

7/11/2018

DATE <u>4/25/2018</u>	SUSPENSE	ENGINEER	LOGGED IN <u>6/23/2018</u>	TYPE <u>SwD</u>	OTHER <u>DMA 18/17737365</u>
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ABOVE THIS LINE FOR DIVISION USE ONLY

1053-B

### NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



## ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

#### Application Acronyms:

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

#### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication  
 NSL  NSP  SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement  
 DHC  CTB  PLC  PC  OLS  OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX  PMX  SWD  IPI  EOR  PPR

- [D] Other: Specify \_\_\_\_\_

SwD - ~~7/18~~

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TSA THH SwD #1  
30-045-3342

SwD, Entrod  
mesuende

9/6/18

#### [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

- [A]  Working, Royalty or Overriding Royalty Interest Owners
- [B]  Offset Operators, Leaseholders or Surface Owner
- [C]  Application is One Which Requires Published Legal Notice
- [D]  Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F]  Waivers are Attached

#### [3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also 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.

Justin Davis  
Print or Type Name

[Signature]  
Signature

VP - Operations  
Title

7/11/18  
Date

justin.davis@jnpresources.com  
e-mail Address

**APPLICATION FOR AUTHORIZATION TO INJECT**

I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance X Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? \_\_\_\_\_ Yes \_\_\_\_\_ No

II. OPERATOR: JUNIPER RESOURCES EXPLORATION COMPANY, LLC  
ADDRESS: 3333 LEE PARKWAY, STE 210 DALLAS, TX 75219  
CONTACT PARTY: AMANDA PALMER PHONE: 214-443-0001

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? \_\_\_\_\_ Yes X No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:  
1. Proposed average and maximum daily rate and volume of fluids to be injected;  
2. 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. Attach appropriate geologic data on the injection zone 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. Describe the proposed stimulation program, if any.

\*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

\*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

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: Amanda Palmer TITLE: Engineer

SIGNATURE: Amanda M. Palmer DATE: 6-13-18

E-MAIL ADDRESS: amanda.palmer@jnpresources.com

\* 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: SWD-1053 (10/18/06) and SWD-1053A (7/7/07)

JUNIPER RESOURCES EXPLORATION COMPANY, LLC  
 TSAH TAH SWD #36  
 1800' FNL & 1360' FWL  
 SEC. 36, T25N R10W  
 SAN JUAN COUNTY, NM

- I. Purpose: to reapply for authorization to inject into the Tsah Tah SWD #36. No additional zones will be completed for disposal. SWD-1053 was approved by the NMOCD on October 18, 2006 and SWD-1053A was approved by the NMOCD on July 7, 2007.
- II. Operator: Juniper Resources Exploration Company, LLC  
 Operator phone number: (214) 443-0001  
 Operator address: 3333 Lee Parkway, Ste 210  
 Dallas, TX 75219  
 Contact: Amanda Palmer, (469) 729-8183
- III. See attached sheets for Well Data (EXHIBIT A).
- IV. No, this is not an expansion of an existing project.
- V. See attached map of leases and injection wells within 2 miles (EXHIBIT B). The wells inside the ½ mile area of review are:

WELL	API	T25N R10W	ZONE	TD	DISTANCE
Tsah Tah 36 #2	3004533753	SWNW Sec. 36	Fruitland Coal	1905'	430'
Tsah Tah 36 #3	3004534239	NESW Sec. 36	Fruitland Coal	1905'	1950'
Tsah Tah 35 #1	3004533766	SENE Sec. 35	Fruitland Coal	1908'	2599'
Tsah Tah 36 #1	3004534240	SENE Sec. 36	Fruitland Coal	1919'	2376'

All leases within a ½ mile radius are:

AREA (LEGAL)	Lease	Lessor	Lessee
T25N-R10W Sec. 25: S2	NMNM-120923	BLM	XTO Energy, Inc.
T25N-R10W Sec. 26: SE4	NOG-0503-1735	Navajo Allottee	XTO Energy, Inc.
T25N-R10W Sec. 35: NE4	NMNM-112957	BLM	Juniper Res Exp Co., LLC
T25N-R10W Sec. 35: SE4	NMNM-114377	BLM	Juniper Res Exp Co., LLC
T25N-R10W Sec. 36: NW4, SW4NE4, S2SE4	VO-6298	State Land Office	Juniper Res Exp Co., LLC
T25N-R10W Sec. 36: N2NE4, N2SW4, SW4SW4, NE4SE4	EO-3148-0010	State Land Office	Kaiser Francis Oil Co.
T25N-R10W Sec. 36: SE4NE4, NW4SE4, SE4SW4	EO-6644-0021	State Land Office	WR Speer

- VI. None of the 4 wells within a ½ mile radius of the SWD #36 penetrate the proposed injection zones. This information has been previously submitted in the SWD-1053 and SWD-1053A. Wellbore diagrams for the 4 Fruitland Coal wells in the area of review are provided (EXHIBIT C).

- VII. 1. The average injection rate will be approximately 2,000 bwpd.  
Maximum injection rate will be approximately 3,000 bwpd.
2. The system is closed. There are water and gas pipelines. Facilities include a tank battery with skimmer and settling tanks, filters, meter, and an injection pump.
3. Average injection pressure will be approximately 650 psi.  
Maximum injection pressure will be approximately 665 psi ( $\leq 0.2$  psi x depth of top perforation)
4. Water source will be existing and future Juniper Resources Exploration Company wells in the San Juan Basin. Juniper operates 113 Fruitland Coal wells in T25N R10W, T24N R11W, and T24N R10W as of June 2018. All are gas wells with maximum TD of 1,900', the closest is the Tsah Tah 36 #2 (430' away). Water analyses from the Menefee, Cliffhouse, and Point Lookout is attached (EXHIBIT D).  
Additionally, a water analysis from a representative sample of Fruitland Coal produced water is attached (EXHIBIT E).
5. Neither the Point Lookout nor the Menefee are productive within two miles of the SWD #36. Stone et al in Hydrogeology and water resources of San Juan Basin, New Mexico wrote, "The Point Lookout Sandstone is not widely used as a source of water ..." and that the fluoride concentrations in Menefee wells near the Chaco River exceed safe drinking water limits.
- VIII. Geologic data has been previously submitted in the SWD-1053 and SWD-1053A.
- IX. There is no proposed stimulation program at this time.
- X. Logs have been previously filed with SWD-1053 and SWD-1053A.
- XI. There are no fresh water wells within one mile of the disposal well. See Exhibit F.
- XII. Juniper is not aware of any geologic or engineering data which suggests the Point Lookout or Menefee are in hydrologic connection with any underground sources of water.
- XIII. Notice has been sent to (EXHIBIT G) to the surface owner, operators of all wells, and lessees or lease operating right holders, and lessors within a half mile: Hilcorp, Kaiser-Francis, New Mexico State Land Office, WR Speer, BLM- Farmington, and the Farmington Indian Minerals Office.

INJECTION WELL DATA SHEET

OPERATOR: JUNIPER RESOURCES EXPLORATION COMPANY, LLC

WELL NAME & NUMBER: TSAH TAH SWD #36

WELL LOCATION: 1800' FNL AND 1360' FWL F      UNIT LETTER      SECTION      TOWNSHIP      RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA  
Surface Casing

SEE ATTACHED

Hole Size: 12 1/4 "      Casing Size: 8 5/8 " 24# J-55

Cemented with: 200      sx.      or      236      ft<sup>3</sup>

Top of Cement: SURFACE      Method Determined: VISUAL

Intermediate Casing

Hole Size: \_\_\_\_\_      Casing Size: \_\_\_\_\_

Cemented with: \_\_\_\_\_      sx.      or      \_\_\_\_\_      ft<sup>3</sup>

Top of Cement: \_\_\_\_\_      Method Determined: \_\_\_\_\_

Production Casing

Hole Size: 7 7/8 "      Casing Size: 5 1/2 " 15.S# J-55

Cemented with: 880      sx.      or      1571      ft<sup>3</sup>

Top of Cement: SURFACE      Method Determined: VISUAL

Total Depth: 4495'

Injection Interval

3376'      feet to      4381'

(Perforated or Open Hole; indicate which)

EXHIBIT A

INJECTION WELL DATA SHEET

Tubing Size: 2 7/8" 6.5# J-55 Lining Material: PLASTIC

Type of Packer: 5 1/2" x 2 7/8" COMPRESSION SET W/ ON/OFF TOOL

Packer Setting Depth: 3313' P.M.

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data

1. Is this a new well drilled for injection?  Yes  No  
 If no, for what purpose was the well originally drilled? \_\_\_\_\_

2. Name of the Injection Formation: MENEFEE, POINT LOOKOUT

3. Name of Field or Pool (if applicable): SWD, MESA VERDE

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. \_\_\_\_\_

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:  
OVER: FRUITLAND COAL (1650') AND PICTURED CLIFFS (1750')  
UNDER: GALLUP (5150') AND DAKOTA (6175')

WELL NAME: TSAH TAH SWD 36			SPOT: 1800' FNL & 1360' FWL			OPERATOR: JUNIPER RESOURCES EXPLORATION			SPUD DATE: 11/21/06			
APINO: 3004533942			LOCATION: Sec. 36 T25N R10W			ZONE: MENEFEE, POINT LOOKOUT			RR DATE: 11/27/06			
W: 85%			FIELD: TSAH TAH			ELEVATION: 6,745'			MICU:			
R: 68%			COUNTY: SAN JUAN			TD: 4,490'			COMPL DATE: 01/08/07			
			STATE: NEW MEXICO			PBTD: 4,448'						
PIPE RECORD								CEMENT & HOLE DATA				
CSG	OD	GRADE	THD	WT/FT	TOP	BTM	# JTS	BIT SIZE	DEPTH	SXS	TYPE	TOC
Cond Surface Interm.	8.625"	J-55	ST&C	24.00#	0'	226'		12.250"	226'	200	Celloflake 2% CaCl2	Surface
Prod Tbg	5.500"	J-55	LT&C	15.50#	0'	4,490'		7.875"	4490'	880	Type 5, Poly Flake	Surface
	2.875"		EUE 8rd	6.5# Plastic Lined Tubing	0'	3,313'	132					

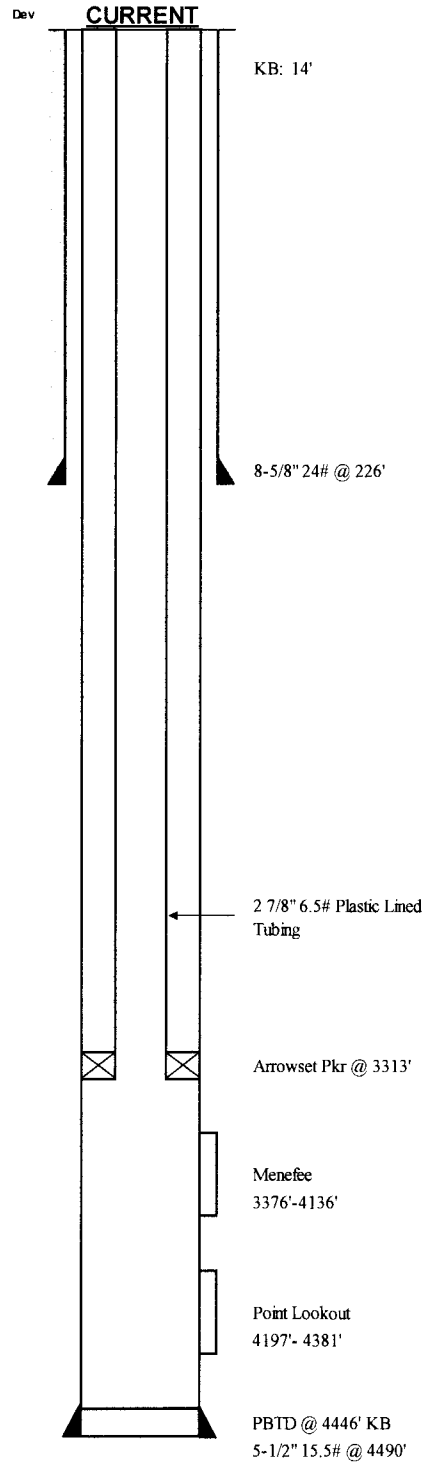


EXHIBIT A

- State of NM
- BLM
- FIMO

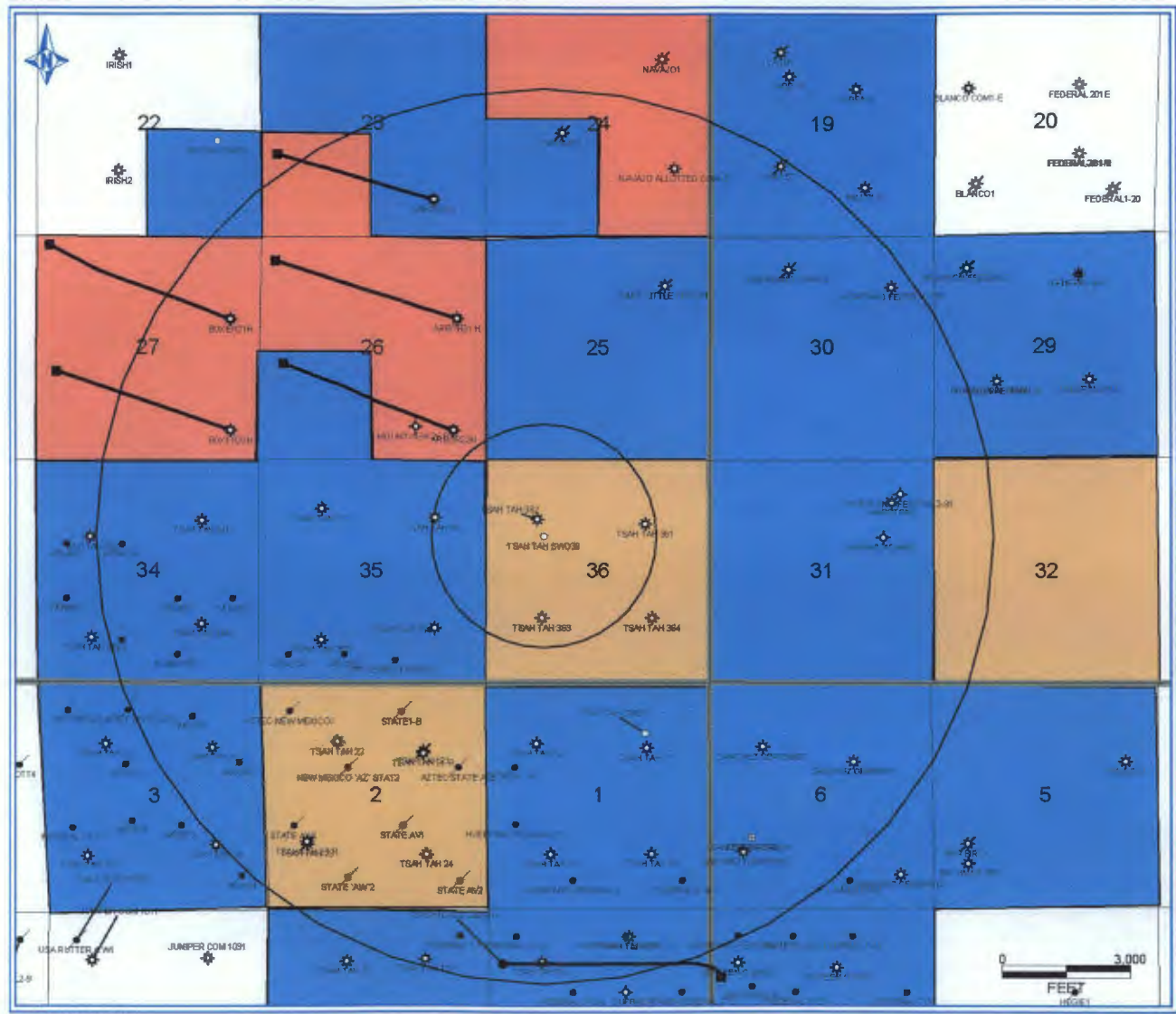


EXHIBIT B



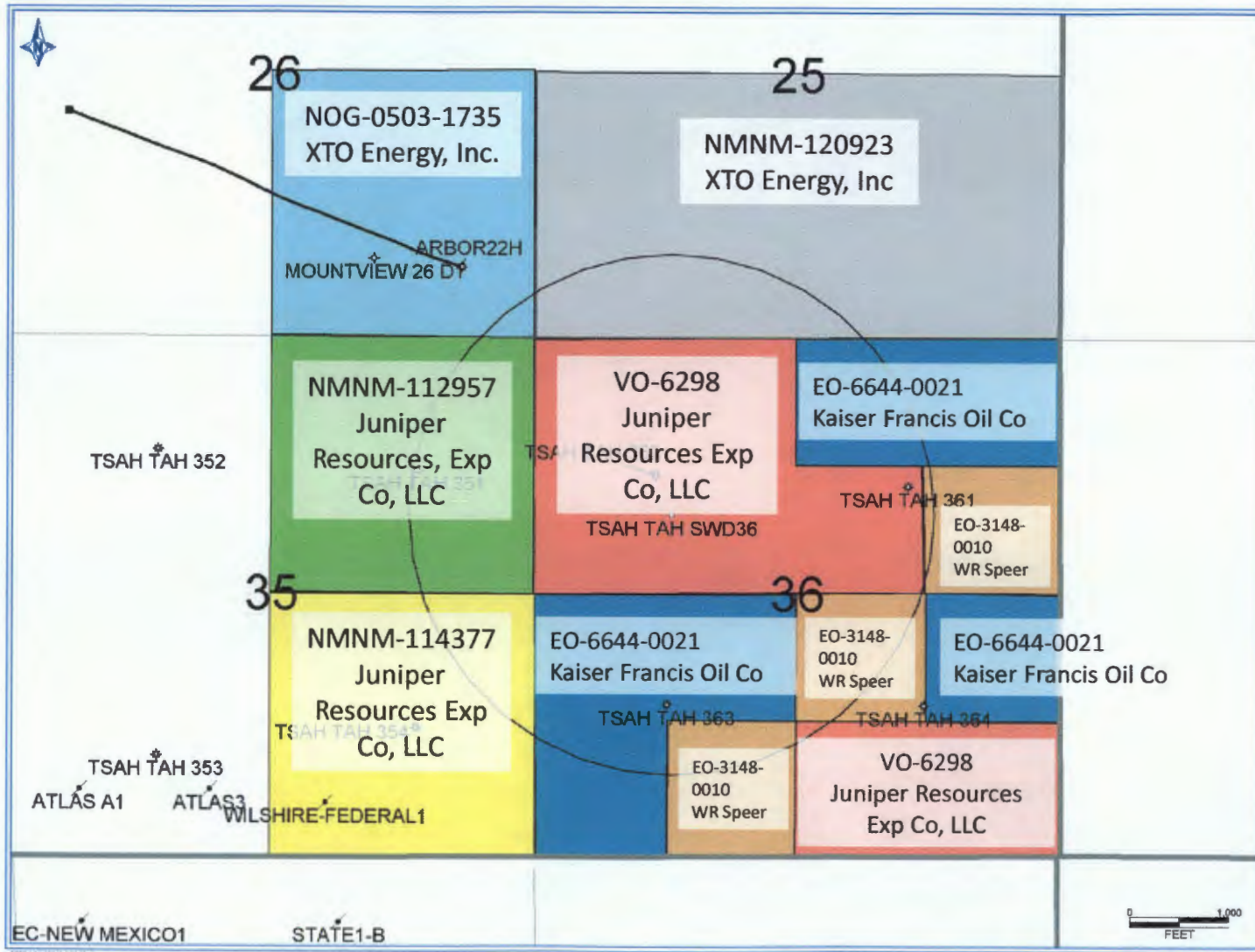


EXHIBIT B



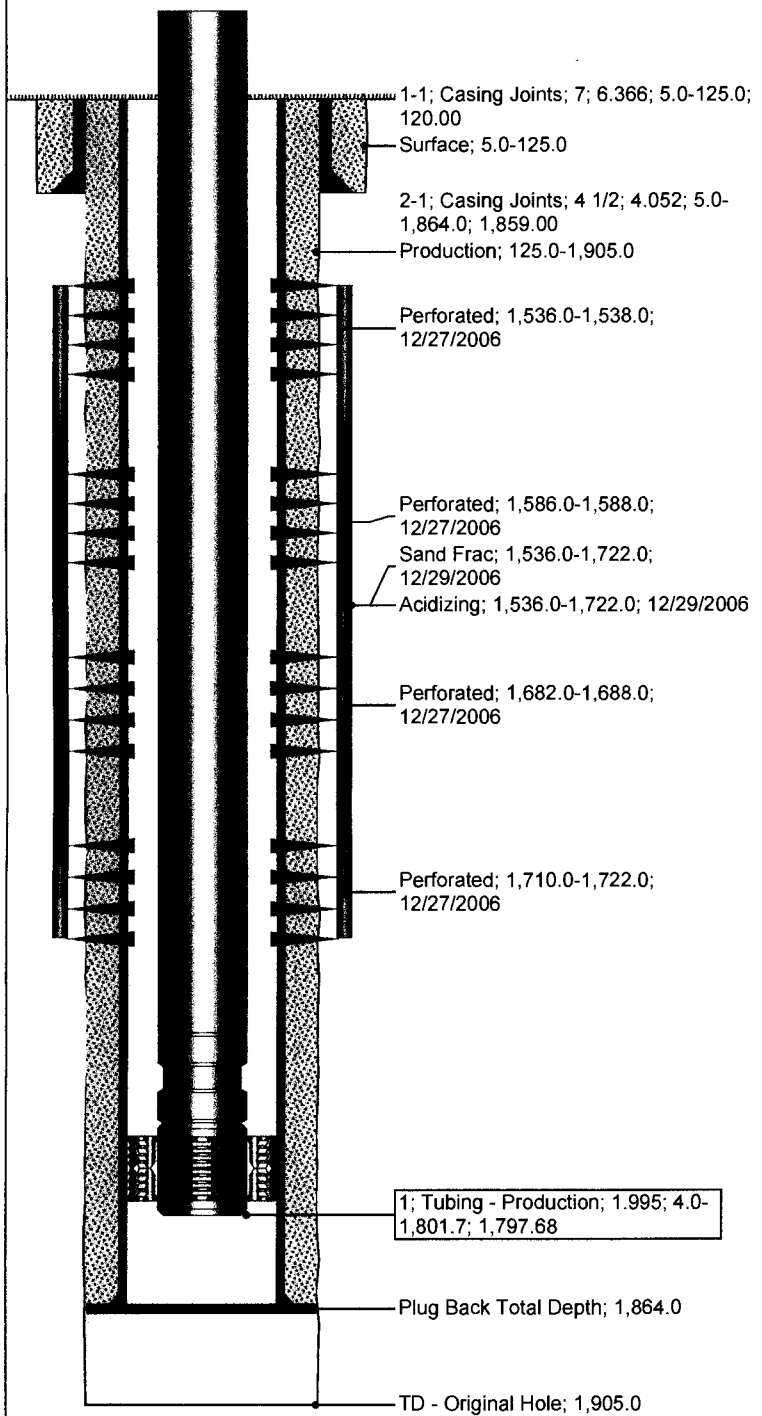
## Pertinent Data Sheet

**Well Name: Tsah Tah 36-2**

API/UWI 30-045-33753-0000	Surface Legal Location Sec 36, T25N, R10W, NESWNNW	Field Name Basin Fruitland Coal	License #	State/Province New Mexico	Well Configuration Type Vertical
Original KB Elevation (ft) 6,738.00	KB-Tubing Head Distance (ft)	Spud Date 7/6/2006 00:00	Rig Release Date	PBTD (All) (ftKB) Original Hole - 1,864.0	Total Depth All (TVD) (ftKB)

Vertical - Original Hole, 12/4/2017 2:27:26 PM

Vertical schematic (actual)



**Well Header**

Spud Date 7/6/2006	Latitude (°) 36° 21' 39.527" N	Longitude (°) 107° 51' 11.015" E
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**Casing Strings**

Casing Description	Run Date	Set Depth...	OD (in)	Wt/Len (lb...)	Grade	Len (ft)
Surface	7/7/2006	125.0	7	23.00	J-55	120.00

**Casing Components**

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Length (ft)	Joints
Casing Joints	7	6.366	23.00	J-55	120.00	

Casing Description	Run Date	Set Depth...	OD (in)	Wt/Len (lb...)	Grade	Len (ft)
Production	7/10/2006	1,864.0	4 1/2	10.50	J-55	1,859.00

**Casing Components**

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Length (ft)	Joints
Casing Joints	4 1/2	4.052	10.50	J-55	1,859.00	

**Cement**

Description	Start Date	Type	Proposed?	String	Wellbore
Surface Casing Cement	7/7/2006	Casing		Surface, 125.0ftKB	Original Hole

Description	Start Date	Type	Proposed?	String	Wellbore
Production Casing Cement	7/10/2006	Casing		Production, 1,864.0ftKB	Original Hole

**Perforations**

Date	Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)
12/27/2006	1,536.0	1,538.0	Fruitland Coal, Original Hole	3.0
12/27/2006	1,586.0	1,588.0	Fruitland Coal, Original Hole	3.0
12/27/2006	1,682.0	1,688.0	Fruitland Coal, Original Hole	3.0
12/27/2006	1,710.0	1,722.0	Fruitland Coal, Original Hole	3.0

**Tubing Strings**

Tubing Description	Run Date	String Length (ft)	Set Depth (ftKB)
Tubing - Production	5/10/2013	1,797.68	1,801.7

Item Des	Jts	Model	OD (in)	Wt (lb/ft)	Grade	Len (ft)
Tubing		T&C Upset	2 3/8	4.70	J-55	1,765.39
Nipple			2 3/8			1.10
Anchor/catcher			2 3/8			31.19

EXHIBIT C

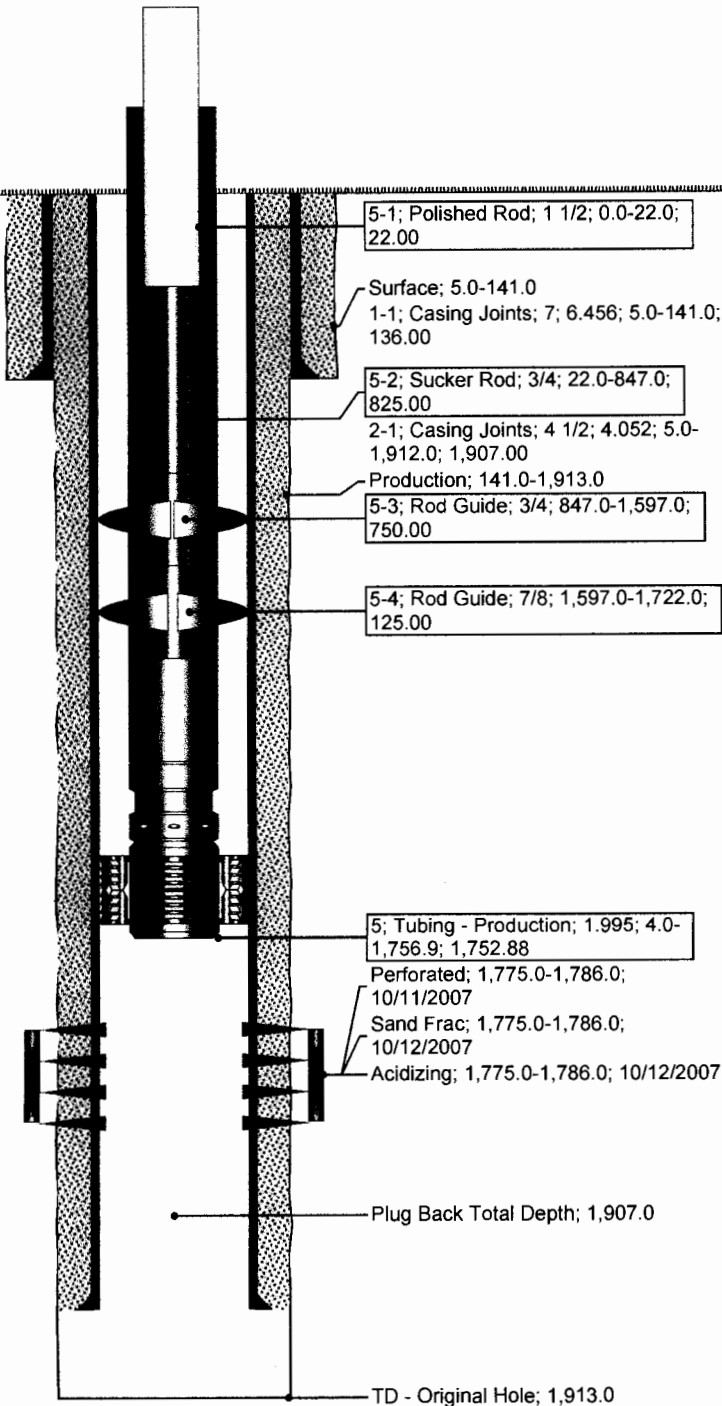
## Pertinent Data Sheet

**Well Name: Tsah Tah 36-3**

API/UWI 30-045-34239-0000	Surface Legal Location Sec 36, T25N, R10W, SWNESW	Field Name Basin Fruitland Coal	License #	State/Province New Mexico	Well Configuration Type Vertical
Original KB Elevation (ft) 6,777.00	KB-Tubing Head Distance (ft)	Spud Date 5/10/2007 00:00	Rig Release Date 5/13/2007 00:00	PBTD (All) (ftKB) Original Hole - 1,907.0	Total Depth All (TVD) (ftKB)

Vertical - Original Hole, 12/4/2017 2:28:50 PM

Vertical schematic (actual)



**Well Header**

Spud Date 5/10/2007	Latitude (°) 36° 21' 16.506" N	Longitude (°) 107° 51' 9.551" E
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**Casing Strings**

Casing Description	Run Date	Set Depth...	OD (in)	Wt/Len (lb...)	Grade	Len (ft)
Surface	5/10/2007	141.0	7	20.00	J-55	136.00

**Casing Components**

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Length (ft)	Joints
Casing	7	6.456	20.00	J-55	136.00	
Joints						

Casing Description	Run Date	Set Depth...	OD (in)	Wt/Len (lb...)	Grade	Len (ft)
Production	5/13/2007	1,912.0	4 1/2	10.50	J-55	1,907.00

**Casing Components**

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Length (ft)	Joints
Casing	4 1/2	4.052	10.50	J-55	1,907.00	44
Joints						

**Cement**

Description	Start Date	Type	Proposed?	String	Wellbore
Surface	5/10/2007	Casing	No	Surface, 141.0ftKB	Original Hole

Description	Start Date	Type	Proposed?	String	Wellbore
Production	5/13/2007	Casing	No	Production, 1,912.0ftKB	Original Hole

**Perforations**

Date	Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)
10/11/2007	1,775.0	1,786.0		3.0

**Tubing Strings**

Tubing Description	Run Date	String Length (ft)	Set Depth (ftKB)
Tubing - Production	1/28/2011	1,752.88	1,756.9

Item Des	Jts	Model	OD (in)	Wt (lb/ft)	Grade	Len (ft)
Tubing	54	T&C Upset	2 3/8	4.70	J-55	1,720.88
Pump Seating Nipple	1		2 3/8			1.10
Mud Anchor	1		2 3/8			30.90

**Rod Strings**

Set Depth...	Run Date	Pull Date	Pull Reason
1,812.0	10/22/2007	10/21/2008	Rod wear

**Rod Components**

Item Description	OD Nominal (in)	Length (ft)	Joints
Polished Rod	1 1/4	22.00	1
Pony Rod	1 1/4	4.00	1
Sucker Rod	3/4	950.00	38
Rod Guide	3/4	750.00	30
Sinker Bar	1 1/2	75.00	3
Rod Pump	1 1/2	16.00	1

Set Depth...	Run Date	Pull Date	Pull Reason
1,800.0	10/21/2008	11/13/2009	Rod wear

**Rod Components**

Item Description	OD Nominal (in)	Length (ft)	Joints
Polished Rod	1 1/2	22.00	1
Pony Rod	1 1/2	4.00	1
Sucker Rod	3/4	825.00	33
Rod Guide	3/4	750.00	30



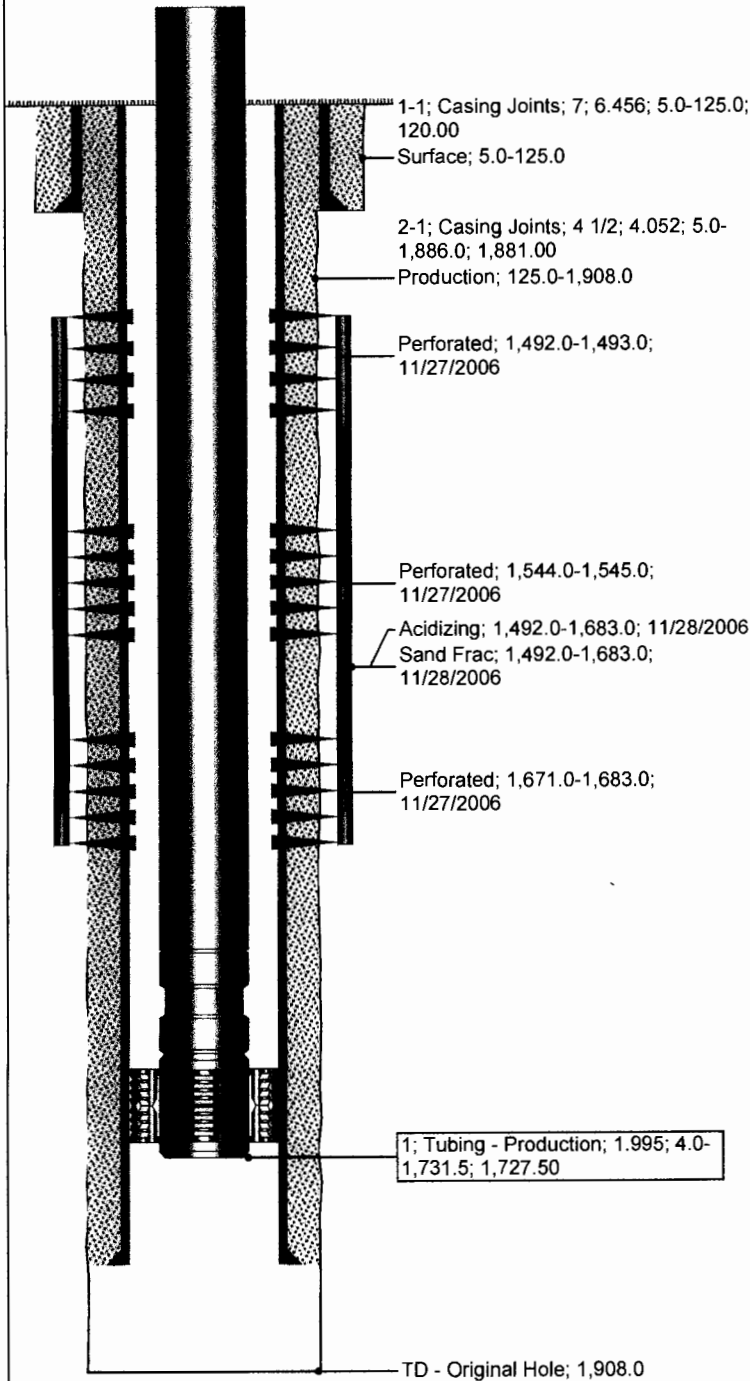
## Pertinent Data Sheet

**Well Name: Tsah Tah 35-1**

API/UWI 30-045-33766-0000	Surface Legal Location Sec 35, T25N, R10W, NWSENE	Field Name Basin Fruitland Coal	License #	State/Province New Mexico	Well Configuration Type Vertical
Original KB Elevation (ft) 6,717.00	KB-Tubing Head Distance (ft)	Spud Date 7/29/2006 00:00	Rig Release Date 8/3/2006 00:00	PBTD (All) (ftKB)	Total Depth All (TVD) (ftKB)

Vertical - Original Hole, 12/4/2017 2:23:02 PM

Vertical schematic (actual)



**Well Header**

Spud Date 7/29/2006	Latitude (°) 36° 21' 40.064" N	Longitude (°) 107° 51' 40.319" E
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**Casing Strings**

Casing Description	Run Date	Set Depth	OD (in)	Wt/Len (lb/ft)	Grade	Len (ft)
Surface	7/30/2006	125.0	7	20.00	J-55	120.00

**Casing Components**

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Length (ft)	Joints
Casing Joints	7	6.456	20.00	J-55	120.00	

Casing Description	Run Date	Set Depth	OD (in)	Wt/Len (lb/ft)	Grade	Len (ft)
Production	8/3/2006	1,886.0	4 1/2	10.50	J-55	1,881.00

**Casing Components**

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Length (ft)	Joints
Casing Joints	4 1/2	4.052	10.50	J-55	1,881.00	

**Cement**

Description	Start Date	Type	Proposed?	String	Wellbore
Surface Casing Cement	7/30/2006	Casing		Surface, 125.0ftKB	Original Hole
Production Casing Cement	8/3/2006	Casing		Production, 1,886.0ftKB	Original Hole

**Perforations**

Date	Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)
11/27/2006	1,492.0	1,493.0	Basin Fruitland Coal, Original Hole	3.0
11/27/2006	1,544.0	1,545.0	Basin Fruitland Coal, Original Hole	3.0
11/27/2006	1,671.0	1,683.0	Basin Fruitland Coal, Original Hole	3.0

**Tubing Strings**

Tubing Description	Run Date	String Length (ft)	Set Depth (ftKB)
Tubing - Production	4/18/2008	1,727.50	1,731.5

Item Des	Jts	Model	OD (in)	Wt (lb/ft)	Grade	Len (ft)
Tubing		T&C Upset	2 3/8	4.70	J-55	1,694.40
Nipple			2 3/8			1.10
Anchor/catcher			2 3/8			32.00

EXHIBIT C



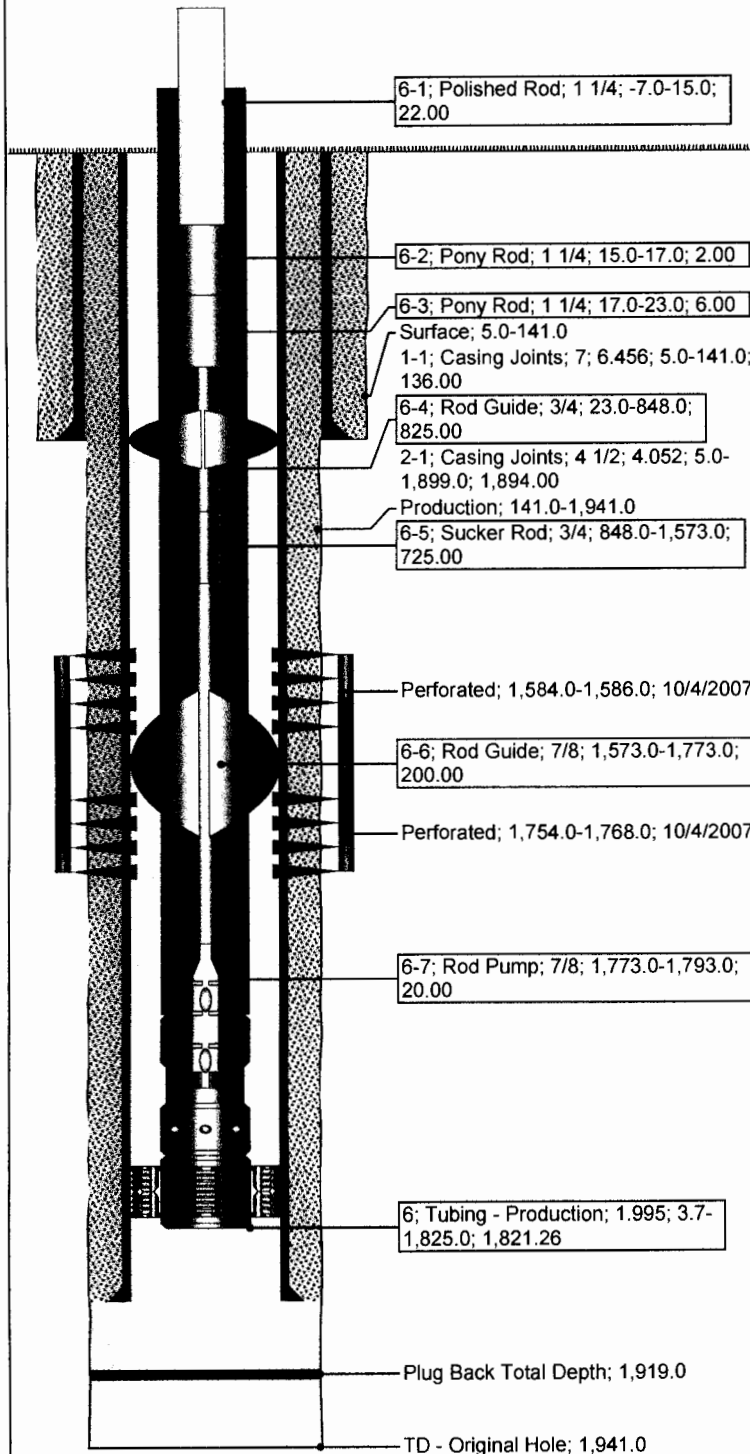
## Downhole Well Profile

**Well Name: Tsah Tah 36-1**

API/UWI 30-045-34240-0000	Surface Legal Location Sec 36, T25N, R10W, NESWNE	Field Name Basin Fruitland Coal	License #	State/Province New Mexico	Well Configuration Type Vertical
Original KB Elevation (ft) 6,750.00	KB-Tubing Head Distance (ft)	Spud Date 4/30/2007 00:00	Rig Release Date 5/3/2007 00:00	PBTD (All) (ftKB) Original Hole - 1,919.0	Total Depth All (TVD) (ftKB)

Vertical - Original Hole, 12/4/2017 12:01:02 PM

Vertical schematic (actual)



Spud Date 4/30/2007	Latitude (°) 36° 21' 38.465" N	Longitude (°) 107° 50' 40.041" E
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### Casing Strings

Casing Description	Run Date	Set Depth...	OD (in)	Wt/Len (lb...)	Grade	Len (ft)
Surface	4/30/2007	141.0	7	20.00	J-55	136.00

### Casing Components

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Length (ft)	Joints
Casing	7	6.456	20.00	J-55	136.00	3

Casing Description	Run Date	Set Depth...	OD (in)	Wt/Len (lb...)	Grade	Len (ft)
Production	5/3/2007	1,899.0	4 1/2	10.50	J-55	1,894.00

### Casing Components

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Length (ft)	Joints
Casing	4 1/2	4.052	10.50	J-55	1,894.00	46

### Cement

Description	Start Date	Type	Proposed?	String	Wellbore
Surface	5/1/2007	Casing	No	Surface, 141.0ftKB	Original Hole

Description	Start Date	Type	Proposed?	String	Wellbore
Production	5/3/2007	Casing	No	Production, 1,899.0ftKB	Original Hole

Description	Start Date	Type	Proposed?	String	Wellbore
Casing					

### Perforations

Date	Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)
10/4/2007	1,584.0	1,586.0	Fruitland Coal, Original Hole	3.0
10/4/2007	1,754.0	1,768.0	Fruitland Coal, Original Hole	3.0

### Tubing Strings

Tubing Description	Run Date	String Length (ft)	Set Depth (ftKB)
Tubing - Production	11/16/2009	1,821.26	1,825.0

Item Des	Jts	Model	OD (in)	Wt (lb/ft)	Grade	Len (ft)
Tubing	55	T&C Upset	2 3/8	4.70	J-55	1,788.86
Pump Seating Nipple	1		2 3/8			1.10
Slotted Mud Anchor/catcher	1		2 3/8			31.30

### Rod Strings

Set Depth...	Run Date	Pull Date	Pull Reason
1,823.0	10/15/2007	1/24/2008	

### Rod Components

Item Description	OD Nominal (in)	Length (ft)	Joints
Polished Rod	1 1/4	22.00	1
Pony Rod	1 1/4	4.00	1
Rod Guide	3/4	750.00	30
Sucker Rod	3/4	950.00	38
Sinker Bar	1 1/2	75.00	3
Rod Pump	1 1/2	16.00	1

Set Depth...	Run Date	Pull Date	Pull Reason
1,821.0	1/24/2008	10/3/2008	Rod wear

### Rod Components

Item Description	OD Nominal (in)	Length (ft)	Joints
Polished Rod	1 1/4	22.00	1
Rod Guide	3/4	750.00	30

EXHIBIT C

**Amanda Palmer**

---

**From:** Matt Strickler  
**Sent:** Tuesday, June 26, 2018 4:54 PM  
**To:** Amanda Palmer  
**Subject:** FW: NM SLO SW-238 Tsah Tah 36 location

Amanda,

Here is the confirmation form the SLO on their ownership in Sec 36. Hopefully this is sufficient.

**From:** Crosby, Faith <fcrosby@slo.state.nm.us>  
**Sent:** Tuesday, June 26, 2018 3:51 PM  
**To:** Matt Strickler <Matt.Strickler@jnpresources.com>  
**Subject:** NM SLO SW-238 Tsah Tah 36 location

Matt

At this well location; Sec 36-T25N-R10W, I will verify that State Land Office has a full estate position, owning both the surface and the mineral estates.

Thank you for your call this afternoon. I hope this is the information you requested. Call if there are other concerns.  
Faith

Faith Crosby  
Management Analyst  
Oil, Gas, and Minerals Division  
Office 505.827.5849  
Fax 505-827-4739



New Mexico State Land Office  
310 Old Santa Fe Trail  
P.O. Box 1148  
Santa Fe, NM 87504-1148  
[fcrosby@slo.state.nm.us](mailto:fcrosby@slo.state.nm.us)

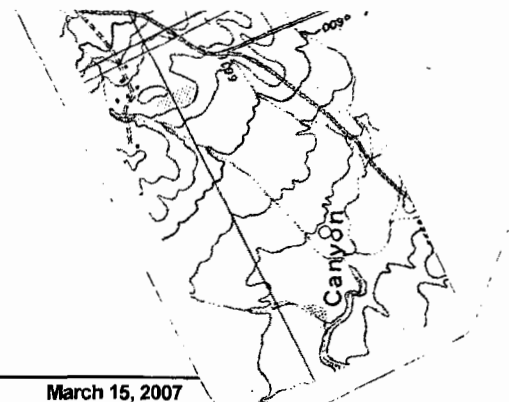
.....  
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---

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Key Pressure Pumping Services  
 Water Analysis Result Form  
 Farmington, NM.  
 708 S. Tucker  
 Phone:(505)325-4192  
 Fax:(505)564-3524  
 Zip:87401

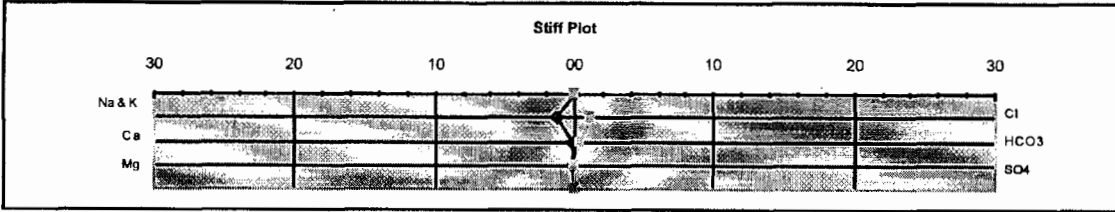


Operator:	Rosetta Resources	Sample Date:	March 15, 2007
		Analysis Date:	March 17, 2007
Well	Tsah Tah SWD # 11	District:	Farmington
Formation:	CLIFFHOUSE	Requested By:	RUSS McQUITY
County:	SAN JUAN N.M.	Technician:	BEN BARELA
Depth:	2469	Source:	Swab Run #1

**PHYSICAL AND CHEMICAL DETERMINATION**

SPECIFIC GRAVITY:	1.005	59	(°F)	S.G. (Corrected):	1.005
pH:	8.50			MAGNESIUM:	48 ppm
RESISTIVITY:	0.70	ohm/meter		CALCIUM:	56 ppm
IRON:	0.10	ppm		BICARBONATES:	486 ppm
H2S:	0	ppm		CHLORIDES:	9552 ppm
POTASSIUM:	38	ppm		SODIUM:	8240 ppm
SULFATES:	23	ppm		TDS:	16443 ppm

CaCO3 Scale Tendency = Remote  
 CaSO4 Scale Tendency = Remote



Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

EXHIBIT D

**Key Pressure Pumping Services**  
**Water Analysis Result Form**  
 Farmington, NM.  
 708 S. Tucker  
 Phone:(505)325-4192  
 Fax:(505)564-3524  
 Zip:87401

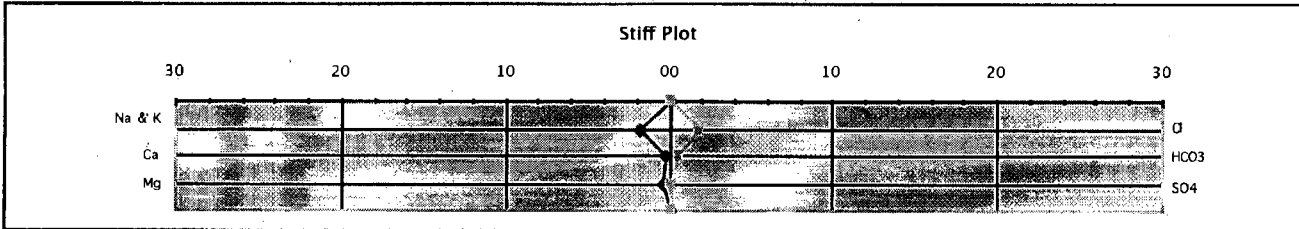


Operator: Rosetta Resources	Sample Date: March 15, 2007
	Analysis Date: March 17, 2007
Well Tsah Tah SWD # 11	District: Farmington
Formation: <u>Menefee</u>	Requested By: RUSS McQUITTY
County: SAN JUAN N.M.	Technician: BEN BARELA
Depth: 3645	Source: Swab Run #1

**P H Y S I C A L   A N D   C H E M I C A L   D E T E R M I N A T I O N**

SPECIFIC GRAVITY: 1.010 @ 52 (°F)	S.G. (Corrected): 1.010
pH: 9.00	MAGNESIUM: 77 ppm
RESISTIVITY: 0.80 ohm/meter	CALCIUM: 63 ppm
IRON: 0.16 ppm	BICARBONATES: 725 ppm
H2S: 0 ppm	CHLORIDES: 14653 ppm
POTASSIUM: 11 ppm	SODIUM : 9586 ppm
SULFATES: 32 ppm	<b>TDS: 25149 ppm</b>

CaCO3 Scale Tendency = Remote  
 CaSO4 Scale Tendency = Remote



Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

**EXHIBIT D**



**Key Pressure Pumping Services**  
**Water Analysis Result Form**  
 Farmington, NM.  
 708 S. Tucker  
 Phone:(505)325-4192  
 Fax:(505)664-3524  
 Zip:87401

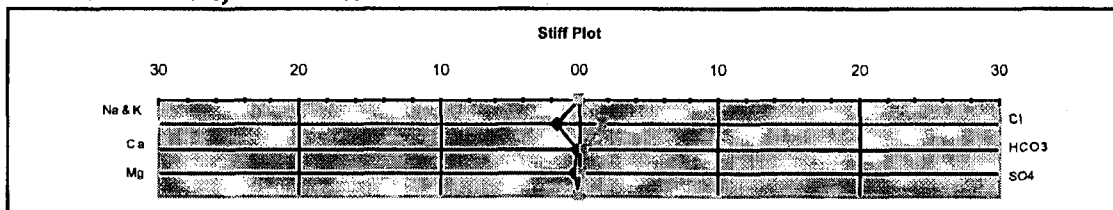


Operator:	Rosetta Resources	Sample Date:	March 15, 2007
		Analysis Date:	March 17, 2007
Well	Tsah Tah SWD # 11	District:	Farmington
Formation:	POINT LOOKOUT	Requested By:	RUSS McQUITTY
County:	SAN JUAN N.M.	Technician:	BEN BARELA
Depth:	4181	Source:	Swab Run #6

**PHYSICAL AND CHEMICAL DETERMINATION**

SPECIFIC GRAVITY:	1.010	47	(°F)	S.G. (Corrected):	1.010
pH:	10.00			MAGNESIUM:	77 ppm
RESISTIVITY:	0.40 ohm/meter			CALCIUM:	40 ppm
IRON:	0.46 ppm			BICARBONATES:	483 ppm
H2S:	0 ppm			CHLORIDES:	13465 ppm
POTASSIUM:	38 ppm			SODIUM:	8752 ppm
SULFATES:	97 ppm			TDS:	22953 ppm

CaCO3 Scale Tendency = Remote  
 CaSO4 Scale Tendency = Remote



Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

**EXHIBIT D**



Lease: Magna Energy/ Juniper Resources  
 Well No. : Juniper SWD 4 Coal Water  
 Location: N/A

Sample Date: N/A  
 Sample Analyzed: 03/08/18  
 Lab #: 4012-2018022816.1

<u>Analysis</u>		<u>Probable Mineral Comp.</u>	<u>mg/l</u>
Specific Gravity (74°F)	1.0203	Ca(HCO3)2	370.07
pH, Lab Measured	7.37	CaSO4	9.61
Calcium Carbonate S.I. @ 80°F (Stiff-Davis)	-0.48	CaCl2	0.00
Calcium Carbonate S.I. @ 140°F (Stiff-Davis)	0.33	Mg(HCO3)2	33.08
		MgSO4	31.58
		MgCl2	32.22
		NaHCO3	0.00
		NaSO4	0.00
		NaCl	15646.03
<u>Dissolved Gases</u>			<u>mg/l</u>
Hydrogen Sulfide (H2S)	N/A		
Carbon Dioxide (CO2)	76.58		
Dissolved Oxygen (O2)	N.D.		

<u>Cations</u>	<u>mg/l</u>	<u>meq/l</u>	<u>Anions</u>	<u>mg/l</u>	<u>meq/l</u>
Sodium (Na)	5296.58	230.39	Chloride (Cl)	9512.51	267.66
Calcium (Ca)	91.51	4.55	Bicarbonate (HCO3)	306.22	5.02
Magnesium (Mg)	24.62	2.03	Carbonate (CO3)	0.00	0.00
Potassium (K)	74.57	1.91	Hydroxyl (OH)	0.00	0.00
Iron (Fe)	26.77	0.96	Sulfate (SO4)	47.06	0.98
Barium (Ba)	5.65	0.08			
Manganese (Mn)	0.52	0.02			
Strontium (Sr)	13.74	0.31			

Total Dissolved Solids, Calculated (mg/l) **15386**  
 Total Hardness as mg/l CaCO<sub>3</sub> 330  
 Resistivity (Ω/m) @ 75°F 0.46

Temp. (F)	Press. (psig)	Calcite CaCO3		Anhydrite CaSO4		Gypsum CaSO4*H2O		Barite BaSO4		Celestite SrSO4		Siderite FeCO3		Mackawenite FeS		CO2 (mpy)	pCO2 (atm)
		xSAT	pptb	xSAT	pptb	xSAT	pptb	xSAT	pptb	xSAT	pptb	xSAT	pptb	xSAT	pptb		
80.0	147	0.555	-0.127	0.002	-379.192	0.003	-333.400	10.018	1.044	0.019	-35.015	280.638	0.184	0.000	-0.002	0.073	0.110
90.0	279.3	0.587	-0.111	0.002	-373.037	0.002	-338.314	7.965	1.012	0.019	-34.970	321.264	0.185	0.000	-0.002	0.086	0.199
100.0	411.6	0.614	-0.099	0.002	-363.142	0.002	-341.930	6.475	0.975	0.019	-34.731	362.229	0.184	0.000	-0.003	0.098	0.288
110.0	543.9	0.635	-0.089	0.002	-350.106	0.002	-333.962	5.354	0.934	0.019	-34.405	403.298	0.181	0.000	-0.003	0.097	0.377
120.0	676.2	0.651	-0.082	0.002	-334.540	0.003	-321.531	4.450	0.887	0.020	-34.127	442.822	0.178	0.000	-0.004	0.087	0.467
130.0	808.5	0.660	-0.077	0.002	-317.047	0.003	-310.308	3.714	0.832	0.020	-33.906	480.667	0.174	0.000	-0.004	0.077	0.556
140.0	940.8	0.664	-0.073	0.002	-298.191	0.003	-300.196	3.111	0.768	0.020	-33.740	515.380	0.169	0.000	-0.005	0.066	0.645
150.0	1073.1	0.662	-0.071	0.003	-278.488	0.003	-291.115	2.615	0.694	0.020	-33.630	546.454	0.163	0.000	-0.005	0.070	0.734
160.0	1205.4	0.655	-0.071	0.003	-258.396	0.003	-282.995	2.203	0.609	0.020	-33.579	573.585	0.157	0.000	-0.006	0.074	0.823
170.0	1337.7	0.643	-0.072	0.003	-238.304	0.003	-275.774	1.861	0.512	0.019	-33.586	595.516	0.150	0.000	-0.007	0.079	0.912
180.0	1470	0.628	-0.073	0.004	-218.537	0.003	-269.405	1.576	0.400	0.019	-33.653	613.404	0.144	0.000	-0.008	0.069	1.001

EXHIBIT E

OSE District Boundary



GIS WATERS PODs

- Active
- Pending
- Plugged
- Incomplete
- Capped
- Changed Location of Well
- Other

Recently Edited PODs



Water Right Regulations

- Critical Management Area - Guidelines
- Special Condition Area
- Quality Restriction Area
- Local Ordinance Area

Federal Lands



State Lands



Conveyances (Beta)



EXHIBIT F

Juniper Resources Exploration Company, LLC, 3333 Lee Parkway Ste 210, Dallas, TX 75219 is making application for administrative approval to dispose of produced water in an existing disposal well by underground injection. Contact person is Amanda Palmer, Phone 214-443-0001. The disposal site is Tsah Tah SWD #36, API No. 3004533942, located 1800' FNL & 1360' FWL, Sec. 36 T25N R10W, San Juan Co. NM. Water will be injected into the Point Lookout and Menefee zones between the depths of approximately 3,376' - 4,381' below the surface. Maximum anticipated injection pressure is 665 psi. Maximum injection rate will be 3,000 bwpd. Any interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.

Legal No. 1253145  
published in The Daily  
Times on Julv 3. 2018.

JUNIPER  
RESOURCES

June 15, 2018

Hilcorp Energy Company  
Attn: Wyn McCubbin  
1111 Travis Street  
Houston, Texas 77002

RE: Tsah Tah SWD #36  
Reactivation Application

Dear Wyn,

Juniper Resources Exploration Company, LLC is applying (see attached application) for reapproval for its existing Tsah Tah SWD #36 water disposal well. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following reapplication for approval to dispose. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: Tsah Tah SWD #36

Disposal Zones: Point Lookout (≈4,200' to 4,300') and Menefee (≈3,325' to 4,192')

Location: 1800' FNL & 1360' FWL Sec. 36, T25N, R10W

San Juan County, NM on state lease VO-6298-0000

Approximate Location: ≈25 air miles south of Bloomfield, NM

Applicant Name: Juniper Resources Exploration Company, LLC (214) 443-0001

Applicant Address: 3333 Lee Parkway, Ste 210, Dallas, TX 75219

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 S. St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please let us know if you have any questions.

Sincerely,

  
Amanda Palmer

4892 0630 0630 2000 0960 9702

7018 0360 0002 0630 2000 0960 9702

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<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$6.70
Total Postage and Fees	\$10.15
Sent To: Hilcorp Energy	
Street and Apt. No. or PO Box No. 1111 Travis St.	
City, State, ZIP+4® Houston, TX 77002	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

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06/19/2018

EXHIBIT G



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Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

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Postage \$6.70

Postmark  
Here

Total Postage and Fees \$10.15

06/19/2018

Sent To *Kaiser Francis*  
 Street and Apt. No. or PO Box No. *6733 S. Yale Avenue*  
 City, State, ZIP+4® *Tulsa, OK 74136*

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 0630 2000 0630 0630

June 15, 2018

Kaiser-Francis Oil Company  
ATTN: Land Department  
6733 S. Yale Avenue  
Tulsa, OK 74136

RE: Tsah Tah SWD #36  
Reactivation Application

To Whom It May Concern,

Juniper Resources Exploration Company, LLC is applying (see attached application) for reapproval for its existing Tsah Tah SWD #36 water disposal well. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following reapplication for approval to dispose. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: Tsah Tah SWD #36

Disposal Zones: Point Lookout (≈4,200' to 4,300') and Menefee (≈3,325' to 4,192')

Location: 1800' FNL & 1360' FWL Sec. 36, T25N, R10W

San Juan County, NM on state lease VO-6298-0000

Approximate Location: ≈25 air miles south of Bloomfield, NM

Applicant Name: Juniper Resources Exploration Company, LLC (214) 443-0001

Applicant Address: 3333 Lee Parkway, Ste 210, Dallas, TX 75219

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 S. St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please let us know if you have any questions.

Sincerely,

Amanda Palmer

JUNIPER  
RESOURCES

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FARMINGTON, NM 87402

Certified Mail Fee	\$3.45
Extra Services & Fees (check box, add fee as appropriate)	\$0.00
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage	\$6.70
Total Postage and Fees	\$10.15

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06/19/2018

Sent To FIMD - Maureen Joe  
Street and Apt. No., or PO Box No. 6251 College Blvd  
City, State, ZIP+4® Farmington, NM 87402  
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

June 15, 2018

Farmington Indian Minerals Office  
ATTN: Maureen Joe  
6251 College Blvd  
Farmington, NM 87402

RE: Tsah Tah SWD #36  
Reactivation Application

Dear Maureen,

Juniper Resources Exploration Company, LLC is applying (see attached application) for reapproval for its existing Tsah Tah SWD #36 water disposal well. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following reapplication for approval to dispose. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: Tsah Tah SWD #36

Disposal Zones: Point Lookout (≈4,200' to 4,300') and Menefee (≈3,325' to 4,192')

Location: 1800' FNL & 1360' FWL Sec. 36, T25N, R10W

San Juan County, NM on state lease VO-6298-0000

Approximate Location: ≈25 air miles south of Bloomfield, NM

Applicant Name: Juniper Resources Exploration Company, LLC (214) 443-0001

Applicant Address: 3333 Lee Parkway, Ste 210, Dallas, TX 75219

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 S. St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please let us know if you have any questions.

Sincerely,

  
Amanda Palmer

JUNIPER  
RESOURCES

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<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$6.70
Total Postage and Fees	\$10.15
0219 46 Postmark Here 06/19/2018	
Sent To BLM Farmington - Jack Savage	
Street and Apt. No., or PO Box No. 6251 College Blvd	
City, State, ZIP+4® Farmington NM 87402	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

June 15, 2018

Bureau of Land Management  
ATTN: Jack Savage  
6251 College Blvd  
Farmington, NM 87402

RE: Tsah Tah SWD #36  
Reactivation Application

To Whom It May Concern,

Juniper Resources Exploration Company, LLC is applying (see attached application) for reapproval for its existing Tsah Tah SWD #36 water disposal well. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following reapplication for approval to dispose. This letter is a notice only. No action is needed unless you have questions or objections.

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Location: 1800' FNL & 1360' FWL Sec. 36, T25N, R10W

San Juan County, NM on state lease VO-6298-0000

Approximate Location: ≈25 air miles south of Bloomfield, NM

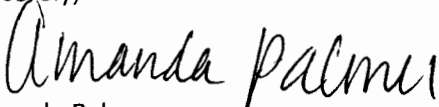
Applicant Name: Juniper Resources Exploration Company, LLC (214) 443-0001

Applicant Address: 3333 Lee Parkway, Ste 210, Dallas, TX 75219

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 S. St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please let us know if you have any questions.

Sincerely,

  
Amanda Palmer





June 15, 2018

WR Speer  
PO Box 1363  
Mount Pleasant, SC 29465-1363

Dear Mr. Speer,

Juniper Resources Exploration Company, LLC is applying (see attached application) for reapproval for its existing Tsah Tah SWD #36 water disposal well. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following reapplication for approval to dispose. This letter is a notice only. No action is needed unless you have questions or objections.

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San Juan County, NM on state lease VO-6298-0000

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Applicant Name: Juniper Resources Exploration Company, LLC (214) 443-0001

Applicant Address: 3333 Lee Parkway, Ste 210, Dallas, TX 75219

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 S. St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please let us know if you have any questions.

Sincerely,

*Amanda Palmer*  
Amanda Palmer

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a> ®.	
MOUNT PLEASANT, SC 29465	
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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
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City, State, ZIP+4®	Mount Pleasant, SC 29465
Postmark Here	06/19/2018
PS Form 3800, April 2015 PSN 7530-02-000-9047	See Reverse for Instructions

7018 0360 0002 0630 2677

JUNIPER  
RESOURCES

June 15, 2018

New Mexico State Land Office  
ATTN: Faith Crosby  
310 Old Santa Fe Trail  
Sant Fe, NM 87504

RE: Tsah Tah SWD #36  
Reactivation Application

Dear Faith,

Juniper Resources Exploration Company, LLC is applying (see attached application) for reapproval for its existing Tsah Tah SWD #36 water disposal well. As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following reapplication for approval to dispose. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: Tsah Tah SWD #36

Disposal Zones: Point Lookout (≈4,200' to 4,300') and Menefee (≈3,325' to 4,192')

Location: 1800' FNL & 1360' FWL Sec. 36, T25N, R10W

San Juan County, NM on state lease VO-6298-0000

Approximate Location: ≈25 air miles south of Bloomfield, NM

Applicant Name: Juniper Resources Exploration Company, LLC (214) 443-0001

Applicant Address: 3333 Lee Parkway, Ste 210, Dallas, TX 75219

Submittal Information: Application for a water disposal well will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 S. St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please let us know if you have any questions.

Sincerely,

  
Amanda Palmer

0992 0690 2660  
0000 2000 0960 9102

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For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a> ®.	
SANTA FE, NM 87501	
Certified Mail Fee	\$3.45
Extra Services & Fees (check box, add fee as appropriate)	\$0.00
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$6.70
Total Postage and Fees	\$10.15
Postmark Here 0219 46 06/19/2018	
Sent To: NM SLD - Faith Crosby Street and Apt. No., or P.O. Box No.: 310 Old Santa Fe Trail City, State, ZIP+4: Santa Fe, NM 87504	
PS Form 3800, April 2015 PSN 7530-02-000-8047 See Reverse for Instructions	



Lee Todd  
VP Geology  
3333 Lee Parkway STE 210  
Dallas, TX 75219  
469.729.8182  
Lee.todd@jnpresources.com

New Mexico Oil Conservation Division  
Attn: Michael McMillan

The three possible sources of drinking water which the Tsah Tah 36 SWD Well No. 1 drilled through are the San Jose, Nacimiento, and Ojo Alamo Sandstone. There is no connection between these possible freshwater sources and the Point Lookout Sandstone, in which the Tsah Tah 36 SWD Well No. 1 injects.

The Point Lookout Sandstone is 3,343' below the Ojo Alamo Sandstone, which is the deepest of the possible fresh water sources. Between the Point Lookout Sandstone and the Ojo Alamo Sandstone lies the 1,400' thick Lewis Shale. The Lewis Shale is noted to be a major aquitard in the San Juan Basin (Kelly et al., 2014). This low porosity and low permeability shale is an effective seal.

A review of Taylor and Huffman's 1998 USGS report showed no faults within 2 miles of the Tsah Tah 36 SWD Well No. 1. No faulting has been identified in well logs or the 2D seismic lines that run through 36 25N 10W.

There is no connection between the possible freshwater sources and the Point Lookout Sandstone, in which the Tsah Tah 36 SWD Well No. 1 injects.

Sincerely,

A handwritten signature in black ink that reads "Lee Todd". The signature is written in a cursive, flowing style.

Lee Todd

Works Cited:

Taylor, D., and Huffman, C., 1998, Map Showing Inferred and Mapped Basement Faults, San Juan Basin and Vicinity, New Mexico and Colorado, USGS.

Kelly S., Engler, T., Cather, M., Pokorny, C., Yang, C., Mamer, E., Hoffman, G., Wilch, J., Johnson, P., Zeigler, K., 2014. Hydrologic Assessment of Oil and Gas Resource Development of the Mancos Shale in the San Juan Basin, New Mexico, Open File Report 566, New Mexico Bureau Geology and Mineral Resources.



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06/20/2018

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**PRIORITY MAIL 3-DAY™**

AMANDA PALMER  
JUNIPER RESOURCES  
3333 LEE PKWY STE 210  
DALLAS TX 75219-5111

Expected Delivery Date: 06/23/18

**0006**

**C071**

SHIP

TO: NEW MEXICO EMNRD  
ATTN: PHILLIP GOETZE  
1220 S SAINT FRANCIS DR  
SANTA FE NM 87505-4225

**USPS TRACKING #**



**9405 8036 9930 0654 3003 96**

Electronic Rate Approved #038555749

## **McMillan, Michael, EMNRD**

---

**From:** McMillan, Michael, EMNRD  
**Sent:** Tuesday, June 26, 2018 10:31 AM  
**To:** 'amanda.palmer@jnpresources.com'  
**Subject:** Tsah Tah 36 SWD Well No. 1

Amanda:

The OCD received your administrative application for the Tsah Tah 36 SWD Well No. 1 on June 25, 2018.

The OCD needs the following information:

Affidavit of publication in a newspaper of general circulation in San Juan County. Your application will be suspended until the OCD receives this. Look at SWD 1679 to get an idea of the required information.

Next, the OCD needs an administrative application checklist.

Signed statement from an engineer or geologist that states there is no connection between the injection interval and sources of drinking water.

Please verify that the NMSLO is the surface owner.

Thanks

Mike

Michael McMillan  
1220 South St. Francis  
Santa Fe, New Mexico  
505-476-3448  
Michael.mcmillan@state.nm.us

THE DAILY TIMES

AFFIDAVIT OF PUBLICATION

Ad No. 0001253145

JUNIPER RESOURCES
3333 LEE PARKWAY, STE 210
DALLAS TX 75219

I, being duly sworn say: THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the State of New Mexico for publication and appeared in the internet at The Daily Times web site on the following days(s):

07/03/18

Kevin Yang
Legal Clerk

Subscribed and sworn before me this 10th of July 2018.

Melissa Rome
State of WI, County of Brown
NOTARY PUBLIC

12-30-1
My Commission Expires

Juniper Resources Exploration Company, LLC, 3333 Lee Parkway Ste 210, Dallas, TX 75219 is making application for administrative approval to dispose of produced water in an existing disposal well by underground injection. Contact person is Amanda Palmer, Phone 214-443-0001. The disposal site is Tsah Tah SWD #36, API No. 3004533942, located 1800' FNL & 1360' FWL, Sec. 36 T25N R10W, San Juan Co. NM. Water will be injected into the Point Lookout and Menefee zones between the depths of approximately 3,376' - 4,381' below the surface. Maximum anticipated injection pressure is 665 psi. Maximum injection rate will be 3,000 bwpd. Any interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.

Legal No. 1253145 published in The Daily Times on July 3, 2018.

Ad#:0001253145
P O : SWD 36
# of Affidavits :0.00





# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

**PLSS Search:**

**Section(s):** 25-26, 35-36    **Township:** 25N    **Range:** 10W

---

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.

---

7/25/18 10:28 AM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



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

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

**PLSS Search:**

**Section(s):** 1-2

**Township:** 24N

**Range:** 10W

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.

7/25/18 10:28 AM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER





# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

**PLSS Search:**

**Section(s):** 30-31      **Township:** 25N      **Range:** 11W

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.

7/25/18 10:29 AM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

Submit To Appropriate District Office  
 State Lease - 6 copies  
 Fee Lease - 5 copies  
 District I  
 1625 N. French Dr., Hobbs, NM 88240  
 District II  
 1301 W. Grand Avenue, Artesia, NM 88210  
 District III  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

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

Form C-105  
 Revised June 10, 2003

WELL API NO.  
 30-045-33942

5. Indicate Type of Lease  
 STATE  FEE

State Oil & Gas Lease No.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:  
 OIL WELL  GAS WELL  DRY  OTHER SWD   
 b. Type of Completion:  
 NEW  WORK  DEEPEN  PLUG  DIFF.   
 WELL OVER  BACK  RESVR.  OTHER

7. Lease Name or Unit Agreement Name  
 TSAH TAH SWD

2. Name of Operator  
 ROSETTA RESOURCES

8. Well No.  
 #36

3. Address of Operator C/O WALSH ENGINEERING & PROD. CORP.  
 7415 E. Main St. Farmington. NM 87402

9. Pool name or Wildcat  
 Blanco Mesa Verde

4. Well Location

Unit Letter F : 1800' Feet From The NORTH Line and 1360' Feet From The WEST Line  
 Section 36 Township 25N Range 10W NMPM County SAN JUAN

10. Date Spudded 11/21/06 11. Date T.D. Reached 11/27/06 12. Date Compl. (Ready to Prod.) 1/08/07 13. Elevations (DF& RKB, RT, GR, etc.) 6745' GL 14. Elev. Casinghead 6745' GL

15. Total Depth 4495' 16. Plug Back T.D. 4446' 17. If Multiple Compl. How Many Zones? 18. Intervals Drilled By Rotary Tools 0 - 4495' Cable Tools

19. Producing Interval(s), of this completion - Top, Bottom, Name BLANCO MESA VERDE - 4193' - 4381' 20. Was Directional Survey Made YES

21. Type Electric and Other Logs Run Gas Spectrum, cased hole neutron - gamma ray log 22. Was Well Cored NO

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24#	226'KB	12 1/4"	200 sx (236 cu.ft.)	NONE
5-1/2"	15.5#	4490'KB	7 7/8"	1 <sup>st</sup> stage 410 sx (775 cu.ft.)	NONE
				100 sx (132 cu.ft.)	
				2 <sup>nd</sup> stage 320 sx (605 cu.ft.)	
				50 sx (59 cu.ft.)	

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

25. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 7/8" plastic lined	4157'	4157'

26. Perforation record (interval, size, and number)

4193' - 4381' TOTAL OF 376 HOLES

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL 4197' - 4381' AMOUNT AND KIND MATERIAL USED 2271 BBLs frac fluid, 100,000#, 20/40 Brady Sand

28. PRODUCTION

Date First Production SWD WELL Production Method (Flowing, gas lift, pumping - Size and type pump) Well Status (Prod. or Shut-in)

Date of Test Hours Tested Choke Size Prod'n For Test Period Oil - Bbl Gas - MCF Water - Bbl. Gas - Oil Ratio

Flow Tubing Press. Casing Pressure Calculated 24-Hour Rate Oil - Bbl. Gas - MCF Water - Bbl. Oil Gravity - API - (Corr.)

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

30. List Attachments  
 DEVIATION SURVEY

31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief

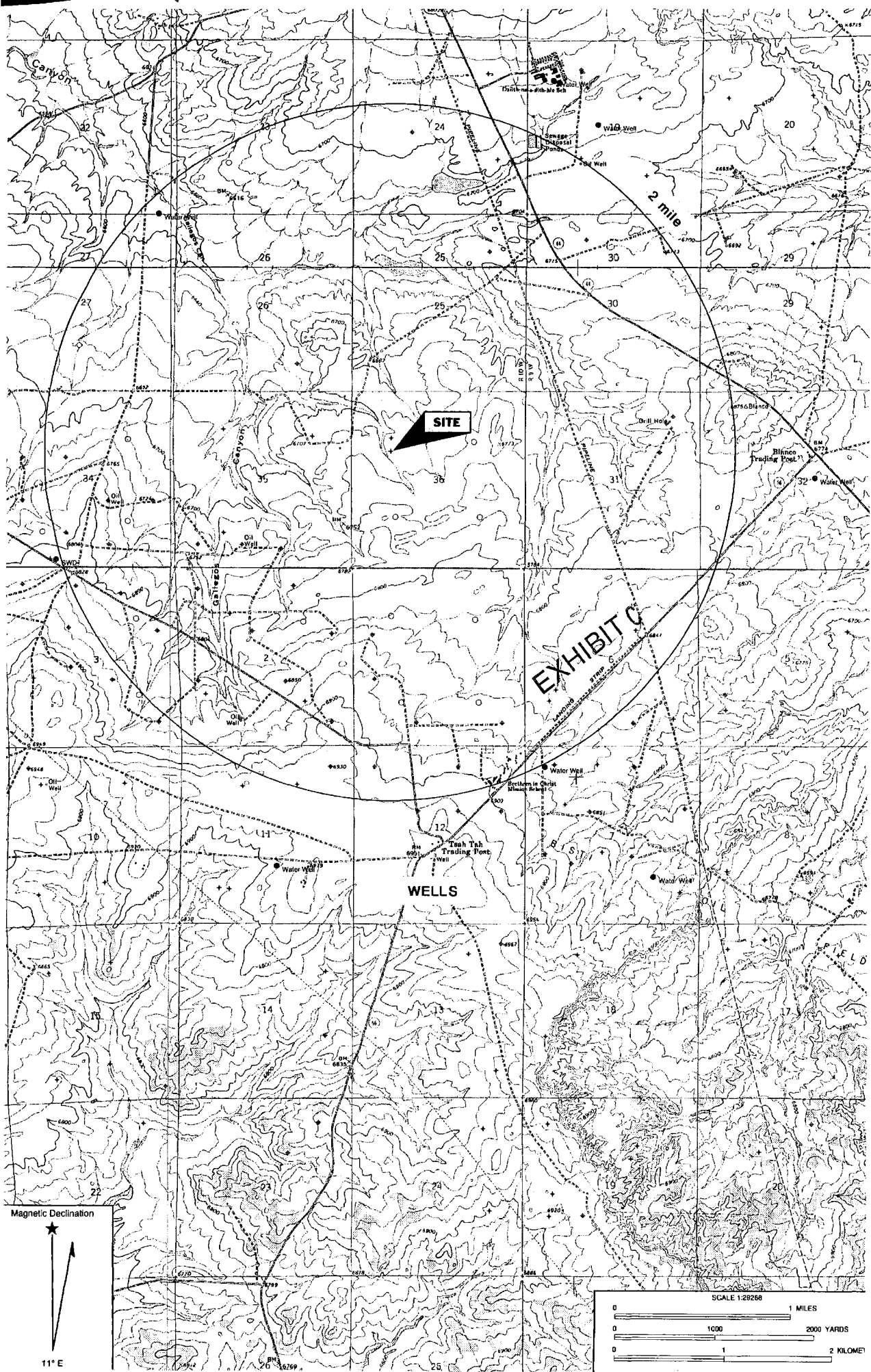
Signature: Printed Name: Gwen Brozzo Title: Production Tech. Date: 1/16/07

E-mail Address: gwen@walsheng.net

INSTRUCTIONS

1/18/07





**SITE**

**EXHIBIT C**

**WELLS**

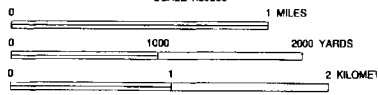
Teah Tah Trading Post

2 mile

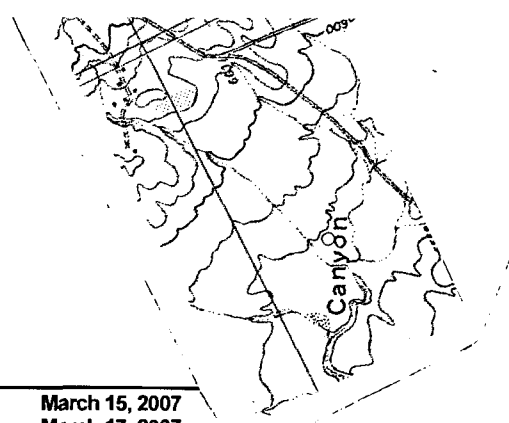
Magnetic Declination



SCALE 1:28268



**Key Pressure Pumping Services**  
 - Water Analysis Result Form  
 Farmington, NM.  
 708 S. Tucker  
 Phone:(505)325-4192  
 Fax:(505)564-3524  
 Zip:87401

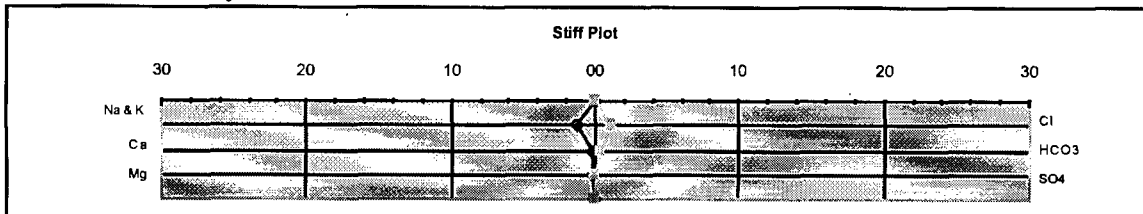


Operator:	Rosetta Resources	Sample Date:	March 15, 2007
		Analysis Date:	March 17, 2007
Well	Tsah Tah SWD # 11	District:	Farmington
Formation:	CLIFFHOUSE	Requested By:	RUSS McQUITTY
County:	SAN JUAN N.M.	Technician:	BEN BARELA
Depth:	2469	Source:	Swab Run #1

**PHYSICAL AND CHEMICAL DETERMINATION**

SPECIFIC GRAVITY:	1.005	59	(°F)	S.G. (Corrected):	1.005
pH:	8.50			MAGNESIUM:	48 ppm
RESISTIVITY:	0.70	ohm/meter		CALCIUM:	56 ppm
IRON:	0.10	ppm		BICARBONATES:	486 ppm
H2S:	0	ppm		CHLORIDES:	9552 ppm
POTASSIUM:	38	ppm		SODIUM :	6240 ppm
SULFATES:	23	ppm		TDS:	16443 ppm

CaCO3 Scale Tendency = Remote  
 CaSO4 Scale Tendency = Remote



Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

**EXHIBIT F**

Key Pressure Pumping Services  
 Water Analysis Result Form  
 Farmington, NM.  
 708 S. Tucker  
 Phone:(505)325-4192  
 Fax:(505)564-3524  
 Zip:87401

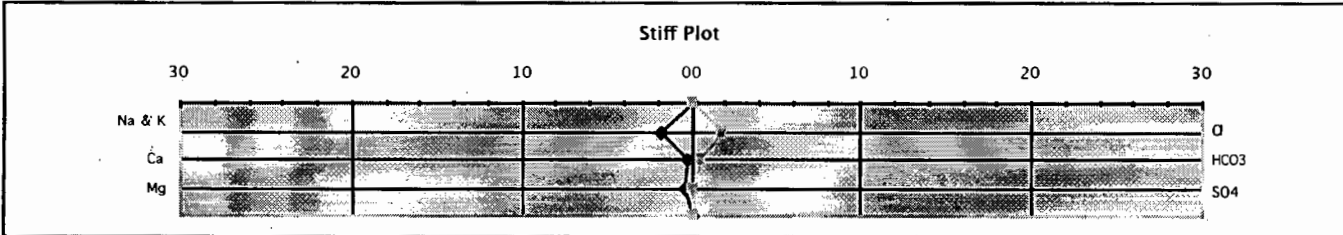


Operator: Rosetta Resources	Sample Date: March 15, 2007
	Analysis Date: March 17, 2007
Well Tsah Tah SWD # 11	District: Farmington
Formation: <u>Menefee</u>	Requested By: RUSS McQUITTY
County: SAN JUAN N.M.	Technician: BEN BARELA
Depth: 3645	Source: Swab Run #1

P H Y S I C A L   A N D   C H E M I C A L   D E T E R M I N A T I O N

SPECIFIC GRAVITY: 1.010	52 (°F)	S.G. (Corrected): 1.010
pH: 9.00		MAGNESIUM: 77 ppm
RESISTIVITY: 0.80 ohm/meter		CALCIUM: 63 ppm
IRON: 0.16 ppm		BICARBONATES: 725 ppm
H2S: 0 ppm		CHLORIDES: 14653 ppm
POTASSIUM: 11 ppm		SODIUM : 9586 ppm
SULFATES: 32 ppm		TDS: 25149 ppm

CaCO3 Scale Tendency = Remote  
 CaSO4 Scale Tendency = Remote



Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

EXHIBIT F

**Key Pressure Pumping Services**

Water Analysis Result Form  
 Farmington, NM.  
 708 S. Tucker  
 Phone:(505)325-4192  
 Fax:(505)564-3524  
 Zip:87401

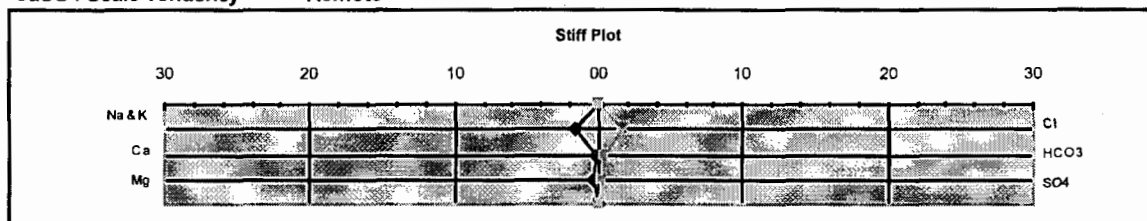


Operator:	Rosetta Resources	Sample Date:	March 15, 2007
		Analysis Date:	March 17, 2007
Well	Tsah Tah SWD # 11	District:	Farmington
Formation:	POINT LOOKOUT	Requested By:	RUSS McQUITTY
County:	SAN JUAN N.M.	Technician:	BEN BARELA
Depth:	4181	Source:	Swab Run #6

**PHYSICAL AND CHEMICAL DETERMINATION**

SPECIFIC GRAVITY:	1.010	47 (°F)	S.G. (Corrected):	1.010
pH:	10.00		MAGNESIUM:	77 ppm
RESISTIVITY:	0.40 ohm/meter		CALCIUM:	40 ppm
IRON:	0.46 ppm		BICARBONATES:	483 ppm
H2S:	0 ppm		CHLORIDES:	13465 ppm
POTASSIUM:	38 ppm		SODIUM :	8752 ppm
SULFATES:	97 ppm		TDS:	22953 ppm

CaCO3 Scale Tendency = Remote  
 CaSO4 Scale Tendency = Remote



Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

**EXHIBIT F**

# Water Analysis Analysis #: 1058

Company: Rosetta Resources

Lease: .

Location: Farmington, New Mexico

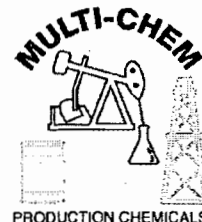
Date: January 16, 2007

Attention: Bryan Enns

Description:

Well: Tsah Tah 2 #4

Sample Point: 2 #4



## DISSOLVED SOLIDS

CATIONS	mg/l	meq/l
Sodium, Na (calc)	10,906.14	474.18
Calcium, Ca	800.00	39.80
Magnesium, Mg	344.04	28.20
Barium, Ba	2.44	0.04
Iron, Fe	27.62	1.48

ANIONS	mg/l	meq/l
Hydroxyl, OH		
Carbonate, CO3		
Bicarbonate, HCO3	518.50	8.49
Sulfate, SO4	0.00	0.00
Chloride, Cl	19,000.00	535.21
Sulfide, S		

## OTHER PROPERTIES

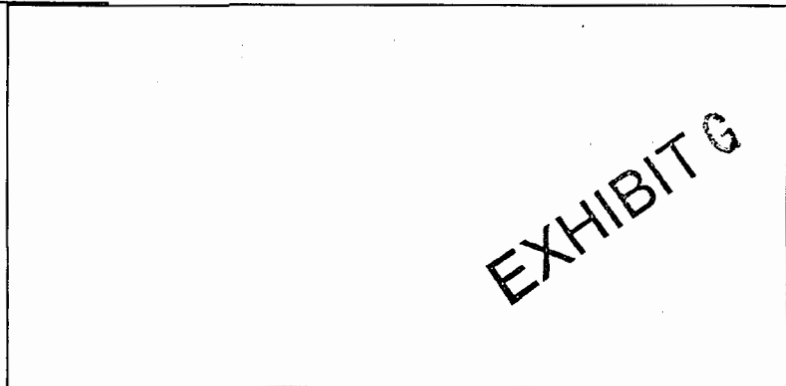
pH	7.30
Specific Gravity	1.014
Dissolved Oxygen, (Mg/l)	
Dissolved Carbon Dioxide	19.80
Sulfide as H2S, (ppm)	0.00
Sample Temp	F. 72 C. 22
CO2 in Gas Phase (Mg/l)	
H2S in Gas Phase (Mg/l)	
Total Hardness (Me/l)	68.00

Total Dissolved Solids (Mg/l)	31,599
Total Ionic Strength	0.5784
Maximum CaSO4, (calc.)	0.00
Maximum BaSO4, (calc.)	0.00
Total SRB (colonies/cc)	
Total APB (colonies/cc)	
Total Aerobic (colonies/cc)	
Manganese (Mg/l):	0.84

### Conclusion:

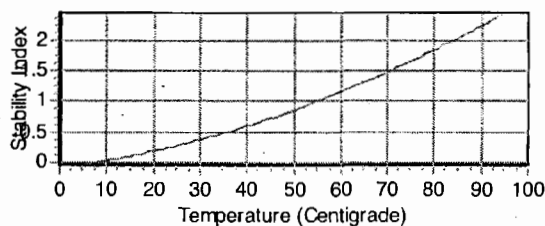
Calcium Carbonate scaling index is positive above 9 degrees Centigrade.  
 Calcium Sulfate scale is not indicated from 0 to 100 degrees Centigrade.  
 Barium Sulfate scale is not indicated from 0 to 100 degrees Centigrade.

### Remarks:

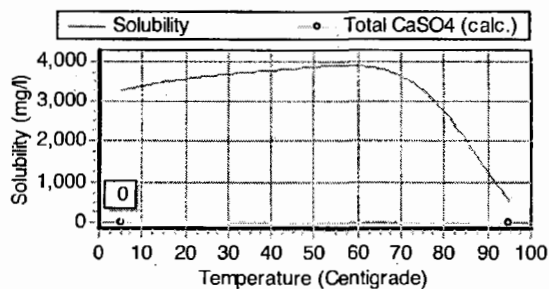


### Scaling Indices vs. Temperature

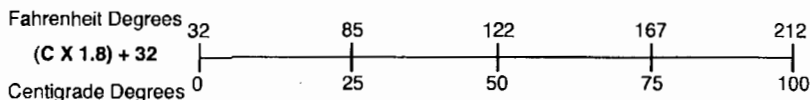
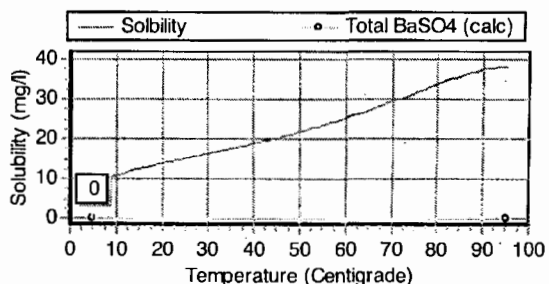
Calcium Carbonate Saturation Index



Calcium Sulfate Solubility



Barium Sulfate Solubility





# Water Analysis Analysis #: 1059

Company: Rosetta Resources

Lease: .

Location: Farmington, New Mexico

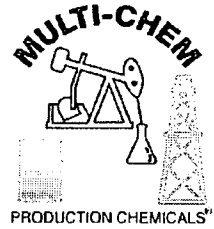
Date: January 16, 2007

Attention: Bryan Enns

Description:

Well: Tsah Tah 33 #2

Sample Point: 33 #2



## DISSOLVED SOLIDS

CATIONS	mg/l	meq/l
Sodium, Na (calc)	10,979.97	477.39
Calcium, Ca	400.00	19.90
Magnesium, Mg	245.22	20.10
Barium, Ba	3.19	0.05
Iron, Fe	46.22	2.48

ANIONS	mg/l	meq/l
Hydroxyl, OH		
Carbonate, CO3		
Bicarbonate, HCO3	786.90	12.88
Sulfate, SO4	0.00	0.00
Chloride, Cl	18,000.00	507.04
Sulfide, S		

## OTHER PROPERTIES

pH	6.80
Specific Gravity	1.014
Dissolved Oxygen, (Mg/l)	
Dissolved Carbon Dioxide	7.90
Sulfide as H2S, (ppm)	0.00
Sample Temp	F. 72 C. 22
CO2 in Gas Phase (Mg/l)	
H2S in Gas Phase (Mg/l)	
Total Hardness (Me/l)	40.00

Total Dissolved Solids (Mg/l)	30,462
Total Ionic Strength	0.5402
Maximum CaSO4, (calc.)	0.00
Maximum BaSO4, (calc.)	0.00
Total SRB (colonies/cc)	
Total APB (colonies/cc)	
Total Aerobic (colonies/cc)	
Manganese (Mg/l):	0.43

### Conclusion:

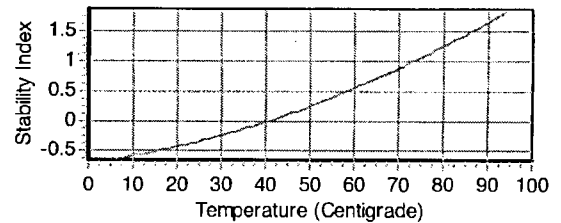
Calcium Carbonate scaling index is positive above 41 degrees Centigrade.  
 Calcium Sulfate scale is not indicated from 0 to 100 degrees Centigrade.  
 Barium Sulfate scale is not indicated from 0 to 100 degrees Centigrade.

### Remarks:

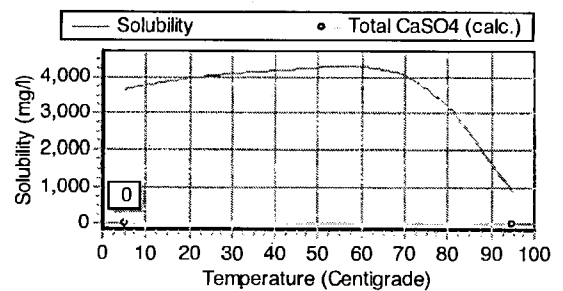
EXHIBIT G

### Scaling Indices vs. Temperature

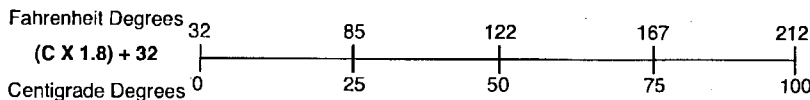
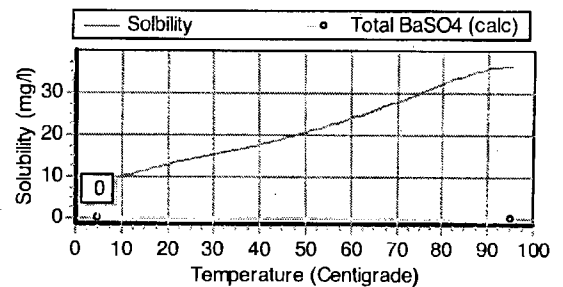
#### Calcium Carbonate Saturation Index



#### Calcium Sulfate Solubility



#### Barium Sulfate Solubility





# FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V16.2]

DATE RECORD: First Rec: 6/25/2018 Admin Complete: 7/11/2018 or Suspended: \_\_\_\_\_ Add. Request/Reply: 7-1-2018  
6-26-2018

ORDER TYPE: WFX / PMX SWD Number: 1053B Order Date: \_\_\_\_\_ Legacy Permits/Orders: \_\_\_\_\_

Well No. 36 Well Name(s): Tsch TAH 36

API : 30-0 45-33942 Spud Date: 11/21/2008 New or Old (EPA): AL (UIC Class II Primacy 03/07/1982)

Footages 1800FWL Lot \_\_\_\_\_ or Unit F Sec 36 Tsp 2SW Rge 10W County SJC  
1360FWL MESQUITE

General Location: 23 miles South/Huff-Finney Pool: SUDJ Pool No.: 96160  
CHACO JUNIPER RESOURCES JUSTIN DAIS

BLM 100K Map: CANYON Operator: EXPLORATION COMPANY, LLC OGRID: 371654 Contact: \_\_\_\_\_

COMPLIANCE RULE 5.9: Total Wells: 124 Inactive: 5 Fincl Assur: \_\_\_\_\_ Compl. Order? \_\_\_\_\_ IS 5.9 OK? \_\_\_\_\_ Date: \_\_\_\_\_

WELL FILE REVIEWED  Current Status: "Active"

WELL DIAGRAMS: NEW: Proposed  or RE-ENTER: Before Conv.  After Conv.  Logs in Imaging: Y

Planned Rehab Work to Well: \_\_\_\_\_

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement (S) or Cf	Cement Top and Determination Method
Planned ___ or Existing ___ Surface	<u>12 1/4" / 8 5/8"</u>	<u>226</u>	<u>200</u>	<u>SURFACE / VISUAL</u>
Planned ___ or Existing ___ Interm/Prod	<u>7 1/8" / 5 1/2"</u>		<u>880</u>	<u>SURFACE / VISUAL</u>
Planned ___ or Existing ___ Interm/Prod				
Planned ___ or Existing ___ Prod/Liner				
Planned ___ or Existing ___ Liner				
Planned ___ or Existing ___ OH / PERM	<u>3376-4361</u>		<u>1025'</u>	

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.				Drilled TD <u>4445</u> PBSD _____
Confining Unit: Litho. Struc. Por.				NEW TD _____ NEW PBSD _____
Proposed Inj Interval TOP:				NEW Open Hole <input type="radio"/> or NEW Perfs <input type="radio"/>
Proposed Inj Interval BOTTOM:				Tubing Size <u>2 7/8</u> in. Inter Coated? _____
Confining Unit: Litho. Struc. Por.				Proposed Packer Depth <u>3313</u> ft
Adjacent Unit: Litho. Struc. Por.				Min. Packer Depth <u>3276</u> (100-ft limit)
				Proposed Max. Surface Press. <u>665</u> psi
				Admin. Inj. Press. <u>675</u> (0.2 psi per ft)

**AOR: Hydrologic and Geologic Information**

POTASH: R-111-PMH Noticed? \_\_\_\_\_ BLM Sec Ord  WIPP  Noticed?  Salt/Salado T: \_\_\_\_\_ B: \_\_\_\_\_ NW: Cliff House fm

FRESH WATER: Aquifer BLW JORS Max Depth 2500 HYDRO AFFIRM STATEMENT By Qualified Person

NMOSE Basin: SJC JUAN CAPITAN REEF thru \_\_\_\_\_ adj NA No. GW Wells in 1-Mile Radius? 0 FW Analysis? NA

Disposal Fluid: Formation Source(s) CO2 Analysis?  On Lease  Operator Only  or Commercial

Disposal Interval: Inject Rate (Avg/Max BWPD): 24/12K Protectable Waters? \_\_\_\_\_ Source: \_\_\_\_\_ System Closed or Open

HC Potential: Producing Interval? \_\_\_\_\_ Formerly Producing? \_\_\_\_\_ Method: Logs/DST/P&A/Other \_\_\_\_\_ 2-Mi Radius Pool Map

AOR Wells: 1/2-M Radius Map and Well List? Y No. Penetrating Wells: 0 [AOR Horizontals: 0 AOR SWDs: 0]

Penetrating Wells: No. Active Wells \_\_\_\_\_ Num Repairs? \_\_\_\_\_ on which well(s)? \_\_\_\_\_ Diagrams? \_\_\_\_\_

Penetrating Wells: No. P&A Wells \_\_\_\_\_ Num Repairs? \_\_\_\_\_ on which well(s)? \_\_\_\_\_ Diagrams? \_\_\_\_\_

NOTICE: Newspaper Date 7-03-2018 Mineral Owner: NMSLO Surface Owner: NMSLO N. Date: 6-15-2018

RULE 26.7(A): Identified Tracts? Y Affected Persons: HILCORP, KAISER FRANKS, WRSPEC N. Date: 6-19-2018

Order Conditions: Issues: Ltd to Point Lookout & Manufacture

Additional COAs: NO Cliff House fm injection !!!

Previous Applications