# Initial

# Application Part I

Received: 06/18/2019

*This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete* 

RECEIVED: 06/18/2019	REVIEWER: MAM	TYPE: SWD		917031667
1	NEW MEXICO O	ABOVE THIS TABLE FOR OCD DIVISION USI <b>DIL CONSERVATIO</b> Sengineering Bur is Drive, Santa Fe,	<b>N DIVISION</b> eau –	Reconcerned and
	ADMINISTRATIN		FOR EXCEPTIONS TO DIV	ISION RULES AND
pplicant: <u>Trove Energy</u> ell Name: <u>SEC SE Fede</u> ool: <u>Proposed: SWD; Devor</u>	eral SWD No.5		OGRID N API: <u>30-01</u> Pool Cod	
SUBMIT ACCURATE AN		NATION REQUIRED 1 DICATED BELOW	O PROCESS THE	IYPE OF APPLICATION
□NSL B. Check one onl [1] Comminglir	cing Unit – Simultane NSP <sub>(PROJECT</sub> y for [1] or [11] ng – Storage – Measu	ous Dedication AREA) NSP (PROR Urement		SWD-216
DHC [ – Injection ] WFX []	CTB PLC Disposal – Pressure In PMX SWD	PC OLS Ocrease – Enhance IPI EOR	□OLM d Oil Recovery □PPR	FOR OCD ONLY
B. Royalty, ove C. Application D. Notification E. Notification F. Surface owr	itors or lease holders miding royalty owner requires published no and/or concurrent o and/or concurrent o her above, proof of not	rs, revenue owners otice approval by SLO approval by BLM	Ition is attached,	Notice Complete Application Content Complete
) <b>CERTIFICATION:</b> I her administrative appro	eby certify that the in oval is <b>accurate</b> and			

understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Ben Stone

Print or Type Name

6/18/2019

Date

903-488-9850

Phone Number

<u>Sen Som</u> Signature

ben@sosconsulting.us e-mail Address

### McMillan, Michael, EMNRD

From:	ben@sosconsulting.us
Sent:	Tuesday, June 18, 2019 2:31 PM
То:	Goetze, Phillip, EMNRD; McMillan, Michael, EMNRD; Jones, William V, EMNRD
Subject:	[EXT] Trove Energy and Water, LLC's C-108 for SWD in its SEC SE Federal SWD #5 prospect
Attachments:	C-108_Trove_SEC-SEFed SWD#5_AsSubmitted_20190618.pdf

Gentlemen:

Please find the attached subject C-108. This location was vetted w/ EOG and ConocoPhillips and spotted per their development plan criteria.

Hard copies via FedEx - going out this afternoon. A link to the PDF file for Affected Parties is also provided below.

Please let me know if additional info is needed.

Thanks, Ben

https://sosconsulting.sharefile.com/d-s18edcb862974efd8



P.O. Box 300 - Como, TX 75431 Visit us on the web at www.sosconsulting.us!

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June 18, 2019

New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Attn: Ms. Adrienne Sandoval, Director

*Re: Application of Trove Energy and Water, LLC to permit for salt water disposal the proposed SEC SE Federal SWD No.5, located in Section 5, Township 26 South, Range 31 East, NMPM, Eddy County, New Mexico.* 

Dear Ms. Sandoval,

Please find the enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request for salt water disposal. The well will be operated as a commercial endeavor offering operators in the area additional options for produced water disposal.

Trove Energy and Water is a developing salt water disposal option for operators in southeast New Mexico and seeks to optimize efficiency, both economically and operationally, of all its operations. Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

This application for a proposed Devonian SWD interval includes the currently mandated increased One-Mile Area of Review including pertinent and available seismic information for the area and region. Published legal notice ran today, June 18, 2019 in the Artesia Daily Press and all offset operators and other affected parties have been notified individually. The legal notice affidavit is included with this application. The application also includes a wellbore schematic, area of review maps, affected party plat and other required information for a complete Form C-108. The well is located on federal surface and minerals and the Bureau of Land Management CFO and offset operators have been notified of this application.

I respectfully request that the approval of this salt water disposal well proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

Best regards,

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

Cc: Application attachment and file

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

### APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Salt Water Disposal and the application QUALIFIES for administrative approval.
- II. OPERATOR: Trove Energy and Water, LLC ADDRESS: 1919 North Turner, Hobbs, NM 88240

CONTACT PARTY: Agent: SOS Consulting, LLC – Ben Stone (903) 488-9850

- III. WELL DATA: All well data and applicable wellbore diagrams are ATTACHED.
- IV. This is not an expansion of an existing project.
- V. A map is attached that identifies all wells and leases within two miles of any proposed injection well with a ONE-Mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- \*VI. A tabulation is attached of data on all wells of public record within the area of review which penetrate the proposed injection zone. *There are NO (0) Wells in the subject AOR which Penetrate the proposed Devonian interval.* The data includes a description of each well's type, construction, date drilled, location, depth, and a schematic of any plugged well illustrating all plugging detail. *NO P&A Wells penetrate.*
- VII. The following data is ATTACHED on the proposed operation, including:
  - 1. Proposed average and maximum daily rate and volume of fluids to be injected;
  - Whether the system is open or closed;
  - 3. Proposed average and maximum injection pressure;
  - 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  - 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Appropriate geologic data on the injection zone is ATTACHED including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Stimulation program a conventional acid job may be performed to clean and open the formation.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). *Well Logs will be filed with OCD.*
- \*XI. There are 2 water wells/ PODs within one mile of the proposed salt water disposal well. Representative analyses are included herein and one or both of the subject wells will be sampled and analyzed and submitted.
- XII. An affirmative statement is ATTACHED that available geologic and engineering data has been examined and no evidence was found of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. "Proof of Notice" section on the next page of this form has been completed and ATTACHED. There are 2 offset lessees and/or mineral owners within 1 mile and federal minerals all have been noticed. Well location is Federal.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME:	Ben Stone	TITLE: SOS Consulting, LLC agent for Trove Energy a	nd Water, L	.LC
SIGNATURE	- Ser	June	DATE:	6/18/2019

E-MAIL ADDRESS: ben@sosconsulting.us

\* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal:

### Page 2

### FORM C-108 – APPLICATION FOR AUTHORIZATION TO INJECT (cont.)

- III. WELL DATA The following information and data is included (See ATTACHED Wellbore Schematic):
- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
  - (1) Lease name; Well No., Location by Section, Township and Range; and footage location within the section.
  - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
  - (3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
  - (1) The name of the injection formation and, if applicable, the field or pool name.
  - (2) The injection interval and whether it is perforated or open-hole.
  - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
  - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
  - (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE pursuant to the following criteria is ATTACHED.

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

# C-108 - Items III, IV, V

# Item III - Subject Well Data

Wellbore Diagram - PROPOSED

# Item IV – Tabulation of AOR Wells

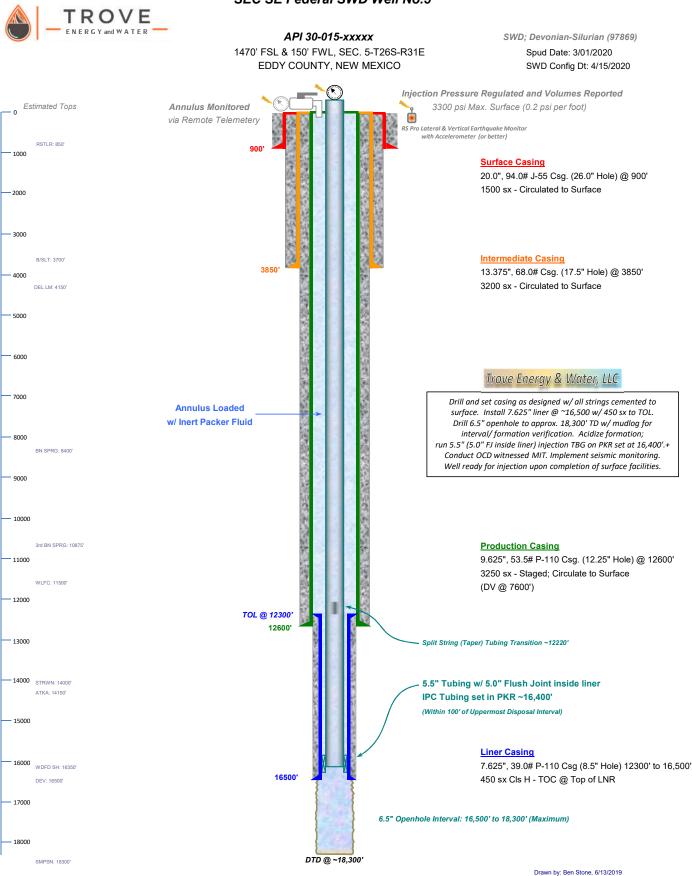
NO wells penetrate the proposed injection interval.

# Item V – Area of Review Maps

1. Two Mile AOR Map with One-Mile Fresh Water Well Radius

2. One-Half Mile AOR Map

All Above Exhibits follow this page.

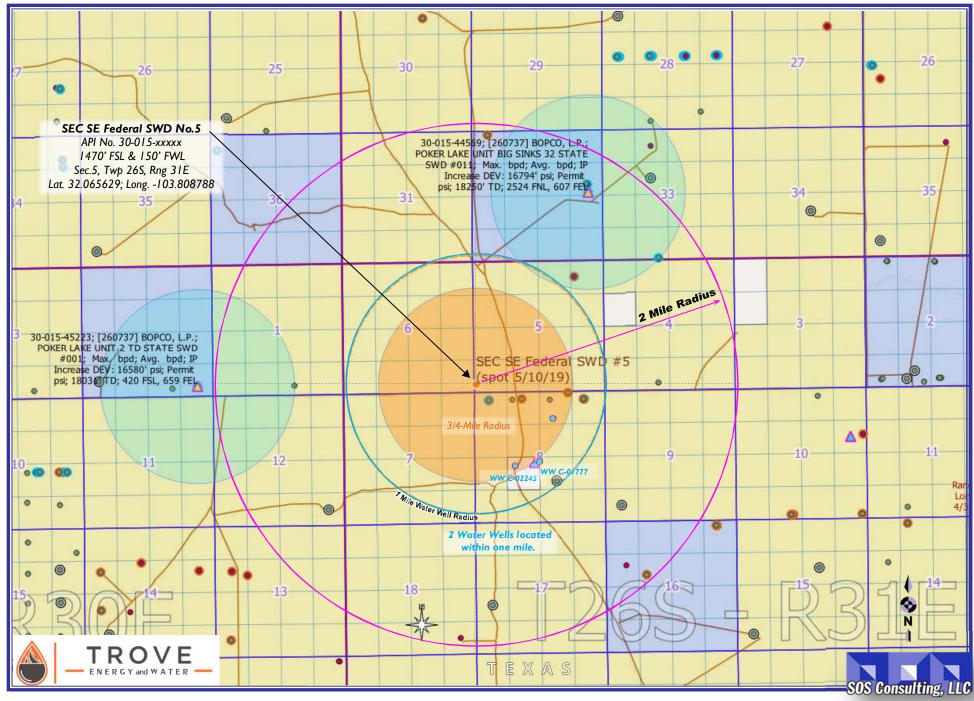




### WELL SCHEMATIC - PROPOSED SEC SE Federal SWD Well No.5

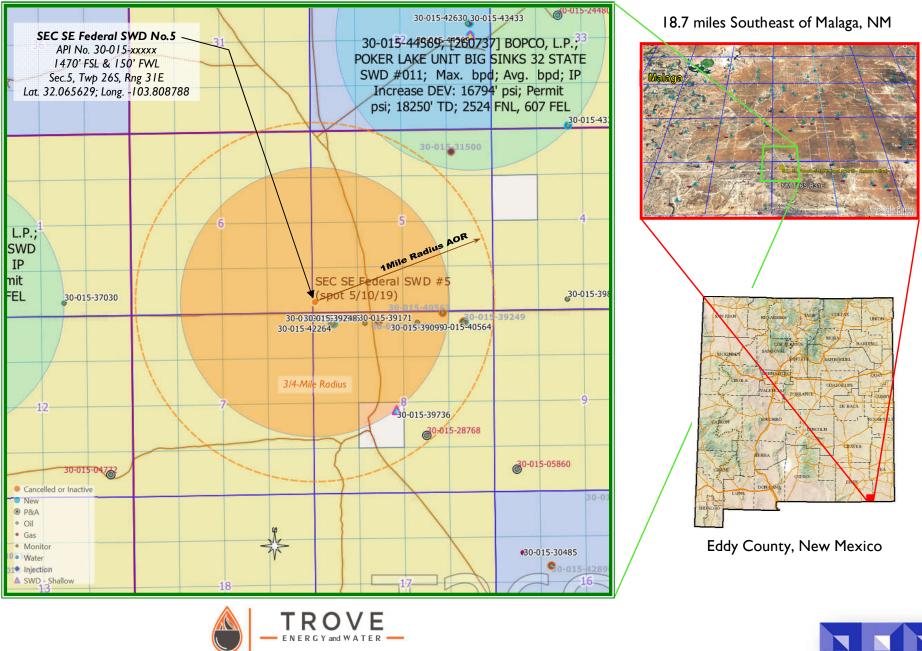
# SEC SE Federal SWD No.5 - Area of Review / 2 Miles

(Attachment to NMOCD Form C-108 - Item V)



# SEC SE Federal SWD Well No.5 – One Mile Area of Review / Overview Map

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)





# **C-108 ITEM VII – PROPOSED OPERATION**

### Trove SEC SE Federal SWD #5

### COMMERCIAL SWD FACILITY

Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take approximately 6-8 weeks. Facility construction including installation of the tank battery, berms, plumbing and other and associated equipment would be occurring during the same interval but at a different location from the well. In any event, it is not expected for the facility construction phase of the project to last more than 60 days, depending on availability of contractors and equipment. Facility design is currently in the planning phase with a company which specializes in such construction.

### DRILL AND CONFIGURE FOR SALT WATER DISPOSAL

### Interval Determination

Prior to commencing disposal, Trove Energy and Water shall submit mudlog and geophysical logs information, to the Division's District geologist and Santa Fe Engineering Bureau, showing evidence agreeable that only the permitted formation is open for disposal including a summary of depths (picks)for contacts of the formations which the Division shall use to amend any order for a final description of the depth for the injection interval. If significant hydrocarbon shows occur while drilling, the operator shall notify Artesia district office and Trove will seek written permission prior to commencing disposal.

### Casing and Logging

Trove's design is to circulate all casing strings to surface. If cement does not circulate on any casing string, the Trove will run a cement bond log (CBL) or other log to determine top of cement and shall notify the Artesia district office with the top of cement (emergency phone number if after normal business hours) prior to continuing with any further cement activity with the proposed well. If cement does not tie back in to next higher casing shoe, the operator shall perform remedial cement job(s) to bring cement, at a minimum, 200 feet above the next higher casing shoe. The operator shall run a CBL (or equivalent) for the 7-5/8-inch liner to demonstrate placement cement and the cement bond with the tie-in with 9-5/8-inch casing string. All logs on the well will be copied to the Artesia district office; CBL logs and mudlogs will be provided prior to commencing disposal. Additionally, prior to commencing disposal the operator shall obtain a bottom-hole pressure of the open-hole completion. This information shall be provided with the sundry notice of commencement of disposal operations.

### Monitoring and Reporting

Prior to commencing any work, an NOI sundry(ies) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per OCD test procedures. (Notify NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity.

# **C-108 ITEM VII – PROPOSED OPERATION**

(continued)

### **OPERATIONAL SUMMARY**

The SWD facility will not be fenced so that trucks may access for load disposal 24/7.

Ultimately, Trove's plans would include tying the SWD into a pipeline, when and if available, so the well and injection equipment will be a closed system and equipped with pressure limiting devices and volume meters. The annulus, loaded with an inert, anti-corrosion packer fluid, will be monitored for pressure.

### SCADA System

The facility and tanks will be equipped with telemetry devices and visual alarms to alert the operator and customers of full tanks or an overflow situation. Operational details including rates, pressures, valve, tank and levels will be continually monitored and either controlled remotely or personnel dispatched for further action.

In addition to operational SCADA system control and monitoring, Trove is considering installing RS Pro Lateral & Vertical Earthquake Monitors with Accelerometer, or better for continuous monitoring. Data will be remotely accessible; monitored and shared as needed. An alternative solution being considered would employ a third party to provide seismic monitoring using public and private seismometers as available.

### Rates, Pressures, Releases

Anticipated daily maximum volume is 30,000 bpd and an average of 22,500 bpd at a maximum surface injection pressure of 3300 psi (.2 psi/ft gradient) – maximum pressure will be adjusted If the top of interval is modified after well logs are run.

Potential releases will be contained and cleaned up immediately. The operator shall repair or otherwise correct the situation within 48 hours before resuming operations. OCD will be notified within 24 hours of any release greater than 5 bbls. If required, remediation will start as soon as practicable. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC; as necessary and appropriate and OCD form C-141 will be submitted promptly.

# **C-108 ITEM VII – PRODUCED WATER ANAYLSES**

Item VII.4 – Water Analysis of Source Zone Water

Delaware Bone Spring Wolfcamp

# Item VII.5 – Water Analysis of Disposal Zone Water

Devonian

Water Analyses follow this page.

Trove Energy & Water, LLC - SEC SE Federal Project Area

# SOURCE ZONE

Lab ID

# DELAWARE

									Lab ID			
API No	3001510181								Sample	e ID		5532
Well Name	SUPERIOR S	TATE			002				Sample	e No		
Location	ULSTR 08	25	s	30	E		Lat / Long	32 14281	-103	3.89616		
Loouton	1980	S	66		E		Lut / Long	02.11201	County	Eddy		
0	(	D							•	-		
Operator	(when sample	ə <b>a)</b> əld	CO	RRAI	CANYC	N			Unit I			
San	nple Date		00				sis Date		Onit 1			
						, <b>,</b>						
	Sa	imple S	Source	e SW	AB			Depth (i	if known)			
	W	ater Ty	р									
ph							alkalinit	y_as_caco3_	_mgL			
ph_ter	mp_F						hardne	ss_as_caco3	_mgL			
specifi	icgravity						hardnes	ss_mgL				
specifi	icgravity_temp	F					resistivi	ity_ohm_cm				
tds_m	gL				155173		resistivi	ity_ohm_cm_	temp_			
tds_m	gL_180C						conduc	tivity				
chlorid	le_mgL				92820		conduc	tivity_temp_F	:			
sodiun	n_mgL						carbona	ate_mgL				
calciur	m_mgL						bicarbo	nate_mgL			122	
iron_m	ngL						sulfate_	_mgL			133	
barium	n_mgL						hydroxi	de_mgL				
magne	esium_mgL						h2s_m	gL				
potass	sium_mgL						co2_m	gL				
stronti	um_mgL						o2_mgl	L				
manga	anese_mgL						anionre	marks				
Remarks												



Trove Energy & Water, LLC - SEC SE Federal Project Area

# SOURCE ZONE

Lab ID

# **BONE SPRING**

							Lab ID		
API No	300253352	29					Sample		6681
Well Name	THYME AF	PY FEDE	RAL	002			Sample	No	
Location	ULSTR (	01 23	S 32	E	Lat / Long	32.33657	-103	8.62470	
	165	50 N	1650	Е			County	Lea	
Operator	(when sam	pled)							
		Field	RED T	ANK			Unit G		
San	nple Date		11/27/20	01	Analysis Date				
		Sample	Source			Denth (i	f known)		
		Water T				Deptil (i	r known)		
ph				6.1	alkalini	ty_as_caco3_	mal		
	mm F			0.1					
ph_ter						ss_as_caco3	_mg∟		
specifi	cgravity			1.15	hardne	ss_mgL			
specifi	cgravity_ten	np_F			resistiv	ity_ohm_cm			
tds_m	gL			172896	resistiv	ity_ohm_cm_	temp_		
tds_m	gL_180C				conduc	tivity			
chlorid	le_mgL			104976	conduc	tivity_temp_F	:		
sodiun	n_mgL				carbon	ate_mgL			
calciur	n_mgL			0	bicarbo	nate_mgL		781	
iron_m	ngL			0	sulfate_	_mgL		1150	
barium	n_mgL			0	hydroxi	de_mgL			
magne	esium_mgL			2025	h2s_m	gL		0	
potass	ium_mgL				co2_m	gL			
stronti	um_mgL				o2_mgl	L			
manga	anese_mgL				anionre	emarks			
Remarks									



Trove Energy & Water, LLC - SEC SE Federal Project Area

# SOURCE ZONE

Lab ID

## WOLFCAMP

API No	30025016	678							Sample	D	5096
Well Name	LAGUNA		AFE	DER	AL U	NIT 001			Sample	No	
Location	ULSTR	22	19	S	33	E	Lat / Long	32.64341	-103	3.64461	
		980	S		10	E			County	Lea	
Operator	(when sar	malad	N								
Operator	(when sai	Field		то	ΝΤΟ				Unit I		
San	nple Date		_				Analysis Date				
							-				
			ple S		e DS	Г		Depth (i	if known)		
		Wat	er Ty	р							
ph							alkalin	ity_as_caco3_	_mgL		
ph_ter	mp_F						hardne	ess_as_caco3	_mgL		
specifi	icgravity						hardne	ess_mgL			
specifi	icgravity_te	mp_F	:				resistiv	/ity_ohm_cm			
tds_m	gL					46915	resistiv	/ity_ohm_cm_	temp_		
tds_m	gL_180C						conduc	ctivity			
chlorid	le_mgL					27270	conduc	ctivity_temp_F	:		
sodiun	n_mgL						carbon	nate_mgL			
calciur	m_mgL						bicarbo	onate_mgL			714
iron_m	ngL						sulfate	_mgL		1	116
barium	n_mgL						hydrox	ide_mgL			
magne	esium_mgL	-					h2s_m	ıgL			
potass	sium_mgL						co2_m	ıgL			
stronti	um_mgL						o2_mg	ιL			
manga	anese_mgL	-					anionre	emarks			
Remarks											

Remarks



Trove Energy & Water, LLC - SEC SE Federal Project Area

# **DISPOSAL ZONE**

DEVONIAN

ONIAN								Lab ID		
API No	30025210	82						Sample		5720
Well Name	ANTELOF	PE RI	DGE	UNIT	003			Sample	No	
Location	ULSTR	34	23	S 34	Е	Lat / Long	32.25922	-103	.46068	
	19	980	S	1650	W			County	Lea	
Operator	(when sam	npled)	)							
		Field	ł	ANTEL	OPE RIDGI	Ξ		Unit K		
Sam	ple Date		1	1/14/196	7	Analysis Date				
		Sam	nple So	ource UI	NKNOWN		Depth (if	known)		
		Wat	er Typ	)						
ph					6.9	alkalinit	y_as_caco3_m	ngL		
ph_ten	np_F					hardnes	s_as_caco3_r	ngL		
specifi	cgravity					hardnes	s_mgL			
specifi	cgravity_te	mp_F				resistivi	ty_ohm_cm			
tds_mę	gL				80187	resistivi	ty_ohm_cm_te	emp_		
tds_mo	gL_180C					conduct	livity			
chlorid	e_mgL				47900	conduct	tivity_temp_F			
sodium	n_mgL					carbona	ate_mgL			
calciun	n_mgL					bicarbo	nate_mgL			476
iron_m	gL					sulfate_	mgL			900
barium	_mgL					hydroxi	de_mgL			
magne	sium_mgL					h2s_mg	ιL			
potass	ium_mgL					co2_mo	βL			
strontiu	um_mgL					o2_mgl	-			
manga	nese_mgL					anionre	marks			
Remarks										



# **Geologic Information**

The Devonian and Silurian consist of carbonates including light colored dolomite and chert intervals interspersed with some tight limestone intervals. Several thick sections of porous dolomite capable of taking water are believed present within the subject formations in the area. Depth control data was inferred from deep wells in the area and charted contours. If the base of Devonian and top of Silurian rocks come in as expected the well will only be drilled deep enough for adequate logging rathole.

At a proposed depth of 18,300' BGL (Below Ground Level) the well will TD approximately 1,800' below the estimated top of the Devonian. Mud logging through the interval will ensure the target interval remains in Devonian and Silurian. Once Devonian is determined, the casing shoe depth will be set at an approximate maximum upper depth of 16,500' BGL. Injection will occur through the resulting openhole interval.

TROVE ATTEMPTS TO BRACKET POTENTIAL INJECTION INTERVALS BASED ON OFFSETTING WELLS, AVAILABLE NEARBY LOGS AND CONTOURS PLOTS; IT IS EXPECTED THAT ONCE DRILLING COMMENCES AND MUDLOGGING RETURNS ARE EVALUATED, THE INTERVAL MAY BE ADJUSTED ACCORDINGLY TO EXPLOIT THE DESIRED FORMATION AS DESCRIBED. C-103 SUNDRY REPORTS WITH APPROPRIATE DATA WILL BE FILED WITH THE OCD AND FINALIZED WITH THE C-105 COMPLETION REPORT.

The Devonian is overlain by the Woodford Shale and Mississippian Lime and underlain by the Middle and Lower Ordovician; Simpson, McKee and Ellenburger.

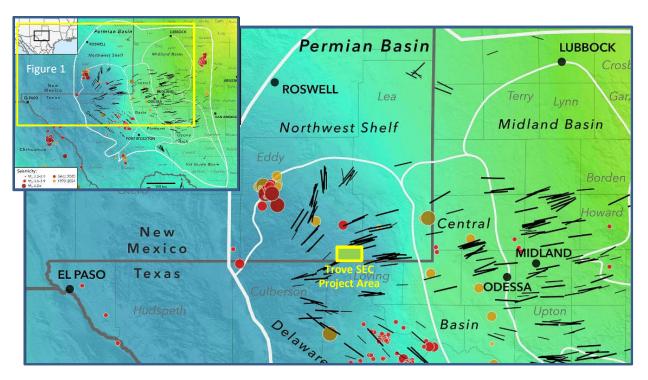
The SWD prospect is in the Carlsbad Basin. Fresh water in the area is generally available from the Rustler and Santa Rosa formations. State Engineer's records show water wells in the area with a depth to groundwater of 292 to 365 feet and an average depth of 317 feet.

There are 2 (two) water wells located within one mile of the proposed SWD. Representative analyses from the area are included herein and one or both of the subject wells will be sampled, analyzed and submitted to the division.

Geological Data

# EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT

Map Source: <u>State of stress in the Permian Basin, Texas and New Mexico: Implications for induced</u> <u>seismicity (Figure 1)</u>; Jens-Erik Lund Snee/ Mark Zoback, February 2018



**TROVE PSE PROJECT VICINITY** 

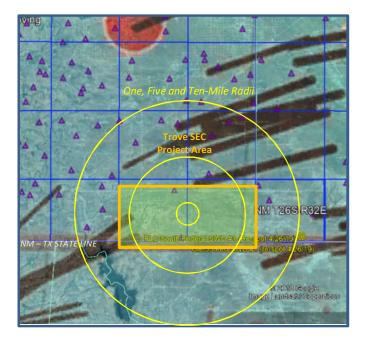


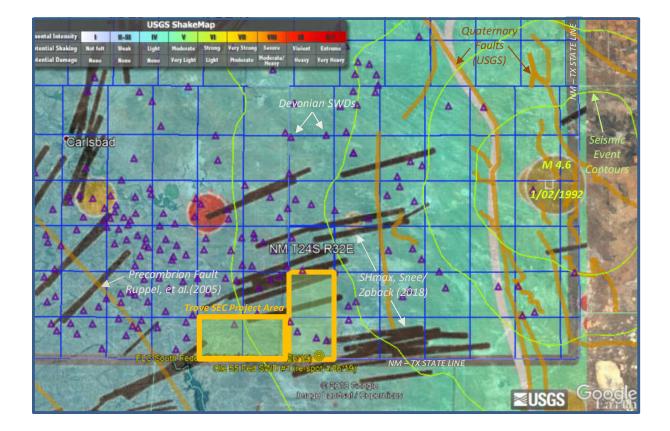
Figure 1. State of stress in the Permian Basin, Texas and New Mexico. Black lines are the measured orientations of the maximum horizontal stress (SHmax), with line length scaled by data quality. The colored background is an interpolation of measured relative principal stress magnitudes (faulting regime) expressed using the A parameter (see text for details) of Simpson (1997). Blue lines are fault traces known to have experienced normalsense offset within the past 1.6 Ma, from the USGS Quaternary Faults and Folds Database (Crone and Wheeler, 2000). The boundary between the Shawnee and Mazatzal basement domains is from Lund et al. (2015), and the Precambrian Grenville Front is from Thomas (2006). The Permian Basin boundary is from the U.S. Energy Information Administration, and the subbasin boundaries are from the Texas Bureau of Economic Geology Permian Basin Geological Synthesis Project. Earthquakes are from the USGS National Earthquake Information Center, the TexNet Seismic Monitoring Program, and Gan and Frohlich (2013). Focal mechanisms are from Saint Louis University (Herrmann et al., 2011).

**Geological Data** 

# EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT (cont.)

In the following map, a layer with USGS historical earthquake data is overlaid and, a layer showing lines to represent Precambrian faults as documented by Ruppel, et al. (2005). Finally, a layer showing all currently permitted SWDs completed or proposed to be completed in the Devonian (Silurian) formation.

The USGS earthquakes shown are well known to the area. The 2012 quake located approximately 13 miles due east of Loving is also shown (19.2 miles). This was perhaps the most significant of the area in recent years but was determined to not be related to oil and gas activity. The best known and largest in recent history was the 1992, 4.6 magnitude quake centered south of Eunice, NM (36.0 miles).



The Precambrian faults and existing Devonian SWDs are discussed in more detail on the next page.

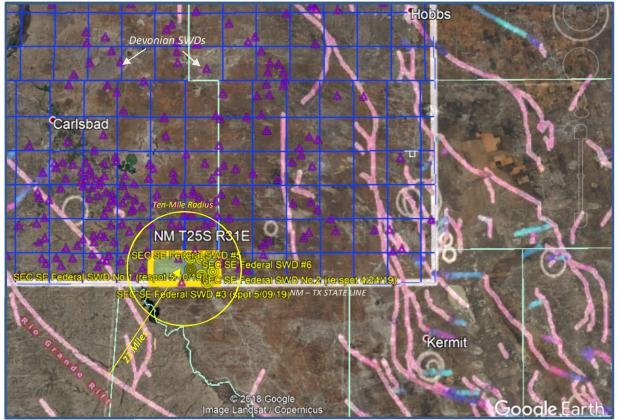
REGIONAL VIEW - DEVONIAN SWD LOCATIONS, PRECAMBRIAN FAULTS, SHmax, USGS MAGNITUDE

**Geological Data** 

# EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT (cont.)

The primary Precambrian faults in the area as documented by Ruppel, et al. (2005) is represented on this map by the thick, pink colored lines. The most significant of these is the fault associated with the Rio Grande Rift, running southeast to northwest and, runs adjacent to a portion of Hwy 285; a portion the associated fault which runs parallel approximately 15 miles northeast is also depicted below. The Trove SEC Project SWD Area is located some 23 miles from the fault. Other documented faults (USGS, 2000) are shown for eastern Lea County and extending into west Texas. Other Devonian SWDs in the area are also shown (small purple triangles) completed or proposed to be completed in the Devonian (Silurian) formation.

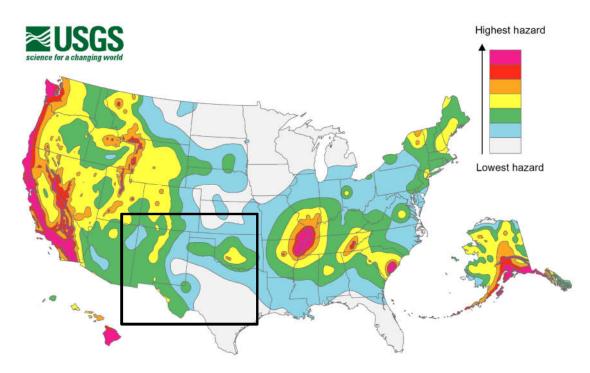
The previously referenced study by Snee and Zoback (shown on previous exhibits) evaluated the strike-slip probability using probabilistic FSP (Fault Slip Potential) analysis of known faults in the Permian Basin. The study predicts that the Precambrian fault shown here has less than a 10% probability of being critically stressed to the point of creating an induced seismicity event. The main reason for the low probability is due to the relationship of the strike of the fault to the regional S<sub>Hmax</sub> orientation; the proposed SWD being well removed from the area.



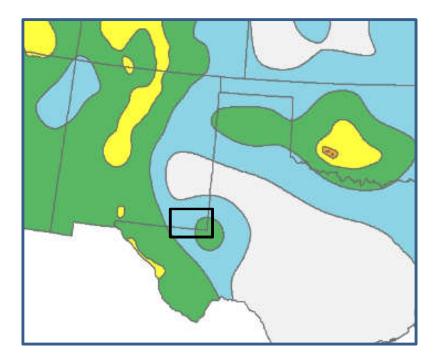
VICINITY - PERMITTED DEVONIAN SWDS, COMPOSITE FAULTS

Geological Data

EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT (cont.)



**2014 map data:** The USGS notes in its report that <u>fracking</u> may be to blame for a sizeable uptick in earthquakes in places like <u>Oklahoma</u>. "Some states have experienced increased seismicity in the past few years that may be associated with human activities such as the disposal of wastewater in deep wells," the report says. USGS hopes to use that data in future maps but it isn't included in this one. "Injection-induced earthquakes are challenging to incorporate into hazard models because they may not behave like natural earthquakes and their rates change based on man-made activities," the report says.



Geological Data

# EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT (cont.)

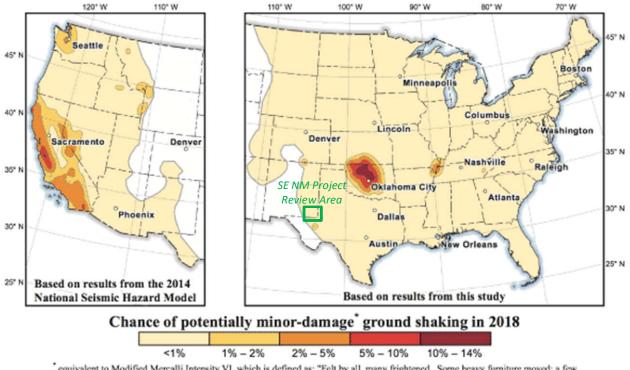
Δ 4 4 Magnitude Carlsbad Age Past hou Past day Older 25S R31E Kermit Quakes © 2018 Google Image Landset / Copanious **⊴USGS** Good at 32.121776° lon -103.741543° elev 3395 ft

USGS 2014 REGIONAL MAP DATA OVERLAY IN GOOGLE EARTH W/ HISTORICAL EARTHQUAKES

An updated USGS map for 2018 is on the next page. While methodology remained essentially the same according to USGS, the interpreted results and color-coding did have some modification. However, the subject area in southeast New Mexico on both maps remains very low and on the 2018 map, the area is assigned a value of <1% of "potentially minor-damage ground shaking".

# C-108 - Item VIII Geological Data

# EARTHQUAKE / SEISMIC INFORMATION SUPPLEMENT (cont.)



### USGS 2018 ONE-YEAR MODEL

\* equivalent to Modified Mercalli Intensity VI, which is defined as: "Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight."

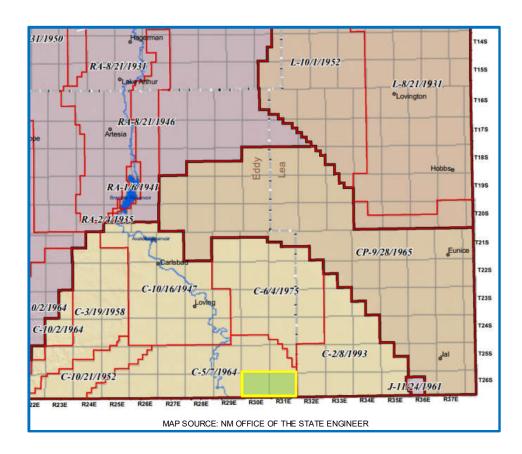
Map showing chance of damage from an earthquake in the Central and Eastern United States during 2018. Percent chances are represented as follows: pale yellow, less than 1 percent; dark yellow, 1 to 2 percent; orange, 2 to 5 percent; red, 5 to 10 percent; dark red, 10 to 12 percent. See Hazard from the western United States from the <u>2014 National Seismic Hazard Maps</u> (Petersen et al., 2014) for comparison.

The USGS has produced the 2018 one-year probabilistic seismic hazard forecast for the central and eastern United States from induced and natural earthquakes. For consistency, the updated 2018 forecast is developed using the same probabilistic seismicity-based methodology as applied in the two previous forecasts.

# Based on publicly available data for the subject area, it is reasonable to believe the risk of induced seismic activity due to disposal injection into this well is extremely low.

# C-108 - Item XI

Groundwater Basins - Water Column / Depth to Groundwater



The subject well is located within the Carlsbad Basin.

State Engineer's records show water wells in the area with a depth to groundwater of 292 to 365 feet and an average depth of 317 feet.

There are 2 water well (PODs) within a one-mile radius of the proposed SWD. A representative analysis is included with this application. Samples from subject wells will be analyzed and results submitted to the division.



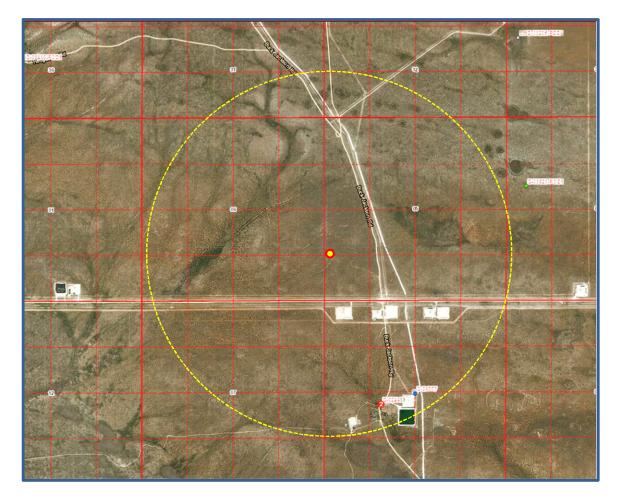
# C-108 Item XI

Water Wells Within One Mile

# SEC SE Federal SWD No.5 - Water Well Locator Map

# There are 2 water well (PODs) within a one-mile radius of the proposed SWD.

A representative analysis is included with this application. Samples from subject wells will be analyzed and results submitted to the division.



Data from NM Office of the State Engineer displayed in OSE-GIS System.



# C-108 ITEM XI – WATER WELLS IN AOR

Depth to Ground Water



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replace O=orphaned, C=the file is closed)	(quar						E 3=SW largest)		3 UTM in meters)		(In feel	i)
POD Number	POD Sub- Code basin	County	10,220	Q 16			Tws	Rng	x	Y			Water Column
C 01777	С	ED				08	26S	31E	613245	3547409* 🌍	325	300	25
C 02090	С	ED		4	4	01	26S	31E	620329	3548533* 🌍	350	335	15
C 02248	CUB	ED	1	2	3	08	26S	31E	612942	3547316* 🌍	300	292	8
C 02249	CUB	ED	1	2	3	08	26S	31E	612942	3547316* 🌍	300	292	8
C 03554 POD1	CUB	ED	2	1	4	01	26S	31E	620547	3549148 🌍	630	300	330
C 03639 POD1	CUB	ED	3	4	2	01	26S	31E	620168	3549279 🌍	700	365	335
C 04256 POD1	С	ED	4	4	2	01	26S	31E	620384	3549257 🌍	666	340	326
										Average Depth to	Water:	317 f	eet
										Minimun	n Depth:	292 f	eet
										Maximun	Depth:	365 f	eet

Record Count: 7

PLSS Search:

Township: 26S

Range: 31E

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

P.O. BOX 98 Ma	rtin Water Laborat	tories, Inc.		709 W. INDIANA
MIDLAND, TX. 79702				MIDLAND, TEXAS 79701
PHONE (432) 583-4521	RESULT OF WATER A	NALYSES		FAX (432) 682-8819
25 AND 10 AM	L	BORATORY NO.		12-156
TO:Mike Lamothe	S/	MPLE RECEIVED		-12-12
PO Box 1656, Monahans, TX 79756		ESULTS REPORTED_	1.	-19-12
• • • • • • • • • • • • • • • • • • •		PO	-	
COMPANY Monachem, Inc.	LEA	SE EOC	j	
FIELD OR POOL				
SECTION BLOCK SURVEY _8-26S-31	ECOUNTYKee	EddySTATE	N	IM
SOURCE OF SAMPLE AND DATE TAKEN: NO. 1 Ross Draw water supply well - S	ample #1 1-10-12			
NO. 2 Ross Draw water supply well - S				
		······································		
NO.3				
NO. 4				
		PROPERTIES		
CHEM	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60* F.	1.0025	1.0025		
pH When Sampled	1.0025	1.0025		
pH When Received	8,30	8.30		
Bicarbonate as HCO,	176	171		
Supersaturation as CaCO,				
Undersaturation as CaCO,			10 M	+
Total Hardness as CaCO,	172	204		
Calcium as Ca	59	53		
Magnesium as Mg	6	17		
Sodium and/or Potassium	42	. 33		
Sulfate as SO,	85	102		1
Chloride as CI	21	21		
iron as Fe	0.2	0.3		
Barium as Ba	0	0		
Turbidity, Electric				
Color as PI				
Total Solids, Calculated	389 -	397		
Temperature *F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen.				
Hydrogen Sulfide	0.0	0.0		
Resistivity, ohms/m at 77° F.	22.900	21.300		
Suspended Oll		<u> </u>		
Filtrable Solids as mg/l				
Volume Filtered, mi				
	1	<u>l</u>		
	Results Reported As Milligra		1 4	and the disc local
Additional Determinations And Remarks	The undersigned co	ertifies the above to	be true and co	rrect to the best
of his knowledge and belief.	ar market an an ar a			
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		- fr		
Form No. 3	8	ALLO	in the second	

Greg Ogden, B.S.

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LATHAM PHINTING CO. - 333-1292

Fresh Water Analysis: Baker Ranch Water Well 1-26S-31E

Chlorides: 399 ppm Total Dissolved Solids: 746 ppm



5-1; TWP- 205; Ro 3IE.

Date: 22-Apr-15

. 2788 West County Road, Hobbs NM 88240 Phone (575) 392-5556 Fax (575) 392-7307

Gamptieny		e!!!t.amie	Ça	mely.	State:
Mewbourne	. 6	aker #1	L	.66	New Mazico
Sample Source	Weiber	d	Sample #		1
Formation			Depth		
Specific Granity	1.000		\$G @ \$u	60 °F clides	1_002
Temperature (*F)	70		Reducing A	gents	
Cations					
Socium (Cale)		in Mg/L	146	b PPM	165
Calcium		in MgA	68	in PPM	68
Magnosium		In Mo/L	29	in PPM	29
Schueble (mn (FE2)		In MgA	0.0	in PPM	¢.
Aniona	<u> </u>	•			
Chlorides		in MgA.	400	in PPM	399
Sulfates		in Mg/L	70	in PPM	70
Bicarbonates		in Mg/L	16	In PPM	18
Total Hardness (aa CaCO3)		In MpA	290	in PPM	289
Total Dissolved Solids (Calc)		in MgA.	748	in PPM	746
Equivalent NaCl Concentratio	n	in Mg/L	728	in PPM	725
Scaling Tendencies					
Calcium Carbonate Index					198
	nois / 500,0	00 - 1,000,00	0 Penalbin / Apaulo 1	,000,000 Press	
Celcium Sutiste (Gyp) Index			••••••••••••••••••••••••••••••••••••••		4,750
Buton 500,000 Plant "This Calculation is only on anymu			Possible / Above 10		

Remarka re=5.079f

# **C-108 ITEM X**

# LOGS and AVAILABLE TEST DATA

A Standard Suite of Logs will be run after drilling the well and submitted to the Division.

# C-108 ITEM XII

Geologic Affirmation

We have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and any underground sources of drinking water.

Ben Stone, Partner SOS Consulting, LLC

Project: Trove Energy and Water, LLC SEC SE Project Area Reviewed 4/26/2019

# **C-108 ITEM XIII – PROOF OF NOTIFICATION**

# IDENTIFICATION AND NOTIFICATION OF INTERESTED PARTIES

# **Exhibits for Section**

Affected Parties Map

List of Interested Parties

Notification Letter to Interested Parties

Proof of Certified Mailing

**Published Legal Notice** 

# SEC SE Federal SWD Well No.5 – Affected Parties Plat

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)

89 K)-07	a BONNSE (J)	SESE HO	L 3	NESW (K)	NWSE (J)	NESE (1)	(0ASM 163	NEBW (K)	Wise (3)	NESE	NWSW (L)	NESW (K)
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ENW C)	NWNE (B)	NILLORDERSZA	L1	NENW (C)	NYONE (B)	NEME (A)	ниллү (D)	NENW (C)	10-0 (B)	(A)	WANW (D)	NENW (C)
ENW F)	SWNE (G) 01	SENE (H)	/T	.1	500E (G) 6 121 0	sene (н)	(78) SMANN (E)	SERW (F)	0000E (G) 6]	SEME (HI)	SANAV (E)	SENW (F)
ESW K)	NWSE (J)	NESE (1)		NESW (K)	NAMSE (J)	NOSE (1)	низм (С)	NEBW (K)	NWSE (J)	NESE (1)	"""" T	.6 <sup>****</sup>
ESW N)	SWSE 30-015-37030	SESE (P)	1.4	SESW (N)	SWSE (0)	SEE (P)	SWSW (M)	SESW (N)	SWSE (0) 10-015-4	SESE (P)	500900 (M)	SESW (N) 30-015-39847
ENW C)	NWNE (B)	NENE (A)	LI	NEHW (C)	NMINE (B)	NENE (A)	30-015-4226430- 5-39248 30-01 NWNW (D)	015-39171 3 3 - 85566 NENW (C-)	30-015 NWNE (B)	40564 (A) 31E	NWNW (D)	NENW (C)
ENW F)	008833ZA	SENE (H)	2	SENN (F)	50002 <sup>3004</sup> (G)	SENE (H)	SWAWY (E)	SENW (F)	(6)	.2	SWWW (E)	SENW (F)
esw K)	NWSE (J)	NESE (1)	13	NESHATIA (K)	.4	NESE (1)	NASW (L)	T.3	NWSE 30-015-2876	NESE (1)	NWSW (L)	NESW (K)
ESW N) NMND		30-0 <u>15-0</u> 4772 (P)	L4	SESW (N)	6) (0)	5858 (P)	SWSW (M)	5050 (N)	SWSE (0)	SESE (P)	30-015-05860 (Å)	SESW (N)
ENW C)	(B)	NENE (A)	L 1	NEHW (C)	N994E (B)	NENE (A)	NAMAY (D)	NENW (C)	NWNE (B) 7	NENE (A)	simitir (D)	NENW. (C1 VD-the
ENW F)	SWNE (G)	SENE (H)	L2	SENW (f')	SWNE (G)	SENE (H)	S////// (E)	SENW (F)	SWNE (G)	SENE (H)	30 <u>5015</u> 30485 (157	SENU (F)
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SOS Consulting, LLC

# C-108 ITEM XIII – PROOF OF NOTIFICATION AFFECTED PARTIES LIST

SOS Consulting is providing electronic delivery of C-108 applications. ALL APPLICABLE AFFECTED PARTIES ARE PROVIDED A LINK IN THE NOTICE LETTER TO A SECURE SOS/ CITRIX SHAREFILE<sup>®</sup> SITE TO VIEW AND DOWNLOAD A FULL COPY OF THE SUBJECT C-108 APPLICATION IN PDF FORMAT.

"AFFECTED PERSON" MEANS THE DIVISION DESIGNATED OPERATOR; IN THE ABSENCE OF AN OPERATOR, A LESSEE WHOSE INTEREST IS EVIDENCE 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.

### SURFACE OWNER

1 U.S. DEPARTMENT OF INTERIOR Bureau of Land Management Oil & Gas Division 620 E. Greene St. Carlsbad, NM 88220 Certified: 7018 2290 0001 2038 6056

### OFFSET MINERALS LESSEES and OPERATORS (All Notified via USPS Certified Mail)

### BLM Lease NMNM-0002790 (T.1 on map) Lessee

2 CONOCOPHILLIPS COMPANY Attn: Hannah Wasserman P.O. Box 2197 Houston, TX 77252-2197 Certified: 7018 2290 0001 2038 6063

### BLM Lease NMNM-04380001, 059060 and Fee Lease (T.2, T.3 and T.4 on map) Lessee & Operator

EOG RESOURCES, INC.
 Attn: Chuck Moran
 5509 Champions Drive
 Midland, TX 79706
 Certified: 7018 2290 0001 2038 6070

### BLM Lease NMLC-0069514A, 0069514B, (T.5 and T.6 on map )

Lessees CTV O&G NM, LLC KEYSTONE OG NM LLC LMBI OG NM LLC SRBI OG NM LLC THRU LINE OG NM LLC 201 Main Street, Ste.2700 Fort Worth, TX 76102

### Operators

4 XTO PERMIAN OPERATING, LLC 6401 Holiday Hill Rd., Bldg.5 Midland, TX 79707 Certified: 7018 2290 0001 2038 6087

# C-108 ITEM XIII – PROOF OF NOTIFICATION AFFECTED PARTIES LIST (cont.)

BLM Lease NMLC-0069514A, 0069514B, (T.5 and T.6 on map - cont.)

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

OFFSET MINERALS OWNERS (Notified via USPS Certified Mail)

U.S. DEPARTMENT OF INTERIOR Bureau of Land Management Oil & Gas Division 620 E. Greene St. Carlsbad, NM 88220

### REGULATORY

NEW MEXICO OIL CONSERVATION DIVISION 1220 S. St. Francis Dr. Santa Fe, NM 87505 (FedEx'ed original and copy)

NEW MEXICO OIL CONSERVATION DIVISION 811 South First St. Artesia, NM 88210 (FedEx'ed copy)

SEC SE #5



June 17, 2019

# **NOTIFICATION TO INTERESTED PARTIES** via U.S. Certified Mail – Return Receipt Requested

To Whom It May Concern:

Trove Energy and Water, LLC, Hobbs, New Mexico, is preparing applications to the New Mexico Oil Conservation Division to drill and complete for salt water disposal the SEC SE Federal SWD Well No.5. The proposed commercial operation will be for produced water disposal from area operators. As indicated in the notice below, the well will be located in Section 5, Township 26 South, Range 31 East in Eddy County, New Mexico.

The published notice states that the interval will be from 16,500 feet to 18,300 feet into the Devonian and Silurian formations.

Following is the notice published in the Artesia Daily Press, Artesia, New Mexico on or about June 18, 2019.

### LEGAL NOTICE

Trove Energy and Water, LLC, 1919 North Turner, Hobbs, NM 88240, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the SEC SE Federal SWD Well No.5 will be located 1470' FSL and 150' FWL, Section 5, Township 26 South, Range 31 East, Eddy County, New Mexico; approximately 18.7 miles southeast of Malaga, NM.

Produced water from area production will be commercially disposed into the Devonian, Silurian and Fusselman formations at a maximum interval depth of 16,500' to 18,300' at a maximum surface pressure of 3300 psi and a rate limited only by such pressure. Mudlogging and e-logs will confirm final interval depths.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice or the OCD receive date, whichever is later. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email info@sosconsulting.us.

You have been identified as a party who may be interested as an offset lessee or operator.

<u>You are entitled to a full copy of the application</u>. A full copy in PDF format will be posted on the SOS Consulting *ShareFile* site and available for future download (posting may lag behind the notice effort).

Use the URL link: <u>https://sosconsulting.sharefile.com/d-sefe7cfc65d34dd1a</u> (Please Note: The ShareFile service is powered by Citrix Systems and is completely secure.\*)

The link to this file will be active for 60 days from the date of this letter. Your company can access and download the file a maximum of five (5) times. (One copy may be downloaded and shared as needed among your company.)

If preferred, you may call SOS Consulting, LLC at 903-488-9850, or email info@sosconsulting.us, and the same PDF file copy will be expedited to you via email.

Please use a subject like "SEC SE Fed SWD #5 June 2019 PDF Copy Request".

Thank you for your attention in this matter.

Best regards,

Sen Jon

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

Cc: Application File

SOS Consulting is committed to providing superior quality work using technology to assist clients and affected parties in obtaining the documentation required. SOS will continue to utilize methods which are less energy and resource intensive including, the reduction of paper copies.

We hope you'll partner with us and appreciate these efforts.

\* You will be asked for your email, name and company. This will not be used by anyone except keeping track of the file downloads. You will not be solicited by SOS or anyone else. Data is stored on Citrix Systems servers only.





# C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)





2 (9 inch) refrigerated pie

3 fresh peaches - peeled,

pint fresh strawberries,

1/2 pint fresh blueberries

pitted, and sliced

crusts

iced

elish!

The classifieds are loaded with yummy job prospects Subserice today and taken bite of opportunity.

ARTESIA DAILY PRESS



Directions

Preheat oven to 450 degrees F (350 degrees C). Lay out one pie erust on a baking sheet lined with parchment or on a baking stone, leaving room for the secord pie crust next to it. Nix together the siced peaches with half the blueberries, 2 tablespoons of the flour and 2 tablespoons of the sugar in a bowl. Pour over one pie crust leaving a t-inch border. Fold up the uncovered border over the edge of the fruit and pinch into pleats. Sprinkle the crust and fruit filling with 3 tablespoons of turbinadio (or raw) sugar. Lay out the second pie crust on the baking sheet. Nix together the sliced strawberries, the rest of the blueberries, a tablespoons of flour and a tablespoons of sugar in the bowl. Pour over the second pie crust and form the galette the same as the first. Sprinkle with 3 table-spoons of turbinado sugar. Bake in preheated oven until crust is lightly browned, 12 to 14 minutes. Sprinkle with more sugar if desired. Serve warm or at room temperature.

### Legal Notice

NOTICE is hereby given that on April 18, 2019, Seven Rivers Farms, LLC; and Seven Rivers Fresh Water LLC, do Atkins Engineering Associates, Inc., 2904 West Second Street, Roswell, NM 88201, filed Application Number RA-1149 with the STATE ENGINEER, under OSE File RA-3200 et al, for a permit to permanently Change an Existing Water Right, seeking authori-zation to use an additional artesian Groundwater Point of Diversion. The requested existing well, RA-1149, located in a portion of the NW-MNEVAEVA for Section 27, Township 19 South, Range 26 East, N.M.P.M., would be used to supplement the diversion of up to 150.00 acre-teet per annum (consumptive use) of artesian groundwater for commercial purposes in all sections located within Township 17 South through Township 22 South, and Range 28 East, N.M.P.M.

The subject well would su	pplement the following	ng existing artesia	an points of diver	sion:
Wells	Ŝubdivision	Section	Township	Range
RA-3200-S-4	NW4NW4NE4	7	20 S.	26 E.
RA-3200-S-5	NE¼SW¼SE¼	28	19 S.	26 E.
RA-3200-S-6	NW4NE4SE4	33	19 S.	26 E.
RA-3200-POD8	NE¼NW¼SE¼	6	20 S.	26 E.
RA-3200-POD9	NW¼SW¼SE¼	6	20 S.	26 E.
RA-3200-POD10	SW14SW14NE14	6	20 S.	26 E.
RA-3200-S (replacement)	SE4SE4SW4	6	20 S.	26 E.
RA-10917	NW¼SE¼SW¼	28	19 S.	26 E.
RA-10929	SW4NW4NE4	7	20 S.	26 E.
RA-10949	SW14NW14NE14	6	20 S.	26 E.
RA-10973	SE14SW14NW14	33	19 S.	26 E.

Emergency authorization for the use of well RA-1149 under NMSA 72-12-24 has been re-quested. Partial approval of the request has been granted.

The proposed supplemental point of diversion is located approximately one-half mile north-east of Lakewood, and one-quarter mile east of Lake Road (CR-34), in Eddy County, New Mexico.

Mexico. Any person, firm or corporation or other entity having standing to file objections or protests shall do so in writing (legible, signed, and include the writer's complete name and mailing address). The objection to the approval of the application: (1) if impairment, you must specifi-ially identify your water rights, and/or (2) if public welfare or conservation of water within the State of New Mexico, you must show you will be substantially and specifically affected. The written protest must be filed, in triplicate, with the State Engineer, 1900 West Second Street, Roswell, New Mexico 88201, within 10 days after the date of the last publication of user end Facsimile's (faxes) will be accepted as a valid protest as long as the triplicate hard copy is sent within 24 hours of the facsimile. Mailing postmark will be used to validate the 24-hour peri-od. Protests can be faxed to 375-623-8359. If no valid protest or objection is filed, the State Engineer will evaluate the application in accordance with Sections 72-2-16, 72-5-6 and 72-12-3.

Published in the Artesia Daily Press, Artesia, N.M., June 18, 25, July 2, 2019 Legal No. 25169.

	_	7 PM	Prime Tin	8 PM	8:30	9 PM	9:30	10 PM	10:30	11 PN
BROA	DC	AST STATIC								
KLUZ	2	Copa Oro 2019 Secrets of the Dea			el Gupo D de la Copa e (2)17, Documenta-		Creative Living		Vectnos 392 bjectives of neo-Nazi	Vecinos III
KENW	3	Tomb" Search for C	leopatra's lost tomb.	ry) Narrated by Glen	in Cose. Premiere.	Tou Should Know	With Sheryl Borden	group.	ojectives of neo-wazi	Company (N)
KOAT	7	The Conners David	American House-	Modern Family "	The Goldbergs "8-	Modern Family	black-ish "Purple Bain" 150	Action 7 News Live	Jimmy Kimmel Live	Joel McHale; E
	-	surprises Darlene.	ent "Auditions 4" Variet	Love a Parade*	BitGoldbergs"	"Kiss and Tell" B Songland "Jonas Br		at 10 (N) BE Eyewitness News 4	Gilpin; Santana. (N) The Tonight Show S	
ков	8			Second Second		pitch to the Jonas Br	others. (N) 🗵	at 10 (N)	Willie Nelson perform	s; Adam DeVine
KASA	9	CONMEBOL Cope /	América 2019 Drasil, el Copa América cuando el	l anfilitión, va por ou oe ofrente a Venezuela	Anérica Brasil 2019	Caso cerrado "Vien	tre prostituto, Mata	At rojo vivo - Edición nocturna	Titulares y más	
квім	10	NCIS "Baars and Cu	ubs" Jimmy is asked to			Blood & Treasure A	search for a lost	KRQE News 13 at	The Late Show With	Stephen Colber
KBIM	10	tamper with evidence	2. 🗮	The 100 "Neverming		train car. (N) BE	Mom Dinner with Vi-	10 (N) Two and a Half	Matthews; Jessie Buck Two and a Half	key performs. (N Seinfeld "The
KWBQ	11	bold decision.	bgue Cisco makes a	es up to her. (N) HE	or Garke's past catch-	Sponge Bath"	olet's future in-law.	Men BE	Men 10	Pen"
GLC		Light of the South		Light of the Southv		<b>Creation Magazine</b>		Being Your Best		On the Walls
KASY		Chicago P.D. "Emo 100 Latinos Dijeror		Chicago P.D. "Rom Loquito por ti	ember the Devil*	News 13 KASY Tengo talento, muc	News 13 on KASY	Funny You Ask Noches con Platani	News 13 on KASY	Pawn Stars Alarma TV
KCHF		Day of Discovery		God Answers Pray	er	Born to Be Free	James Robison	CBN Newswatch	Issues & Answers	
KTEL	22	Andy Griffith Show	Andy Griffith Show		Grien Acres	Hogan's Heroes	Hogan's Heroes	Carol Eurnett Show		1
		TATIONS								
QVC EWTN		Shawn's Beauty Se EWTN News Night		Scripture and Trad	itior	Carpenter's Shop	Women of Grace	The Sandal Shop (M Daily Mass - Olam I		Westmore Be Mother Angel
GALAP	14	La taxista		Nosotros los guapos	s Nosotros los guapos	Nosotros los guapos	Nosotros los guapos	Nosotros los guapos	Nosotros los guapos	Maria de Tode
HSN		Diane Gilman Fast			ories Clearance (N)	Fashion & Accesso	ries Clearance (N)	Home Solutions (N)		Proform Fitne
C-SPAN WGN-A	20	Politics and Public Cops	Cops	Pure Anna receives	an aller of marriage	Married With	Married With	Politics and Public Married With	Policy Today Married With	Married Wi
WEA	23	Strangest Weather	on Earth "Ice Tsunami"	Strangest Weather			e "Buried in the Snow"	SOS: How to Surviv		SOS: How to S
NBCSN	25	American Ninja Wa	arrior (Part 1 of 2)	American Ninja Wa		American Ninja Wa	rrior "Dallas Finals"	American Ninja Wa	rrior "Dallas Finals"	Ninja Warrior
UKIDS MTV		Puss in Boots Ridiculousness	Dragons: Riders Ridiculousness	Home: Adv. Ridiculousness	Get Out of My Room Ridiculousness	Ridiculousness	Ridiculousness	All Hail King Ridiculousness	Inspector Gadget Ridiculousness	Mr. Peabody 2019 MTV Aw
FNG	28	Hamily (N)	Indiculousiless	The Ingraham Angl	le (h)		Will Stamon Bream			Hermity
FXX		Family Guy	Family Guy	Family Guy	Family Guy	Archer	Archer	Archer	Archer	It's Always Si
TOON	30	Bob's Burgers Cuomo Prime Time	Bob's Burgers	Family Guy CNN Tonight With	Family Guy	Rick and Morty CNN Tonight With	Robot Chicken	Tigtone Anderson Cooper 3	Awesome Show	American Da Cuomo Prime
DISN	32	Coop & Cami	Sydney to the Max	Amphibia	Big City Greens	Sydney to the Max		Bunk'd	Bunk'd	Jessie
CNBC	33	Shark Tank An eleg	gant lighting solution.	The Profit "Pacific H	losptality"	The Profit "Handi Pr	oducts"	The Profit "Rayjus"	100000	The Profit "Q
ESPN ESPN2	34	2019 College Wo Good Game	Good Game	SportsCenter (N) (L Good Game	.ive) Gcod Game	SportsCenter (N) (L	ive) (UFC Fight Flashback	SportsCenter With S	cott Van Pelt (N) (Live)	SportsCenter Mock Draft
ESPNZ		College Basketball		Good dame		From Feb. 10, 2018.	quro rigiti riasnoaca	College Basketball	From Dec. 5, 2017.	MOCK DIAIL
E!	37	<b>Chrisley Knows Bes</b>	at Chrisley Knows Best	t E! News Kelly Ripa	and Mark Consuelos.	*** Legally Blonde	(2001, Comedy) Ree	se Withersooon, Luke	Wilson.	Legally Blond
APL	38	Lone Star Law: Big Lies, Crimes & Vid		Lone Star Law "Bac Forensic Files	Forensic Files	Lone Star Law "Fav Forensic Files	Forensic Files	Lone Star Law: Big	ger and Better "A Prison of His Own"	Lone Star Law
FX			3) Ethan Hawke, Lena				nan uncovers a dark s			Pose "Worth I
TNT	41	Animal Kingdom "	Tank* (N) (DVS)	Animal Kingdom "T	Tank' (DVS)	** Four Brothers (	2005, Crime Drama) M	lark Wahlberg, Tyresi		NCIS: New Or
LIFE		Dance Moms "Cho	ose Wisely" (N) (2012, Musical Corried	Cheerleader Gener			Dance Moms	Dance Moms	ania (2012) (CADi Va	Dance Moms
AETV		The First 48: Teens			life (r Parole "Otis" (N)		's big case is decided. r of three is executed.			The First 48:
TBS	45	Big Bang Theory	Big Bang Theory	Big Bang Theory	The Detour (N)	Conan "Sean Penn"	The Detour	Seinfeld	Conan "Sean Penn"	New Girl "Bull
COMEDY	46	The Office Jan sue	s Dunder Mifflin.	The Office	The Office	The Office	The Office	Drunk History	Drunk History	Drunk History
NATGEO VH1		Hard Time: Locked Black Ink Crew: Ch		Hard Time: Locked Black Ink Crew: Ch		Hard Time: Locked Black lok Crew: Chi	cago "Team Bonding"	Hard Time: Locked Black lok Craw: Chi		Monster Fish
CMTV	50	Last Man Standing	Roseanne	Roseanne	Roseanne	Married With	Married With	Married With	Married With	Married Wit
TRAV	51	Andy Griffith Show Expedition Unknow	Andy Griffith Show	Andy Griffith Show America Unearthed		Everybody Raymond America Unearthed	Everybody Raymond	Everybody Loves R America Unearthed		Two and a Ha Expedition Un
TLC	53	Say Yes, Dress	Say Yes, Dress	Sweet Home Sextu		Outdaughtered (N)		Outdaughtered "Ou		Sextuplets
PARMT	54	+++ John Wick (2)	014) Keanu Reeves.	Ink Master "A Storm	n Is Brewin" (N)	*** John Wick: Cl	hapter 2 (2017, Action	Keanu Reeves, Con	nmon, Laurence Fishb	uma.
SC			lell Hath No Fury" (N)	Guardians of the G Smarter Than			gend of the Wizard"			Guardians-Gl Friends
NIKP	1.11	The Loud House *** Taken (2008)	Liam Neeson. Slavers				<ol> <li>Voices of Ben Stille nipes, Robert Downey</li> </ol>		SpongeBob caught up in another	Lodge 49 Liz s
AMC	57	kidnap the daughter	of a former spy.	lugitive case.	eres de la seconde de la seconda de la s			· · · · · · · · · · · · · · · · · · ·		her day off at v
USA truTV	58	WWE SmackDown		Chrisley Knows Bes Paid-Torpey		Modern Family Impractical Jokers	Modern Family	Modern Family Impractical Jokers	Modern Family	Chrisley Know Impractical Jo
NELNET	60	Top 10		Top 10		NEL Total Access		Top 10		Top 10
-	61	** Model Shop (1	1969, Drama) Anouk	*** Bob & Carol &	Tel & Alice (1969, 0 take a cue from the se	Comedy) Natalie Woo	d, Robert Culp, Elliott	++1 Staircase (1969	), Drama) Richard Bur kuals share a thriving	ton, Rex Harris
TCM			and the Order of the I			Futurama	Futurama	Futurana	Futurama	Futurama
TCM		*** The Gift (201:	5, Suspense) Jason Ba	ateman, Rebecca Hall	Double Mommy (20	16, Suspense) Morgan	Denreder. A young	*** The Gift (2015	Suspense) Jason Ba	teman, Rebecc
SYFY	-	An old acquaintance	e causes trouble for a r			iend have to protect h			causes trouble for a r	
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SYFY LIFEMOV FOOD	64	Chopped 'Holy Bol		Chopped "Bowled C Cox Horsemanshin				An PhD	Cattlemen to Cottle	men
SYFY LIFEMOV FOOD RFDTV	64 65		ogna!" (N)	Cox Horsemanship		America Horseback	Rural Evening News	Ag PhD	Cattlemen to Cattle	Tom & Jerry
SYFY LIFEMOV FOOD RFDTV BOOM	64 65 66	Chopped "Holy Bol Cattle-Cattle Tom and Jerry Love, Take Two (2)	ognal" (N) JAGER PRO (N) Tom and Jerry 019, Romance) Heath-	Cox Horsemanship Care Bears: Unlock The Golden Girls	Ken McNabb New Looney Tunes The Golden Girls	America Horseback	Rural Evening News	Ag PhD The Golden Girls	Cattlemen to Cattle	Tom & Jerry Frasier "Mother
SYFY LIFEMOV FOOD RFDTV	64 65 66 67	Chopped "Holy Bol Cattle-Cattle Tom and Jerry	ogna!" (N) JAGER PRO (N) Tom and Jerry 019, Romance) Heath- elius Smith Jr.,	Cox Horsemanship Care Bears: Unlock The Golden Girls "Love Me Tender"	Ken McNabb K New Looney Tunes	America Horseback Looney Tunes "Sou The Golden Girls	Rural Evening News	The Golden Girls	The Golden Girls	

an VELL, THEN LET'S PRETENC WE'RE TALKING ABOUT SOMETHING WORTHWHILE T US ST2 Y CAR I ASKED OUR NIECE, BIZZY BUZZ BUZZ, TH' LI'L CLEANIN' MACHINE, TO TAKE CARE OF IT !!/ | CLE WHEW !! THAT WUZ QUITE A PARTY WE THREW T'CELEBRATE BARNEY GOOGLE'S BIRFDAY !! OUR HOUSE IS A MESS, AN' I'M TOO TIRED TO I'LL THAT'S OKAY. MAW

### Legal Notice

Trove Energy and Water, LLC, 1919 North Turner, Hobbs NM 88240, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seek-Inject) with the New Mexico Oil Conservation Division seek-ing administrative approval for a salt water disposal well. The proposed well, the SEC SE Federal SWD Well No.5 will be located 1470' FSL and 150' FWL, Section 5, Township 26 South, Range 31 East, Eddy County, New Mexico; approximately 18.7 miles southeast of Malaga, NM.

Produced water from area production will be commercially disposed into the Devontan, Silur an and Fusselman forma-tions at a maximum interval depth of 16,500° to 18,300° at a maximum surface pressure of 3300 psi and a rate limited onl by such pressure. Mudlogging and e-logs will confirm final interval depths.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 SL Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice or the OCD receive date, whichever is later. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC (903)488-9850 or, email info@sosconsulting.us.

Published in the Artesia Daily Press, Artesia, N.M., June 18, 2019 Legal No. 25170.

### legal 1 SOUTHEAST NM COMMUNITY ACTION CORPORATION HEAD START FROGRAM Request for Proposals

Southeast NM Community Action Corporation Head Start Program is soliciting Sealed Proposals to repair the floor in the multipurpose room at the Artesia Head Start center

located at 615 Kemp St Artesia New Mexico.

Sealed Proposals must be submitted to SNMCAC Head Star Program, PO Box 37, Artesia, NN. or delivered to Artesia Head Start 504 Gage, Artesia, NM, Please mark on the outsid of the envelope Attention: Mary Perry. Proposals must be re ceived by June 25, 2019 by 1:00 MST. A site survey is require before submitting proposal. An appointment to view site m be scheduled by contacting Buddy Simmons 575-703-0782 of Mary Perry 575-748-1141.

Proposals must include wage rate requirements as stipulated in the New Mexico Procurement Code and by the Davis-Ba-con wage determination, it applicable in responding to this request. Iotal price must include installation, materials, labo and New Mexico Gross Receipt Taxes.

Product and Labor Warranty must be included in proposals

The SNMCAC Head Start Program reserves the right to reje any or all quotes or to waive any technicality.

Mary A. Perry, Head Start Director Southeast NM Community Action Corporation Head Start Program P.O. Box 37 504 W. Gage Artesia, NM 88211-0037 (575) 748-1141

Published in the Artesia Daily Press, Artesia, N.M., June 18, 19, 2019 Legal No. 25171.

# **Affidavit of Publication**

### No.

25170

State of New Mexico

being duly sworn sayes that he is the

County of Eddy:

### Danny Scott

Publisher

of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

### Legal Ad

was published in a regular and entire issue of the said
Artesia Daily Press, a daily newspaper duly qualified
for that purpose within the meaning of Chapter 167 of
the 1937 Session Laws of the state of New Mexico for
Consecutive weeks/day on the same

day as follows:

First Publication	June 18, 2019	
Second Publication		
Third Publication		
Fourth Publication		
Fifth Publication		
Sixth Publication		
Seventh Publication		
Subscribed and sworn be	efore me this	
18th day of	June	2019
1912		
Katia	to Remine	
Latisha Ro	mine	

Latisha Romine Notary Public, Eddy County, New Mexico

# **Copy of Publication:**

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