DATE THE APPLICANT FILED THE APPLICATION FOR PERMIT TO INJECT.; PER OCD RULES NMAC 19.15.26.7, A. AND 19.15.26.8, B.2.

### PSE Federal SWD #4

COUNT	AFFECTED PARTY	ADDRESS	CERTIFIED RECEIPT NO. / DATE	PROTESTOR
1	U.S. DEPT. OF INTERIOR Bureau of Land Management	620 E. Greene St. Carlsbad, NM 88220	7018 2290 0001 2038 6186 8/13/19	
2	COG OPERATING, LLC	Attn: NM Land/ Leases 600 W. Illinois Avenue Midland, TX 79701	7018 2290 0001 2038 6193 8/13/19	
3	EOG RESOURCES, INC.	Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706	7018 2290 0001 2038 6209 8/13/19	
4	DEVON ENERGY PRODUCTION CO., LP	333 W. Sheridan Avenue OKC, OK 73102-5010	7018 2290 0001 2038 6216 8/13/19	
5	BLACKBUCK RESOURCES	2601 Westheimer, Ste.C210 Houston, TX 77098	7018 2290 0001 2038 6223 8/13/19	Yes

### WLC South Federal SWD #2

COUNT	AFFECTED PARTY	ADDRESS	CERTIFIED RECEIPT NO. / DATE	PROTESTOR
1	U.S. DEPT. OF INTERIOR Bureau of Land Management	620 E. Greene St. Carlsbad, NM 88220	7018 2290 0001 2038 6230 8/13/19	
2	EOG RESOURCES, INC.	Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706	7018 2290 0001 2038 6247 8/13/19	
3	CHEVRON USA, INC.	Attn: Linda McMurray, Permitting Team 6301 Deauville Blvd. Midland, TX 79706	7018 2290 0001 2038 6254 8/13/19	
4	STATE OF NEW MEXICO Oil, Gas and Minerals Division	310 Old Santa Fe Trail Santa Fe, NM 87504	7018 2290 0001 2038 6261 8/13/19	
5	NGL WATER SOLUTIONS PERMIAN, LLC	1509 W. Wall St., Ste.306 Midland, TX 79701	7018 2290 0001 2038 6278 8/13/19	Yes

EXHIBIT

6



# HEARING NOTIFICATION SERVICE LIST

## AFFECTED PARTIES LIST (cont.)

### WLC South Federal SWD #3

COUNT	AFFECTED PARTY	ADDRESS	CERTIFIED RECEIPT NO. / DATE	PROTESTOR
1	U.S. DEPT. OF INTERIOR Bureau of Land Management	620 E. Greene St. Carlsbad, NM 88220	7018 2290 0001 2038 6285 8/13/19	
2	EOG RESOURCES, INC.	Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706	7018 2290 0001 2038 6292 8/13/19	
3	RAILROAD COMMISSION OF TEXAS, Technical Permitting Section - UIC Program	P.O. Box 12967 Austin, TX 78711-29676	7018 2290 0001 2038 6308 8/13/19	
4	STATE OF NEW MEXICO Oil, Gas and Minerals Division	310 Old Santa Fe Trail Santa Fe, NM 87504	7018 2290 0001 2038 6315 8/13/19	
5	NGL WATER SOLUTIONS PERMIAN, LLC	1509 W. Wall St., Ste.306 Midland, TX 79701	7018 2290 0001 2038 6322 8/13/19	Yes

### WLC Mid Federal SWD #3

COUNT	AFFECTED PARTY	ADDRESS	CERTIFIED RECEIPT NO. / DATE	PROTESTOR
1	U.S. DEPT. OF INTERIOR Bureau of Land Management	620 E. Greene St. Carlsbad, NM 88220	7018 2290 0001 2038 6339 8/13/19	
2	BTA OIL PRODUCERS, INC.	104 S. Pecos St. Midland, TX 79701	7018 2290 0001 2038 6346 8/13/19	
3	COG OPERATING, LLC	Attn: NM Land/ Leases 600 W. Illinois Avenue Midland, TX 79701	7018 2290 0001 2038 6353 8/13/19	
4	EOG RESOURCES, INC.	Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706	7018 2290 0001 2038 6360 8/13/19	
5	STATE OF NEW MEXICO Oil, Gas and Minerals Division	310 Old Santa Fe Trail Santa Fe, NM 87504	7018 2290 0001 2038 6377 8/13/19	Yes

### WLC Mid Federal SWD #4

COUNT	AFFECTED PARTY	ADDRESS	CERTIFIED RECEIPT NO. / DATE	PROTESTOR
1	U.S. DEPT. OF INTERIOR Bureau of Land Management	620 E. Greene St. Carlsbad, NM 88220	7018 2290 0001 2038 6384 8/13/19	
2	EOG RESOURCES, INC.	Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706	7018 2290 0001 2038 6391 8/13/19	
3	DEVON ENERGY PRODUCTION CO., LP	333 W. Sheridan Avenue OKC, OK 73102-5010	7018 2290 0001 2038 6407 8/13/19	
4	STATE OF NEW MEXICO Oil, Gas and Minerals Division	310 Old Santa Fe Trail Santa Fe, NM 87504	7018 2290 0001 2038 6414 8/13/19	Yes

## HEARING NOTIFICATION SERVICE LIST AFFECTED PARTIES LIST (cont.)

### WLC Mid Federal SWD #5

COUNT	AFFECTED PARTY	ADDRESS	CERTIFIED RECEIPT NO. / DATE	PROTESTOR
1	U.S. DEPT. OF INTERIOR Bureau of Land Management	620 E. Greene St. Carlsbad, NM 88220	7018 2290 0001 2038 6421 8/13/19	
2	COG OPERATING, LLC	Attn: NM Land/ Leases 600 W. Illinois Avenue Midland, TX 79701	7018 2290 0001 2038 6438 8/13/19	
3	OXY Y-1 COMPANY	6001 Deauville Blvd. Midland, TX 79706	7018 2290 0001 2038 6445 8/13/19	
4	KAISER-FRANCIS OIL COMPANY	P.O. Box 21468 Tulsa, OK 74121-1468	7018 2290 0001 2038 6452 8/13/19	
5	BTA OIL PRODUCERS, INC.	104 S. Pecos St. Midland, TX 79701	7018 2290 0001 2038 6469 8/13/19	
6	EOG RESOURCES, INC.	Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706	7018 2290 0001 2038 6476 8/13/19	
7	STATE OF NEW MEXICO Oil, Gas and Minerals Division	310 Old Santa Fe Trail Santa Fe, NM 87504	7018 2290 0001 2038 6483 8/13/19	Yes

### FLC South Federal SWD #1

COUNT	AFFECTED PARTY	ADDRESS	CERTIFIED RECEIPT NO. / DATE	PROTESTOR
1	U.S. DEPT. OF INTERIOR Bureau of Land Management	620 E. Greene St. Carlsbad, NM 88220	7018 2290 0001 2038 6490 8/13/19	
2	CONOCOPHILLIPS COMPANY	P.O. Box 2197 Houston, TX 77252-2197	7018 2290 0001 2038 6506 8/13/19	
3	SARHA OPERATING COMPANY	306 W. Wall St., Ste.1025 Midland, TX 79701	7018 2290 0001 2038 6513 8/13/19	
4	RAILROAD COMMISSION OF TEXAS, Technical Permitting Section - UIC Program	P.O. Box 12967 Austin, TX 78711-29676	7018 2290 0001 2038 6520 8/13/19	
5	NGL WATER SOLUTIONS PERMIAN, LLC	1509 W. Wall St., Ste.306 Midland, TX 79701	7018 2290 0001 2038 6537 8/13/19	Yes



# HEARING NOTIFICATION SERVICE LIST

## AFFECTED PARTIES LIST (cont.)

### Ole 55 Federal SWD #1

COUNT	AFFECTED PARTY	ADDRESS	CERTIFIED RECEIPT NO. / DATE	PROTESTOR
1	U.S. DEPT. OF INTERIOR Bureau of Land Management	620 E. Greene St. Carlsbad, NM 88220	7018 2290 0001 2038 6544 8/13/19	
2	CONOCOPHILLIPS COMPANY	P.O. Box 2197 Houston, TX 77252-2197	7018 2290 0001 2038 6551 8/13/19	
3	SARAH OPERATING COMPANY	306 W. Wall St., Ste.1025 Midland, TX 79701	7018 2290 0001 2038 6568 8/13/19	
4	MNA ENTERPRISES LTD CO.	106 W Alabama St. Hobbs, NM 88242	7018 2290 0001 2038 6575 8/13/19	
5	RAILROAD COMMISSION OF TEXAS, Technical Permitting Section - UIC Program	P.O. Box 12967 Austin, TX 78711-29676	7018 2290 0001 2038 6582 8/13/19	
6	STATE OF NEW MEXICO Oil, Gas and Minerals Division	310 Old Santa Fe Trail Santa Fe, NM 87504	7018 2290 0001 2038 6599 8/13/19	
7	NGL WATER SOLUTIONS PERMIAN, LLC	1509 W. Wall St., Ste.306 Midland, TX 79701	7018 2290 0001 2038 6605 8/13/19	Yes

I hereby certify that the above mailings included full copies of the subject C-108s with hearing notification cover letters and were sent via U.S. certified mail on August 13, 2019.

Ben Stone, SOS Consulting, LLC  
Agent for Trove Energy and Water, LLC

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 OKC, OK 73102-5010

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 CHEVRON USA, INC.  
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 6301 Deauville Blvd.  
 Midland, TX 79706

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 5509 Champions Drive  
 Midland, TX 79706

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 Midland, TX 79701

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PS Form 3800, June 2015

7018 2290 0001 2038 6292

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate):  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$  
Total Postage and Fees \$8.50

Sent To: EOG RESOURCES, INC.  
Attn: Chuck Moran  
5509 Champions Drive  
Midland, TX 79706

PS Form 3800, June 2015

7018 2290 0001 2038 6315

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☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$  
Total Postage and Fees \$8.50

Sent To: STATE OF NEW MEXICO  
Oil, Gas and Minerals Division  
310 Old Santa Fe Trail  
Santa Fe, NM 87504

PS Form 3800, June 2015

7018 2290 0001 2038 6322

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate):  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$2.20  
Total Postage and Fees \$8.50

Sent To: NGL WATER SOLUTIONS, LLC  
1509 W. Wall St., Ste 306  
Midland, TX 79701

PS Form 3800, June 2015



# Proof of Notice - Certified Mail Receipts

WLC Mid Federal SWD #3

7018 2290 0001 2038 6339

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Certified Mail Fee: \$  
Extra Services & Fees (check box, add fee as appropriate):  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
Postage: \$  
Total Postage and Fees: 8.35

Sent To: USPS  
Street and A: Bureau of Land Management  
City, State, ZIP: Oil & Gas Division  
620 E. Greene St.  
Carlsbad, NM 88220

PS Form 3800, April 2016

7018 2290 0001 2038 6346

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Certified Mail Fee: \$  
Extra Services & Fees (check box, add fee as appropriate):  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
Postage: \$  
Total Postage and Fees: 8.35

Sent To: BTA OIL PRODUCERS, INC  
Street and A: 104 S Pecos St  
City, State, ZIP: Midland, TX 79701

PS Form 3800, April 2016

7018 2290 0001 2038 6353

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Certified Mail Fee: \$  
Extra Services & Fees (check box, add fee as appropriate):  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
Postage: \$  
Total Postage and Fees: 8.35

Sent To: COG OPERATING LLC  
Street and A: Attn: NM Land/ Leases  
City, State, ZIP: 600 W Illinois Avenue

PS Form 3800, April 2016

7018 2290 0001 2038 6360

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Certified Mail Fee: \$  
Extra Services & Fees (check box, add fee as appropriate):  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
Postage: \$  
Total Postage and Fees: 8.35

Sent To: EOG RESOURCES, INC  
Street and A: Attn: Chuck Moran  
City, State, ZIP: 5509 Champions Drive  
Midland, TX 79706

PS Form 3800, April 2016

7018 2290 0001 2038 6377

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Extra Services & Fees (check box, add fee as appropriate):  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
Postage: \$  
Total Postage and Fees: 8.35

Sent To: STATE OF NEW MEXICO  
Street and A: Oil, Gas and Minerals Division  
City, State, ZIP: 310 Old Santa Fe Trail  
Santa Fe, NM 87504

PS Form 3800, April 2016

# Proof of Notice - Certified Mail Receipts

WLC Mid Federal SWD #4

7018 2290 0001 2038 6384

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$

Postage \$  
Total Postage and Fees \$ **8.35**

Sent To  
Street Bureau of Land Management  
Oil & Gas Division  
City, St 620 E. Greene St  
Carlsbad, NM 88220

PS Form Instructions

Postmark Here  
AUG 13 2019

7018 2290 0001 2038 6391

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$

Postage \$  
Total Postage and Fees \$ **8.35**

Sent To  
Street EOG RESOURCES, INC  
Attn: Chuck Moran  
City, St 5509 Champions Drive  
Midland, TX 79706

PS Form Instructions

Postmark Here  
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7018 2290 0001 2038 6407

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$

Postage \$  
Total Postage and Fees \$ **8.35**

Sent To  
Street DEVON ENERGY PROD CO, LP  
333 W. Sheridan Avenue  
City, St OKC, OK 73102-5010

PS Form Instructions

Postmark Here  
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7018 2290 0001 2038 6414

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Certified Mail Fee \$ **3.50**  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$ **2.80**  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$

Postage \$ **2.05**  
Total Postage and Fees \$ **8.35**

Sent To  
Street STATE OF NEW MEXICO  
Oil, Gas and Minerals Division  
City, St 310 Old Santa Fe Trail  
Santa Fe, NM 87504

PS Form Instructions

Postmark Here  
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# Proof of Notice - Certified Mail Receipts

WLC Mid Federal SWD #5

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Certified Mail Fee \$  
Extra Services & Fees (check box, and fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Restricted Mail (see notes) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$  
Total Postage and Fees \$8.20

Postmark Here  
AUG 13 2019

KAISER-FRANCIS OIL COMPANY  
P O Box 21468  
Tulsa, OK 74121-1468

PS Form 3800, June 2015

2549 8E02 T000 0622 8T02

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Certified Mail Fee \$  
Extra Services & Fees (check box, and fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Restricted Mail (see notes) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$  
Total Postage and Fees \$8.20

Postmark Here  
AUG 13 2019

OXY Y  
6001 F  
Midlar

PS Form 3800, June 2015

5449 8E02 T000 0622 8T02

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Certified Mail Fee \$  
Extra Services & Fees (check box, and fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Restricted Mail (see notes) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$  
Total Postage and Fees \$7.20

Postmark Here  
AUG 13 2019

COG OPER  
Attn NM L  
600 W Ilir  
Midland

PS Form 3800, June 2015

8E49 8E02 T000 0622 8T02

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Certified Mail Fee \$  
Extra Services & Fees (check box, and fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Restricted Mail (see notes) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$  
Total Postage and Fees \$8.20

Postmark Here  
AUG 13 2019

Bureau of  
Oil &  
620 F  
Carlsbad

PS Form 3800, June 2015

1249 8E02 T000 0622 8T02

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Certified Mail Fee \$  
Extra Services & Fees (check box, and fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Restricted Mail (see notes) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$  
Total Postage and Fees \$8.20

Postmark Here  
AUG 13 2019

BTA OIL PRODUCERS INC  
104 S. Pecos St  
Midland, TX 79701

PS Form 3800, June 2015

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Certified Mail Fee \$  
Extra Services & Fees (check box, and fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Restricted Mail (see notes) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$  
Total Postage and Fees \$8.20

Postmark Here  
AUG 13 2019

EOG RESOURCES INC  
Attn: Chuck Moran  
5509 Champions Drive  
Midland, TX 79706

PS Form 3800, June 2015

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Certified Mail Fee \$  
Extra Services & Fees (check box, and fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Restricted Mail (see notes) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$  
Total Postage and Fees \$8.20

Postmark Here  
AUG 13 2019

STATE OF NEW MEXICO  
Oil, Gas and Minerals Division  
310 Old Santa Fe Trail  
Santa Fe, NM 87504

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Certified Mail Fee \$  
Extra Services & Fees (check box, and fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Restricted Mail (see notes) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$  
Postage \$  
Total Postage and Fees \$8.20

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STATE OF NEW MEXICO  
Oil, Gas and Minerals Division  
310 Old Santa Fe Trail  
Santa Fe, NM 87504

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# Proof of Notice - Certified Mail Receipts

FLC South Federal SWD #1

7018 2290 0001 2038 6490

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$

Postage \$  
Total Postage and Fees \$8.35

Sent To  
Street and  
City, State  
PS Form 3800, June 2015

**Bureau of Land Management**  
Oil & Gas Division  
620 E. Greene St  
Carlsbad, NM 88220

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COMO TX 74422

7018 2290 0001 2038 6513

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$

Postage \$  
Total Postage and Fees \$8.35

Sent To  
Street and  
City, State  
PS Form 3800, June 2015

**SARAH OPERATING COMPANY**  
306 W. Wall St. Ste 1025  
Midland, TX 79701

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COMO TX 74422

7018 2290 0001 2038 6506

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$

Postage \$  
Total Postage and Fees \$8.35

Sent To  
Street and  
City, State  
PS Form 3800, June 2015

**CONOCOPHILLIPS COMPANY**  
P.O. Box 2197  
Houston, TX 77252-2197

Postmark Here  
AUG 13 2019  
COMO TX 74422

7018 2290 0001 2038 6520

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy) \$  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$

Postage \$  
Total Postage and Fees \$8.35

Sent To  
Street and  
City, State  
PS Form 3800, June 2015

**RAILROAD COMMISSION OF TEXAS**  
Technical Permitting Section - UIC Program  
P.O. Box 12967  
Austin, TX 78711-2967

Postmark Here  
AUG 13 2019  
COMO TX 74422

7018 2290 0001 2038 6537

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Certified Mail Fee \$3.35  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy) \$2.80  
☐ Return Receipt (electronic) \$  
☐ Certified Mail Restricted Delivery \$  
☐ Adult Signature Required \$  
☐ Adult Signature Restricted Delivery \$

Postage \$2.45  
Total Postage and Fees \$8.35

Sent To  
Street and  
City, State  
PS Form 3800, June 2015

**NGL WATER SOLUTIONS, LLC**  
1509 W. Wall St. Ste 306  
Midland, TX 79701

Postmark Here  
AUG 13 2019  
COMO TX 74422



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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
 Postage \$  
 Total Postage and Fees \$ **8.35**

Sent To: MNA ENTERPRISES LTD CO  
 Street: 106 W Alabama St  
 City: Hobbs, NM 88242

PS Form 3800, June 2015

5259 9E02 T000 0622 9T02

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
 Postage \$  
 Total Postage and Fees \$ **8.35**

Sent To: SARAH OPER  
 Street: 306 W Wall  
 City: Midland

PS Form 3800, June 2015

9959 9E02 T000 0622 9T02

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
 Postage \$  
 Total Postage and Fees \$ **8.35**

Sent To: CONOCOPHIL  
 Street: P O B  
 City: Houston, TX

PS Form 3800, June 2015

1559 9E02 T000 0622 9T02

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
 Postage \$  
 Total Postage and Fees \$ **8.35**

Sent To: Bureau of L  
 Street: Oil & C  
 City: Carlsbad

PS Form 3800, June 2015

6459 9E02 T000 0622 9T02

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
 Postage \$  
 Total Postage and Fees \$ **8.35**

Sent To: NGL WATER SOLUTIONS, LLC  
 Street: 1509 W Wall St, Ste 306  
 City: Midland, TX 79701

PS Form 3800, June 2015

7018 2290 0001 2038 6562

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Certified Mail Fee \$  
Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
 Postage \$  
 Total Postage and Fees \$ **8.35**

Sent To: RAILROAD COMMISSION OF TEXAS  
 Street: Technical Permitting Section - UIC Program  
 City: P O Box 12967  
 Austin, TX 78711-2967

PS Form 3800, June 2015

7018 2290 0001 2038 6599

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**OFFICIAL USE**

Certified Mail Fee \$ **3.35**  
 2.05  
 Extra Services & Fees (check box, add fee as appropriate)  
☐ Return Receipt (hardcopy)  
☐ Return Receipt (electronic)  
☐ Certified Mail Restricted Delivery  
☐ Adult Signature Required  
☐ Adult Signature Restricted Delivery  
 Postage \$ **2.80**  
 Total Postage and Fees \$ **8.35**

Sent To: STATE OF NEW MEXICO  
 Street: Oil, Gas and Minerals Division  
 City: 310 Old Santa Fe Trail  
 Santa Fe, NM 87504

PS Form 3800, June 2015

7018 2290 0001 2038 6599



# Proof of Notice - Certified Mail

## Return Receipts (Green Cards)

Trove Energy and Water, LLC  
WLC-M Fed SWD #3

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>Bureau of Land Management Oil &amp; Gas Division 620 E. Greene St. Carlsbad, NM 88220</p> <p>9590 9402 4014 8079 1491 62</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6339</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>A. Signature <i>[Signature]</i></p> <p>B. Received by (Printed Name) <i>[Signature]</i></p> <p>C. Date of Delivery 8/15/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p> <p>9590 9402 4014 8079 1491 24</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6360</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p> <p>Domestic Return Receipt</p>	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>BTA OIL PRODUCERS, INC. 104 S. Pecos St. Midland, TX 79701 WLC-MF3-H</p> <p>9590 9402 4014 8079 1491 48</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6346</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>A. Signature <i>[Signature]</i></p> <p>B. Received by (Printed Name) <i>[Signature]</i></p> <p>C. Date of Delivery 8/16/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p> <p>9590 9402 4014 8079 1491 31</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6353</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p> <p>Domestic Return Receipt</p>	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>STATE OF NEW MEXICO Oil, Gas and Minerals Division 310 Old Santa Fe Trail Santa Fe, NM 87504</p> <p>9590 9402 4014 8079 1491 17</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6377</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>A. Signature <i>[Signature]</i></p> <p>B. Received by (Printed Name) <i>[Signature]</i></p> <p>C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p> <p>9590 9402 4014 8079 1491 17</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6377</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p> <p>Domestic Return Receipt</p>	



# Proof of Notice - Certified Mail

Return Receipts (Green Cards)

Trove Energy and Water, LLC  
**WLC-M Fed SWD #4**

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>Bureau of Land Management Oil &amp; Gas Division 620 E. Greene St. Carlsbad, NM 88220 WLC-MB4-H</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6384</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>EOG RESOURCES, INC. Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706 WLC-MB4-H</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6391</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	
<p>A. Signature X [Signature]</p> <p>B. Received by (Printed Name) Chuck Moran</p> <p>C. Date of Delivery 8/15/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p>		<p>A. Signature X [Signature]</p> <p>B. Received by (Printed Name) Chuck Moran</p> <p>C. Date of Delivery 8/15/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p>	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>DEVON ENERGY PROD. CO., LP 333 W. Sheridan Avenue OKC, OK 73102-5010 WLC-MB4-H</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6407</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>STATE OF NEW MEXICO Oil, Gas and Minerals Division 310 Old Santa Fe Trail Santa Fe, NM 87504 WLC-MB4-H</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6414</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	
<p>A. Signature X [Signature]</p> <p>B. Received by (Printed Name) Chuck Moran</p> <p>C. Date of Delivery 8/15/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p>		<p>A. Signature X [Signature]</p> <p>B. Received by (Printed Name) Chuck Moran</p> <p>C. Date of Delivery 8/15/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p>	





# Proof of Notice - Certified Mail

## Return Receipts (Green Cards)

Trove Energy and Water, LLC  
WLC-M Fed SWD #5

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>Bureau of Land Management Oil &amp; Gas Division 820 E. Greene St. Carlsbad, NM 88220 WLC-MMS-H</p> <p>9590 9402 4014 8079 1488 68</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6421</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>A. Signature X <i>[Signature]</i> B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p> <p>EOG RESOURCES, INC. Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706 WLC-MMS-H</p> <p>7018 2290 0001 2038 6476</p> <p>PS Form 3811, February 2004 Domestic Return Receipt 102545-02 M-1540</p>	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>KAISER-FRANCIS OIL COMPANY P.O. Box 21468 Tulsa, OK 74121-1468 WLC-MMS-H</p> <p>9590 9402 4014 8079 1499 33</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6452</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>A. Signature X <i>[Signature]</i> B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p> <p>OXY-Y-1 COMPANY 6001 Deauville Blvd Midland, TX 79706 WLC-MMS-H</p> <p>9590 9402 4014 8079 1499 40</p> <p>7018 2290 0001 2038 6445</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt</p>	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>COG OPERATING, LLC Attn: NM Land/Leases 600 W. Illinois Avenue Midland, TX 79701 WLC-MMS-H</p> <p>9590 9402 4014 8079 1499 57</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6438</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>A. Signature X <i>[Signature]</i> B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p> <p>BTA OIL PRODUCERS, INC. 104 S. Pecos St. Midland, TX 79701 WLC-MMS-H</p> <p>9590 9402 4014 8079 1499 26</p> <p>7018 2290 0001 2038 6469</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt</p>	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>STATE OF NEW MEXICO Oil, Gas and Minerals Division 310 Old Santa Fe Trail Santa Fe, NM 87504 WLC-MMS-H</p> <p>7018 2290 0001 2038 6463</p> <p>PS Form 3811, February 2004 Domestic Return Receipt 102545-02 M-1540</p>		<p>A. Signature X <i>[Signature]</i> B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	



# Proof of Notice - Certified Mail

## Return Receipts (Green Cards)

Trove Energy and Water, LLC  
**WLC-S Fed SWD #2**

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>Bureau of Land Management Oil &amp; Gas Division 620 E. Greene St. Carlsbad, NM 88220 WLC-SW2-H</p> <p>9590 9402 4014 8079 1488 77</p> <p>2. Article Number (Transfer from service label) 7016 2290 0001 2036 6230</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>EOG RESOURCES, INC Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706 WLC-SW2-H</p> <p>9590 9402 4014 8079 1488 51</p> <p>2. Article Number (Transfer from service label) 7016 2290 0001 2036 6247</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	
<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) [Blank]</p> <p>C. Date of Delivery [Blank]</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail <input type="checkbox"/> Registered Mail Restricted Delivery</p>		<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) Timmy Whitehead</p> <p>C. Date of Delivery 8/15/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>CHEVRON USA, INC. Attn: Linda McMurray, Permitting Team 6301 Deauville Blvd Midland, TX 79706 WLC-SW2-H</p> <p>9590 9402 4014 8079 1488 44</p> <p>2. Article Number (Transfer from service label) 7016 2290 0001 2036 6254</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>STATE OF NEW MEXICO Oil, Gas and Minerals Division 310 Old Santa Fe Trail Santa Fe, NM 87504 WLC-SW2-H</p> <p>9590 9402 4014 8079 1488 37</p> <p>2. Article Number (Transfer from service label) 7016 2290 0001 2036 6261</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	
<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) [Blank]</p> <p>C. Date of Delivery [Blank]</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail <input type="checkbox"/> Registered Mail Restricted Delivery</p>		<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) [Blank]</p> <p>C. Date of Delivery [Blank]</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>NGL WATER SOLUTIONS, LLC 1509 W. Wall St., Ste. 306 Midland, TX 79701 WLC-SW2-H</p> <p>9590 9402 4014 8079 1488 20</p> <p>2. Article Number (Transfer from service label) 7016 2290 0001 2036 6278</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>NGL WATER SOLUTIONS, LLC 1509 W. Wall St., Ste. 306 Midland, TX 79701 WLC-SW2-H</p> <p>9590 9402 4014 8079 1488 20</p> <p>2. Article Number (Transfer from service label) 7016 2290 0001 2036 6278</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	
<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) [Blank]</p> <p>C. Date of Delivery [Blank]</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail <input type="checkbox"/> Registered Mail Restricted Delivery</p>		<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) [Blank]</p> <p>C. Date of Delivery 8/15</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>	



# Proof of Notice - Certified Mail

Return Receipts (Green Cards)

Trove Energy and Water, LLC  
WLC-S Fed SWD #3

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>Bureau of Land Management Oil &amp; Gas Division 620 E. Greene St. Carlsbad, NM 88220 WLC-SB3-H</p> <p>9590 9402 4014 8079 1488 13</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6285</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>EOG RESOURCES, INC. Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706 WLC-SB3-H</p> <p>9590 9402 4014 8079 1488 06</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6292</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	
<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) Jimmie Whitehead</p> <p>C. Date of Delivery 8/15/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p>		<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) Jimmie Whitehead</p> <p>C. Date of Delivery 8/15/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p>	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>RAILROAD COMMISSION OF TEXAS Technical Permitting Section - UIC Program P.O. Box 12967 Austin, TX 78711-2967 WLC-SB3-H</p> <p>9590 9402 4014 8079 1487 90</p> <p>Article Number (Transfer from service label) 7018 2290 0001 2038 6308</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>STATE OF NEW MEXICO Oil, Gas and Minerals Division 310 Old Santa Fe Trail Santa Fe, NM 87504 WLC-SB3-H</p> <p>9590 9402 4014 8079 1487 83</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6315</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	
<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) Railroad Commission of Texas</p> <p>C. Date of Delivery AUG 15 2019</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p>		<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) Railroad Commission of Texas</p> <p>C. Date of Delivery AUG 15 2019</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p>	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>NGL WATER SOLUTIONS, LLC 1509 W. Wall St., Ste 306 Midland, TX 79701 WLC-SB3-H</p> <p>9590 9402 4014 8079 1491 79</p> <p>Article Number (Transfer from service label) 7018 2290 0001 2038 6322</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>NGL WATER SOLUTIONS, LLC 1509 W. Wall St., Ste 306 Midland, TX 79701 WLC-SB3-H</p> <p>9590 9402 4014 8079 1491 79</p> <p>Article Number (Transfer from service label) 7018 2290 0001 2038 6322</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	
<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) NGL Water Solutions, LLC</p> <p>C. Date of Delivery 8/15</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p>		<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name) NGL Water Solutions, LLC</p> <p>C. Date of Delivery 8/15</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery</p>	



# Proof of Notice - Certified Mail

## Return Receipts (Green Cards)

Trove Energy and Water, LLC  
FLC-S Fed SWD #1

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION		SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature X <i>Atwill</i></p> <p>B. Received by (Printed Name)</p> <p>D. Is delivery address different from item 1? If YES, enter delivery address below:</p>		<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name)</p> <p>C. Date of Delivery 08/16/18</p> <p>D. Is delivery address different from item 1? If YES, enter delivery address below:</p>	
1. Article Addressed to:  Bureau of Land Management Oil & Gas Division 620 E. Greene St. Carlsbad, NM 88220 FL08114		3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Registered <input type="checkbox"/> Insured Mail <input type="checkbox"/> Restricted Delivery? (Extra Fee)		1. Article Addressed to:  CONOCOPHILLIPS COMPANY P.O. Box 2197 Houston, TX 77252-2197 FL08114		3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Registered <input type="checkbox"/> Insured Mail <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> C.O.D. <input type="checkbox"/> Restricted Delivery? (Extra Fee)	
2. 7016 2290 0001 2038 6490				2. 7016 2290 0001 2038 6506			
PS Form 3811, February 2004 Domestic Return Receipt				PS Form 3811, February 2004 Domestic Return Receipt			

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION		SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature X <i>George McAlister</i></p> <p>B. Received by (Printed Name) GEORGE McALISTER</p> <p>D. Is delivery address different from item 1? If YES, enter delivery address below:</p>		<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name)</p> <p>C. Date of Delivery AUG 15 2018</p> <p>D. Is delivery address different from item 1? If YES, enter delivery address below:</p>	
1. Article Addressed to:  SARAH OPERATING COMPANY 306 W. Wall St., Ste. 1025 Midland, TX 79701 FL08114		3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Registered <input type="checkbox"/> Insured Mail <input type="checkbox"/> Restricted Delivery? (Extra Fee)		1. Article Addressed to:  RAILROAD COMMISSION OF TEXAS Technical Permitting Section - UIC Program P.O. Box 12967 Austin, TX 78711-2967 FL08114		3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Registered <input type="checkbox"/> Insured Mail <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> C.O.D. <input type="checkbox"/> Restricted Delivery? (Extra Fee)	
2. 7016 2290 0001 2038 6513				2. 7016 2290 0001 2038 6520			
PS Form 3811, February 2004 Domestic Return Receipt				PS Form 3811, February 2004 Domestic Return Receipt			

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature X <i>Charles Ballard</i></p> <p>B. Received by (Printed Name)</p> <p>C. Date of Delivery 8/15</p> <p>D. Is delivery address different from item 1? If YES, enter delivery address below:</p>	
1. Article Addressed to:  NGL WATER SOLUTIONS, LLC 1509 W. Wall St., Ste. 306 Midland, TX 79701 FL08114		3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Registered <input type="checkbox"/> Insured Mail <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> C.O.D. <input type="checkbox"/> Restricted Delivery? (Extra Fee)	
2. 7016 2290 0001 2038 6537			
PS Form 3811, February 2004 Domestic Return Receipt			



# Proof of Notice - Certified Mail

## Return Receipts (Green Cards)

Trove Energy and Water, LLC  
Ole 55 Fed SWD #1

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION		SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>Bureau of Land Management Oil &amp; Gas Division 620 E. Greene St. Carlsbad, NM 88220 OLE 55-H</p>		<p>A. Signature X <i>Charles</i></p> <p>B. Received by (Printed Name)</p> <p>D. Is delivery address different from item 1? If YES, enter delivery address below:</p> <p>3. Service Type  <input type="checkbox"/> Certified Mail  <input type="checkbox"/> Registered  <input type="checkbox"/> Insured Mail  <input type="checkbox"/> Restricted Delivery? (Extra Fee)         </p>		<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>CONOCOPHILLIPS COMPANY P.O. Box 2197 Houston, TX 77252-2197 OLE 55-H</p>		<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name)</p> <p>C. Date of Delivery 08/16/19</p> <p>D. Is delivery address different from item 1? If YES, enter delivery address below:</p> <p>3. Service Type  <input type="checkbox"/> Certified Mail  <input type="checkbox"/> Registered  <input type="checkbox"/> Insured Mail  <input type="checkbox"/> Express Mail  <input type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> C.O.D.  <input type="checkbox"/> Restricted Delivery? (Extra Fee)         </p>	
7018 2290 0001 2038 6544		7018 2290 0001 2038 6551		7018 2290 0001 2038 6551		7018 2290 0001 2038 6551	
PS Form 3811, February 2004 Domestic Return Receipt		PS Form 3811, February 2004 Domestic Return Receipt		PS Form 3811, February 2004 Domestic Return Receipt		PS Form 3811, February 2004 Domestic Return Receipt	

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7018 2290 0001 2038 6568		7018 2290 0001 2038 6568		7018 2290 0001 2038 6568		7018 2290 0001 2038 6568	
PS Form 3811, February 2004 Domestic Return Receipt		PS Form 3811, February 2004 Domestic Return Receipt		PS Form 3811, February 2004 Domestic Return Receipt		PS Form 3811, February 2004 Domestic Return Receipt	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION		SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>NGL WATER SOLUTIONS, LLC 1509 W. Wall St., Ste. 306 Midland, TX 79701 OLE 55-H</p>		<p>A. Signature X <i>Charles</i></p> <p>B. Received by (Printed Name)</p> <p>D. Is delivery address different from item 1? If YES, enter delivery address below:</p> <p>3. Service Type  <input type="checkbox"/> Certified Mail  <input type="checkbox"/> Registered  <input type="checkbox"/> Insured Mail  <input type="checkbox"/> Restricted Delivery? (Extra Fee)         </p>		<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>STATE OF NEW MEXICO Oil, Gas and Minerals Division 310 Old Santa Fe Trail Santa Fe, NM 87504 OLE 55-H</p>		<p>A. Signature X <i>[Signature]</i></p> <p>B. Received by (Printed Name)</p> <p>C. Date of Delivery</p> <p>D. Is delivery address different from item 1? If YES, enter delivery address below:</p> <p>3. Service Type  <input type="checkbox"/> Certified Mail  <input type="checkbox"/> Registered  <input type="checkbox"/> Insured Mail  <input type="checkbox"/> Express Mail  <input type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> C.O.D.  <input type="checkbox"/> Restricted Delivery? (Extra Fee)         </p>	
7018 2290 0001 2038 6605		7018 2290 0001 2038 6605		7018 2290 0001 2038 6599		7018 2290 0001 2038 6599	
PS Form 3811, February 2004 Domestic Return Receipt		PS Form 3811, February 2004 Domestic Return Receipt		PS Form 3811, February 2004 Domestic Return Receipt		PS Form 3811, February 2004 Domestic Return Receipt	

One unreturned for Ole 55 – next page...



ALERT: MAIL SERVICE IS DISRUPTED IN SOME PARTS OF THE SOUTHEAST U.S. DU...

**USPS Tracking®** FAQs > (<https://www.usps.com/faqs/uspstracking-faqs.htm>)

**Track Another Package +**

**Tracking Number:** 70182290000120386575

Remove X

We attempted to deliver your item at 10:02 am on August 15, 2019 in HOBBS, NM 88242 and a notice was left because an authorized recipient was not available.

## Delivery Attempt

August 15, 2019 at 10:02 am  
Notice Left (No Authorized Recipient Available)  
HOBBS, NM 88242

Feedback

**NOTE:** MNA Enterprises did not pick up notification for the hearing notice however; when noticed for the original C-108, the notice was received and signed for.

Text 8

Track

Produ

### SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

MNA ENTERPRISES LTD CO  
106 W Alabama St  
Hobbs, NM 88242  
OLE 55X



9590 9402 4014 8079 1496 67

2. Article Number (Transfer from service label)

7018 1130 0000 8738 0649

PS Form 3811, July 2015 PSN 7530-02-000-9053

### COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *[Signature]*

☐ Agent

☐ Addressee

B. Received by (Printed Name)

*F. Griggs*

C. Date of Delivery

D. Is delivery address different from item 1?

If YES, enter delivery address below:

☐ Yes

☐ No

3. Service Type

☐ Adult Signature

☐ Adult Signature Restricted Delivery

☐ Certified Mail®

☐ Certified Mail Restricted Delivery

☐ Collect on Delivery

☐ Collect on Delivery Restricted Delivery

Mail

Mail Restricted Delivery

(X)

☐ Priority Mail Express®

☐ Registered Mail™

☐ Registered Mail Restricted Delivery

☐ Return Receipt for Merchandise

☐ Signature Confirmation™

☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt



# Proof of Notice - Certified Mail

## Return Receipts (Green Cards)

Trove Energy and Water, LLC  
PSE Fed SWD #4

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>DEVON ENERGY PROD. CO., LP 333 W. Sheridan Avenue OKC, OK 73102-5010 PSE#4H</p> <p>9590 9402 4014 8079 1487 14</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6216</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	<p>A. Signature <i>[Signature]</i></p> <p>B. Received by (Printed Name) <i>[Name]</i></p> <p>C. Date of Delivery AUG 15 2019</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>	<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>Bureau of Land Management Oil &amp; Gas Division 620 E. Greene St Carlsbad, NM 88220 PSE#4H</p> <p>9590 9402 4014 8079 1486 84</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6186</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	<p>A. Signature <i>[Signature]</i></p> <p>B. Received by (Printed Name) <i>[Name]</i></p> <p>C. Date of Delivery 8-15-19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>EOG RESOURCES, INC. Attn: Chuck Moran 5509 Champions Drive Midland, TX 79706 PSE#4H</p> <p>9590 9402 4014 8079 1487 07</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6209</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	<p>A. Signature <i>[Signature]</i></p> <p>B. Received by (Printed Name) <i>[Name]</i></p> <p>C. Date of Delivery 8/16/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>	<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>COG OPERATING, LLC Attn: NM Land/Leases 600 W Illinois Avenue Midland, TX 79701 PSE#4H</p> <p>9590 9402 4014 8079 1486 91</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6193</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	<p>A. Signature <i>[Signature]</i></p> <p>B. Received by (Printed Name) <i>[Name]</i></p> <p>C. Date of Delivery 8/16/19</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>BLACKBUCK RESOURCES 2601 Westheimer, Ste C210 Houston, TX 77098 PSE#4H</p> <p>9590 9402 4014 8079 1487 21</p> <p>2. Article Number (Transfer from service label) 7018 2290 0001 2038 6223</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	<p>A. Signature <i>[Signature]</i></p> <p>B. Received by (Printed Name) <i>[Name]</i></p> <p>C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>



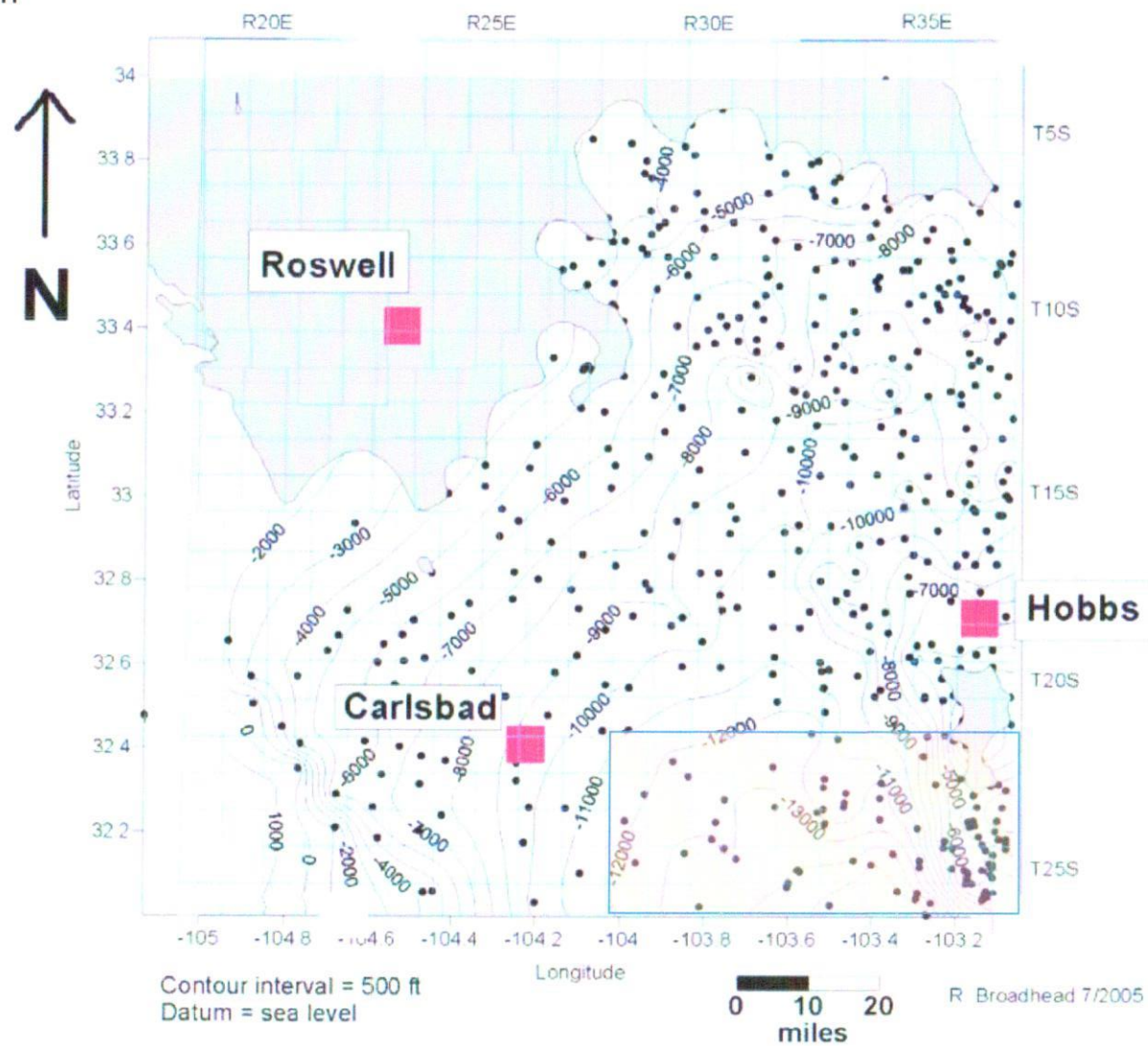
## Devonian Mapping Project



Prepared by:  
Howard McLaughlin  
August 2019

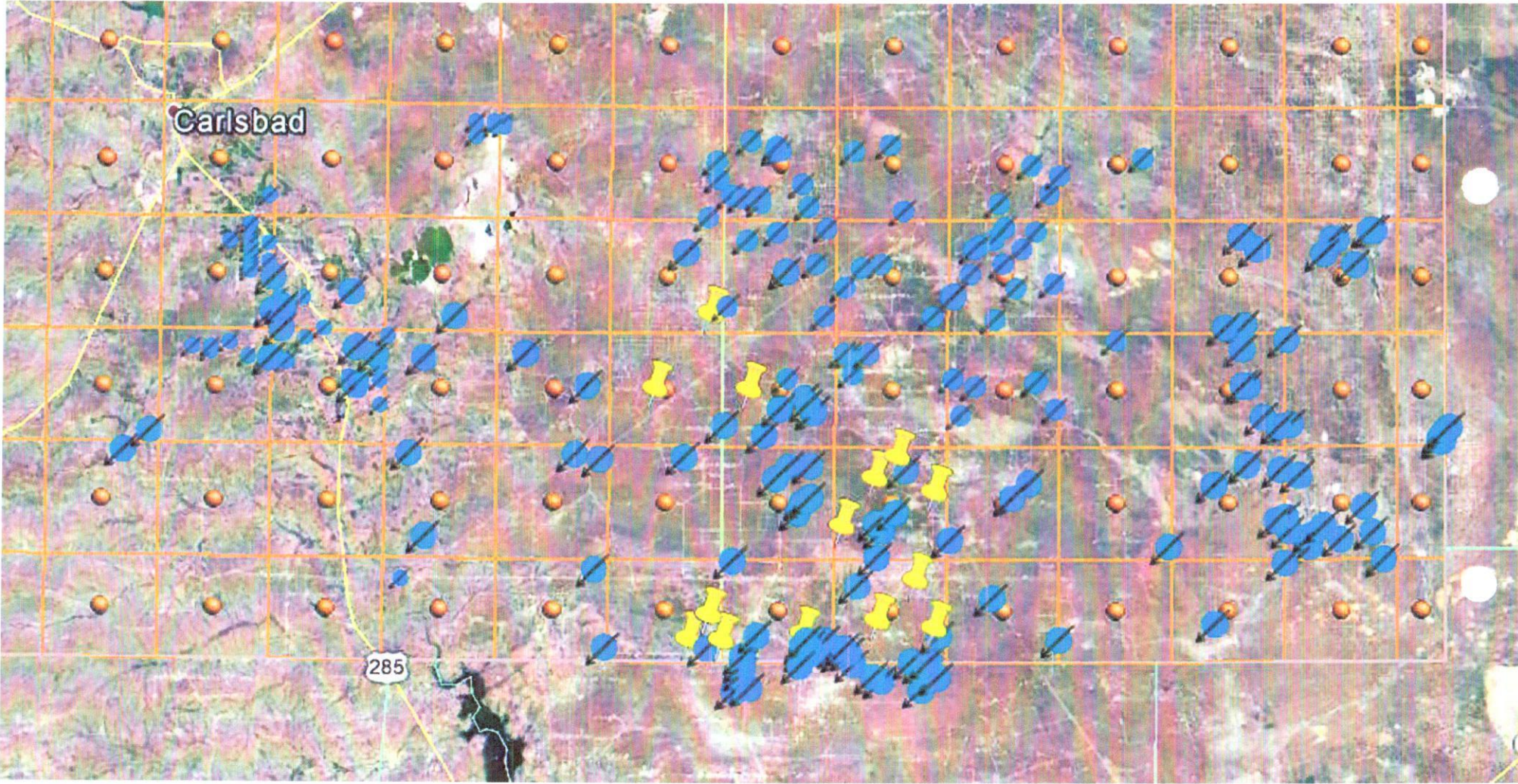


## Generalized Top Devonian Structure Map



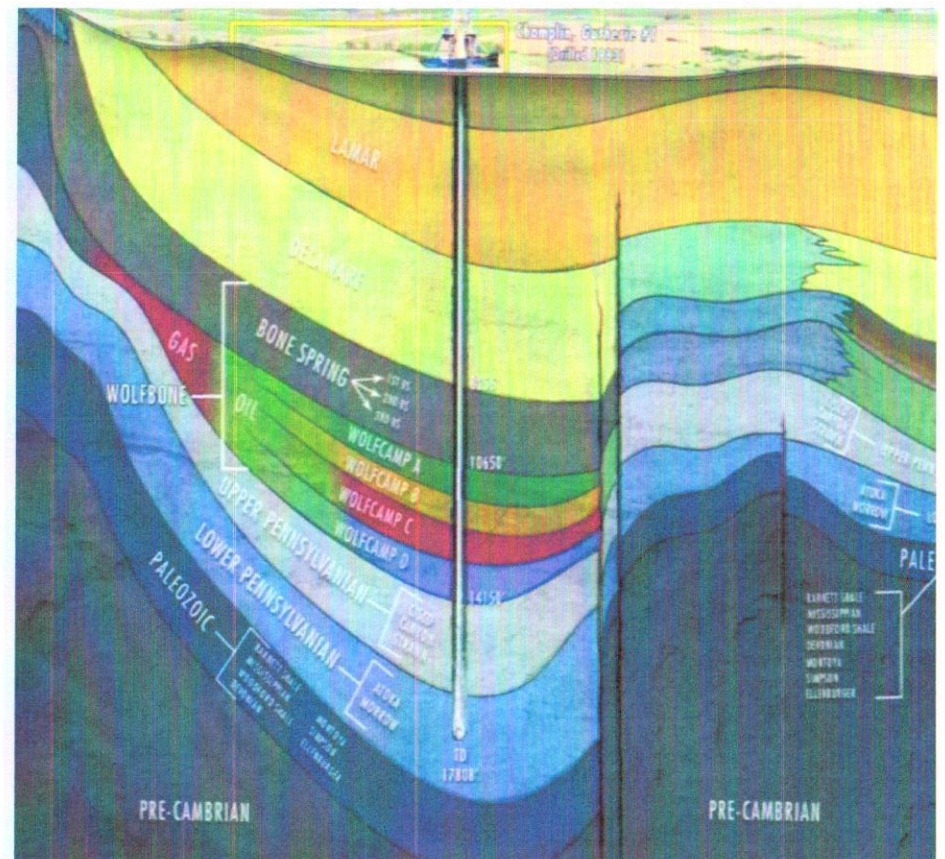
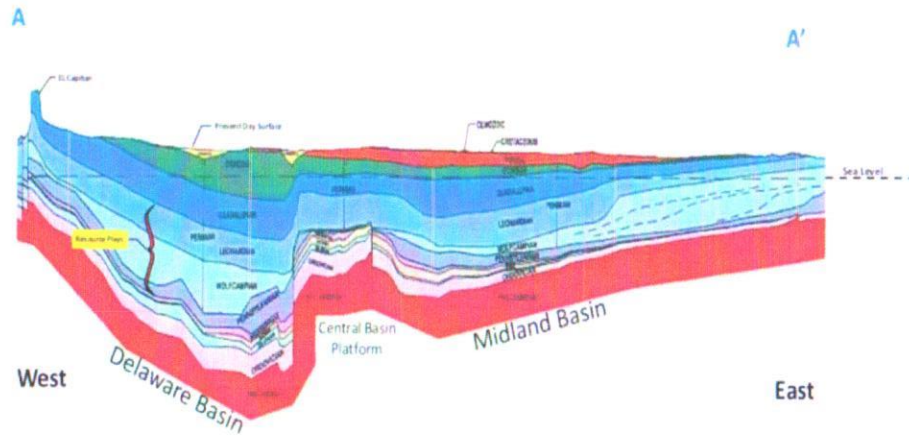
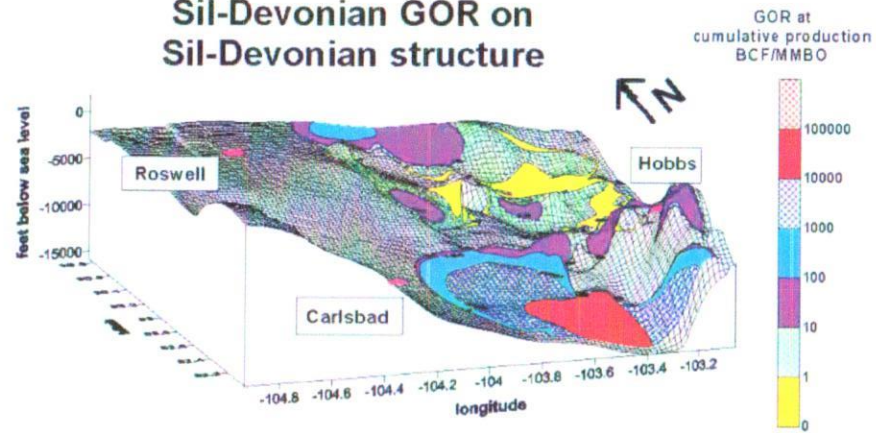


Trove Database of SWD Wells



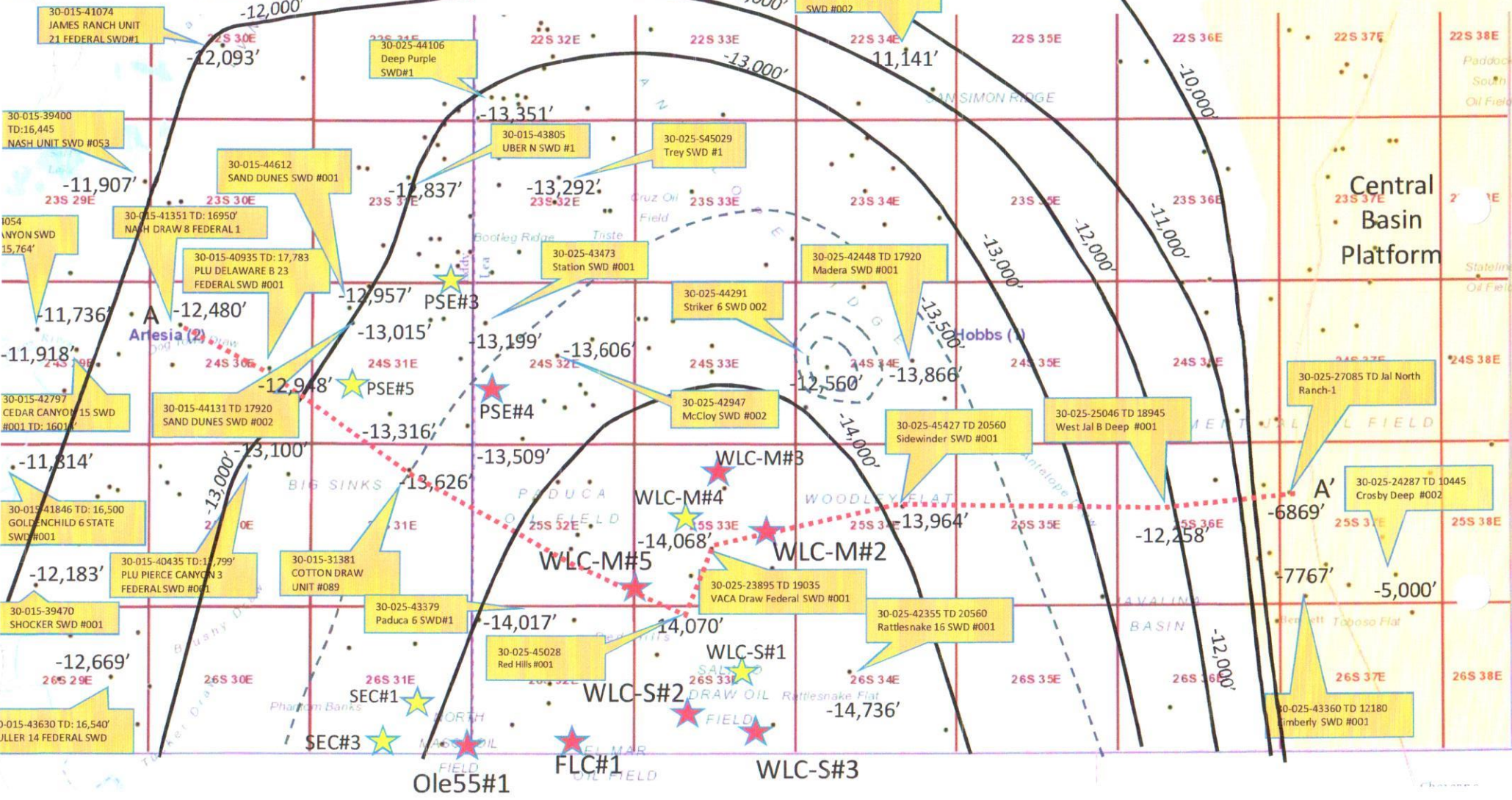


## Sil-Devonian GOR on Sil-Devonian structure





Top Devonian – Structure Map (sub-sea)

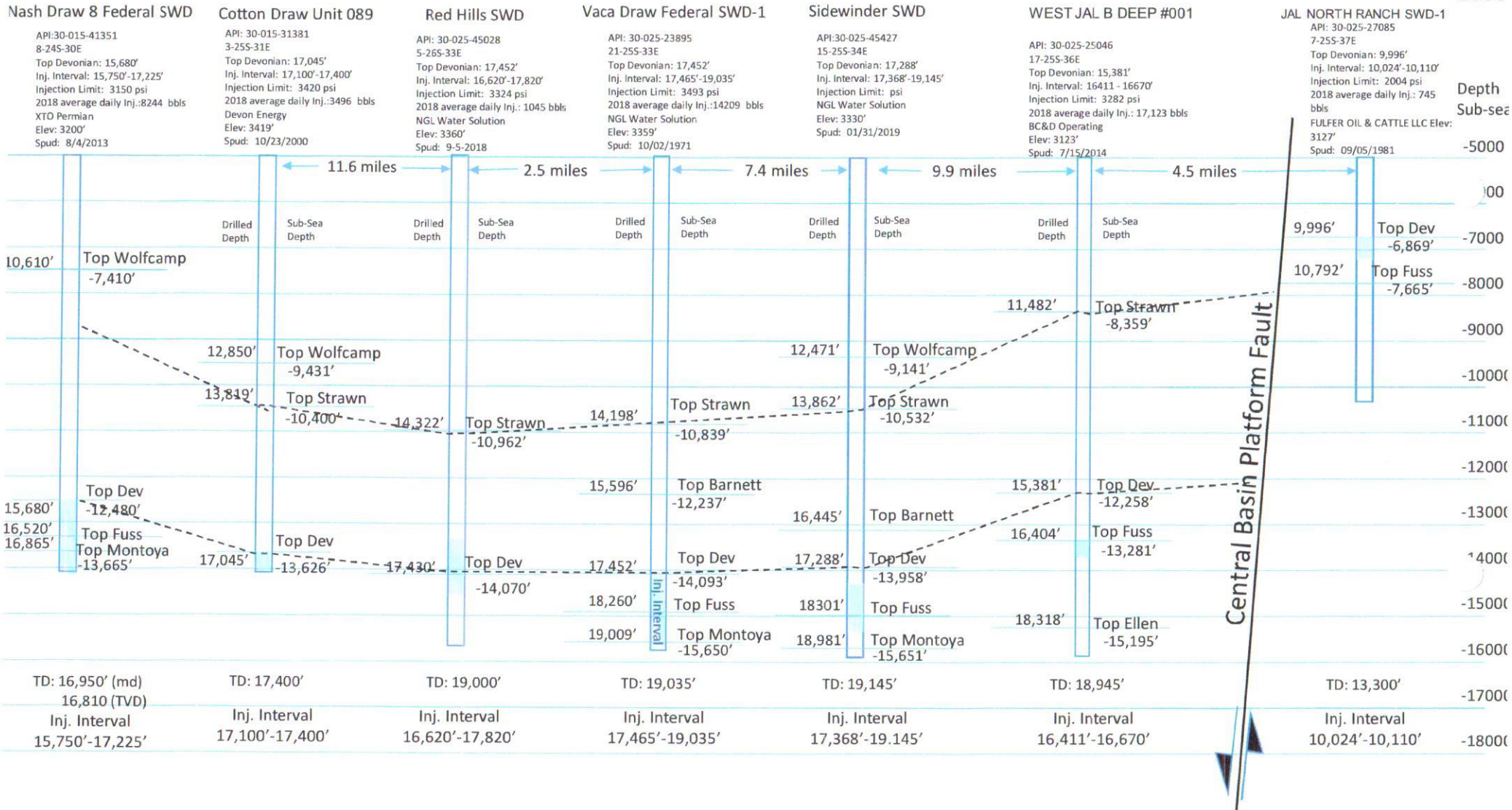




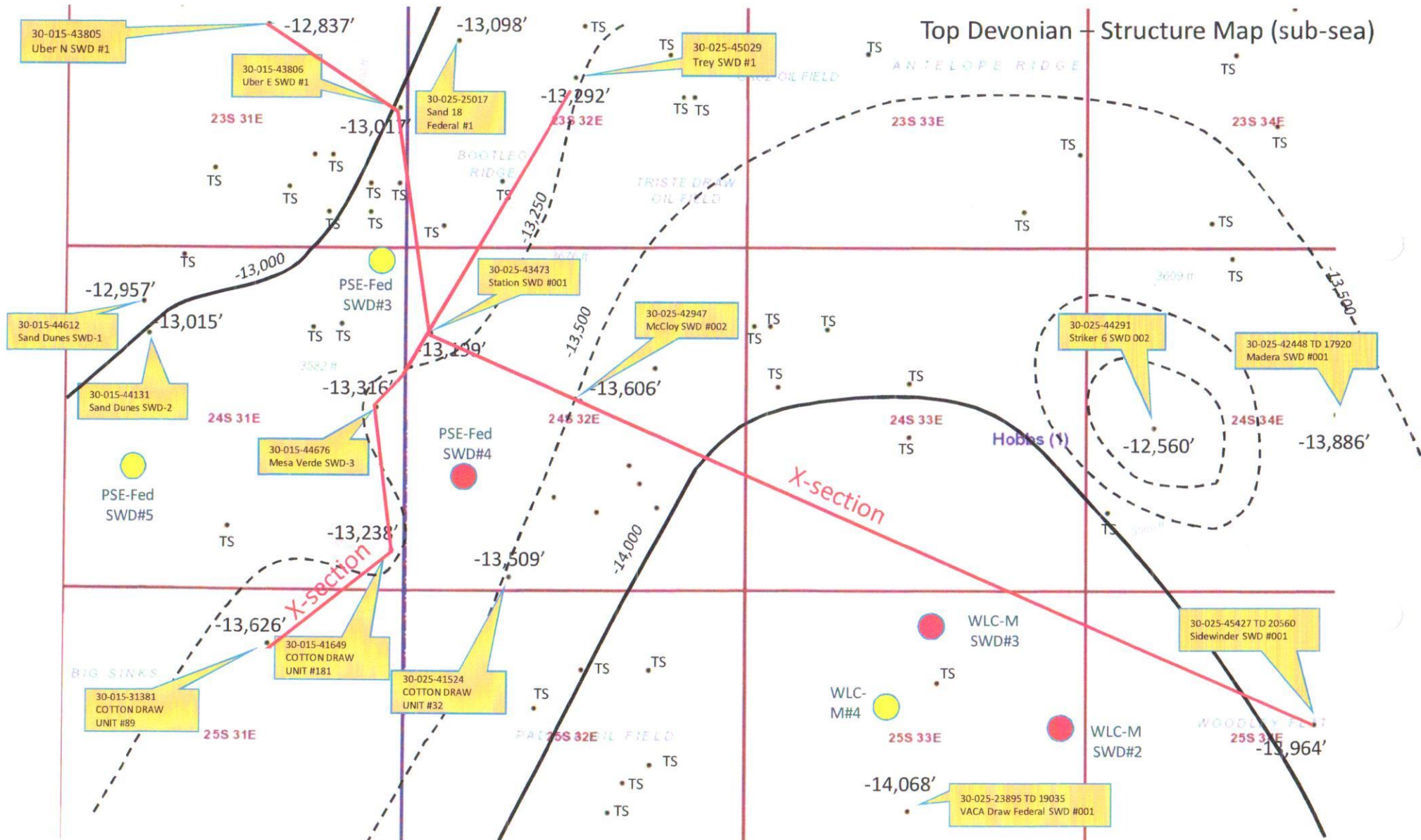
West

## Structural X-section - Sub-Sea Depths

East



# Top Devonian - Structure Map (sub-sea)

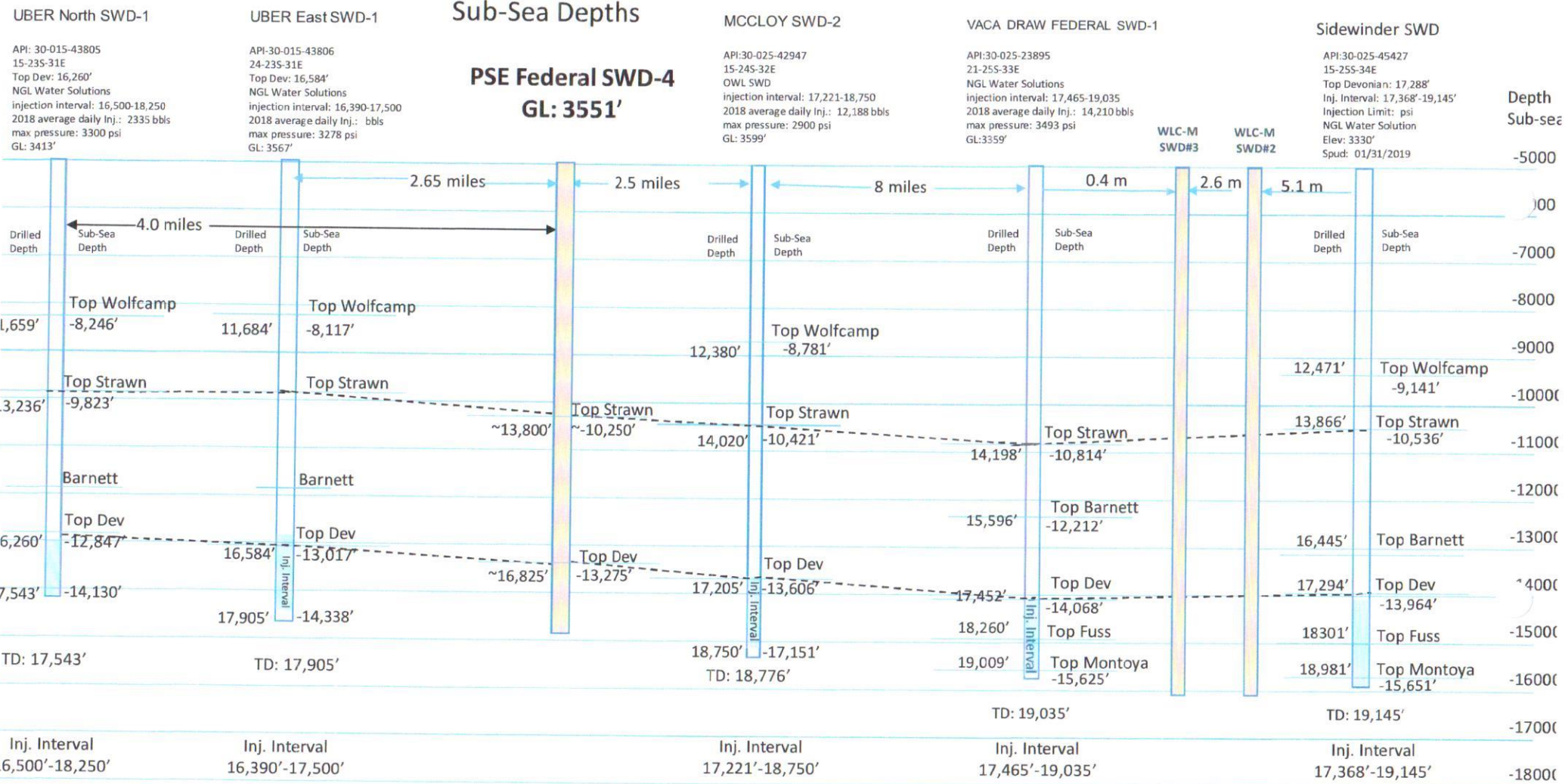




North

South

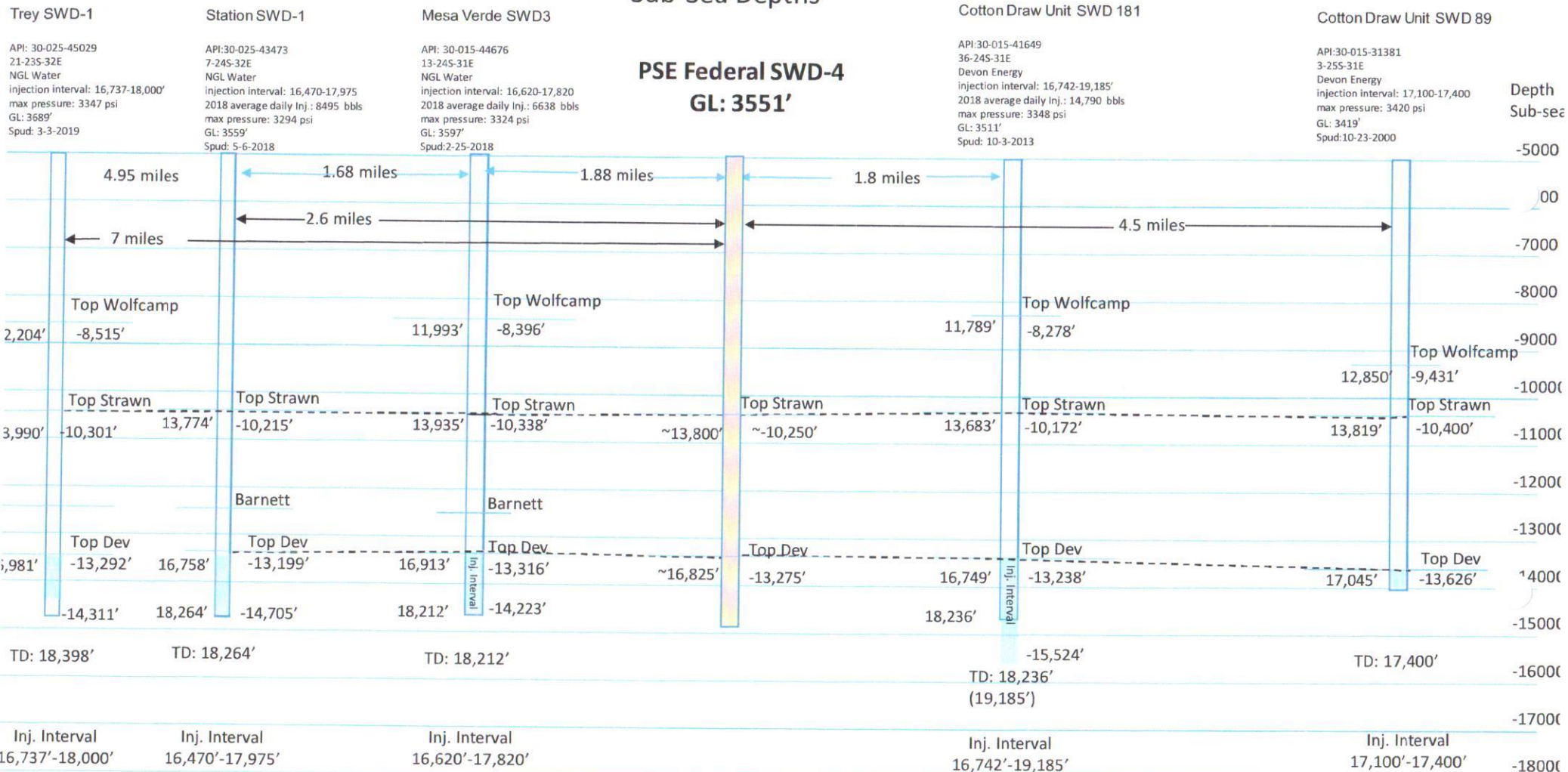
Structural X-section  
Sub-Sea Depths



North

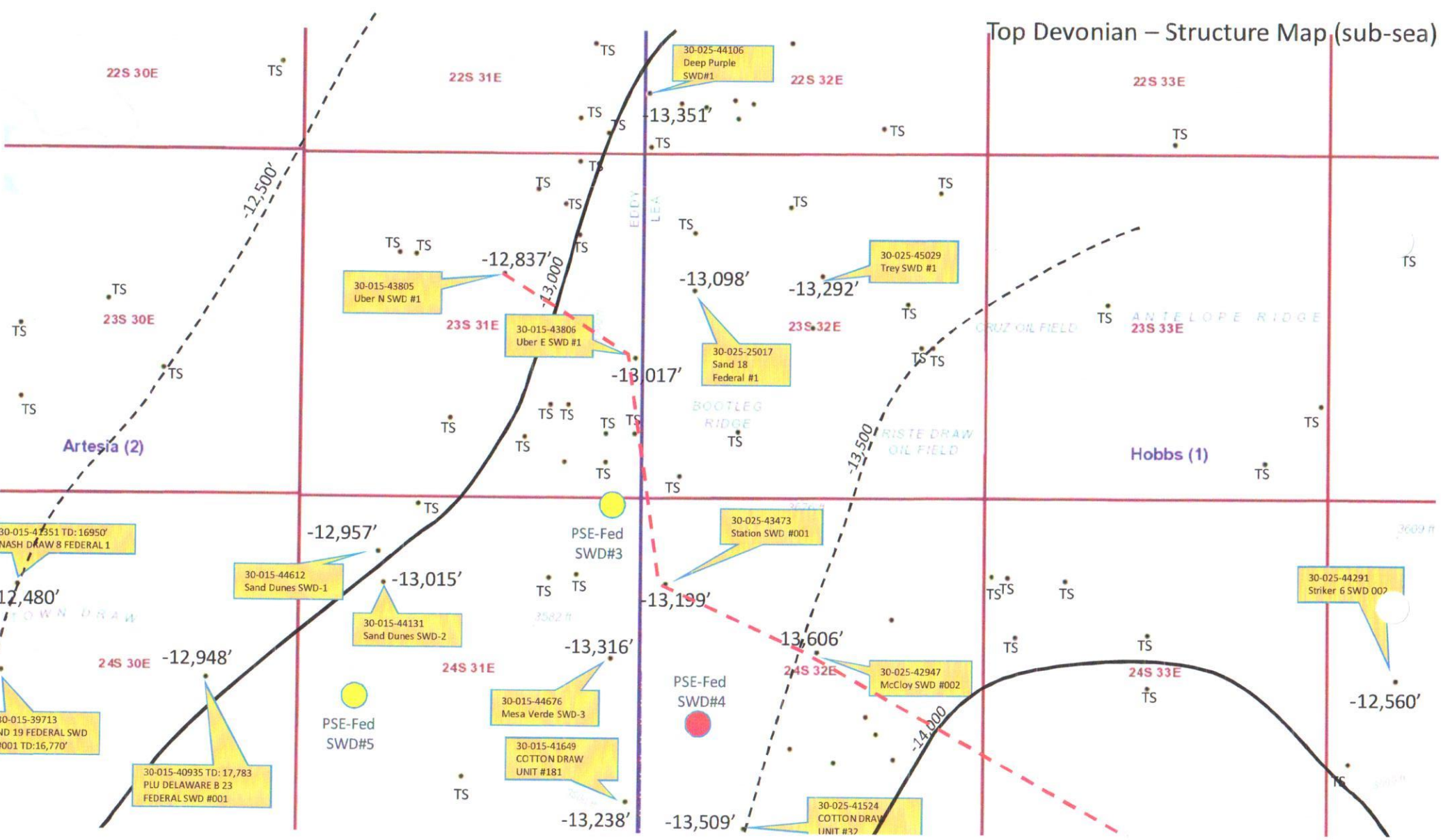
Structural X-section  
Sub-Sea Depths

South



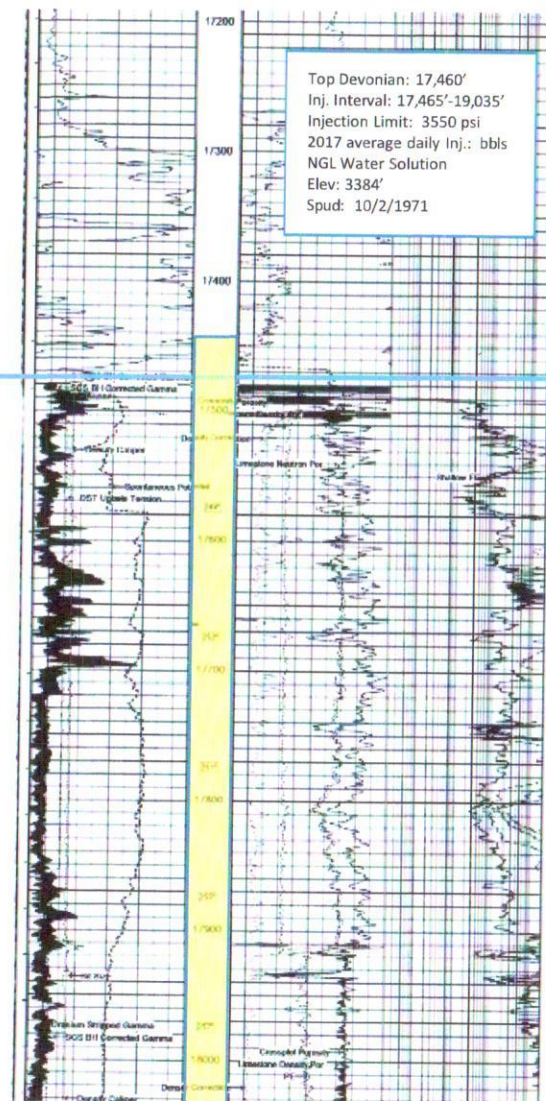


This is a detailed geological structure map of the Top Devonian sub-sea. The map is overlaid with a grid of red lines representing geographic coordinates, with labels such as 22S 30E, 23S 31E, 24S 30E, 22S 31E, 23S 32E, 24S 31E, 22S 32E, 23S 33E, and 24S 33E. Major geological features are labeled in blue and green, including Artesia (2), EDDY LEA, BOOTLEG RIDGE, CRUZ OIL FIELD, RISTE DRAW OIL FIELD, ANTELOPE RIDGE, and Hobbs (1). Numerous well locations are marked with black dots and labeled with 'TS'. Several wells are highlighted with yellow callout boxes containing their IDs and names: 30-015-43805 (Uber N SWD #1), 30-015-43806 (Uber E SWD #1), 30-015-44612 (Sand Dunes SWD-1), 30-015-44131 (Sand Dunes SWD-2), 30-015-44676 (Mesa Verde SWD-3), 30-015-41649 (COTTON DRAW UNIT #181), 30-015-40935 (PLU DELAWARE B 23 FEDERAL SWD #001), 30-015-47351 (NASH DRAW B FEDERAL 1), 30-015-39713 (ND 19 FEDERAL SWD #001 TD: 16,770'), 30-025-44106 (Deep Purple SWD#1), 30-025-45029 (Trey SWD #1), 30-025-25017 (Sand 18 Federal #1), 30-025-43473 (Station SWD #001), 30-025-42947 (McCloy SWD #002), 30-025-41524 (COTTON DRAW UNIT #32), and 30-025-44291 (Striker 6 SWD 002). Depth contours are shown as dashed lines with values like -12,500', -13,000', -13,500', and -14,000'. Specific depth points are labeled with values such as -12,837', -13,017', -13,015', -12,957', -12,948', -13,316', -13,238', -13,509', -13,199', -13,606', -12,560', -13,098', -13,292', and -12,480'. Other labels include 'PSE-Fed SWD#3', 'PSE-Fed SWD#4', and 'PSE-Fed SWD#5'. The map also includes a scale bar at the bottom left indicating 0, 100, and 200 feet.

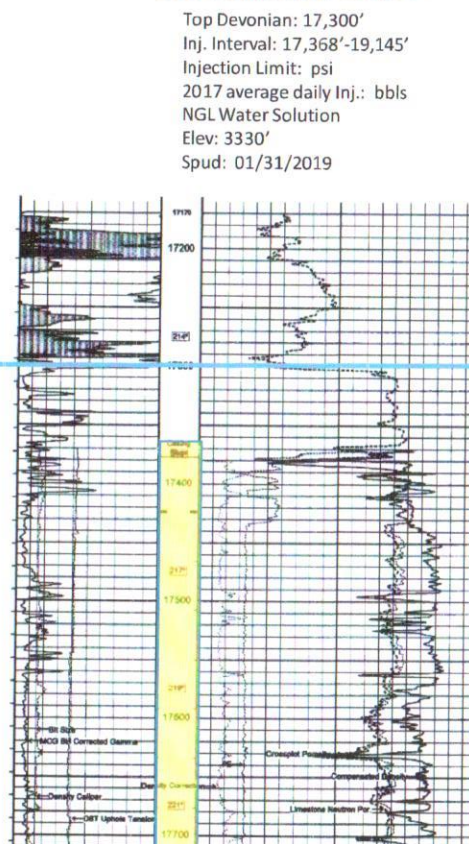




## VACA Draw Federal SWD



## Sidewinder SWD

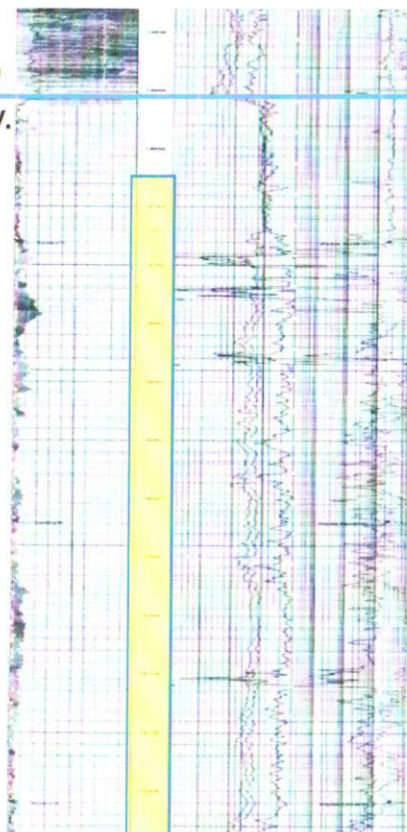


## Rattlesnake 16 SWD #001

30-025-42355

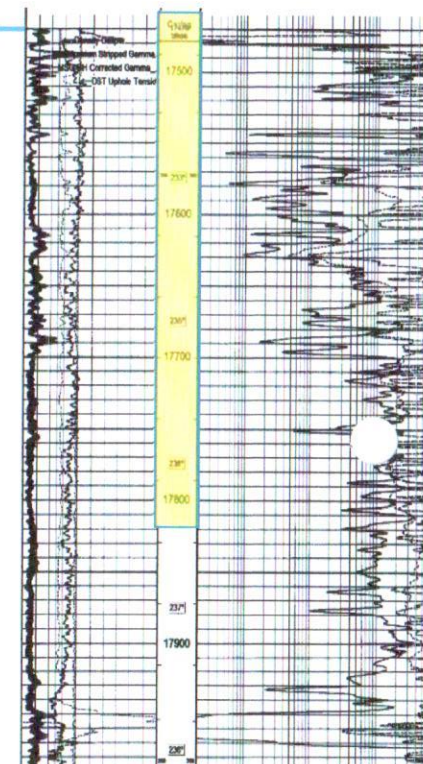
TD: 20,335'

Top Devonian: 18,610'  
 Inj. Interval: 18,773-20,560'  
 Injection Limit: 3755 psi  
 2018 average daily Inj.: 6039 bbls  
 Devon Production Co  
 Elev: 3337'  
 Spud: 05-29-2015



## Red Hills 30-025-45028

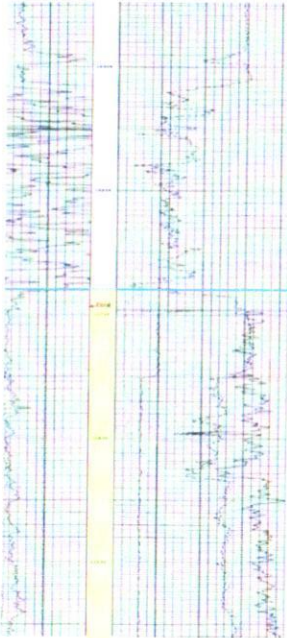
API: 30-025-45028  
 5-26S-33E  
 Top Devonian: 17,452'  
 Inj. Interval: 16,620'-17,820'  
 Injection Limit: 3324 psi  
 2018 average daily Inj.: 1045 bbls  
 NGL Water Solution  
 Elev: 3360'  
 Spud: 9-5-2018





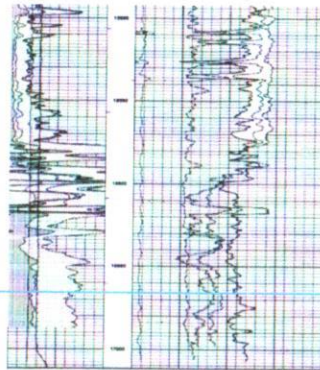
## Nash Draw 8 Federal SWD

Top Devonian: 15,680'  
Inj. Interval: 15,680'-16,520'  
Injection Limit: 3420 psi  
2017 average daily Inj.: bbls  
BOPCO LP  
Elev: 3200'  
Spud: 8/4/2013



## Cotton Draw Unit 089

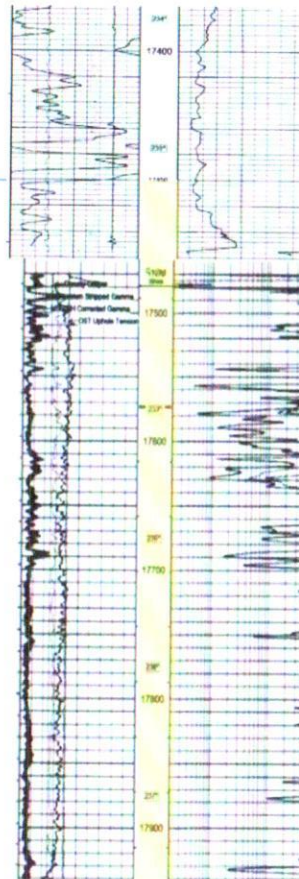
Top Devonian: 17,045'  
Inj. Interval: 17,100'-17,400'  
Injection Limit: 3420 psi  
2017 average daily Inj.: bbls  
Devon Energy  
Elev: 3419'  
Spud: 10/23/2000



Top  
Dev.

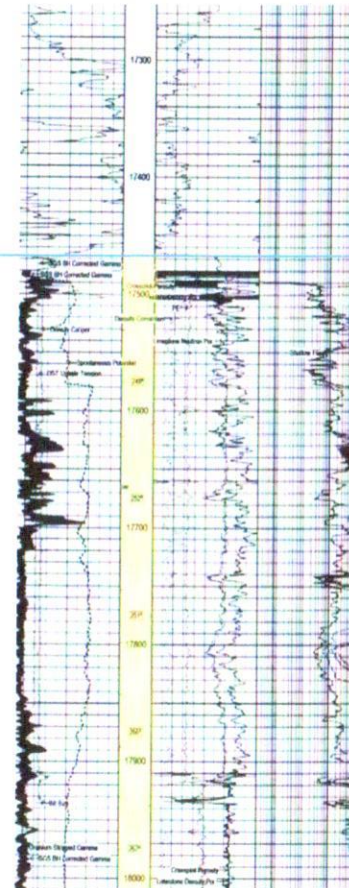
## Red Hills SWD

Top Devonian: 17,452'  
Inj. Interval: 17,465'-19,035'  
Injection Limit: 3350 psi  
2017 average daily Inj.: bbls  
NGL Water Solution  
Elev: 3360'  
Spud:



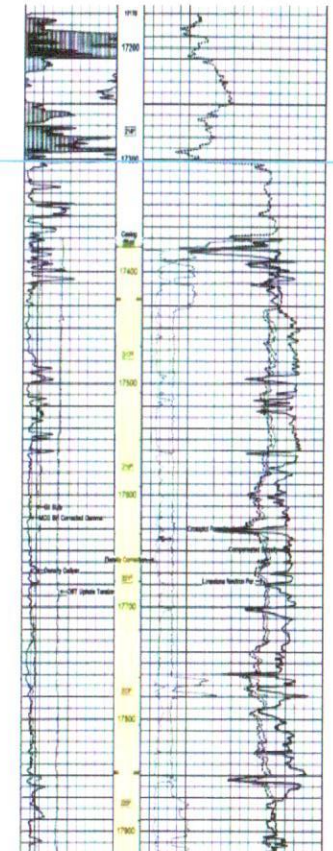
## Vaca Draw Federal

Top Devonian: 17,452'  
Inj. Interval: 17,465'-19,035'  
Injection Limit: 3350 psi  
2017 average daily Inj.: bbls  
NGL Water Solution  
Elev: 3384'  
Spud: 10/02/1971



## Sidewinder SWD

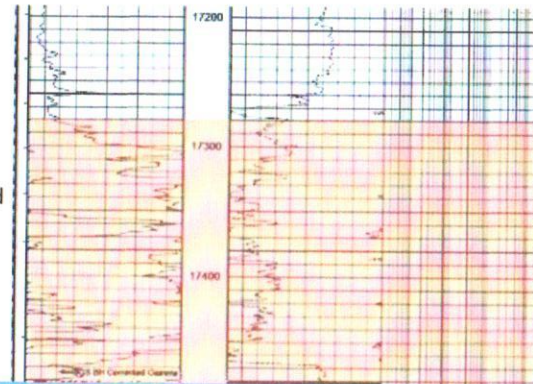
Top Devonian: 17,300'  
Inj. Interval: 17,368'-19,145'  
Injection Limit: psi  
2017 average daily Inj.: bbls  
NGL Water Solution  
Elev: 3330'  
Spud: 01/31/2019



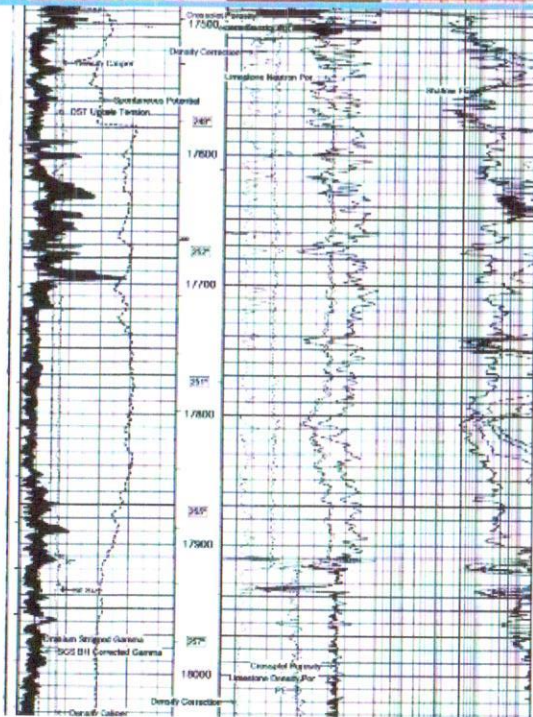


# VACA Draw Federal SWD

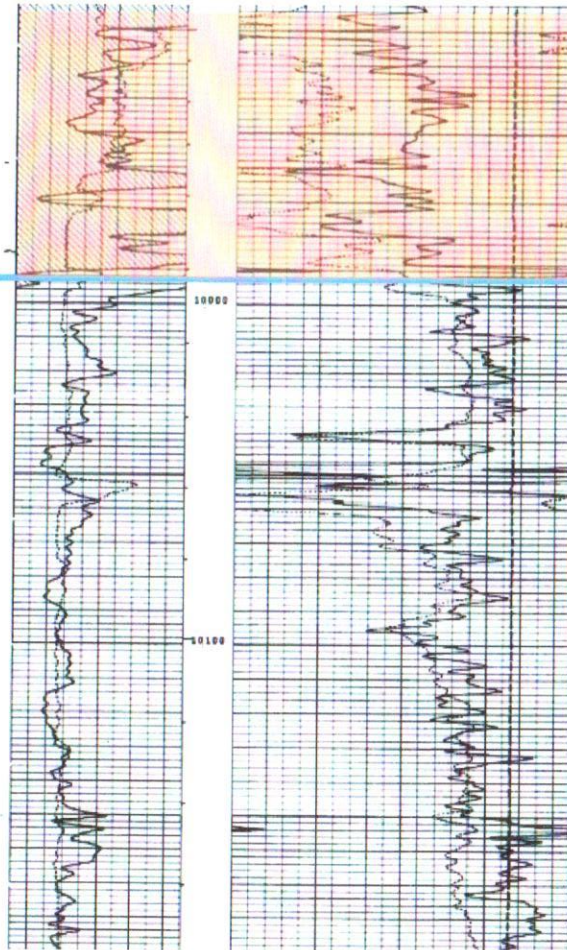
Woodford  
Shale



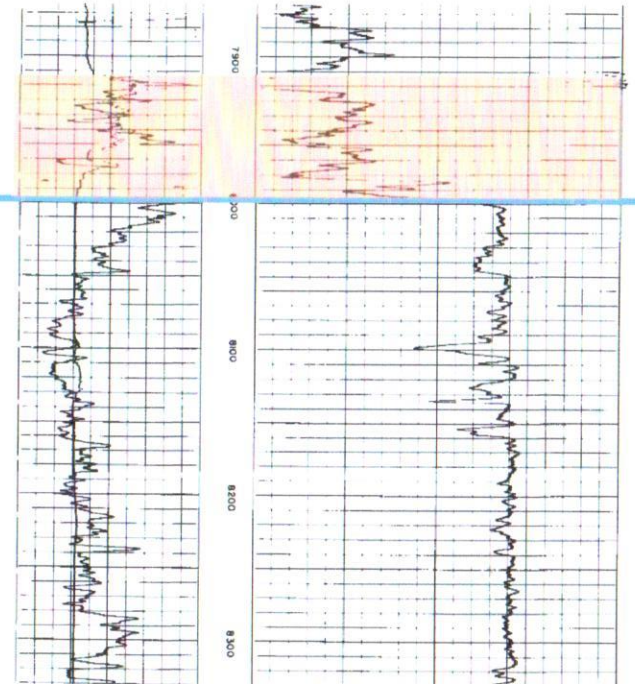
Devonian  
Carbonates



## JAL NORTH RANCH SWD No. 001 Operator: FULFER OIL & CATTLE LLC



## Crosby Deep

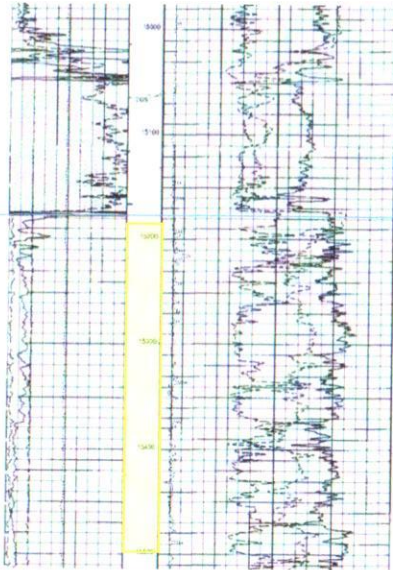




## Top Devonian Picks

**SHOCKER SWD #001**  
**30-015-39470**  
 TD: 15,681'

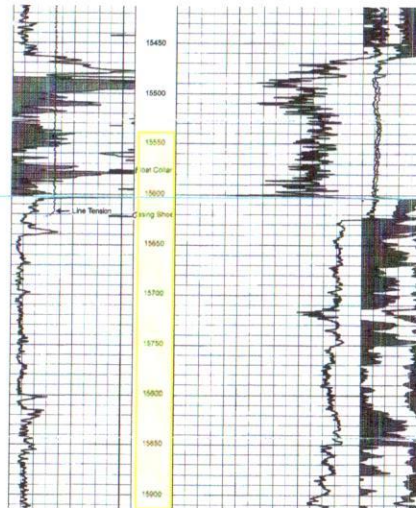
Top Devonian: 15180'  
 Inj. Interval: 15,200-15'700'  
 Injection Limit: 3040 psi  
 2017 average daily Inj.: 3236 bbls  
 Yates Petroleum/EOG  
 Elev: 3016.5'  
 Spud: 12-2-2011



2017 average daily Inj.: 3236 bbls

**FULLER 14 FEDERAL SWD**  
**30-015-43630**  
 TD: 16540'

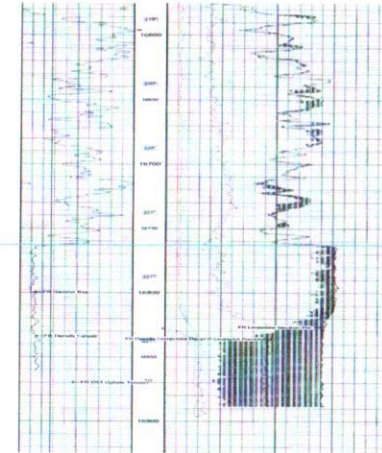
Top Devonian: 15,604'  
 Inj. Interval: 15,540'-16,540'  
 Injection Limit: 3108 psi  
 2017 average daily Inj.: 13,058 bbls  
 MEWBOURNE OIL CO  
 Elev: 2935'  
 Spud: 05/14/2016



2017 average daily Inj.: 13,058 bbls

**MADERA SWD #001**  
**30-025-42448**  
 TD: 18,200'

Top Devonian: 16,762'  
 Inj. Interval: 17,400-19,200'  
 Injection Limit: 3480 psi  
 2017 average daily Inj.: 20,500bbls  
 OWL SWD OPERATING, LLC  
 Elev: 3464'  
 Spud: 06-24-2015



Open hole 17,200 – 19,222'  
 2017 average daily Inj.: 20,500bbls



Howard McLaughlin, Geologist

## **EXPERIENCE**

### **Cheetah Energy Services, LLC; Managing Director**

*Dates Employed Dec 2016 – Present*

*Employment Duration 2 yrs 10 mos*

*Location East Texas*

Cheetah Energy Services, LLC is a fully integrated well servicing and drilling company active in North and East Texas. Multiple rigs and pump and work over packages available at competitive rates.

### **Mosman Oil & Gas; Manager US Operations**

*Dates Employed April 2017 – Present*

*Employment Duration 2 yrs 6 mos*

*Location Dallas/Fort Worth Area*

Contract Operator for production activities in Young and Dawson counties, Texas.

### **Contour Exploration & Production; Managing Director**

*Dates Employed Jun 2011 – Present*

*Employment Duration 8 yrs 4 mos*

*Location Dallas, Texas*

Engaged in exploration, production and consulting activities in the Dallas Texas area. Shallow oil development and field rehabilitation in Northern Texas . Evaluation of acquisition and re-development opportunities in the North and East Texas areas.

### **Manager of USA Operations**

**Cue Resources, Inc.**

*Dates Employed Jun 2015 – Nov 2016*

*Employment Duration 1 yr 6 mos*

*Location Dallas, Texas*

Technical and field operational manager of the Pine Mills oil field in Wood County, East Texas.

### **High Peak Royalties; Board Member**

*Dates Employed Sep 2009 – Nov 2016*

*Employment Duration 7 yrs 3 mos*

*Location Sydney, Australia*

ASX listed Torrens Energy to merge with unlisted Phoenix via 100% scrip takeover offer providing new growth opportunities for Torrens through the acquisition of royalty interests in Australia and internationally.



**Antares Energy; CEO & Managing Director**

*Dates Employed Jun 2003 – Jul 2008*

*Employment Duration 5 yrs 2 mos*

Antares Energy was engaged in exploration and field development in Western Turkey and Western Australia from 2003-2004. Exploration and production activities in Texas and Oklahoma 2004-2008. Based in Dallas, Texas.

**BHP Billiton Petroleum; VP Global Exploration**

*Dates Employed Apr 1983 – Jul 2002*

*Employment Duration 19 yrs 4 mos*

*Location Melbourne, London, Houston*

Exploration Team leader for West Australia Exploration & Development 1983-1989,  
Asset Team Leader Europe/Africa and the Middle East based in London 1989-92,  
Asset Team Leader for Australia/Asia 1992-1996 based in Melbourne  
VP Strategic planning Marketing Division 1996-1998;  
VP Global Exploration 1998-2002, based in Houston

**ESSO Resources Canada Ltd.; Geologist**

*Dates Employed 1978 – 1983*

*Employment Duration 5 yrs*

*Location Calgary Alberta*

Exploration and development geology in the Western Canadian Basin, Canadian Arctic and offshore Newfoundland.

**EDUCATION****Swinburne University of Technology**

*Degree Name Master's degree*

*Field Of Study Astronomy*

*Dates attended or expected graduation 2005 – 2011*

**University of Calgary**

*Degree Name BSc*

*Field Of Study Geology*

*Dates attended or expected graduation 1974 – 1977*

**Red Deer College**

*Degree Name BSc*

*Field Of Study Chemistry*

*Dates attended or expected graduation 1972 – 1975*

**University of Alberta**

*Degree Name BSc*

*Field Of Study Chemistry*

*Dates attended or expected graduation 1972 – 1975*



# Geological Evaluation of Devonian Salt Water Disposal sites for Trove Energy & Water, LLC

EXHIBIT 8

Prepared by:

Howard McLaughlin

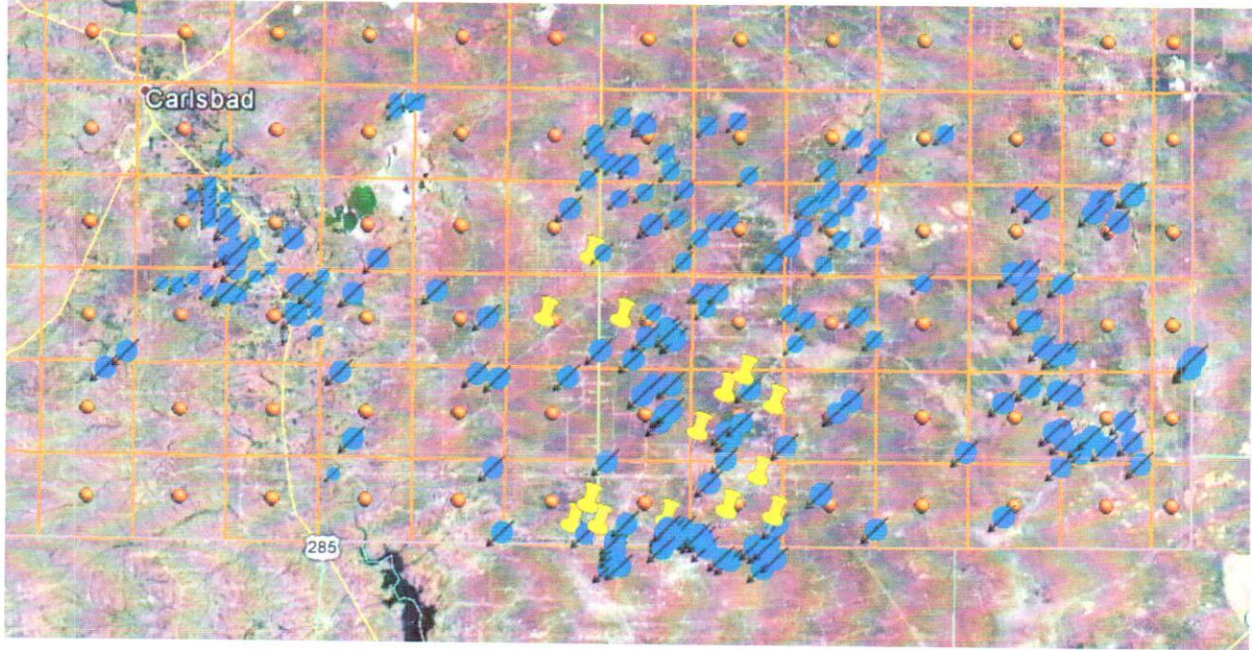
August 2019



## Geological Evaluation of Devonian Salt Water Disposal sites for Trove Energy & Water, LLC

### Introduction

The location of the proposed 14 injection wells are in Southern Lea & Eddy Counties New Mexico. Approximately 50 Devonian deep SWD wells were used for this evaluation. These wells are all within an area of 2000 square miles.



### Geological Setting

During most of the Paleozoic Era, sandstone, limestone, and carbonaceous shales were deposited in sedimentary basins throughout much of Texas and Southern New Mexico. These basins received sediments until the latter part of the Pennsylvanian era, when the Llano Uplift and the Ouachita Fold Belt caused regional tilting of the land surface to the west and east off the flanks of the uplifted zones.

The Silurian/Devonian section overlays the Montoya Group, which comprises a moderately thick (100 to 600 ft) Upper Ordovician carbonate ramp succession present in both outcrop and the subsurface of West Texas and southeastern New Mexico.

The Montoya Group was largely deposited on the Middle-Upper Ordovician Simpson Group but locally overlies on the Lower Ordovician Ellenburger or equivalent. The Sylvan Shale, where present, and the Fusselman Formation generally overlie the Montoya.

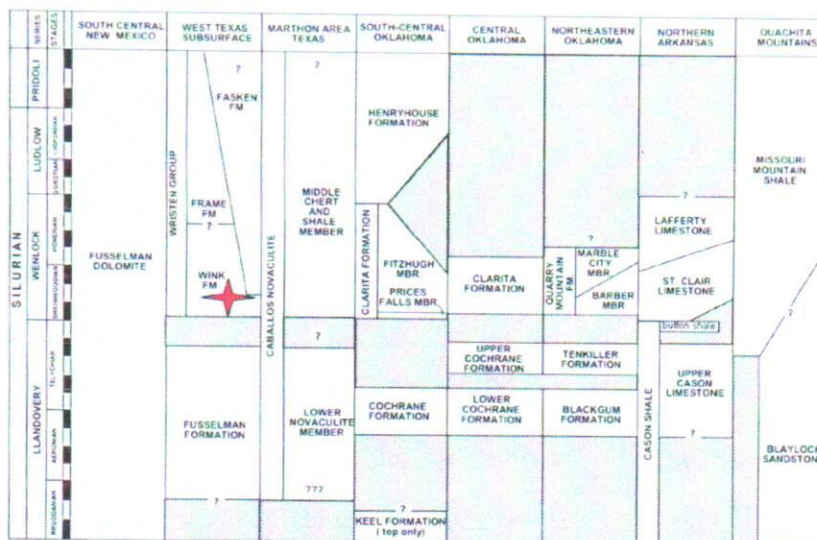
Available information shows that the upper Fusselman in the Midland Basin was deposited in a spectrum of shallow-water, high-energy open marine environments. The top of the upper Fusselman in a number of wells is characterized by diagenetic textures indicative of karstification and soil formation, both of which suggest a prolonged period of subaerial erosion prior to deposition of the overlying Wristen Formation.

The Fusselman Formation comprises a complex series of carbonate facies, including light-colored ooid

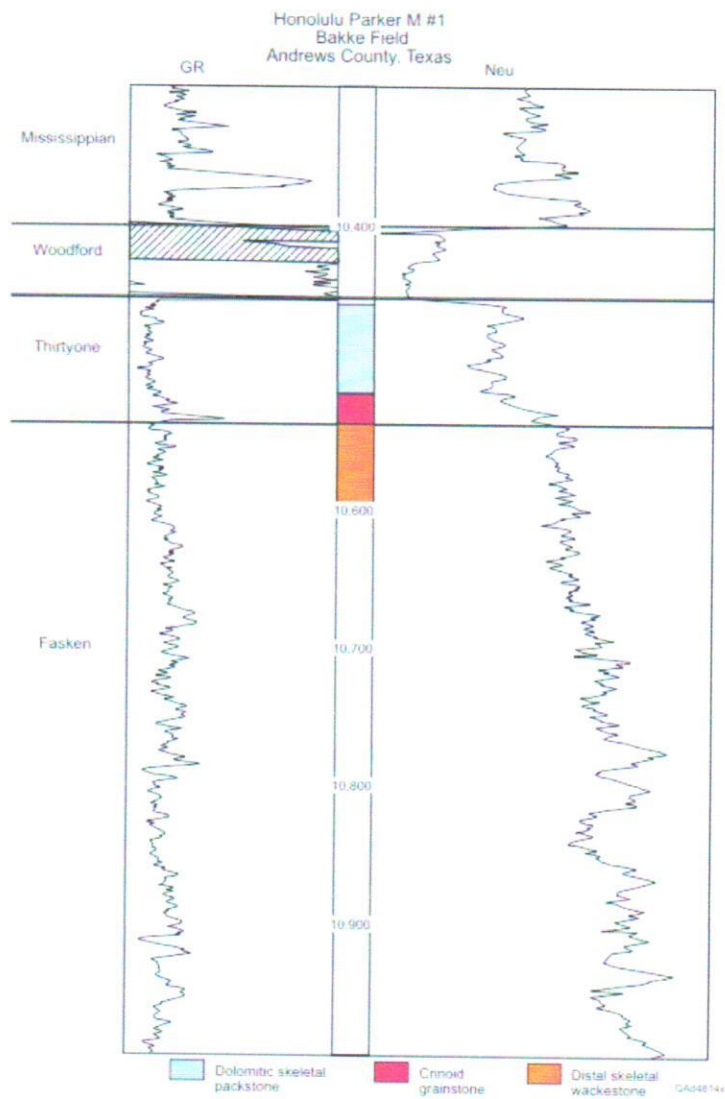
grainstones, green glauconitic and pink pelmatozoan grainstones and packstones, and sparse skeletal wackestones with minor shaly intercalations. Geesaman and Scott (1989) and Garfield and Longman (1989) divided the Fusselman into two informal units in the subsurface of the central Midland Basin, a lower Fusselman and an upper Fusselman, each of which represents a separate depositional sequence.

The age of the subsurface Fusselman is poorly known due to a lack of fossil material from only limited core studies. The upper Fusselman is dominated by widespread thick, crinoidal grainstones, and lesser amounts of dolomitic wackestone to skeletal packstone. These three lithofacies are interbedded such that they reflect minor differences in paleotopographic setting and degree of relative subsidence during deposition.

In the area being proposed for these disposal wells, the Devonian Woodford Shale overlays massive deposits of undifferentiated carbonates of Silurian/Devonian age, predominately Fusselman dolostones that are the primary deep disposal zone in this area of Southern New Mexico. Immediately beneath the Woodford the Thirtyone and Fasken formations develop porosity within skeletal packstones.



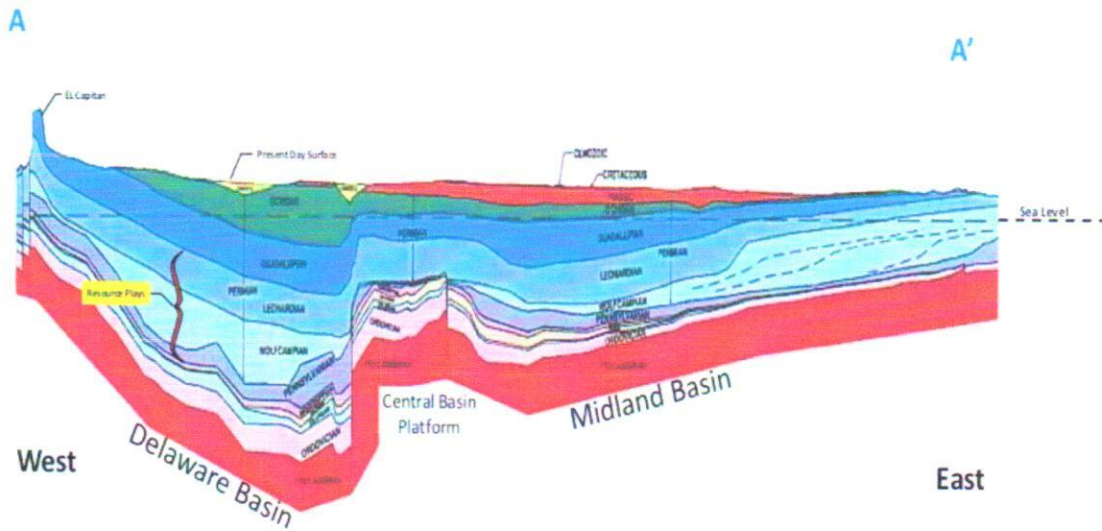




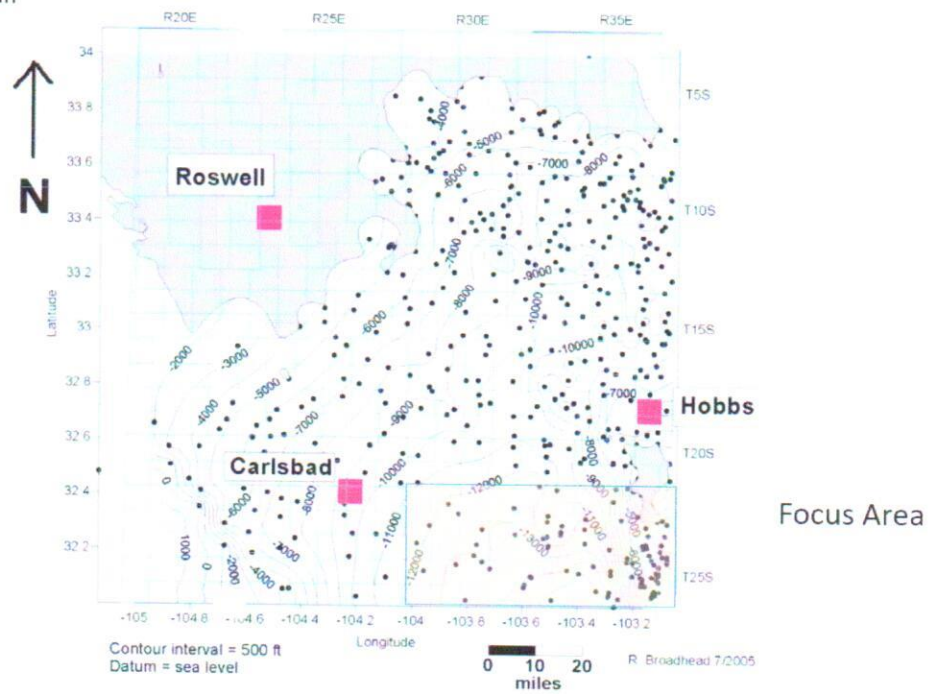
Typical type section for the area of interest.

### Detailed Analysis of the location

The subsurface structure of the Devonian sediments displays a sequence of carbonates becoming shallower to the North and deeper to the South. The Central Basin Platform is a major feature that separates the Delaware basin from the Midland Basin.



Generalized Top Devonian Structure Map

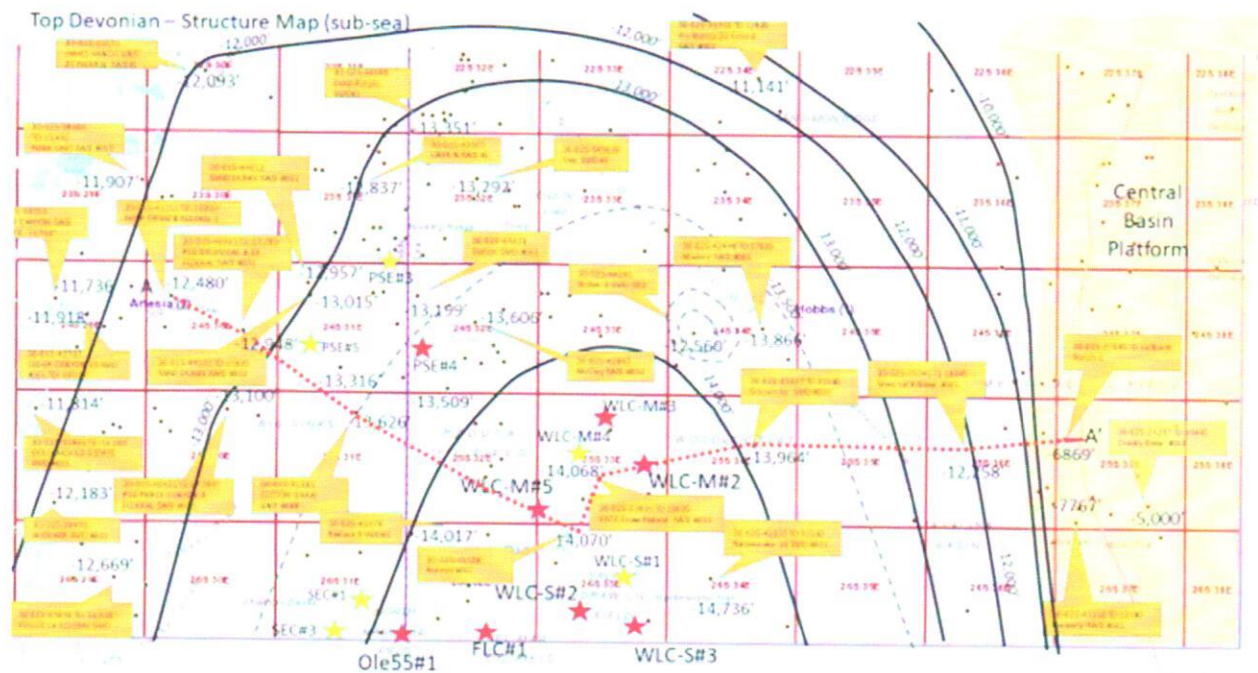




## Detailed Devonian Mapping

The area that contains most of the proposed Trove SWD wells is in a plunging nose that dips south into Texas. There is very little deep well control available in Texas so most the picks were from wells in Southeastern New Mexico. The Top Devonian in the central area is between 15,000-18,000 feet in depth and very few wells penetrate the complete section.

The Central Basin Platform creates a boundary to the east with the Top Devonian shallowing up to less than 10,000 feet.



There are relatively few Devonian wells in the greater project area, so accurately contouring the top of this formation is subject to a great deal of uncertainty. Within the project area the subsea depth of the Top Devonian is between 11,000 – 15,000' subsea. The ground elevation in the area is approximately 3500-4000' above sea level, meaning that the drilling depth to the Top of the Devonian will be between 14,000 – 19,000 feet from the surface. Regionally the Devonian gets shallower towards the North and deeper towards the south. The use of seismic would help enormously in determining the general structure of the deeper formations. However for the purpose of drilling a salt water disposal well this level of detail is sufficient.













A few examples are listed below:

**Well: Moutray SWD-1 (30-015-43895)**

Permit date: 2-8-2017 (amended)

Permitted interval: 14,905 – 16,036' ( 1131')

Permitted injection pressure: 2981 psi max

Average volume: 9,840 bbls/day (first 4 months of 2018)

**Well: Madera SWD-1 (30-025-42448)**

Permit date: 5-7-2015

Permitted interval: 17,400 – 19,222' ( 1822')

Permitted injection pressure: 3480 psi max

Average volume: 20,116 bbls/day (first 5 months of 2018)

**Well: Vaca Draw Federal SWD-1 (30-025-23895)**

Permit date: 11-30-2016

Permitted interval: 17,498 – 19,842' ( 2344')

Permitted injection pressure: 3500 psi max

Average volume: 10,630 bbls/day (first 4 months of 2018)

**Well: Moomaw SWD-1 (30-025-44661)**

Permit date: 5-14-2018

Permitted interval: 17,400 – 19,200' ( 1800')

Permitted injection pressure: 3480 psi max

Average volume: ?? bbls/day (no reported injection – well not yet completed)

Restrictions: no disposal below the Silurian including the Montoya Fm.

**Well: Brininstool SWD-3 (30-025-44000)**

Permit date: 10-28-2017

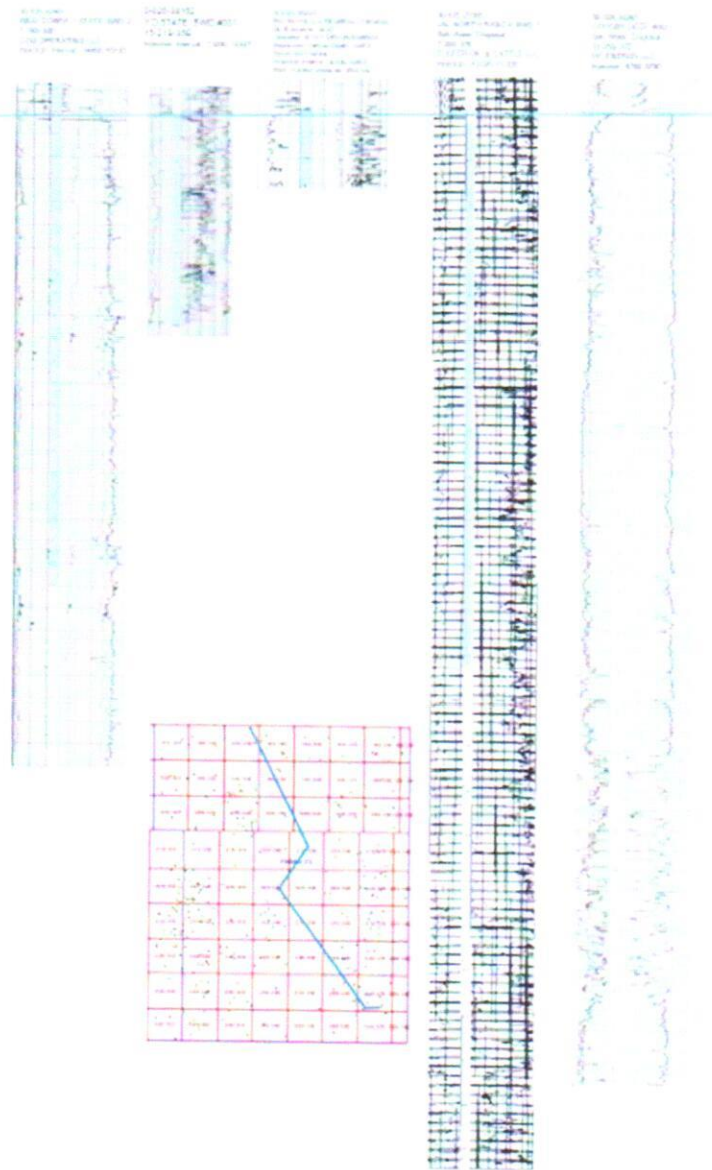
Permitted interval: 17,000' – 18,500' (1500')

Permitted injection pressure: 3400 psi max

Average volume: ?? bbls/day (no reported injection – well not yet completed)







## Conclusions

All of the project area is technically suitable for deep Devonian salt water disposal wells. In general the Devonian section is not a commercial hydrocarbon zone in this area and thus injection of water does not interfere with hydrocarbon production.

Prepared by: Howard McLaughlin – Geologist  
August 2019

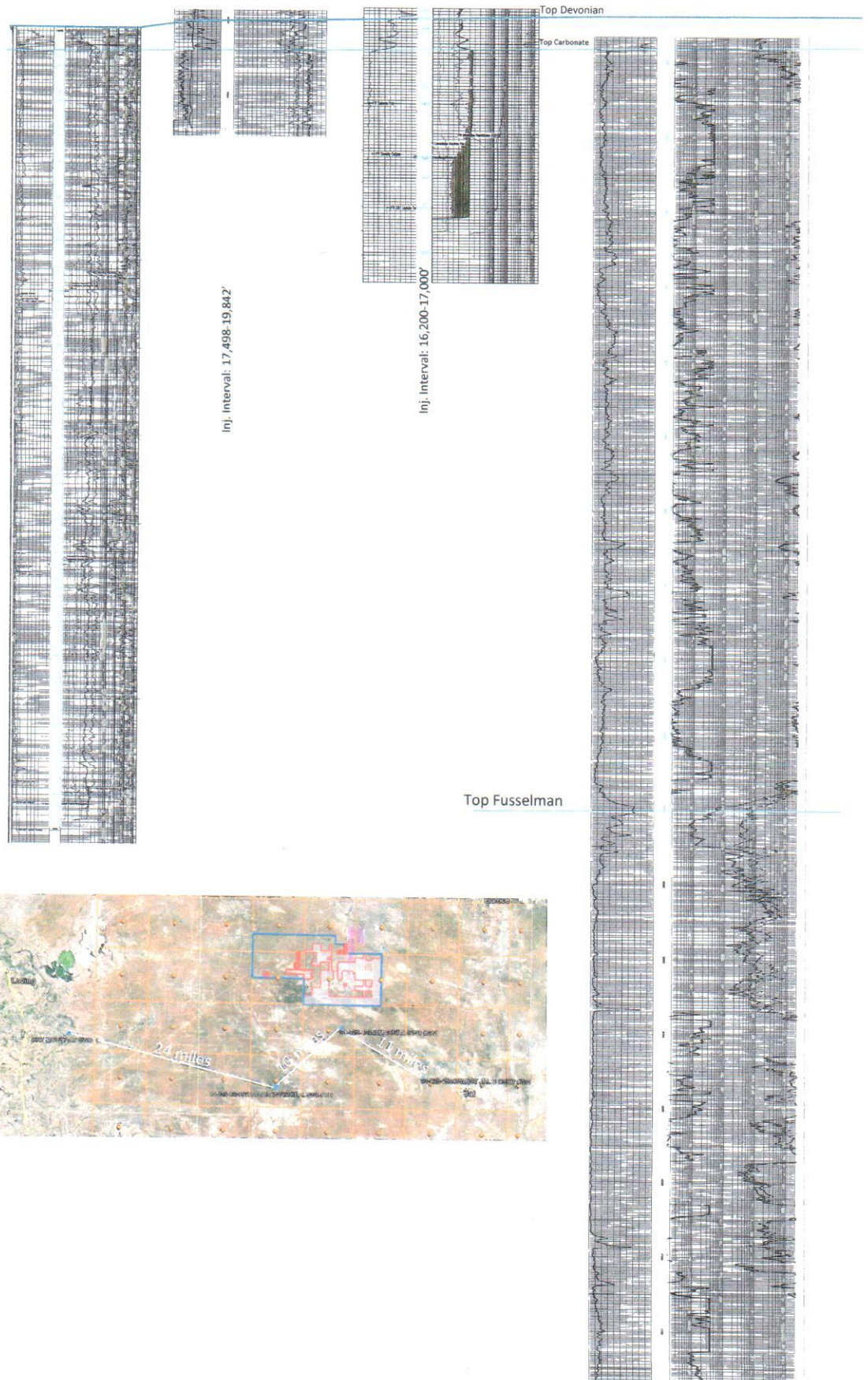


3001543895  
Well Name: OXY MOUTRAY  
Operator: MESQUITE SWD,  
INC.  
MOUTRAY  
TD: 16052  
Inj. Interval: 14,905-16,036'

30-025-23895  
VACA DRAW FEDERAL SWD  
#001  
21-255-33E  
MESQUITE SWD, INC.  
Open hole 17,465 - 19,035'  
Inj. Interval: 17,498-19,842'

30-025-42448  
MADERA SWD #001  
OWL SWD OPERATING, LLC  
14-245-34E  
TD: 18,200'  
Inj. Interval: 16,200-17,000'  
Open hole from 17,400-  
19,222'

30-025-25046  
WEST JAL B DEEP #001  
17-255-36E  
Lakewood Energy  
Solutions  
Inj. Interval: 11,708-16,439'





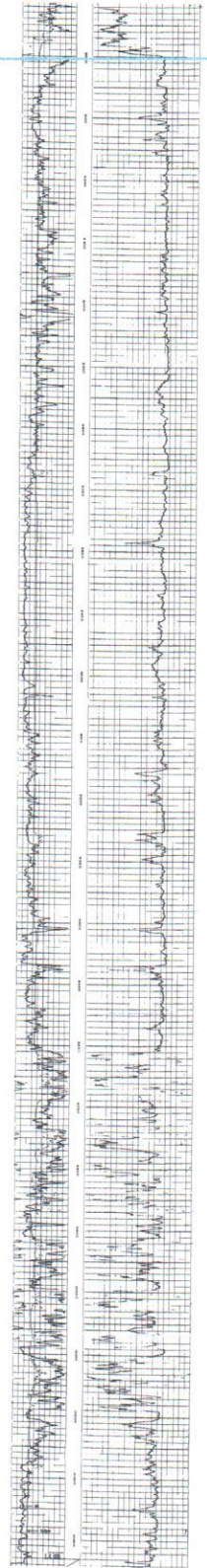
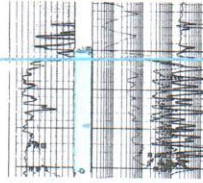
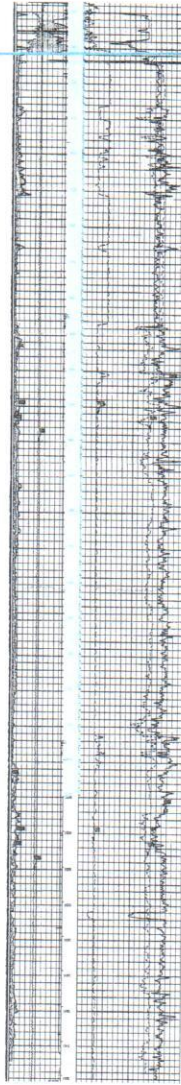
30-025-42461  
WILD COB  
1-19S-34E  
COG OPER, LLC  
Injection Interval: 14400-16100'

0-025-38162  
YO STATE SWD #001  
15-21S-35E  
Injection Interval: 13490-14347'

30-025-36425  
RIO BLANCO 4 FEDERAL COM #003  
OL Elevation: 3400'  
Operator: [6137] DEVON ENERGY  
Measured Vertical Depth: 14653'  
Spud: 05/11/2004  
Injection Interval: 14500-14653'  
Max injection pressure: 2900 psi

30-025-27085  
JAL NORTH RANCH SWD-1  
Salt Water Disposal  
7-25S-37E  
FULFIER OIL & CATTLE LLC  
Injection: 10,020-11,220'

30-025-24287  
CROSBY DEEP #002  
Salt Water Disposal  
33-25S-37E  
DC ENERGY LLC  
Injection: 8780-8790'





# Trove Energy and Water, LLC

## Fault Slip Potential Analysis

EXHIBIT

9

# FSP Methodology

- 4 FSP areas (100 square miles each) centered on townships in southeast New Mexico to cover all proposed Trove SWDs.
- Exact geologic conditions of the FSP areas are unknown.
- Two scenarios modeled for each FSP area using range of possible geologic conditions based on nearby geophysical logs.
- Scenario 1 uses low end of possible geologic conditions.
- Scenario 2 uses high end of possible geologic conditions.
- Each scenario modeled over 25 years. Stress gradients and pore pressure gradients derived from published papers (Snee and Zoback 2018).
- Reference depth, injection interval thickness, porosity, and permeability derived from nearby geophysical logs penetrating the injection interval (New Mexico OCD 2019, see appendix).
- One mapped Precambrian fault in the 100 square mile area of review for FSP area 1. No mapped or known sedimentary or Precambrian faults in the 100 square mile area of review for FSP areas 2, 3, and 4 (USGS 2019 and Wilson 2018).
- Additional random faults generated using strike and dip consistent with known New Mexico faults (USGS 2019, Snee and Zoback 2018).
- Advanced geological parameters derived from well logs and confirmed with previous expert testimony in the region (Reynolds 2019).



# Parameters

Parameter	Value	Source
Vertical Stress Gradient (psi/ft)	1.1	Snee and Zoback (2018)
Horizontal Stress Direction (degrees azimuth)	75	Snee and Zoback (2018)
Reference Depth (ft)	16,600-17,500	Well Logs NMOCD (2019)
Initial Reservoir Pressure Gradient (psi/ft)	0.44	Snee and Zoback (2018)
A Phi	0.7	Snee and Zoback (2018)
Friction Coefficient	0.7	Snee and Zoback (2018)
Thickness with High Porosity (ft)	100-250	Well Logs NMOCD (2019)
Porosity (%)	5-10	Well Logs NMOCD (2019)
Permeability (mD)	10-100	Well Logs NMOCD (2019)
Fault Strike Minimum (degrees)	140	Snee and Zoback (2018)
Fault Strike Maximum (degrees)	190	Snee and Zoback (2018)
Fault Dip Minimum (degrees)	60	Snee and Zoback (2018)
Fault Dip Maximum (degrees)	90	Snee and Zoback (2018)
Density (kg/m <sup>3</sup> )	1000	ALL Research and Reynolds (2019)
Dynamic Viscosity (Pa*s)	0.0003	ALL Research and Reynolds (2019)
Fluid Compressibility (Pa <sup>-1</sup> )	4.70E-10	ALL Research and Reynolds (2019)
Rock Compressibility (Pa <sup>-1</sup> )	8.70E-10	ALL Research and Reynolds (2019)

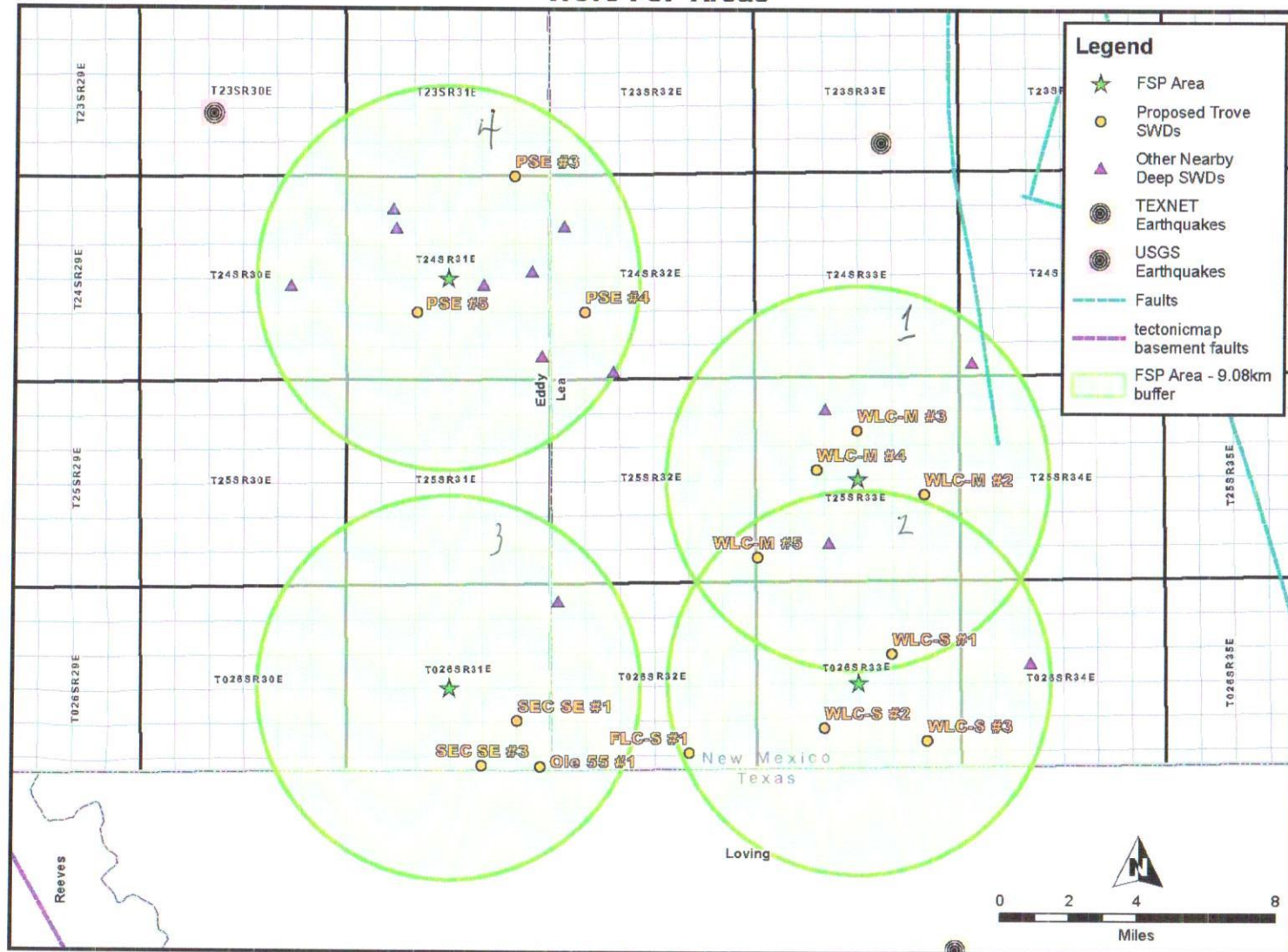
# Injection Data

- 13 deep class II injection wells active in 2019 within 4 areas of review (see appendix).
- Monthly average injection rates calculated from injection start-date through April 2019 (see appendix).
- 14 proposed Trove SWDs within 4 areas of review.
- Proposed Trove SWDs assumed to inject at proposed average rate of 40,000 bpd.

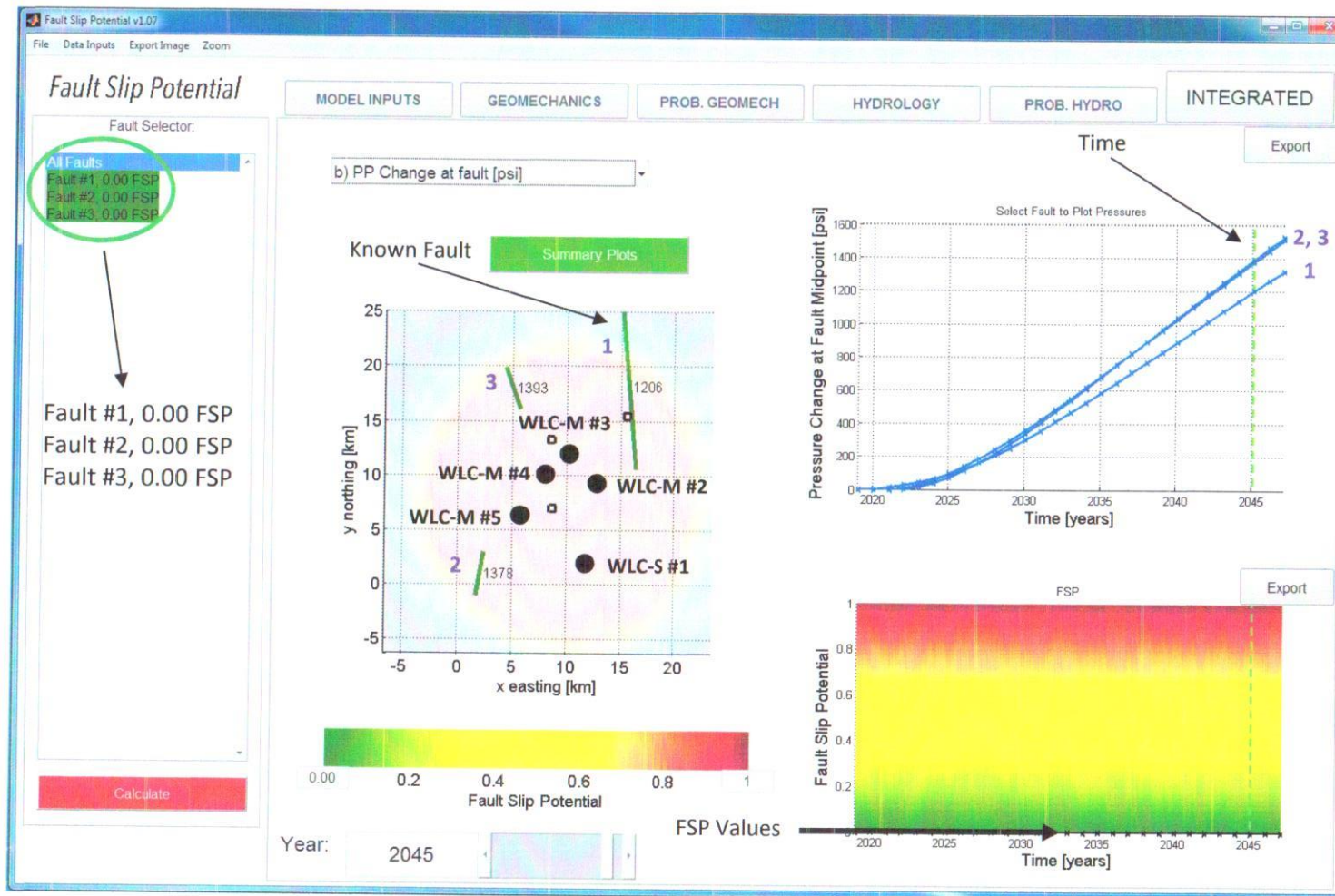


# FSP Areas

## Trove FSP Areas



# FSP After 25 Years - Area 1 - Scenario 1



## Parameters

Estimated Porosity  
5%

Estimated Permeability  
10 mD

Estimated Injection Interval  
17,400 – 19,000 ft

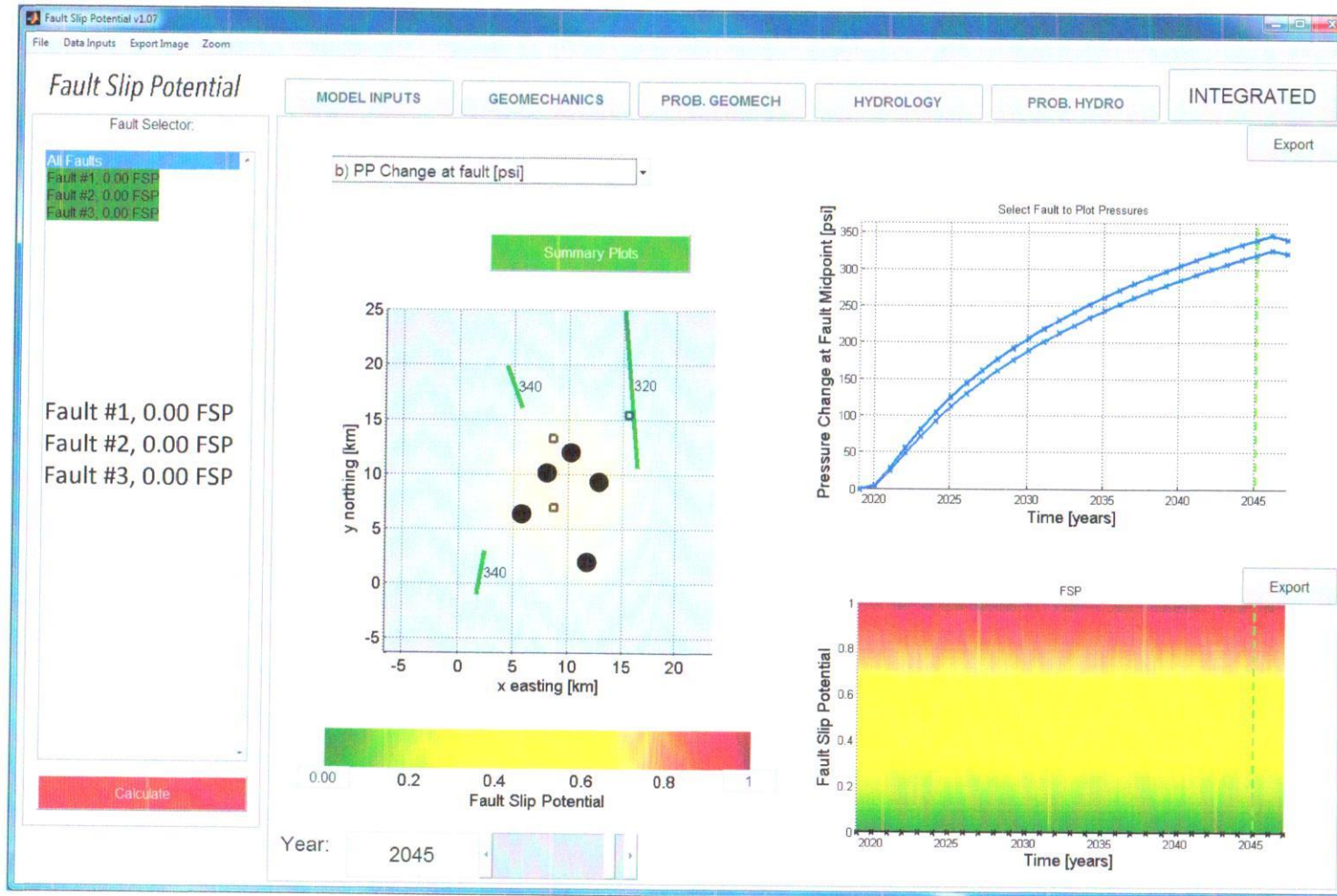
Estimated Thickness with High  
(5%) Porosity  
100 ft

● = Proposed Trove SWDs

□ = Other Deep SWDs



# FSP After 25 Years - Area 1 - Scenario 2



## Parameters

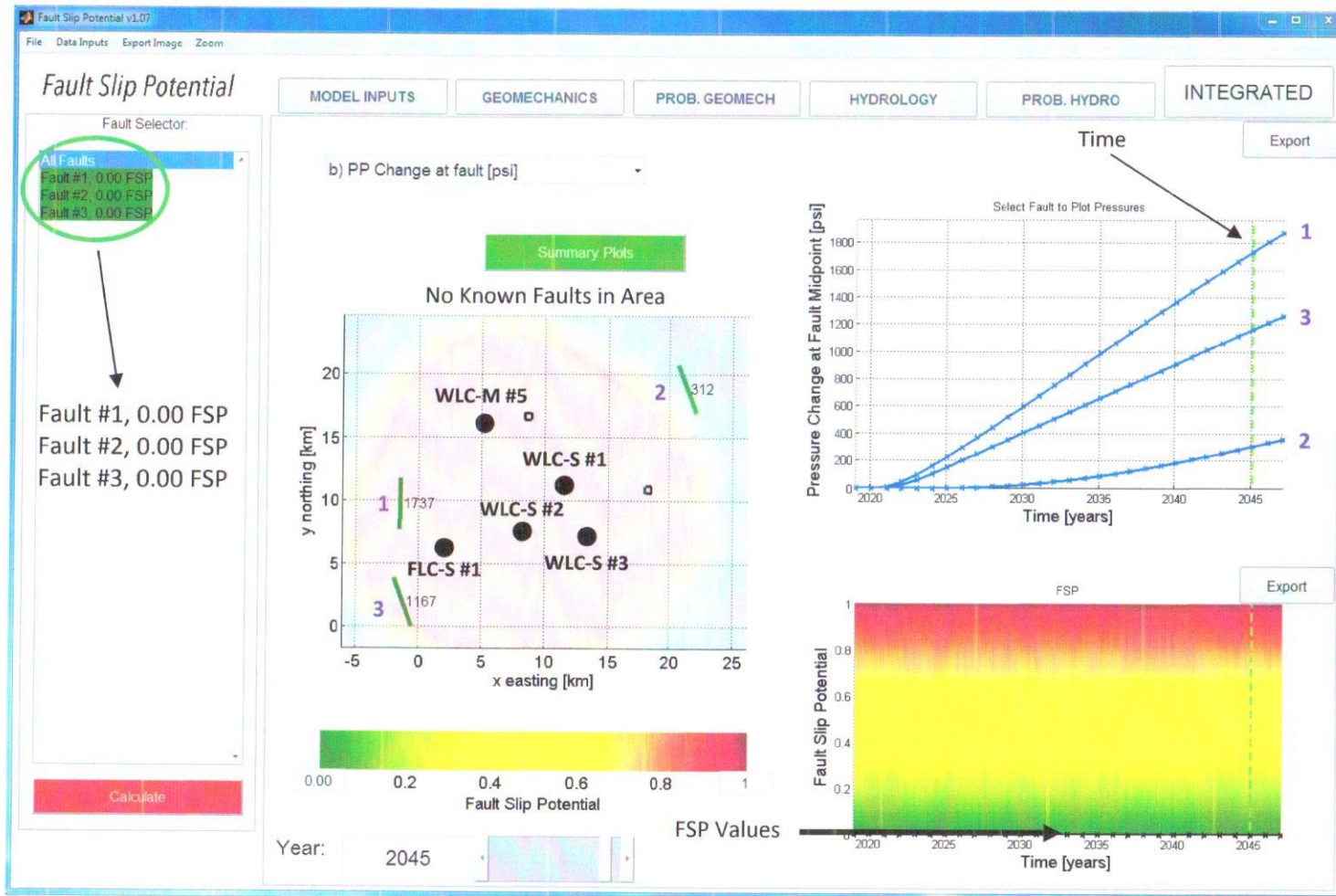
Estimated Porosity  
10%

Estimated Permeability  
100 mD

Estimated Injection Interval  
17,400 – 19,000 ft

Estimated Thickness with High  
(10%) Porosity  
250 ft

# FSP After 25 Years - Area 2 - Scenario 1



## Parameters

Estimated Porosity  
5%

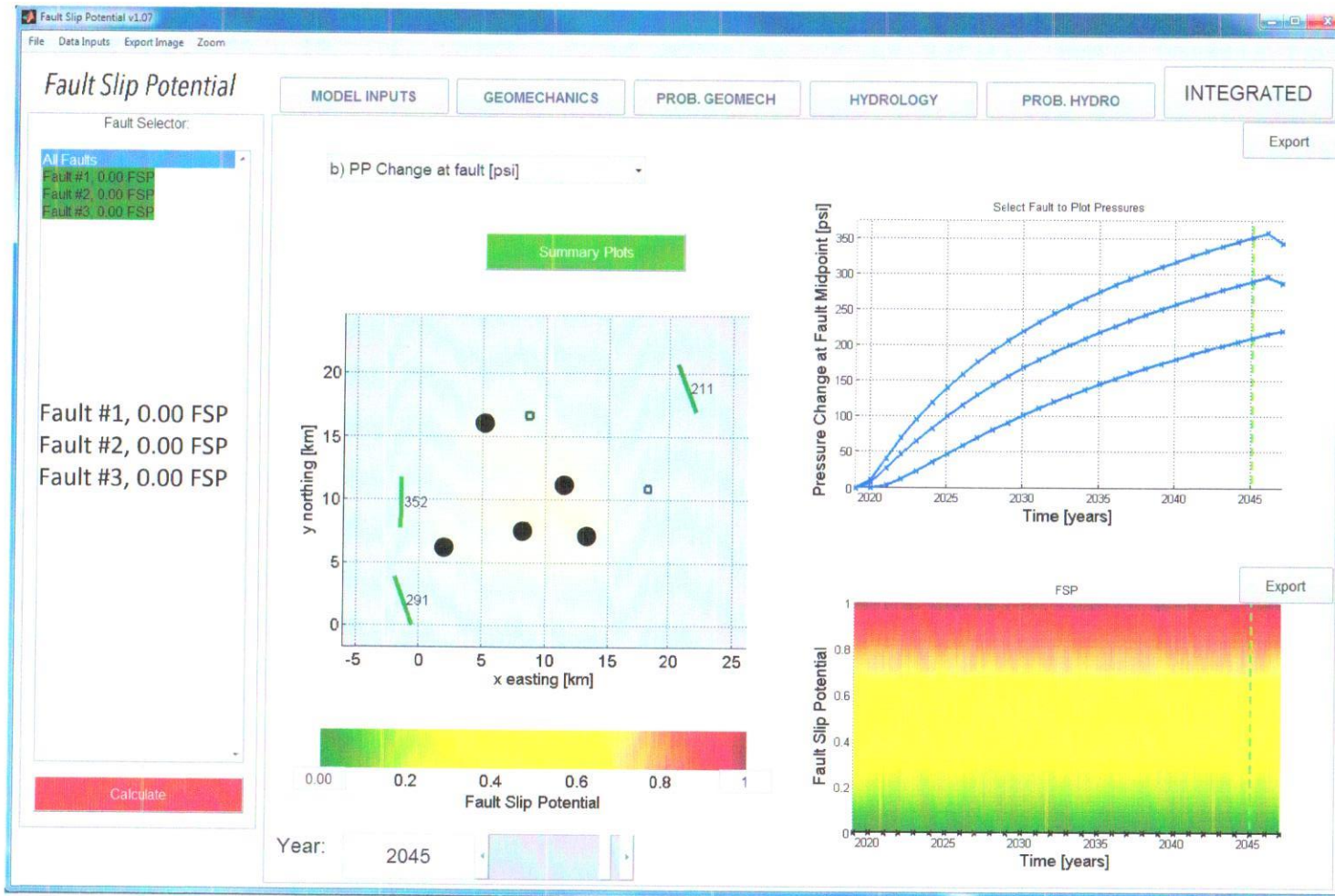
Estimated Permeability  
10 mD

Estimated Injection Interval  
17,500 – 19,100 ft

Estimated Thickness with High  
(5%) Porosity  
100 ft



# FSP After 25 Years - Area 2 - Scenario 2



## Parameters

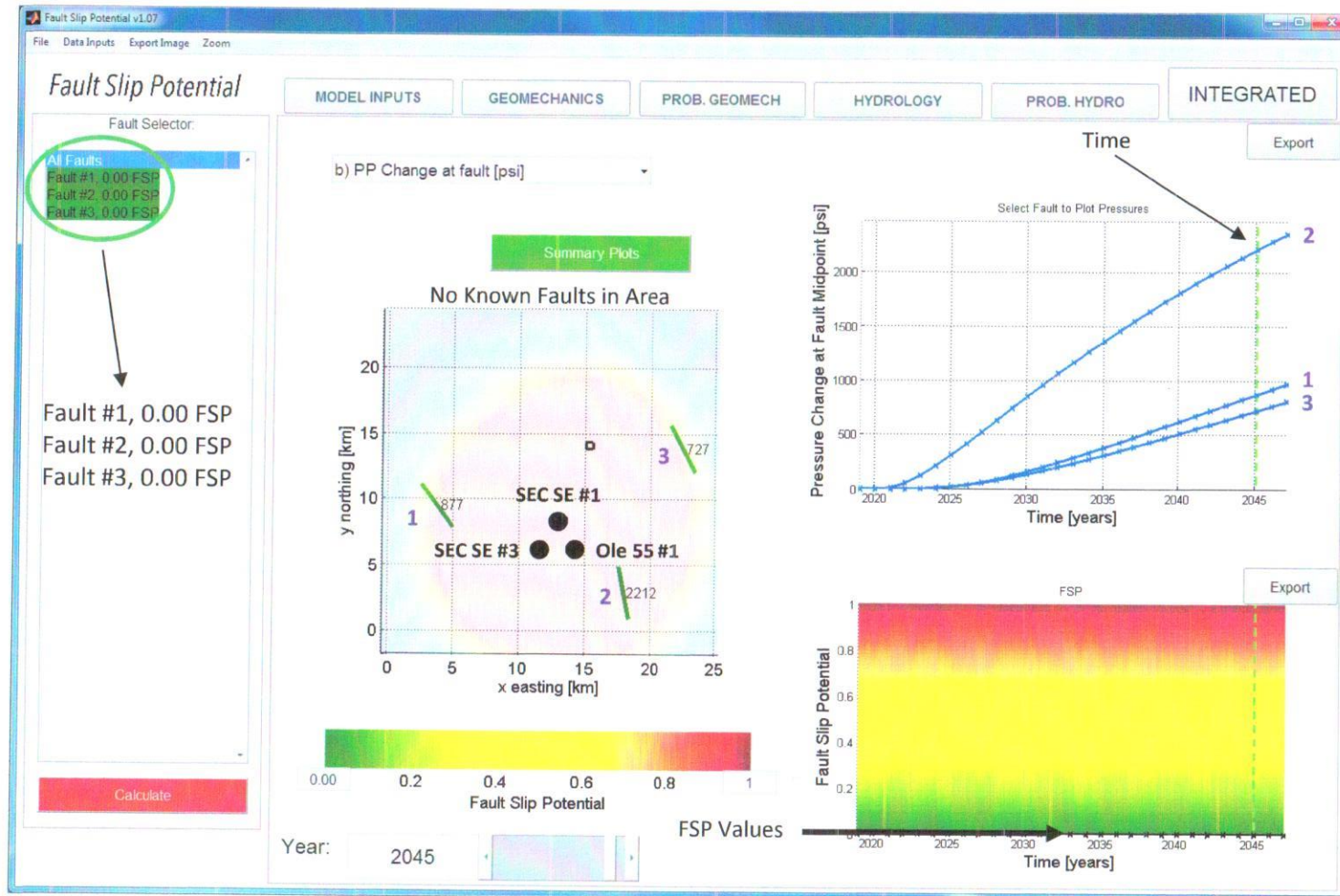
Estimated Porosity  
10%

Estimated Permeability  
100 mD

Estimated Injection Interval  
17,500 – 19,100 ft

Estimated Thickness with High  
(10%) Porosity  
250 ft

# FSP After 25 Years - Area 3 - Scenario 1



## Parameters

Estimated Porosity  
5%

Estimated Permeability  
10 mD

Estimated Injection Interval  
16,600 – 18,500 ft

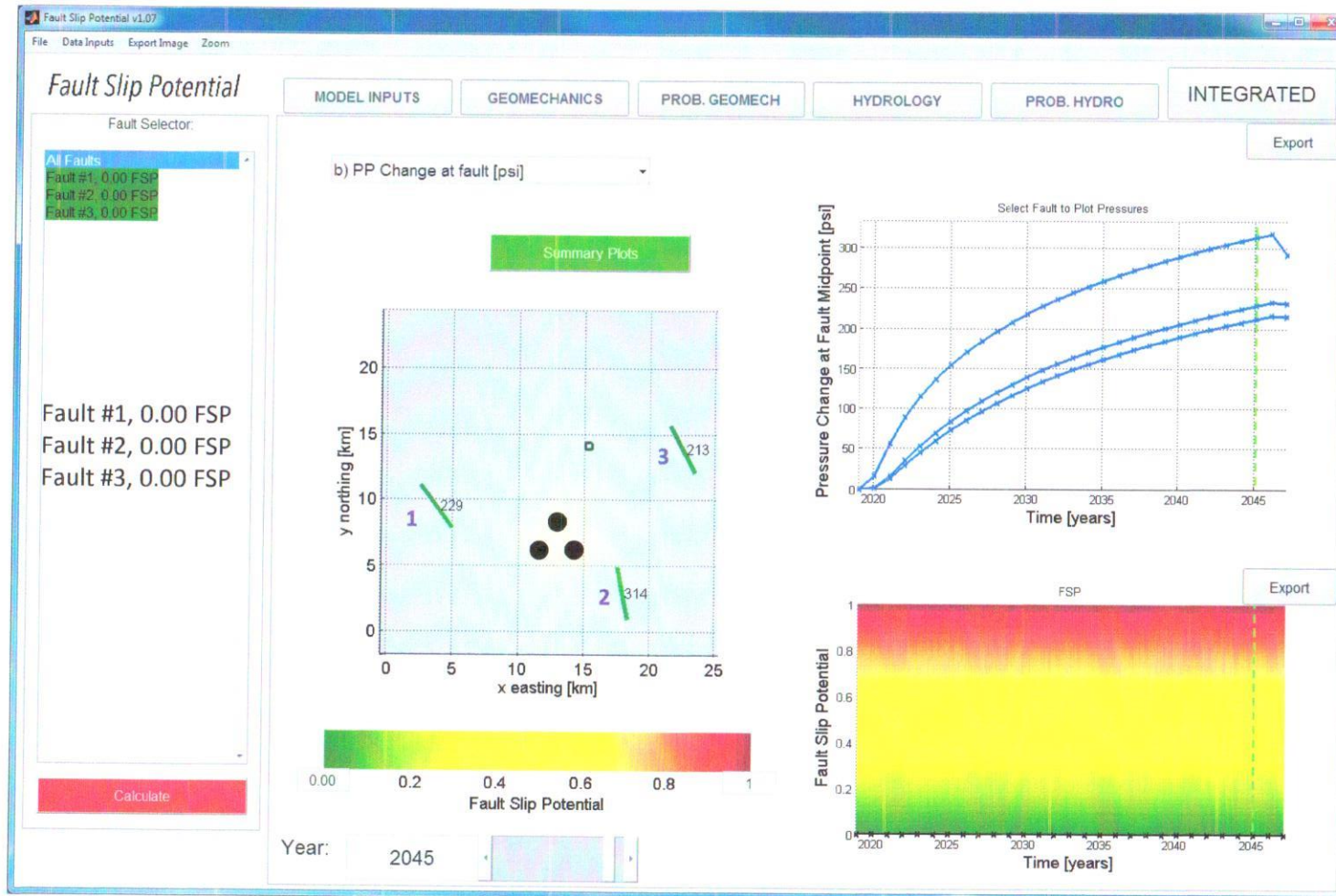
Estimated Thickness with High  
(5%) Porosity  
100 ft

● = Proposed Trove SWDs

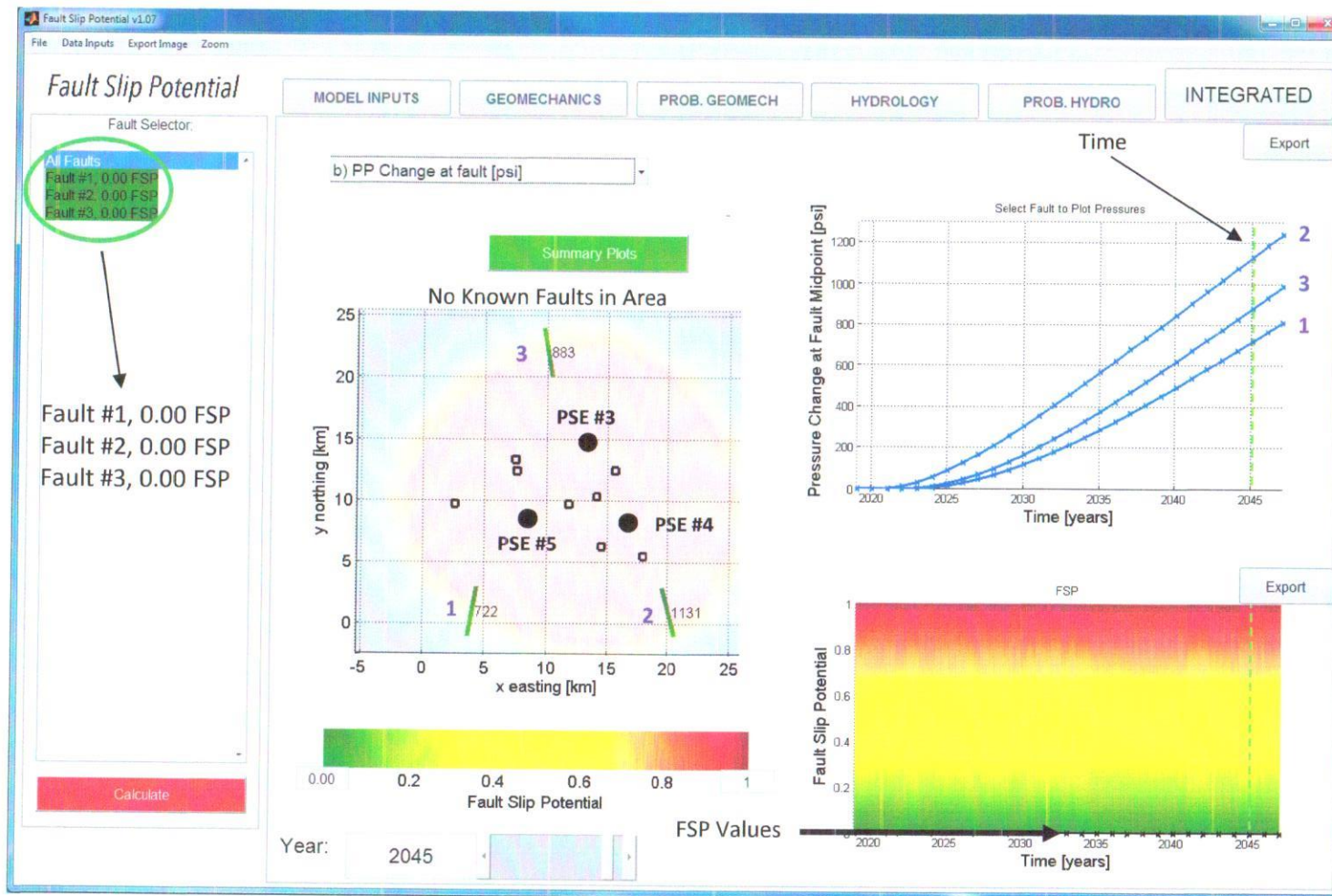
□ = Other Deep SWDs



# FSP After 25 Years - Area 3 - Scenario 2



# FSP After 25 Years - Area 4 - Scenario 1



## Parameters

Estimated Porosity  
5%

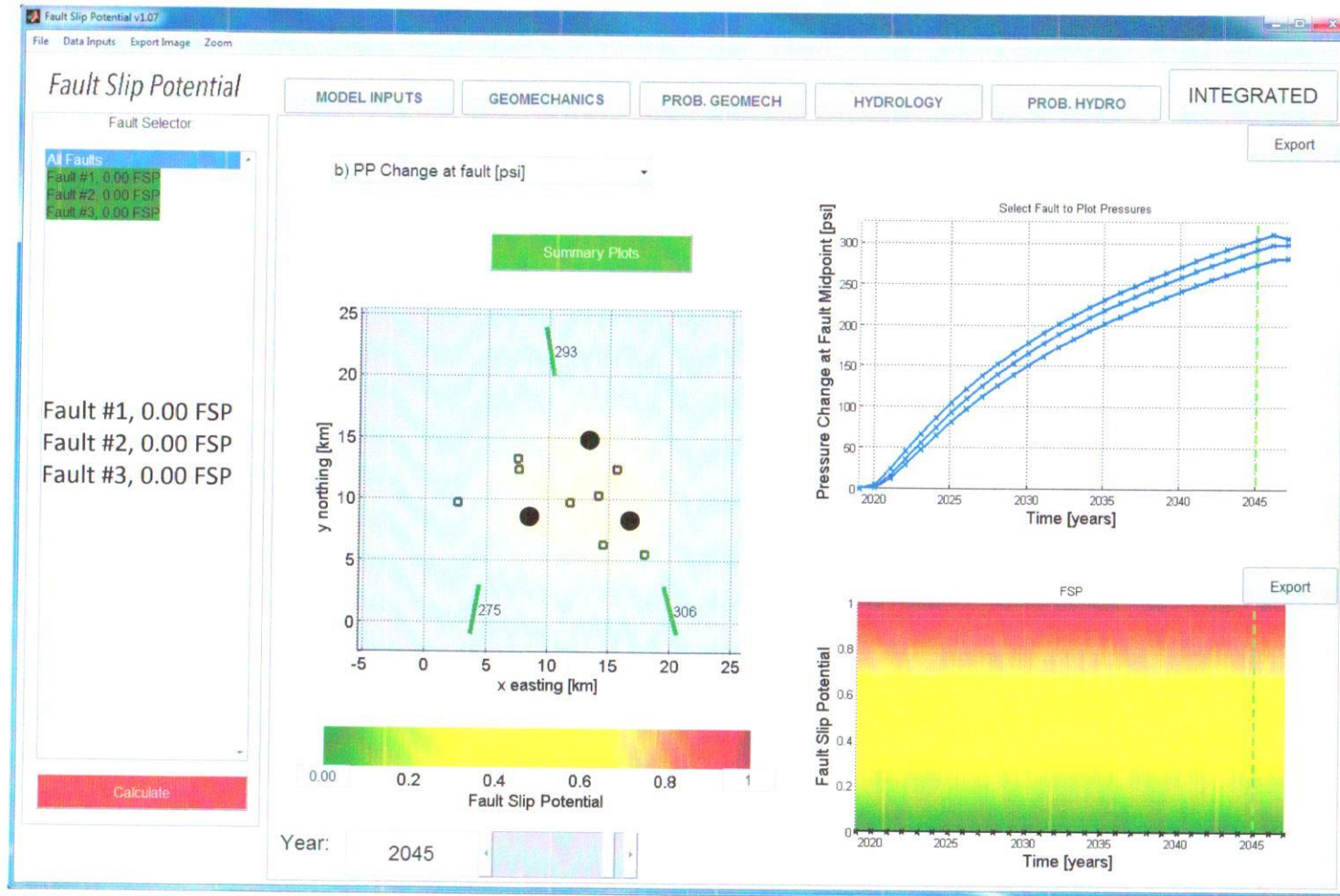
Estimated Permeability  
10 mD

Estimated Injection Interval  
16,700 – 18,200 ft

Estimated Thickness with High  
(5%) Porosity  
100 ft



# FSP After 25 Years - Area 4 - Scenario 2



## Parameters

Estimated Porosity  
10%

Estimated Permeability  
100 mD

Estimated Injection Interval  
16,700 – 18,200 ft

Estimated Thickness with High  
(10%) Porosity  
250 ft

# Conclusions

- There is one mapped Precambrian fault in the 100 square mile review of FSP area 1, which shows FSP of 0.00 over 25 years in both high and low geologic scenarios.
- Known faults in southeast New Mexico do not align with the horizontal stress field, and are not likely to slip.
- FSP modeling through 25 years, with injection rates that are likely overestimated, shows no risk of potential fault slip in the areas of review.
- These areas present little to no risk for injection induced seismicity.



# References

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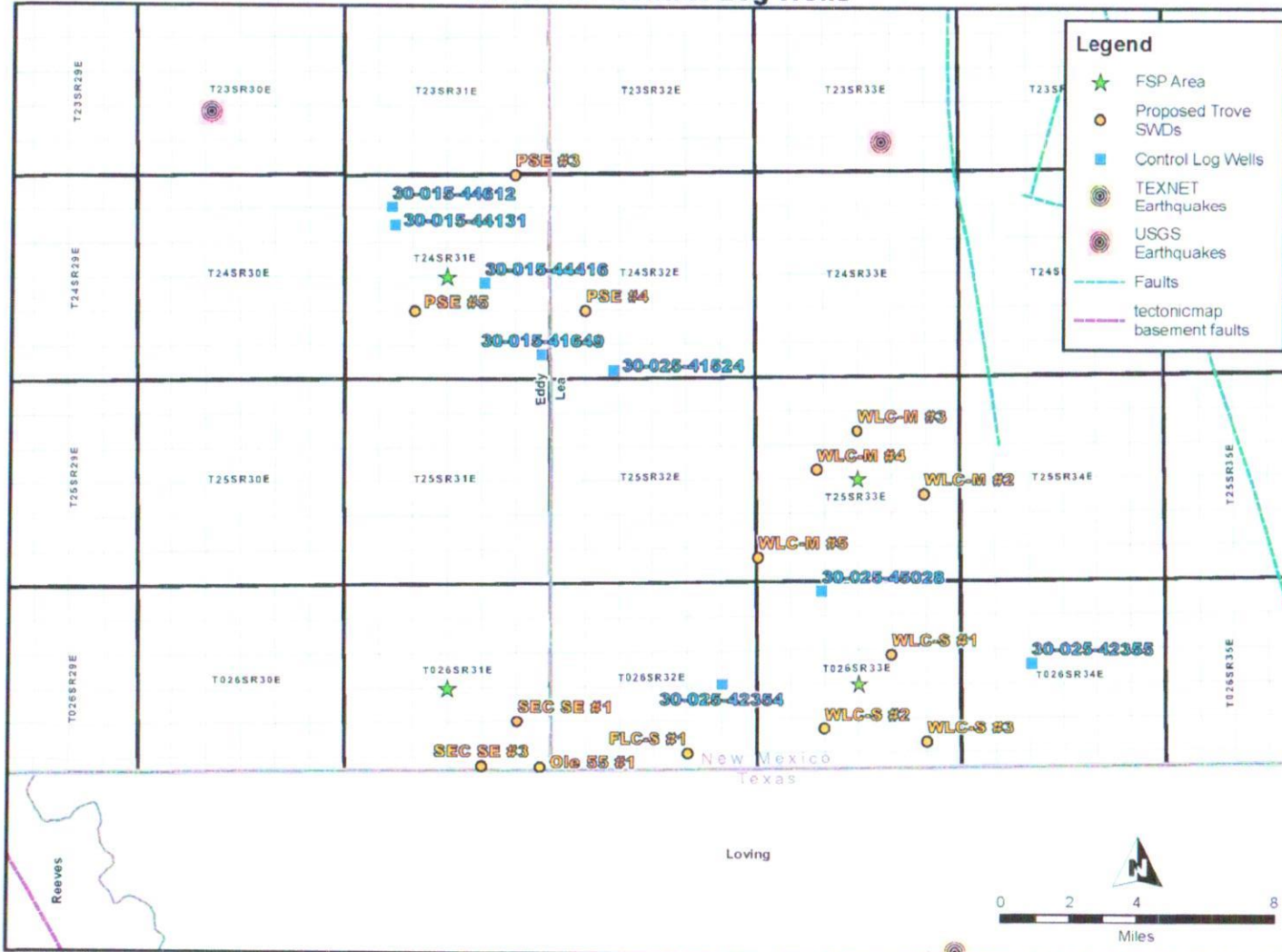
# Appendix

## Control Log Well Details and Nearby Deep SWDs Injection Data



# Control Log Wells

Trove FSP Control Log Wells



30-025-45028

Dev/Sil logged from 17,430' to 18,900' (partial)

30-025-42354

Dev/Sil logged from 17,730' to 18,675' (partial)

30-025-42355

Dev/Sil logged from 18,610' to 20,071' (complete)

30-015-41649

Dev/Sil logged from 16,749' to 18,118' (complete)

30-015-44131

Dev/Sil logged from 16,530' to 16,950' (partial)

30-015-44416

Dev/Sil logged from 16,691' to 18,100' (partial)

30-015-44612

Dev/Sil logged from 16,430' to 17,690' (partial)

30-025-41524

Dev/Sil logged from 17,000' to 18,500' (partial)

Notes: Approximately 100-250 feet of >5% porosity within injection interval. Montoya is tight where present on logs.

# Nearby Deep SWD Injection Data

FSP Area	API #	Well Name	Average Daily Injection Rate (BWPD)	Injection Start-Date
1	30-015-43867	CYPRESS SWD #001	8,377	Jul - 2018
1	30-025-29000	DIAMOND 31 FEDERAL COM #001	2,950	Jan - 2014
1, 2	30-025-35598	RED HILLS SWD #001	8,346	Dec - 2018
2	30-025-42355	RATTLESNAKE 16 SWD #001	5,834	Dec - 2015
3	30-025-43379	PADUCA 6 SWD #001Y	21,046	Aug - 2017
4	30-025-41524	COTTON DRAW 32 STATE SWD #002	12,724	Mar - 2017
4	30-015-41649	COTTON DRAW UNIT SWD #181	10,367	Jan - 2014
4	30-015-44676	MESA VERDE SWD #003	8,396	Sep - 2018
4	30-015-40935	PLU DELAWARE B 23 FEDERAL SWD #001	9,742	Jul - 2013
4	30-015-44612	SAND DUNES SWD #001	1,472	Nov - 2018
4	30-015-44131	SAND DUNES SWD #002	17,396	Jul - 2018
4	30-025-43473	STATION SWD #001	25,243	Aug - 2018
4	30-015-44416	STRIKER 2 SWD #001	11,584	Oct - 2018