

12/16/2014 DATE IN	SUSPENSE	PRG ENGINEER	12/17/2014 LOGGED IN	SAD TYPE	PMA41435158323 APP NO.
-----------------------	----------	-----------------	-------------------------	-------------	---------------------------

ABOVE THIS LINE FOR DIVISION USE ONLY

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 _____

- SAD
 - Great Western
 Drilling CO
 9338
 Well
 - Thorpe seans
 com #1
 30-015-20169
 Pool
 - SWD, Devonian
 96101

[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.

Billy E. Prichard
 Print or Type Name

Billy E. Prichard
 Signature

Agent for Great Western Drilling Company
 Title

12/15/14
 Date

billy@pwllc.net
 e-mail Address



PERMIT TYPE: WFX / PMX (SWD) Number: Permit Date: Legacy Permits/Orders:

Well No. 1 Well Name(s): ThorpeScars SWD#1

API: 30-0 15-20169 Spud Date: 8-28-1968 New or Old: 0 (UIC Class II Primacy 03/07/1982)

Footages 1094FSL, 913FEL Lot 0 or Unit 0 Sec 18 Tsp 18S Rge 26E County Eddy

General Location: 2.5 miles South of Antesia Pool: SWD, Devonian Pool No.: 96101

BLM 100K Map: Antesia Operator: Great Western Drilling Company OGRID: 9338 Contact: Billy Prichard

COMPLIANCE RULE 5.9: Total Wells: 90 Inactive: 2 Fincl Assur: X Compl. Order? IS 5.9 OK? X Date:

WELL FILE REVIEWED 1 Current Status: P&A Φ -> 0-8950

WELL DIAGRAMS: NEW: Proposed 0 or RE-ENTER: Before Conv. 1 After Conv. 1 Logs in Imaging:

Planned Rehab Work to Well: C.B.L. For the 5 1/2" Setting Base 878, Tie

Well Construction Details:		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned <u>0</u> or Existing <u>0</u> Surface		<u>15 1/4</u>	<u>158</u>	<u>50</u>	<u>Surface</u>
Planned <u>0</u> or Existing <u>0</u> Interm/Prod					
Planned <u>0</u> or Existing <u>0</u> Interm/Prod		<u>12 1/4 / 8 5/8</u>	<u>1210</u>	<u>900</u>	<u>Surface</u>
Planned <u>0</u> or Existing <u>0</u> Prod/Liner					
Planned <u>0</u> or Existing <u>0</u> Liner		<u>7 7/8 / 5 1/2</u>	<u>9800</u>	<u>1200</u>	<u>Surface</u>
Planned <u>0</u> or Existing <u>1</u> (OH) PERF		<u>9800 to 10,500</u>		<u>700</u>	

Injection Stratigraphic Units:		Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.			<u>Woodford</u>	
Confining Unit: Litho. Struc. Por.			<u>Ellenburger</u>	<u>10,500</u>
Proposed Inj Interval TOP:	<u>9800</u>		<u>Woodford</u>	
Proposed Inj Interval BOTTOM:	<u>10500</u>		<u>Ellenburger</u>	<u>10,500</u>
Confining Unit: Litho. Struc. Por.				
Adjacent Unit: Litho. Struc. Por.				

Completion/Operation Details:	
Drilled TD <u>8970</u>	PBTD <u> </u>
NEW TD <u>10500</u>	NEW PBTD <u> </u>
NEW Open Hole <u>0</u> or NEW Perfs <u>0</u>	
Tubing Size <u>2 7/8</u> in.	Inter Coated? <u>X</u>
Proposed Packer Depth <u>9750</u> ft	
Min. Packer Depth <u>9700</u> (100-ft limit)	
Proposed Max. Surface Press. <u>1960</u> psi	
Admin. Inj. Press. <u>1960</u> (0.2 psi per ft)	

AOR: Hydrologic and Geologic Information

POTASH: R-111-P 0 Noticed? MA BLM Sec Ord 0 WIPP 0 Noticed? SALT/SALADO T: B: CLIFF HOUSE

FRESH WATER: Aquifer Alluvial Max Depth 200 HYDRO AFFIRM STATEMENT By Qualified Person 1

NMOSE Basin: Boxley CAPITAN REEF: thru 0 adj 0 NA 0 No. Wells within 1-Mile Radius? FW Analysis 0

Disposal Fluid: Formation Source(s) Analysis? X On Lease 0 Operator Only 1 or Commercial 0

Disposal Int: Inject Rate (Avg/Max BWPD): 2000 / 10000 Protectable Waters? MA Source: System: Closed 1 or Open 0

HC Potential: Producing Interval? MA Formerly Producing? Method: Logs/DST/P&A Other muclly 2-Mile Radius Pool Map 0

AOR Wells: 1/2-M Radius Map? MA Well List? Total No. Wells Penetrating Interval: Horizontals?

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

Penetrating Wells: No. P&A Wells 0 Num Repairs? on which well(s)? Diagrams?

NOTICE: Newspaper Date 12-09-2014 Mineral Owner Wayne Gussman Surface Owner ST Rocken N. Date 12/15/2014

RULE 26.7(A): Identified Tracts? Affected Persons: COG, Murchison, Yates, Gussman N. Date 12/15/2014

Permit Conditions: Issues: Tie in Φ LOG 8700-TD, Resistivity 8700-TD

Add Permit Cond:



Pueblo West Resources
125 Greathouse Village
Decatur, Texas 76234
432-934-7680

DECEMBER 15, 2014

RECEIVED NMOCD

2014 DEC 15 10:15 AM

Per the rules and regulations of the New Mexico Oil Conservation Division you have been identified as a party of interest, enclosed is a copy of NMOCD form C108.

Great Western Drilling Company, 700 West Louisiana, Midland, TX 79701 has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to convert the Thorpe Sears Com #1, API # 30-015-20169, 1094 FSL x 913 FEL, Unit Letter "P", Section 18, T18S, R26E, Eddy County, New Mexico from a dry and abandoned gas well to a private lease Devonian salt water disposal well. The disposal interval would be the Devonian formation through open hole from 9800 feet – 10500 feet. Disposal fluid would be produced water piped in from Great Western Drilling Company producing wells in the area. Anticipated disposal rate of 2000 BWPD with a maximum disposal rate of 10000 BWPD. Anticipated disposal pressure 0 (Zero) psi with a maximum disposal pressure of 1960 psi. Well is approximately 8 miles S of Artesia, New Mexico.

All interested parties opposing the aforementioned must file objections with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained by contacting Cary Billingsley 432-688-2073

Sincerely,

A handwritten signature in black ink that reads "Billy E. Prichard". The signature is written in a cursive, flowing style.

Billy E. Prichard
email; billy@pwillc.net
www.pwillc.net

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance X Disposal _____ Storage
Application qualifies for administrative approval? X Yes _____ No
- II. OPERATOR: **Great Western Drilling Company** **Ogrid # 9338**
ADDRESS: **700 W. Louisiana** **Midland, TX 79701**
CONTACT PARTY: **Cary Billingsley** PHONE: **432-688-2073**
- 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: **Billy E. Prichard**

TITLE: **Agent for Great Western Drilling Co**

SIGNATURE: _____

DATE: **12/15/14**

E-MAIL ADDRESS: **billy@pwllc.net**

- * 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: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

***Great Western Drilling Company
Thorpe Sears SWD # 1
API 30-015-20169
1094 FSL X 913 FEL
Unit Letter "P", Section 18, T18S, R26E
Eddy County, New Mexico
C108 Application for Authorization to Inject***

I.

The purpose of this application is seeking administrative approval for the conversion of the Thorpe Sears Com # 1 from a dry and abandoned Morrow gas well test to a private lease Devonian salt water disposal well.

II.

**Operator: Great Western Drilling Company Ogrid: 9338
Address: 700 W. Louisiana Midland, TX 79701
Contact Party: Cary Billingsley 432-688-2073**

III.

Please see Exhibit "A" for well data

IV.

This is not an expansion of an existing project

V.

Please see Exhibit "B" of map of Area of Review

VI.

**No wells in 0.5 mile area of review that penetrate proposed disposal zone
Please see Exhibit "C"**

VII.

- 1. Anticipated disposal volume 2000 BWPD with a maximum of 10000 BWPD.**
- 2. System will be closed.**
- 3. Anticipated disposal pressure of 0 (Zero) psig with a maximum disposal pressure of 1960 psig.**
- 4. Please see Exhibit "D" for disposed fluid analysis.**
- 5. Please see Exhibit "D" for disposal zone fluid analysis.**



www.pwllc.net

Page 1 of 1

**Great Western Drilling Company
Thorpe Sears SWD # 1
API 30-015-20169
1094 FSL X 913 FEL
Unit Letter "P", Section 18, T18S, R26E
Eddy County, New Mexico
C108 Application for Authorization to Inject**

VIII.

The Devonian is cherty fractured limestone and dolomite.

IX.

No stimulation is planned at this time. If disposal rates and pressures dictate, disposal zone will acidized to clean up near wellbore damage.

X.

Logs will be submitted after completion of re-entry.

XI.

**Several fresh water wells were identified in the AOR
Water sample analysis will be forwarded when received**

XII.

**Available geological and engineering data have been examined and no
evidence of open faults or hydrological connection between the disposal zone
and any underground sources of drinking water has been found.**

XIII.

Please see Exhibit "E" for Proof of Notify

Billy E. Prichard

Agent for Great Western Drilling Company

Date 12/15/14

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-20169	Pool Code 96101	Pool Name SWD; Devonian
Property Code 313916	Property Name Thorpe Sears SWD	Well Number 1
OGRUP No. 9338	Operator Name GREAT WESTERN DRILLING COMPANY	Elevation 3411'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	18	18-S	26-E		1094	SOUTH	913	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y= 634222.1 N X= 474882.5 E LAT.=32.743545° N LONG.=104.415025° W	GEODETIC COORDINATES NAD 83 NME SURFACE LOCATION Y= 634284.4 N X= 516061.1 E LAT.=32.743658° N LONG.=104.415544° W	EDGE OF CULTIVATION

OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Billy E. Prichard 11/18/14
Signature Date

Billy E. Prichard - Agent
Printed Name

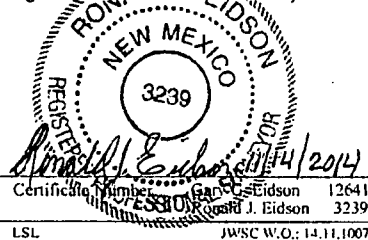
billy@pwlc.net
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

OCTOBER 29, 2014

Date of Survey
Signature of Registered Professional Surveyor:



Certificate Number 3239
LSL JWSC W.O.: 14.11.1007

**Great Western Drilling Company
Thorpe Sears SWD # 1
API # 30-015-20169
1094 FSL X 913 FEL
Unit Letter "P", Section 18, T18S, R26E
Eddy County, New Mexico**

Well Data

Data obtained from records maintained by NMOCD

Spud August 31, 1968 by The Fundamental Oil Corporation

Drilled 15 ½" cable tool hole to 158'. Ran 4 joints of 14" Lap-Weld new casing to 158' from ground level. Cemented with 50 sks Class "C" Incor cement. Cement circulated to surface and the fell back approximately 30 feet. Redi-Mix to surface.

Drilled 12 ¼" hole to 1155 feet, reduced hole to 11" drilled to 1210 feet. 8 5/8" casing set at 1210 feet. Cemented with 500 sks Class "C" cement and additives. Top of cement behind 8 5/8" casing 380 feet. Cemented to surface from 300 feet with 1" pipe and 400 sks Class "C"

Drilled 7 7/8" hole to TD of 8970 feet X Dry Hole

Plugged as follows 11/13/1968

Plug 1 - 35 sks Class "C" 8660-8800 feet

Plug 2 - 35 sks Class "C" 6860-7000 feet

Plug 3 - 35 sks Class "C" 5560-5700 feet

Plug 4 - 35 sks Class "C" 4160-4300 feet

Plug 5 - 35 sks Class "C" 1960-2100 feet

Plug 6 - 35 sks Class "C" 1060-1200 feet

Plug 7 - 35 sks Class "C" 560-700 feet

PA Marker

Well was replugged on 7/27/1969 due to gas leak

Drilled out to 2105 feet

25 sks cement plug 2092 feet

50 sks cement plug 1282 feet

40 sks cement plug 688 feet

10 sks cement plug at 25 feet to surface

Exhibit "A"

Great Western Drilling Company

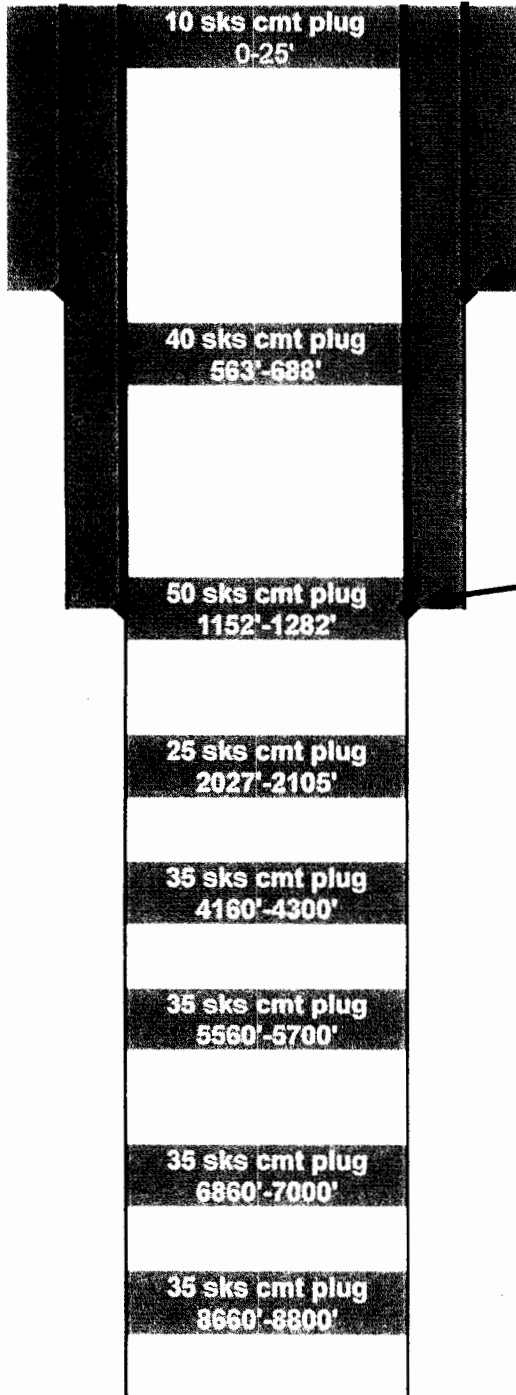
Unit Letter "P", Section 18, T18S, R26E

Eddy County, New Mexico

1094 FSL X 913 FEL

Thorpe-Sears SWD #1

Current WBD



14" Lap Weld CSA 158' in 15 1/2" Hole
Cemented w/ 50 sks
Top off w/ RediMix
Cement circulated to Surface

Exhibit "A"

8 5/8" 24# J55 CSA 1210' in 12 1/4" Hole
Cemented w/ 900 sks Class "C"
Cement circulated to Surface
12 1/4" hole to 1155'
11" hole 1155'-1210'

Estimated Formation Tops

San Andres	900
Glorieta	2900
Tubb	3712
Abo	4305
Wolfcamp	5595
Virgilian	7020
Canyon	7435
Strawn	8045
Atoka	8460
Morrow	8645
Morrow C	8925

PA 7/27/1969

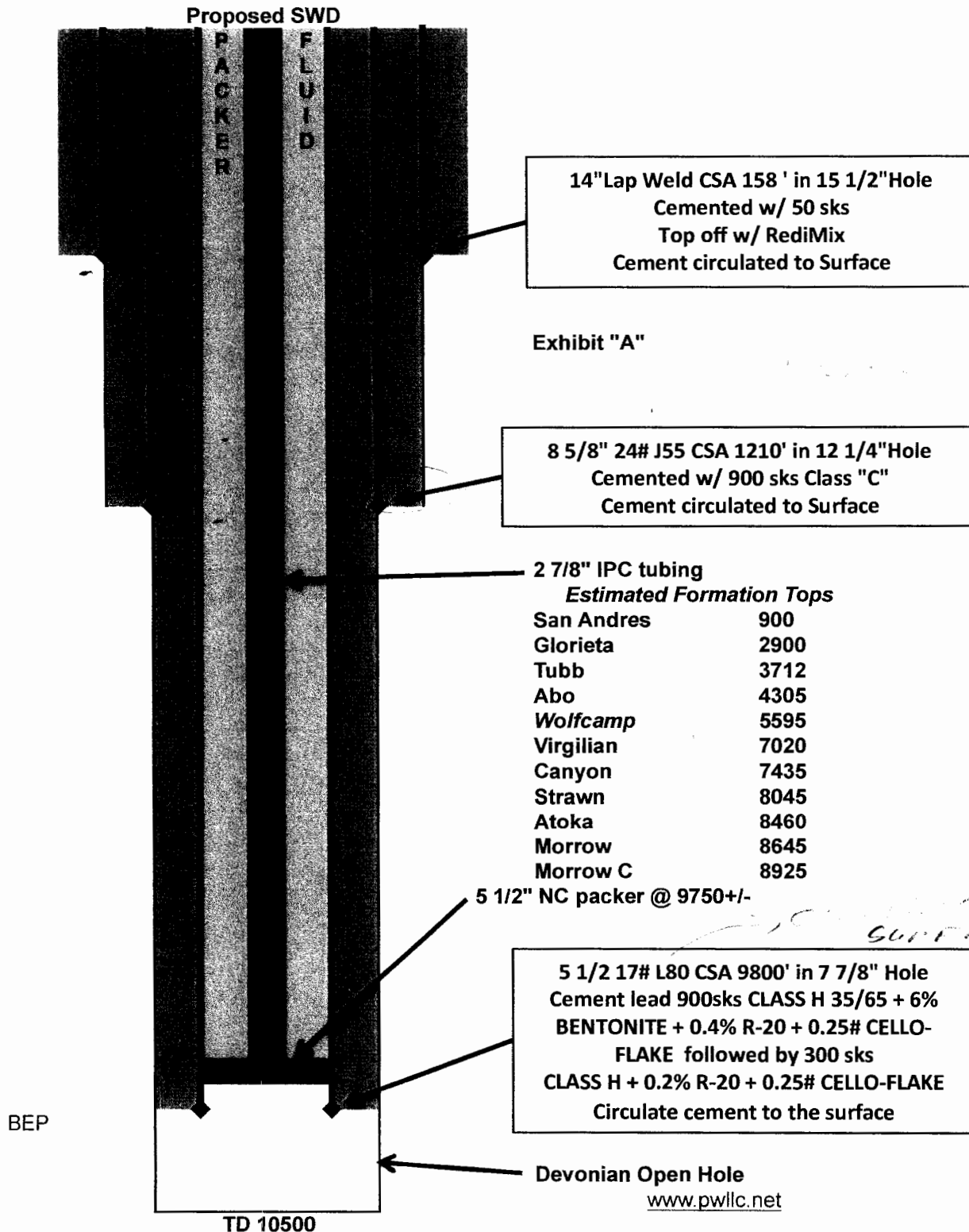
BEP

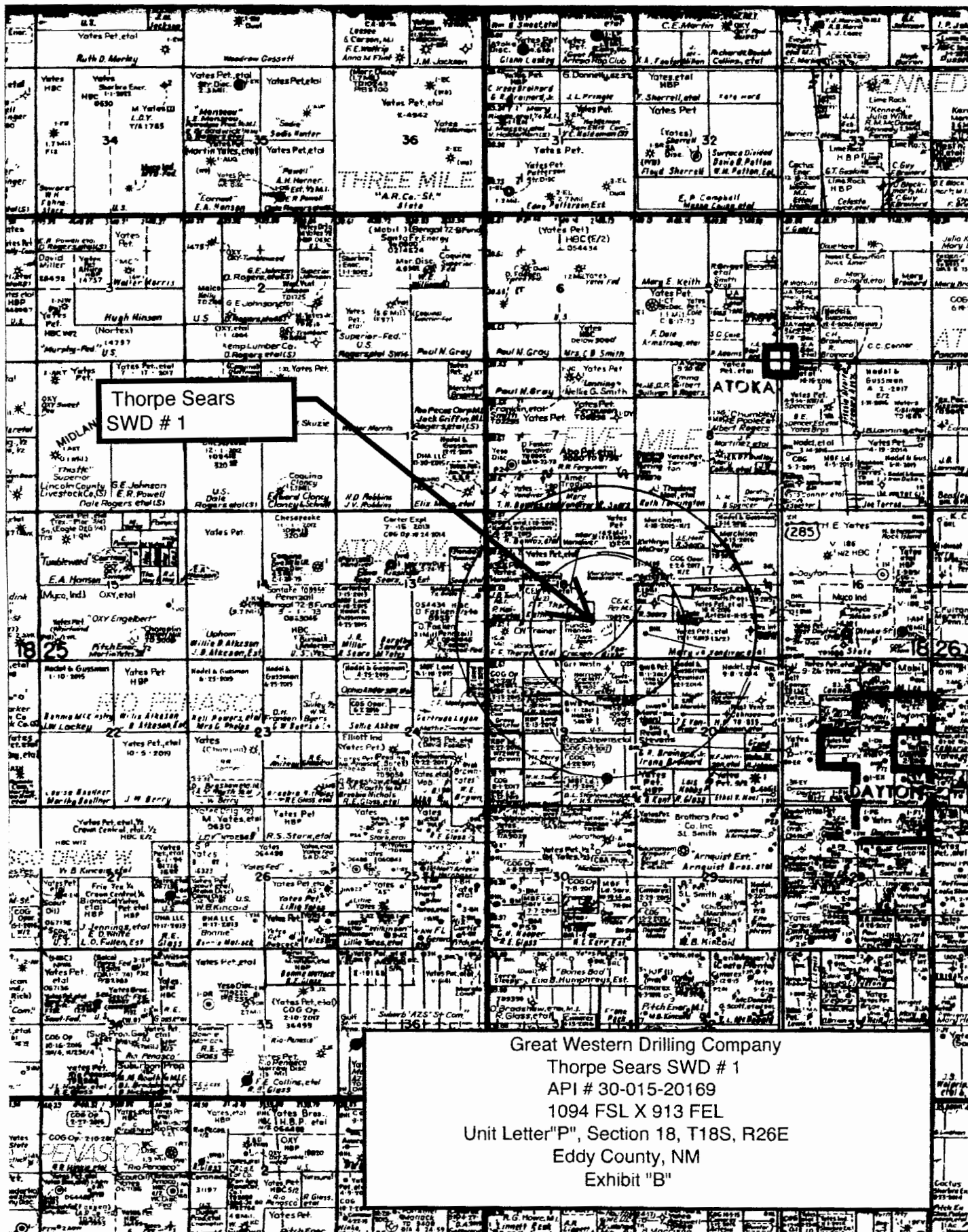
TD 8970'

www.pwllc.net

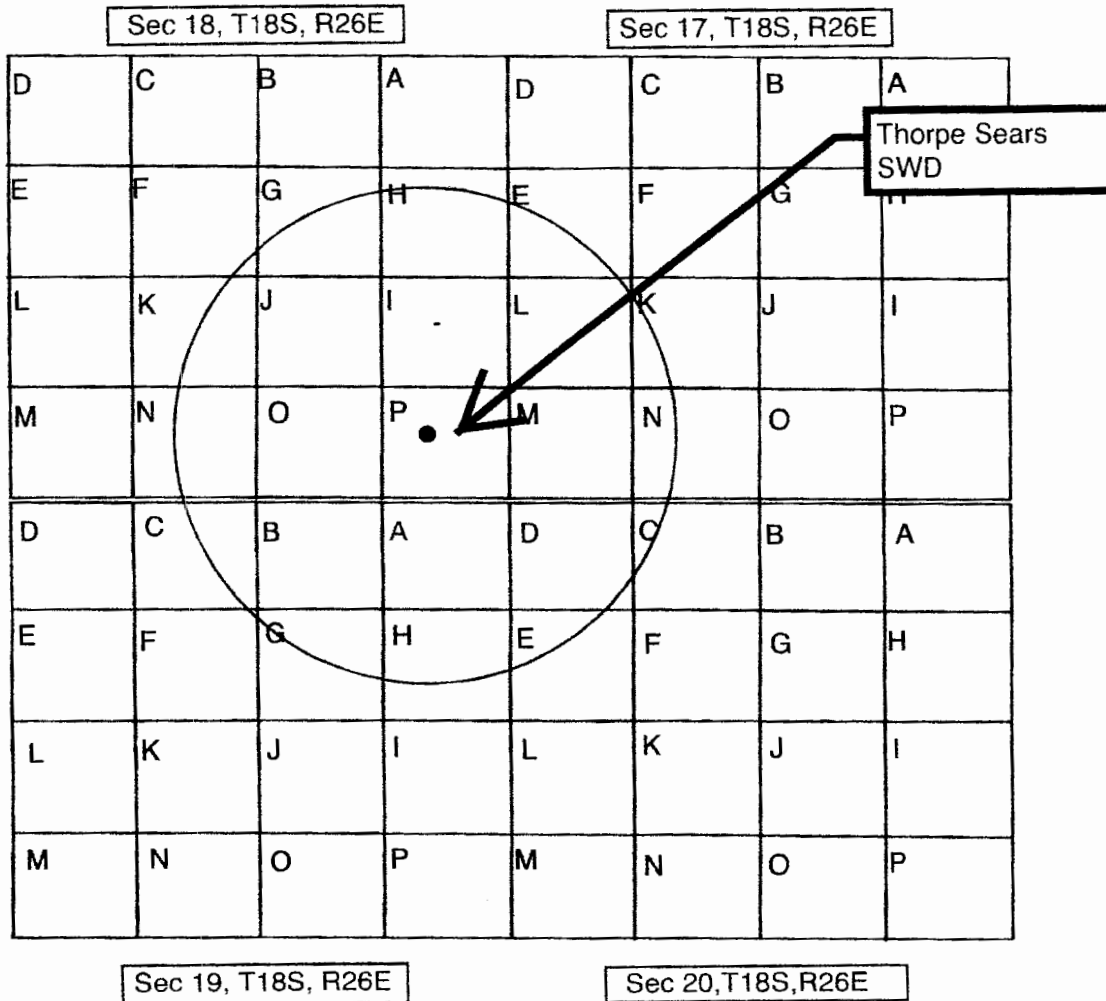
Great Western Drilling Company
Unit Letter "P", Section 18, T18S, R26E
Eddy County, New Mexico
1094 FSL X 913 FEL

Thorpe-Sears SWD #1





Great Western Drilling Co.
 Thorpe Sears SWD # 1
 API # 30-015-20169
 0.5 Mile AOR



Offset well data

Sec 18
 Unit Letters F,G,H,I,J,K,N,O,P
 Sec 17
 Unit Letters E,K,L,M,N
 Sec 19
 Unit Letters A,B,C,H,G
 Sec 20
 Unit Letters C,D,E

EXHIBIT "C"

Great Western Drilling Company
 Thorpe Sears SWD # 1
 API # 30-015-20169
 Offset well data

Data from records maintained by NMOCD
 Section 18, T18S, R26E

Unit Letter	API #	Total Depth	Status
F	None		
G	None		
H	None		
I	None		
J	None		
K	None		
N	None		
O	None		
P	30-015-20169	Proposed SWD Well	P

Section 17, T18S, R26E

Unit Letter	API #	Total Depth	Status
E	30-015-40589	6885'	A
E	30-015-27028	9050'	P
K	None		
L	None		
M	None		S
N	None		

Section 19, T18S, R26E

Unit Letter	API #	Total Depth	Status
A	30-015-33409	9106'	A
A	30-015-41487	7085'	Not Yet Drilled
A	30-015-00210	1602'	P
B	None		
C	None		
H	None		
G	None		

Section 20, T18S, R26E

Unit Letter	API #	Total Depth	Status
C	None		
D	None		
E	30-015-20018	9053	P

No wells in AOR penetrate the proposed disposal zone

Exhibit "C"

BEP
www.pwllc.net

Great Western Drilling Company
Thorpe Sears SWD # 1
API # 30-015-20169
Eddy County, NM

Produced Water in Area
Data obtained from Go-Tech

API	Formation	TDS	Chorides
3001530694	Yeso	194357	152244
3001503917	Devonian	61230	35100

EXHIBIT "D"

BEP

www.pwllc.net

Legal Notice

Great Western Drilling Company, 700 West Louisiana, Midland, TX 79701 has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to convert the Thorpe Sears Com #1, API # 30-015-20169, 1094 FSL x 913 FEL, Unit Letter "P", Section 18, T18S, R26E, Eddy County, New Mexico from a dry and abandoned gas well to a private lease Devonian salt water disposal well. The disposal interval would be the Devonian formation through open hole from 9800 feet – 10500 feet. Disposal fluid would be produced water piped in from Great Western Drilling Company producing wells in the area.

Anticipated disposal rate of 2000 BWPd with a maximum disposal rate of 10000 BWPd. Anticipated disposal pressure 0 (Zero) psi with a maximum disposal pressure of 1960 psi. Well is approximately 8 miles S of Artesia, New Mexico.

All interested parties opposing the aforementioned must file objections with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained by contacting Cary Billingsley 432-688-2073

EXHIBIT "E"

Affidavit of Publication

No. 23282

State of New Mexico

County of Eddy:

Danny Scott

being duly sworn, says that he is the

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 Notice

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

1 Consecutive weeks/day on the same

day as follows:

First Publication December 9, 2014

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Subscribed and sworn before me this

9th day of December 2014



OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2015

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

LEGAL NOTICE

Great Western Drilling Company, 700 West Louisiana, Midland, TX 79701 has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to convert the Thorpe Sears Com #1, API # 30-015-20169, 1094 FSL x 913 FEL, Unit Letter "P", Section 18, T18S, R26E, Eddy County, New Mexico from a dry and abandoned gas well to a private lease Devonian salt water disposal well. The disposal interval would be the Devonian formation through open hole from 9800 feet - 10500 feet. Disposal fluid would be produced water piped in from Great Western Drilling Company producing wells in the area. Anticipated disposal rate of 2000 BWPD with a maximum disposal rate of 10000 BWPD. Anticipated disposal pressure 0 (Zero) psi with a maximum disposal pressure of 1960 psi. Well is approximately 8 miles S of Artesia, New Mexico.

All interested parties opposing the aforementioned must file objections with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained by contacting Cary Billingsley 432-688-2073

Published in the Artesia Daily Press, Artesia, N.M., December 9, 2014 Legal No. 23282.

Exhibit "E"

***Great Western Drilling Company
Thorpe Sears SWD # 1
API 30-015-20169
1094 FSL X 913 FEL
Unit Letter "P", Section 18, T18S, R26E
Eddy County, New Mexico***

Notified Parties

**NMOCD
District 2
811 S. First Street
Artesia, NM 88210**

**Artesia Oil and Gas, L.L.C.
PO Box 647
Artesia, NM 88211**

**Murchison Oil and Gas, Inc
1100 Mira Vista Blvd
Plano, TX 75093**

**COG Operating, L.L.C.
One Concho Center
600 W. Illinois Ave
Midland, TX 79701**

**Yates Petroleum Corporation
105 South 4th Street
Artesia, NM 88210**

**Nadle and Gussman Permian, L.L.C.
PO Box 1936
Roswell, NM 88202**

**SJ Rocker Royalties
2716 N. Penn Suite 38
Roswell, NM 88201**

**BWB Partners I
PO Box 51407
Midland, TX 79710**

***Great Western Drilling Company
Thorpe Sears SWD # 1
API 30-015-20169
1094 FSL X 913 FEL
Unit Letter "P", Section 18, T18S, R26E
Eddy County, New Mexico***

Notified Parties

**Read and Stevens, Inc
PO Box 1518
Roswell, NM 88202**

**Khody Land and Minerals Company
210 Park Ave Suite 900
Oklahoma City, OK 73102**

**RKI Exploration and Production, L.L.C.
210 Park Ave Suite 900
Oklahoma City, OK 73102**

7014 1200 0000 7981 5861

OKLAHOMA CITY OK 73102

Postage	\$1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

Sent To **Khody Land and Minerals**
210 Park Ave Suite 900
Oklahoma City, OK 73102

PS Form 3800

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

ARTESIA NM 88210

Postage	\$1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

Sent To **NMOCD District 2**
811 S. First Street
Artesia, NM 88210

PS Form 3800

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

MIDLAND TX 79710

Postage	\$1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

Sent To **BWB Partners I**
PO Box 51407
Midland, TX 79710

PS Form 3800

7014 1200 0000 4601 5146

PLANO TX 75093

Postage	\$1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

Sent To **Murchison Oil and Gas, Inc**
1100 Mira Vista Blvd
Plano, TX 75093

PS Form 3800

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

ROSWELL NM 88202

Postage	\$1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

Sent To **Read and Stevens, Inc**
PO Box 1518
Roswell, NM 88202

PS Form 3800

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

ROSWELL NM 88201

Postage	\$1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

Sent To **SJ Rocker Royalties**
2716 N. Penn Suite 38
Roswell, NM 88201

PS Form 3800

7014 1200 0000 7981 5823

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

ARTESIA NM 88210

Postage	\$ 1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

Yates Petroleum Corporation
105 South 4th Street
Artesia, NM 88210

Sent To: _____
 Street, Apt. or PO Box: _____
 City, State: _____

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

MIDLAND TX 79701

Postage	\$ 1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

COG Operating, L.L.C.
One Concho Center
600 W. Illinois Ave
Midland, TX 79701

Sent To: _____
 Street, Apt. or PO Box: _____
 City, State: _____

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

ROSWELL NM 88202

Postage	\$ 1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

Nadie and Gussman Perminian, L.L.C.
PO Box 1936
Roswell, NM 88202

Sent To: _____
 Street, Apt. or PO Box: _____
 City, State: _____

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

ARTESIA NM 88211

Postage	\$ 1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

Artesia Oil and Gas, L.L.C.
PO Box 647
Artesia, NM 88211

Sent To: _____
 Street, Apt. or PO Box: _____
 City, State: _____

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

OKLAHOMA CITY OK 73102

Postage	\$ 1.61	0634
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$7.61	12/15/2014

ARKI Exploration and Production, L.L.C.
210 Park Ave Suite 900
Oklahoma City, OK 73102

Sent To: _____
 Street, Apt. or PO Box: _____
 City, State: _____

7014 1200 0000 7981 5854



Pueblo West Resources
125 Greathouse Village
Decatur, Texas 76234
432-934-7680

DECEMBER 15, 2014

RECEIVED

2014 12 15 10:03

Phillip,
Enclosed are 2 copies of C108 for API # 30-015-20169.

Sincerely,

A handwritten signature in cursive script that reads "Billy E. Prichard". The signature is fluid and stylized, with a large loop at the end of the last name.

Billy E. Prichard
email; billy@pwllc.net
www.pwllc.net

Affidavit of Publication

No. 23282

State of New Mexico

County of Eddy:

Danny Scott

being duly sworn, says that he is the

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 Notice

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 1 Consecutive weeks/day on the same

day as follows:

First Publication December 9, 2014

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Subscribed and sworn before me this

9th day of December 2014



OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2015

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

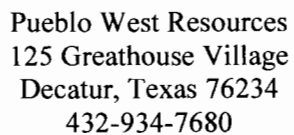
Copy of Publication:

LEGAL NOTICE

Great Western Drilling Company, 700 West Louisiana, Midland, TX 79701 has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to convert the Thorpe Sears Com #1, API # 30-015-20169, 1094 FSL x 913 FEL, Unit Letter "P", Section 18, T18S, R26E, Eddy County, New Mexico from a dry and abandoned gas well to a private lease Devonian salt water disposal well. The disposal interval would be the Devonian formation through open hole from 9800 feet - 10500 feet. Disposal fluid would be produced water piped in from Great Western Drilling Company producing wells in the area. Anticipated disposal rate of 2000 BWPD with a maximum disposal rate of 10000 BWPD. Anticipated disposal pressure 0 (Zero) psi with a maximum disposal pressure of 1960 psi. Well is approximately 8 miles S of Artesia, New Mexico.

All interested parties opposing the aforementioned must file objections with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained by contacting Cary Billingsley 432-688-2073

Published in the Artesia Daily Press, Artesia, N.M., December 9, 2014 Legal No. 23282.



Phillip enclosed are analysis of fresh water from wells in the area of the Thorpe-Sears SWD permit application that I filed for Great Western Drilling Company. API # 30-015-20169. Please call or email if you need further information.

Billy E. Parker

Billy E. Prichard
email; billy@pwllc.net
www.pwllc.net
Fax 720-293-0460

7575 400-9 4 1/2 P
CDD 100 100 100



Permian Basin Area Laboratory
2101 S Market St. / Building B
Midland, TX. 79711

Report Date: 12/19/2014

Complete Water Analysis Report SSP v.8

Customer:	GREAT WESTERN DRILLING	Sample Point Name	COATS COM SHALLOW FRESH WATER
District:	New Mexico	Sample ID:	201401029098
Sales Rep:	Michael Oney	Sample Date:	12/16/2014
Lease:	COATS COM	Log Out Date:	12/19/2014
Site Type:	Well Sites	Analyst:	Samuel Newman
Sample Point Description:	NOT PROVIDED		

GREAT WESTERN DRILLING, COATS COM, COATS COM SHALLOW FRESH WATER

		Anions:		Cations:	
		mg/L	meq/L	mg/L	meq/L
Initial Temperature (°F):	250	Chloride (Cl ⁻):	21.1	Sodium (Na ⁺):	16.7
Final Temperature (°F):	80	Sulfate (SO ₄ ²⁻):	516.6	Potassium (K ⁺):	0.0
Initial Pressure (psi):	100	Borate (H ₂ BO ₃):	0.0	Magnesium (Mg ²⁺):	61.6
Final Pressure (psi):	15	Fluoride (F ⁻):	ND	Calcium (Ca ²⁺):	203.5
		Bromide (Br ⁻):	ND	Strontium (Sr ²⁺):	3.0
pH:		Nitrite (NO ₂ ⁻):	ND	Barium (Ba ²⁺):	0.0
pH at time of sampling:	7.9	Nitrate (NO ₃ ⁻):	ND	Iron (Fe ²⁺):	0.0
		Phosphate (PO ₄ ³⁻):	ND	Manganese (Mn ²⁺):	0.0
		Silica (SiO ₂):	ND	Lead (Pb ²⁺):	ND
				Zinc (Zn ²⁺):	0.0
Alkalinity by Titration:	mg/L meq/L			Aluminum (Al ³⁺):	ND
Bicarbonate (HCO ₃ ⁻):	355.1 5.8			Chromium (Cr ³⁺):	ND
Carbonate (CO ₃ ²⁻):	ND			Cobalt (Co ²⁺):	ND
Hydroxide (OH ⁻):	ND			Copper (Cu ²⁺):	ND
aqueous CO ₂ (ppm):	ND	Organic Acids:	mg/L meq/L	Molybdenum (Mo ²⁺):	ND
aqueous H ₂ S (ppm):	ND	Formic Acid:	ND	Nickel (Ni ²⁺):	ND
aqueous O ₂ (ppb):	ND	Acetic Acid:	ND	Tin (Sn ²⁺):	ND
		Propionic Acid:	ND	Titanium (Ti ²⁺):	ND
Calculated TDS (mg/L):	1178	Butyric Acid:	ND	Vanadium (V ²⁺):	ND
Density/Specific Gravity (g/cm ³):	0.9980	Valeric Acid:	ND	Zirconium (Zr ²⁺):	ND
Measured Density/Specific Gravity	1.0009			Total Hardness:	766 N/A
Conductivity (mmhos):	ND				
MCF/D:	No Data				
BOPD:	No Data				
BWPD:	No Data	Anion/Cation Ratio:	1.07		

Conditions		Barite (BaSO ₄)		Calcite (CaCO ₃)		Gypsum (CaSO ₄ ·2H ₂ O)		Anhydrite (CaSO ₄)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi		0.000	1.12	44.737	-0.57	0.000	-0.82	0.000
99°F	24 psi		0.000	1.20	47.635	-0.57	0.000	-0.74	0.000
118°F	34 psi		0.000	1.30	51.787	-0.56	0.000	-0.64	0.000
137°F	43 psi		0.000	1.42	56.318	-0.53	0.000	-0.53	0.000
156°F	53 psi		0.000	1.54	60.893	-0.50	0.000	-0.40	0.000
174°F	62 psi		0.000	1.67	65.343	-0.46	0.000	-0.27	0.000
193°F	72 psi		0.000	1.80	69.573	-0.41	0.000	-0.12	0.000
212°F	81 psi		0.000	1.94	73.741	-0.37	0.000	0.03	7.965
231°F	91 psi		0.000	2.08	77.608	-0.31	0.000	0.18	47.434
250°F	100 psi		0.000	2.22	81.090	-0.26	0.000	0.34	81.005

Conditions		Celestite (SrSO ₄)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate (FeCO ₃)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi	-0.74	0.000	-8.09	0.000	0	0.000		0.000
99°F	24 psi	-0.73	0.000	-8.11	0.000	0	0.000		0.000
118°F	34 psi	-0.71	0.000	-8.13	0.000	0	0.000		0.000
137°F	43 psi	-0.67	0.000	-8.13	0.000	0	0.000		0.000
156°F	53 psi	-0.62	0.000	-8.13	0.000	0	0.000		0.000
174°F	62 psi	-0.55	0.000	-8.13	0.000	0	0.000		0.000
193°F	72 psi	-0.47	0.000	-8.12	0.000	0	0.000		0.000
212°F	81 psi	-0.38	0.000	-8.11	0.000	0	0.000		0.000
231°F	91 psi	-0.28	0.000	-8.09	0.000	0	0.000		0.000
250°F	100 psi	-0.17	0.000	-8.07	0.000	0	0.000		0.000

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales.

Note 3: Saturation Index predictions on this sheet use pH and alkalinity; %CO₂ is not included in the calculations.

ScaleSoft Pitzer™
SSP2010

Well located in S2 of Section 17, T18S, R26E
Eddy County, New Mexico



Permian Basin Area Laboratory
2101 S Market St. / Building B
Midland, TX. 79711

Report Date: 12/19/2014

Complete Water Analysis Report SSP v.8

Customer:	GREAT WESTERN DRILLING	Sample Point Name	COATS COM DEEP FRESH WATER
District:	New Mexico	Sample ID:	201401029097
Sales Rep:	Michael Oney	Sample Date:	12/16/2014
Lease:	COATS COM	Log Out Date:	12/19/2014
Site Type:	Well Sites	Analyst:	Samuel Newman
Sample Point Description:	NOT PROVIDED		

GREAT WESTERN DRILLING, COATS COM, COATS COM DEEP FRESH WATER

Initial Temperature (°F):		250		Anions:		mg/L		meq/L		Cations:		mg/L		meq/L	
Final Temperature (°F):		80		Chloride (Cl ⁻):		48.0		1.4		Sodium (Na ⁺):		88.8		3.9	
Initial Pressure (psi):		100		Sulfate (SO ₄ ²⁻):		617.2		12.9		Potassium (K ⁺):		0.0		0.0	
Final Pressure (psi):		15		Borate (H ₃ BO ₃):		0.0		0.0		Magnesium (Mg ²⁺):		77.9		6.4	
pH:		7.8		Fluoride (F ⁻):		ND		ND		Calcium (Ca ²⁺):		243.3		12.0	
pH at time of sampling:		7.8		Bromide (Br ⁻):		ND		ND		Strontium (Sr ²⁺):		4.0		0.1	
Alkalinity by Titration:		mg/L		Nitrite (NO ₂ ⁻):		ND		ND		Barium (Ba ²⁺):		0.0		0.0	
Bicarbonate (HCO ₃ ⁻):		361.9		Nitrate (NO ₃ ⁻):		ND		ND		Iron (Fe ²⁺):		0.0		0.0	
Carbonate (CO ₃ ²⁻):		ND		Phosphate (PO ₄ ³⁻):		ND		ND		Manganese (Mn ²⁺):		0.0		0.0	
Hydroxide (OH ⁻):		ND		Silica (SiO ₂):		ND		ND		Lead (Pb ²⁺):		ND		ND	
aqueous CO ₂ (ppm):		ND		Organic Acids:		mg/L		meq/L		Zinc (Zn ²⁺):		0.0		0.0	
aqueous H ₂ S (ppm):		ND		Formic Acid:		ND		ND		Aluminum (Al ³⁺):		ND		ND	
aqueous O ₂ (ppb):		ND		Acetic Acid:		ND		ND		Chromium (Cr ³⁺):		ND		ND	
Calculated TDS (mg/L):		1439		Propionic Acid:		ND		ND		Cobalt (Co ²⁺):		ND		ND	
Density/Specific Gravity (g/cm ³):		0.9983		Butyric Acid:		ND		ND		Copper (Cu ²⁺):		ND		ND	
Measured Density/Specific Gravity		1.0010		Valeric Acid:		ND		ND		Molybdenum (Mo ²⁺):		ND		ND	
Conductivity (mmhos):		ND		Anion/Cation Ratio:		0.90		ND = Not Determined		Nickel (Ni ²⁺):		ND		ND	
MCF/D:		No Data								Tin (Sn ²⁺):		ND		ND	
BOPD:		No Data								Titanium (Ti ⁴⁺):		ND		ND	
BWPD:		No Data								Vanadium (V ³⁺):		ND		ND	
										Zirconium (Zr ²⁺):		ND		ND	
										Total Hardness:		929		N/A	

Conditions		Barite (BaSO ₄)		Calcite (CaCO ₃)		Gypsum (CaSO ₄ ·2H ₂ O)		Anhydrite (CaSO ₄)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi		0.000	1.12	47.474	-0.48	0.000	-0.73	0.000
99°F	24 psi		0.000	1.19	50.458	-0.48	0.000	-0.65	0.000
118°F	34 psi		0.000	1.30	54.717	-0.46	0.000	-0.55	0.000
137°F	43 psi		0.000	1.41	59.334	-0.44	0.000	-0.44	0.000
156°F	53 psi		0.000	1.54	63.964	-0.41	0.000	-0.31	0.000
174°F	62 psi		0.000	1.67	68.435	-0.37	0.000	-0.18	0.000
193°F	72 psi		0.000	1.80	72.654	-0.33	0.000	-0.03	0.000
212°F	81 psi		0.000	1.94	76.783	-0.28	0.000	0.12	36.735
231°F	91 psi		0.000	2.08	80.587	-0.23	0.000	0.27	78.855
250°F	100 psi		0.000	2.22	83.989	-0.18	0.000	0.43	114.699

Conditions		Celestite (SrSO ₄)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate (FeCO ₃)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi	-0.59	0.000	-7.02	0.000	0	0.000		0.000
99°F	24 psi	-0.59	0.000	-7.04	0.000	0	0.000		0.000
118°F	34 psi	-0.56	0.000	-7.06	0.000	0	0.000		0.000
137°F	43 psi	-0.53	0.000	-7.06	0.000	0	0.000		0.000
156°F	53 psi	-0.48	0.000	-7.06	0.000	0	0.000		0.000
174°F	62 psi	-0.41	0.000	-7.06	0.000	0	0.000		0.000
193°F	72 psi	-0.33	0.000	-7.05	0.000	0	0.000		0.000
212°F	81 psi	-0.24	0.000	-7.04	0.000	0	0.000		0.000
231°F	91 psi	-0.14	0.000	-7.02	0.000	0	0.000		0.000
250°F	100 psi	-0.04	0.000	-7.00	0.000	0	0.000		0.000

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales.

Note 3: Saturation Index predictions on this sheet use pH and alkalinity; %CO₂ is not included in the calculations.



ScaleSoft Pitzer™
SNP2010

Well located 2401 FSLX 1964 FEL, Section 18, T18S, R26E
Eddy County, New Mexico



Permian Basin Area Laboratory
2101 S Market St. / Building 8
Midland, TX. 79711

Report Date: 12/19/2014

Complete Water Analysis Report SSP v.8

Customer:	GREAT WESTERN DRILLING	Sample Point Name	COATS COM DEEP FRESH WATER
District:	New Mexico	Sample ID:	201401029097
Sales Rep:	Michael Oney	Sample Date:	12/16/2014
Lease:	COATS COM	Log Out Date:	12/19/2014
Site Type:	Well Sites	Analyst:	Samuel Newman
Sample Point Description:	NOT PROVIDED		

GREAT WESTERN DRILLING, COATS COM, COATS COM DEEP FRESH WATER

Field Data		Analysis of Sample					
		Anions:		mg/L		meq/L	
Initial Temperature (°F):	250	Chloride (Cl ⁻):	48.0	1.4	Sodium (Na ⁺):	88.8	3.9
Final Temperature (°F):	80	Sulfate (SO ₄ ²⁻):	617.2	12.9	Potassium (K ⁺):	0.0	0.0
Initial Pressure (psi):	100	Borate (H ₃ BO ₃):	0.0	0.0	Magnesium (Mg ²⁺):	77.9	6.4
Final Pressure (psi):	15	Fluoride (F ⁻):	ND		Calcium (Ca ²⁺):	241.3	12.0
pH:		Bromide (Br ⁻):	ND		Strontium (Sr ²⁺):	4.0	0.1
pH at time of sampling:	7.8	Nitrite (NO ₂ ⁻):	ND		Barium (Ba ²⁺):	0.0	0.0
		Nitrate (NO ₃ ⁻):	ND		Iron (Fe ²⁺):	0.0	0.0
		Phosphate (PO ₄ ³⁻):	ND		Manganese (Mn ²⁺):	0.0	0.0
		Silica (SiO ₂):	ND		Lead (Pb ²⁺):	ND	
					Zinc (Zn ²⁺):	0.0	0.0
Alkalinity by Titration:	mg/L						
Bicarbonate (HCO ₃ ⁻):	361.9				Aluminum (Al ³⁺):	ND	
Carbonate (CO ₃ ²⁻):	ND				Chromium (Cr ³⁺):	ND	
Hydroxide (OH ⁻):	ND				Cobalt (Co ²⁺):	ND	
					Copper (Cu ²⁺):	ND	
aqueous CO ₂ (ppm):	ND	Organic Acids:	mg/L	meq/L	Molybdenum (Mo ²⁺):	ND	
aqueous H ₂ S (ppm):	ND	Formic Acid:	ND		Nickel (Ni ²⁺):	ND	
aqueous O ₂ (ppb):	ND	Acetic Acid:	ND		Tin (Sn ²⁺):	ND	
		Propionic Acid:	ND		Titanium (Ti ³⁺):	ND	
		Butyric Acid:	ND		Vanadium (V ³⁺):	ND	
Calculated TDS (mg/L):	1439	Valeric Acid:	ND		Zirconium (Zr ²⁺):	ND	
Density/Specific Gravity (g/cm ³):	0.9983				Total Hardness:	929	N/A
Measured Density/Specific Gravity	1.0010						
Conductivity (mmhos):	ND						
MCF/D:	No Data	Anion/Cation Ratio:	0.90				
BOPD:	No Data						
BWPD:	No Data						

Conditions		Barite (BaSO ₄)		Calcite (CaCO ₃)		Gypsum (CaSO ₄ ·2H ₂ O)		Anhydrite (CaSO ₄)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi	0.000	0.000	1.12	47.474	-0.48	0.000	-0.73	0.000
99°F	24 psi	0.000	0.000	1.19	50.458	-0.48	0.000	-0.65	0.000
118°F	34 psi	0.000	0.000	1.30	54.717	-0.46	0.000	-0.55	0.000
137°F	43 psi	0.000	0.000	1.41	59.334	-0.44	0.000	-0.44	0.000
156°F	53 psi	0.000	0.000	1.54	63.964	-0.41	0.000	-0.31	0.000
174°F	62 psi	0.000	0.000	1.67	68.435	-0.37	0.000	-0.18	0.000
193°F	72 psi	0.000	0.000	1.80	72.654	-0.33	0.000	-0.03	0.000
212°F	81 psi	0.000	0.000	1.94	76.783	-0.28	0.000	0.12	36.735
231°F	91 psi	0.000	0.000	2.08	80.587	-0.23	0.000	0.27	78.855
250°F	100 psi	0.000	0.000	2.22	83.989	-0.18	0.000	0.43	114.699

Conditions		Celestite (SrSO ₄)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate (FeCO ₃)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi	-0.59	0.000	-7.02	0.000	0	0.000		0.000
99°F	24 psi	-0.59	0.000	-7.04	0.000	0	0.000		0.000
118°F	34 psi	-0.56	0.000	-7.06	0.000	0	0.000		0.000
137°F	43 psi	-0.53	0.000	-7.06	0.000	0	0.000		0.000
156°F	53 psi	-0.48	0.000	-7.06	0.000	0	0.000		0.000
174°F	62 psi	-0.41	0.000	-7.06	0.000	0	0.000		0.000
193°F	72 psi	-0.33	0.000	-7.05	0.000	0	0.000		0.000
212°F	81 psi	-0.24	0.000	-7.04	0.000	0	0.000		0.000
231°F	91 psi	-0.14	0.000	-7.02	0.000	0	0.000		0.000
250°F	100 psi	-0.04	0.000	-7.00	0.000	0	0.000		0.000

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales.

Note 3: Saturation Index predictions on this sheet use pH and alkalinity; %CO₂ is not included in the calculations.

ScaleSoft Pitter™
SSP2010

Well located 2401 FSLX 1964 FEL, Section 18,T18S, R26E
Eddy County, New Mexico



Permian Basin Area Laboratory
2101 S Market St. / Building B
Midland, TX. 79711

Report Date: 12/19/2014

Complete Water Analysis Report SSP v.8

Customer:	GREAT WESTERN DRILLING	Sample Point Name:	COATS COM SHALLOW FRESH WATER
District:	New Mexico	Sample ID:	201401029098
Sales Rep:	Michael Oney	Sample Date:	12/16/2014
Lease:	COATS COM	Log Out Date:	12/19/2014
Site Type:	Well Sites	Analyst:	Samuel Newman
Sample Point Description:	NOT PROVIDED		

GREAT WESTERN DRILLING, COATS COM, COATS COM SHALLOW FRESH WATER

Field Data			Analysis of Sample								
			Anions:		mg/L	meq/L	Cations:		mg/L	meq/L	
Initial Temperature (°F):	250		Chloride (Cl⁻):		21.1	0.6	Sodium (Na⁺):		16.7	0.7	
Final Temperature (°F):	80		Sulfate (SO₄²⁻):		516.6	10.8	Potassium (K⁺):		0.0	0.0	
Initial Pressure (psi):	100		Borate (H₃BO₃):		0.0	0.0	Magnesium (Mg²⁺):		61.6	5.1	
Final Pressure (psi):	15		Fluoride (F⁻):		ND		Calcium (Ca²⁺):		203.5	10.2	
pH:	7.9	pH at time of sampling:	Bromide (Br⁻):		ND		Strontium (Sr²⁺):		3.0	0.1	
			Nitrite (NO₂⁻):		ND		Barium (Ba²⁺):		0.0	0.0	
			Nitrate (NO₃⁻):		ND		Iron (Fe²⁺):		0.0	0.0	
			Phosphate (PO₄³⁻):		ND		Manganese (Mn²⁺):		0.0	0.0	
			Silica (SiO₂):		ND		Lead (Pb²⁺):		ND		
Alkalinity by Titration:			mg/L	meq/L			Zinc (Zn²⁺):		0.0	0.0	
Bicarbonate (HCO₃⁻):	355.1	5.8					Aluminum (Al³⁺):		ND		
Carbonate (CO₃²⁻):	ND						Chromium (Cr³⁺):		ND		
Hydroxide (OH⁻):	ND						Cobalt (Co²⁺):		ND		
			Organic Acids:		mg/L	meq/L			Copper (Cu²⁺):		ND
aqueous CO₂ (ppm):	ND		Formic Acid:		ND		Molybdenum (Mo²⁺):		ND		
aqueous H₂S (ppm):	ND		Acetic Acid:		ND		Nickel (Ni²⁺):		ND		
aqueous O₂ (ppb):	ND		Propionic Acid:		ND		Tin (Sn²⁺):		ND		
			Butyric Acid:		ND		Titanium (Ti²⁺):		ND		
Calculated TDS (mg/L):	1178		Valeric Acid:		ND		Vanadium (V²⁺):		ND		
Density/Specific Gravity (g/cm³):	0.9980						Zirconium (Zr²⁺):		ND		
Measured Density/Specific Gravity	1.0009						Total Hardness:		766	N/A	
Conductivity (mmhos):	ND										
MCF/D:	No Data										
BOPD:	No Data										
BWPD:	No Data		Anion/Cation Ratio:		1.07		ND = Not Determined				

Conditions		Barite (BaSO₄)		Calcite (CaCO₃)		Gypsum (CaSO₄·2H₂O)		Anhydrite (CaSO₄)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi		0.000	1.12	44.737	-0.57	0.000	-0.82	0.000
99°F	24 psi		0.000	1.20	47.635	-0.57	0.000	-0.74	0.000
118°F	34 psi		0.000	1.30	51.787	-0.56	0.000	-0.64	0.000
137°F	43 psi		0.000	1.42	56.318	-0.53	0.000	-0.53	0.000
156°F	53 psi		0.000	1.54	60.893	-0.50	0.000	-0.40	0.000
174°F	62 psi		0.000	1.67	65.343	-0.46	0.000	-0.27	0.000
193°F	72 psi		0.000	1.80	69.573	-0.41	0.000	-0.12	0.000
212°F	81 psi		0.000	1.94	73.741	-0.37	0.000	0.03	7.965
231°F	91 psi		0.000	2.08	77.608	-0.31	0.000	0.18	47.434
250°F	100 psi		0.000	2.22	81.090	-0.26	0.000	0.34	81.005

Conditions		Celestite (SrSO₄)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate (FeCO₃)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi	-0.74	0.000	-8.09	0.000	0	0.000		0.000
99°F	24 psi	-0.73	0.000	-8.11	0.000	0	0.000		0.000
118°F	34 psi	-0.71	0.000	-8.13	0.000	0	0.000		0.000
137°F	43 psi	-0.67	0.000	-8.13	0.000	0	0.000		0.000
156°F	53 psi	-0.62	0.000	-8.13	0.000	0	0.000		0.000
174°F	62 psi	-0.55	0.000	-8.13	0.000	0	0.000		0.000
193°F	72 psi	-0.47	0.000	-8.12	0.000	0	0.000		0.000
212°F	81 psi	-0.38	0.000	-8.11	0.000	0	0.000		0.000
231°F	91 psi	-0.28	0.000	-8.09	0.000	0	0.000		0.000
250°F	100 psi	-0.17	0.000	-8.07	0.000	0	0.000		0.000

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales.

Note 3: Saturation index predictions on this sheet use pH and alkalinity. %CO₂ is not included in the calculations.

ScaleSoft Pitzer™
SSP2010

Well located in S2 of Section 17, T18S, R26E
Eddy County, New Mexico



Permian Basin Area Laboratory
2101 S Market St. / Building B
Midland, TX. 79711

Report Date: 12/19/2014

Complete Water Analysis Report SSP v.8

Customer:	GREAT WESTERN DRILLING	Sample Point Name	COATS COM DEEP FRESH WATER
District:	New Mexico	Sample ID:	201401029097
Sales Rep:	Michael Oney	Sample Date:	12/16/2014
Lease:	COATS COM	Log Out Date:	12/19/2014
Site Type:	Well Sites	Analyst:	Samuel Newman
Sample Point Description:	NOT PROVIDED		

GREAT WESTERN DRILLING, COATS COM, COATS COM DEEP FRESH WATER

Field Data			Analysis of Sample							
			Anions:		mg/L	meq/L	Cations:		mg/L	meq/L
Initial Temperature (°F):	250	Chloride (Cl⁻):		48.0	1.4	Sodium (Na⁺):		88.8	3.9	
Final Temperature (°F):	80	Sulfate (SO₄²⁻):		617.2	12.9	Potassium (K⁺):		0.0	0.0	
Initial Pressure (psi):	100	Borate (H₃BO₃):		0.0	0.0	Magnesium (Mg²⁺):		77.9	6.4	
Final Pressure (psi):	15	Fluoride (F⁻):		ND		Calcium (Ca²⁺):		241.3	12.0	
pH:	7.8	Bromide (Br⁻):		ND		Strontium (Sr²⁺):		4.0	0.1	
		Nitrite (NO₂⁻):		ND		Barium (Ba²⁺):		0.0	0.0	
		Nitrate (NO₃⁻):		ND		Iron (Fe²⁺):		0.0	0.0	
		Phosphate (PO₄³⁻):		ND		Manganese (Mn²⁺):		0.0	0.0	
		Silica (SiO₂):		ND		Lead (Pb²⁺):		ND		
						Zinc (Zn²⁺):		0.0	0.0	
pH at time of sampling:										
Alkalinity by Titration:			mg/L	meq/L						
Bicarbonate (HCO₃⁻):	361.9	5.9				Aluminum (Al³⁺):		ND		
Carbonate (CO₃²⁻):	ND					Chromium (Cr³⁺):		ND		
Hydroxide (OH⁻):	ND					Cobalt (Co²⁺):		ND		
						Copper (Cu²⁺):		ND		
			Organic Acids:			mg/L	meq/L			
aqueous CO₂ (ppm):	ND	Formic Acid:		ND		Molybdenum (Mo²⁺):		ND		
aqueous H₂S (ppm):	ND	Acetic Acid:		ND		Nickel (Ni²⁺):		ND		
aqueous O₂ (ppb):	ND	Propionic Acid:		ND		Tin (Sn²⁺):		ND		
		Butyric Acid:		ND		Titanium (Ti²⁺):		ND		
Calculated TDS (mg/L):	1439	Valeric Acid:		ND		Vanadium (V³⁺):		ND		
Density/Specific Gravity (g/cm³):	0.9983					Zirconium (Zr²⁺):		ND		
Measured Density/Specific Gravity	1.0010									
Conductivity (mmhos):	ND					Total Hardness:		929	N/A	
MCF/D:	No Data									
BOPD:	No Data									
BWPD:	No Data	Anion/Cation Ratio:		0.90		ND = Not Determined				

Conditions		Barite (BaSO₄)		Calcite (CaCO₃)		Gypsum (CaSO₄·2H₂O)		Anhydrite (CaSO₄)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi		0.000	1.12	47.474	-0.48	0.000	-0.73	0.000
99°F	24 psi		0.000	1.19	50.458	-0.48	0.000	-0.65	0.000
118°F	34 psi		0.000	1.30	54.717	-0.46	0.000	-0.55	0.000
137°F	43 psi		0.000	1.41	59.334	-0.44	0.000	-0.44	0.000
156°F	53 psi		0.000	1.54	63.964	-0.41	0.000	-0.31	0.000
174°F	62 psi		0.000	1.67	68.435	-0.37	0.000	-0.18	0.000
193°F	72 psi		0.000	1.80	72.654	-0.33	0.000	-0.03	0.000
212°F	81 psi		0.000	1.94	76.783	-0.28	0.000	0.12	36.735
231°F	91 psi		0.000	2.08	80.587	-0.23	0.000	0.27	78.855
250°F	100 psi		0.000	2.22	83.989	-0.18	0.000	0.43	114.699

Conditions		Celestite (SrSO₄)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate (FeCO₃)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi	-0.59	0.000	-7.02	0.000	0	0.000		0.000
99°F	24 psi	-0.59	0.000	-7.04	0.000	0	0.000		0.000
118°F	34 psi	-0.56	0.000	-7.06	0.000	0	0.000		0.000
137°F	43 psi	-0.53	0.000	-7.06	0.000	0	0.000		0.000
156°F	53 psi	-0.48	0.000	-7.06	0.000	0	0.000		0.000
174°F	62 psi	-0.41	0.000	-7.06	0.000	0	0.000		0.000
193°F	72 psi	-0.33	0.000	-7.05	0.000	0	0.000		0.000
212°F	81 psi	-0.24	0.000	-7.04	0.000	0	0.000		0.000
231°F	91 psi	-0.14	0.000	-7.02	0.000	0	0.000		0.000
250°F	100 psi	-0.04	0.000	-7.00	0.000	0	0.000		0.000

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered

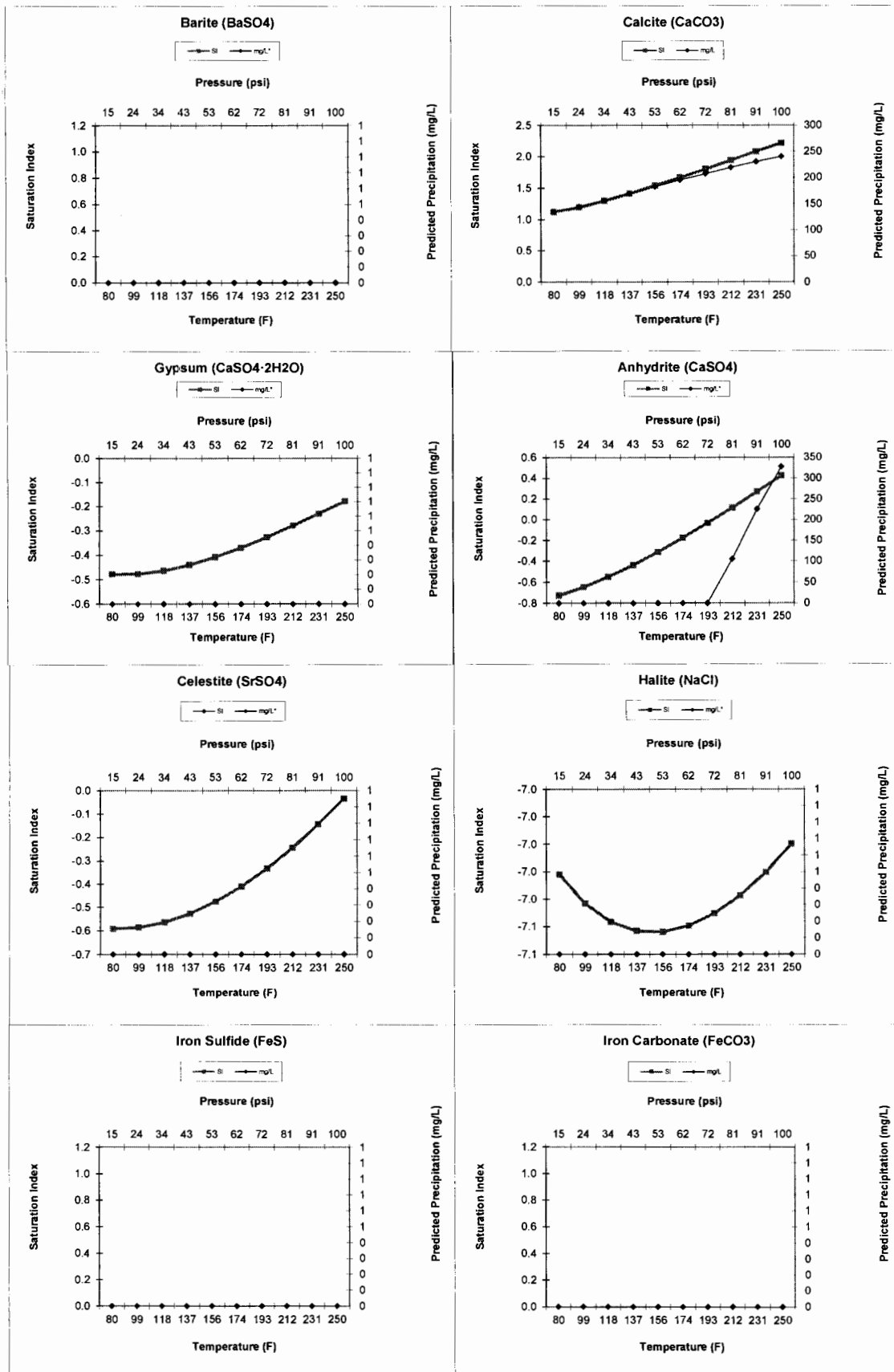
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales.

Note 3: Saturation index predictions on this sheet use pH and alkalinity; %CO₂ is not included in the calculations.



ScaleSoft Pitzer™
SSP2010

Comments:



Complete Water Analysis Report SSP v.8

Customer:	GREAT WESTERN DRILLING	Sample Point Name	COATS COM SHALLOW FRESH WATER
District:	New Mexico	Sample ID:	201401029098
Sales Rep:	Michael Oney	Sample Date:	12/16/2014
Lease:	COATS COM	Log Out Date:	12/19/2014
Site Type:	Well Sites	Analyst:	Samuel Newman
Sample Point Description:	NOT PROVIDED		

GREAT WESTERN DRILLING, COATS COM, COATS COM SHALLOW FRESH WATER

Field Data			Analysis of Samples											
			Anions:		mg/L		meq/L		Cations:		mg/L		meq/L	
Initial Temperature (°F):	250	Chloride (Cl⁻):	21.1	0.6	Sodium (Na⁺):	16.7	0.7							
Final Temperature (°F):	80	Sulfate (SO₄²⁻):	516.6	10.8	Potassium (K⁺):	0.0	0.0							
Initial Pressure (psi):	100	Borate (H₃BO₃):	0.0	0.0	Magnesium (Mg²⁺):	61.6	5.1							
Final Pressure (psi):	15	Fluoride (F⁻):	ND		Calcium (Ca²⁺):	203.5	10.2							
		Bromide (Br⁻):	ND		Strontium (Sr²⁺):	3.0	0.1							
pH:		Nitrite (NO₂⁻):	ND		Barium (Ba²⁺):	0.0	0.0							
pH at time of sampling:	7.9	Nitrate (NO₃⁻):	ND		Iron (Fe²⁺):	0.0	0.0							
		Phosphate (PO₄³⁻):	ND		Manganese (Mn²⁺):	0.0	0.0							
		Silica (SiO₂):	ND		Lead (Pb²⁺):	ND								
					Zinc (Zn²⁺):	0.0	0.0							
Alkalinity by Titration:	mg/L	meq/L												
Bicarbonate (HCO₃⁻):	355.1	5.8			Aluminum (Al³⁺):	ND								
Carbonate (CO₃²⁻):	ND				Chromium (Cr³⁺):	ND								
Hydroxide (OH⁻):	ND				Cobalt (Co²⁺):	ND								
					Copper (Cu²⁺):	ND								
					Molybdenum (Mo⁴⁺):	ND								
aqueous CO₂ (ppm):	ND	Formic Acid:	ND		Nickel (Ni²⁺):	ND								
aqueous H₂S (ppm):	ND	Acetic Acid:	ND		Tin (Sn²⁺):	ND								
aqueous O₂ (ppb):	ND	Propionic Acid:	ND		Titanium (Ti²⁺):	ND								
		Butyric Acid:	ND		Vanadium (V⁵⁺):	ND								
Calculated TDS (mg/L):	1178	Valeric Acid:	ND		Zirconium (Zr⁴⁺):	ND								
Density/Specific Gravity (g/cm³):	0.9980													
Measured Density/Specific Gravity	1.0009													
Conductivity (mmhos):	ND				Total Hardness:	766	N/A							
MCF/D:	No Data													
BOPD:	No Data													
BWPD:	No Data	Anion/Cation Ratio:	1.07		ND = Not Determined									

Conditions		Barite (BaSO ₄)		Calcite (CaCO ₃)		Gypsum (CaSO ₄ ·2H ₂ O)		Anhydrite (CaSO ₄)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi		0.000	1.12	44.737	-0.57	0.000	-0.82	0.000
99°F	24 psi		0.000	1.20	47.635	-0.57	0.000	-0.74	0.000
118°F	34 psi		0.000	1.30	51.787	-0.56	0.000	-0.64	0.000
137°F	43 psi		0.000	1.42	56.318	-0.53	0.000	-0.53	0.000
156°F	53 psi		0.000	1.54	60.893	-0.50	0.000	-0.40	0.000
174°F	62 psi		0.000	1.67	65.343	-0.46	0.000	-0.27	0.000
193°F	72 psi		0.000	1.80	69.573	-0.41	0.000	-0.12	0.000
212°F	81 psi		0.000	1.94	73.741	-0.37	0.000	0.03	7.965
231°F	91 psi		0.000	2.08	77.608	-0.31	0.000	0.18	47.434
250°F	100 psi		0.000	2.22	81.090	-0.26	0.000	0.34	81.005

Conditions		Celestite (SrSO ₄)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate (FeCO ₃)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi	-0.74	0.000	-8.09	0.000	0	0.000		0.000
99°F	24 psi	-0.73	0.000	-8.11	0.000	0	0.000		0.000
118°F	34 psi	-0.71	0.000	-8.13	0.000	0	0.000		0.000
137°F	43 psi	-0.67	0.000	-8.13	0.000	0	0.000		0.000
156°F	53 psi	-0.62	0.000	-8.13	0.000	0	0.000		0.000
174°F	62 psi	-0.55	0.000	-8.13	0.000	0	0.000		0.000
193°F	72 psi	-0.47	0.000	-8.12	0.000	0	0.000		0.000
212°F	81 psi	-0.38	0.000	-8.11	0.000	0	0.000		0.000
231°F	91 psi	-0.28	0.000	-8.09	0.000	0	0.000		0.000
250°F	100 psi	-0.17	0.000	-8.07	0.000	0	0.000		0.000

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered

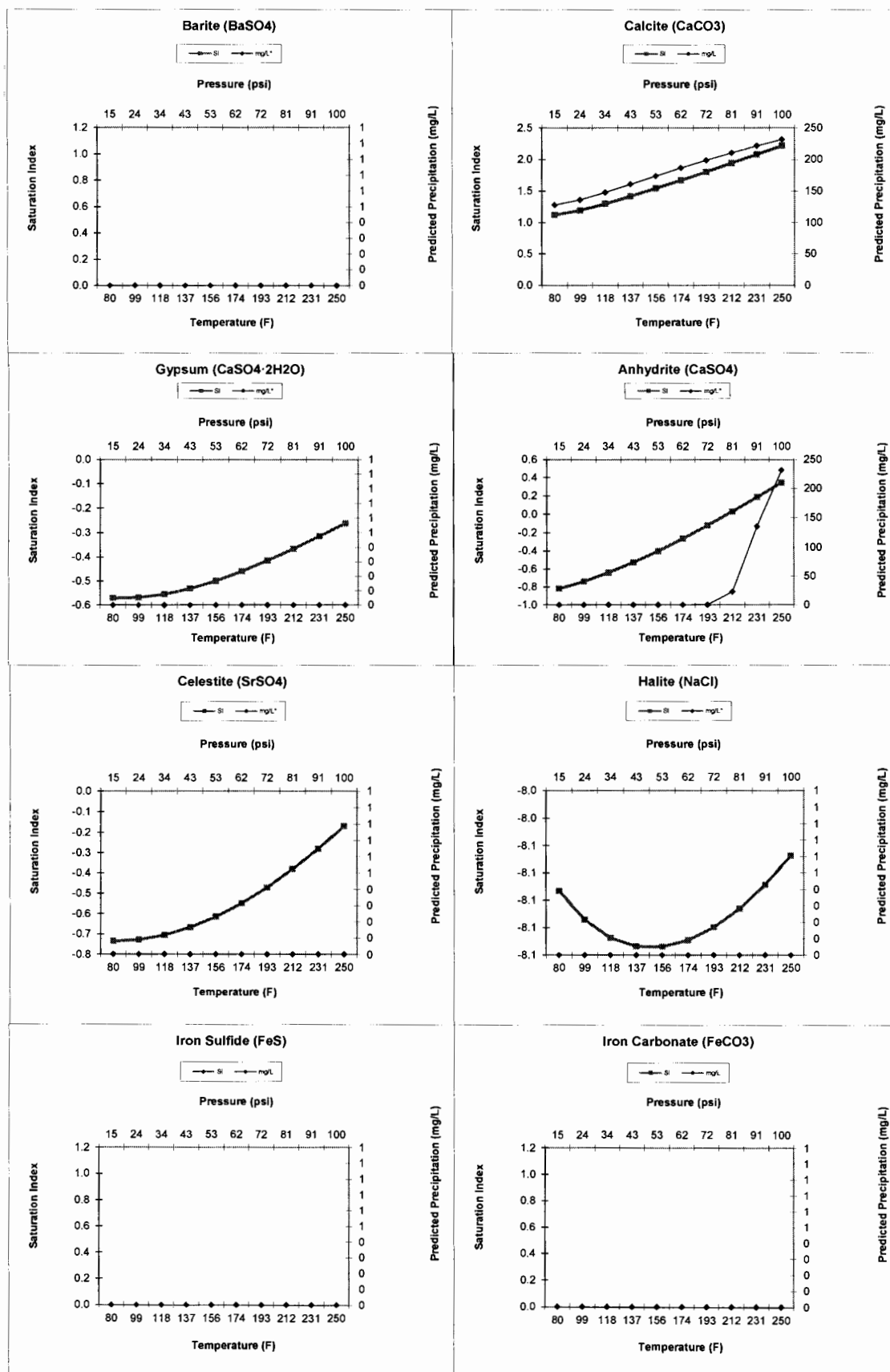
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales.

Note 3: Saturation Index predictions on this sheet use pH and alkalinity; %CO₂ is not included in the calculations.



ScaleSoftPitzer™
SSP2010

Comments:



McMillan, Michael, EMNRD

From: billy@pwllc.net
Sent: Monday, July 13, 2015 3:40 PM
To: McMillan, Michael, EMNRD
Subject: [FWD: FW: Thorpe-Sears Fresh Water Analysis / Footages]
Attachments: Thorpe-Sears Deep Water Analysis.pdf; Thorpe-Sears Shallow Water Analysis.pdf

Michael, these were mailed to NMOCD when recd..the water analysis is attached.

Thanks

Billy (Bill) E. Prichard
Pueblo West Resources
125 Greathouse Village
Decatur, TX 76234
432-934-7680 cellular
720-293-0460 fax

 Facebook

email; billy@pwllc.net
www.pwllc.net

----- Original Message -----

Subject: FW: Thorpe-Sears Fresh Water Analysis / Footages
From: "Cary Billingsley" <cbillingsley@gwdc.com>
Date: Tue, January 06, 2015 9:25 am
To: <billy@pwllc.net>
Cc: "Cary Billingsley Contact Info" <cbillingsley@gwdc.com>

Bill,

Please see the attached water analyses from two different water sources around the Thorpe-Sears SWD re-entry. Ralph Skinner (our production supervisor) collected these and had them analyzed. The deep water analysis is from the same section as the Thorpe-Sears re-entry, and the shallow analysis is from section 17 (located approximately 1/2 mile to the southeast of the Thorpe-Sears re-entry. I have attached Ralph's comments below. Please review and let me know if you need anything else to complete the SWD application and submittal. Thanks for your help,

Thanks for your help,

Cary

From: Ralph Skinner [<mailto:rskinner@gwdc.com>]
Sent: Wednesday, December 24, 2014 10:05 AM
To: 'Cary Billingsley'
Subject: Thorpe-Sears Fresh Water Analysis / Footages

Cary: Attached are two water analysis from Section 18 (Deep water north of the Thorpe-Sears casing stub) and from Section 17 (Shallow water south across ravine of the Thorpe-Sears casing stub). We will get resistivity on

these samples next week. Also, footages on the north water well in Section 18 are 2401' FSL and 1964' FEL. I have the latitude and longitude if you need. Let me know if this is sufficient.

Ralph Skinner Jr.
Production Supervisor
Lovington Office
575-396-5538 Office
575-396-5969 Fax
rskinner@gwdc.com



GREAT WESTERN DRILLING

Post Office Box 1659
Midland, Texas 79702

From: billy@pwllc.net [mailto:billy@pwllc.net]
Sent: Monday, December 15, 2014 10:45 AM
To: Cary Billingsley
Subject: Thorpe Sears SWD # 1

Cary, attached is scanned copy of SWD application for the Thorpe Sears that went out this morning. I have obligated us to furnish to OCD a fresh water sample analysis. I have a color copy in the mail to you as well. When you get water analysis send it to me and I will send to the right personnel at OCD in Santa Fe.

Thanks

Billy (Bill) E. Prichard
Pueblo West Resources
125 Greathouse Village
Decatur, TX 76234
432-934-7680 cellular
720-293-0460 fax

 Facebook

email; billy@pwllc.net
www.pwllc.net



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 replaced,
O=orphaned,
C=the file is closed)

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

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

(In feet)

		POD														
		Sub-														
		Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth	Depth	Water	
POD Number													Well	Water	Column	
<u>RA 01469 2</u>				ED	2	3	3	18	18S	26E	553733	3622993*		300	150	150
<u>RA 01469 REPAR</u>				ED	2	3	3	18	18S	26E	553733	3622993*		230	160	70
<u>RA 01469 SUP</u>				ED	2	3	3	18	18S	26E	553733	3622993*		225	90	135
<u>RA 01508</u>				ED	3	2	3	18	18S	26E	553918	3623197*		235		
<u>RA 01508 CLW</u>				ED	2	3	3	18	18S	26E	553733	3622993*		300		
<u>RA 02013</u>				ED	2	2	2	17	18S	26E	556527	3624212*		136		
<u>RA 03181</u>				ED	4	2	3	17	18S	26E	555726	3623199*		200		
<u>RA 03181 CLW</u>		O		ED			1	17	18S	26E	555422	3623902*		250	92	158
<u>RA 03181 CLW-2</u>		O		ED	2	2		18	18S	26E	554816	3624106*		258	115	143
<u>RA 03181 CLW-3</u>		O		ED	3	2		18	18S	26E	554417	3623702*		334	134	200
<u>RA 03181 COMB</u>		O		ED	2	3		17	18S	26E	555627	3623300*		229	55	174
<u>RA 03181 REPAR-3</u>		O		ED	1	1	4	17	18S	26E	555929	3623401*		309	100	209
<u>RA 03181 SUP</u>		O		ED	1	1	4	17	18S	26E	555929	3623401*		290	60	230
<u>RA 03181 SUP REPAR</u>		O		ED	1	1	4	18	18S	26E	554320	3623397*		315	115	200
<u>RA 03618</u>				ED		3	2	20	18S	26E	556037	3622093*		1838		
<u>RA 03966</u>				ED	2	1	2	18	18S	26E	554513	3624205*		50	18	32
<u>RA 04283</u>				LE	1	4	3	20	18S	26E	555538	3621384*		158	125	33
<u>RA 09709</u>				ED		2	2	17	18S	26E	556428	3624113*		235	110	125

Average Depth to Water: **101 feet**

Minimum Depth: **18 feet**

Maximum Depth: **160 feet**

Record Count: 18

PLSS Search:

Section(s): 17-20

Township: 18S

Range: 26E

*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.



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 replaced,
O=orphaned,
C=the file is closed)

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

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

(In feet)

POD Number	POD Sub-Code	basin	County	Q Q Q			Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
				64	16	4								
RA 10230			CH	4	2	3	12	18S	25E	552502	3624812*	400	200	200
RA 10533			ED	4	2	2	11	18S	25E	551685	3625617*	200		
RA 10534			ED	4	3	3	11	18S	25E	550488	3624400*	200		
RA 10535			ED	4	4	4	11	18S	25E	551700	3624404*	200		
RA 10536			ED	4	1	1	11	18S	25E	550477	3625607*	200		

Average Depth to Water: 200 feet

Minimum Depth: 200 feet

Maximum Depth: 200 feet

Record Count: 5

PLSS Search:

Section(s): 11-14

Township: 18S

Range: 25E

*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.

7014 2870 0000 4332 3828

U.S. Postal ServiceTM
CERTIFIED MAIL[®] RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com[®].

ARTESIA, NM 88210
OFFICIAL USE

Postage	\$ \$1.61	0634
Certified Fee	\$3.30	02
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ \$7.61	

Sent To	04/29/2015
Street & Apt. No., or PO Box No.	Wayne Netherlin
City, State, ZIP+4	35 Hay Stack Road
	Artesia, NM 88210
PS Form 3800, July	for Instructions