

AE Order Number Banner

Application Number: pMSG2411448586

SWD-2607


RAYBAW Operating, LLC [330220]

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: Raybaw Operating LLC
ADDRESS: 2626 Cole Ave, Suite 300, Dallas, TX 75204
CONTACT PARTY: Nancy Winn PHONE: 281-793-5452
- 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: Nancy J. Winn TITLE: Geoscience/Regulatory Analyst
SIGNATURE:  DATE: 01/24/2024
E-MAIL ADDRESS: nwinn@sbcglobal.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: Original SWD authority granted under Administrative Order

SWD-1393-A dated May 6, 2013

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

Side 2

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

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

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

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.



2626 Cole Avenue, Suite 300
Dallas, Texas 75204
214-600-9185

Regulator 29 SWD #1
API 30-015-41034
1650' FSL, 900' FEL
Unit Letter "I", Section 29, T18S, R26E
Eddy County, New Mexico
C108 Application for Authorization to Inject

I.

The purpose of this application is seeking administrative approval for the reinstatement of the Regulator 29 SWD #1 from shut-in status as a disposal well in the Devonian to an active private lease salt water disposal well in the Devonian. (Original SWD authority was granted under Administrative Order SWD-1393-A dated May 6, 2013)

II.

Operator: Raybaw Operating, LLC Ogrid: 330220
Address: 2626 Cole Avenue, Suite 300, Dallas Texas 75204
Contact Party: Michael Lee Phone: 214-800-2301

III.

Please refer to Exhibit "A" for well data

IV.

This is not an expansion of an existing project

V.

Please refer to Exhibit "B" of map of Area of Review

VI.

No wells in 0.5 mile Area of Review that penetrated proposed/existing disposal zone
Please refer to Exhibit "C"

VII.

1. Anticipated disposal volume 2000 BWPD with a maximum of 10,000 BWPD
2. System will be closed
3. Anticipate disposal pressure of 0 (Zero) psig with a maximum disposal pressure of 1967 psig (previously in effect by Administrative Order SWD-1393-A dated May 6, 2013)
4. Please refer to Exhibit "D" for disposed fluid analysis
5. Please refer Exhibit "D" for disposal zone fluid analysis

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 be acidized to clean up near wellbore damage

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X.

Logs attached

XI.

No fresh water wells were identified in the Area of Review

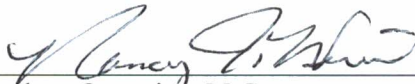
XII

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 refer to Exhibit "E" for proof of notify.

Nancy J. Winn



Agent for Raybaw Operating, LLC

Regulator 29 SWD #1
API 30-015-41034
1650' FSL, 900' FEL
Unit Letter "T", Section 29, T18S, R26E
Eddy County, New Mexico
C108 Application for Authorization to Inject

Well Data (Exhibit "A")

Data obtained from records maintained by NMOCD
Spud February 26, 2013 by Nadel and Gussman (HEYCO, LLC)

Drilled surface, hole size 17 1/2" to 926'. Run 23 joints of 13 3/8", J-55, 54.5#. Cemented with 780 sks Class "C" and additives. Cement circulated to surface.

Drilled 8 3/4" to 9960'. Run 236 joints of 7", 26# L-80 casing to 9,838'. Stage 1 Cemented with 625 sks Class "C" and additives. Stage 2 Cemented with 1,775 sks Class "C" and additives. Cement circulated to surface

Drilled 6 1/8" to 10,500'. Plug back depth 10,476' (open hole 9838' to 10,476). Released rig March 27, 2013.

Completion 3 1/2" tubing to 9636. Packer set 9,786'. Open Hole 9,838' to 10,476 stimulated with 27,000 gals 15% HCL.

Workover January 16, 2016. Ran 3 1/2", 9.30# L80 IPC tubing to 9,794. Nickel coated packer set 9,792'

Workover April 16, 2018. Ran 3 1/2", 9.30# L80 IPC tubing to 9,822.56'. Tryton Nickel coated packer set 9,784.61

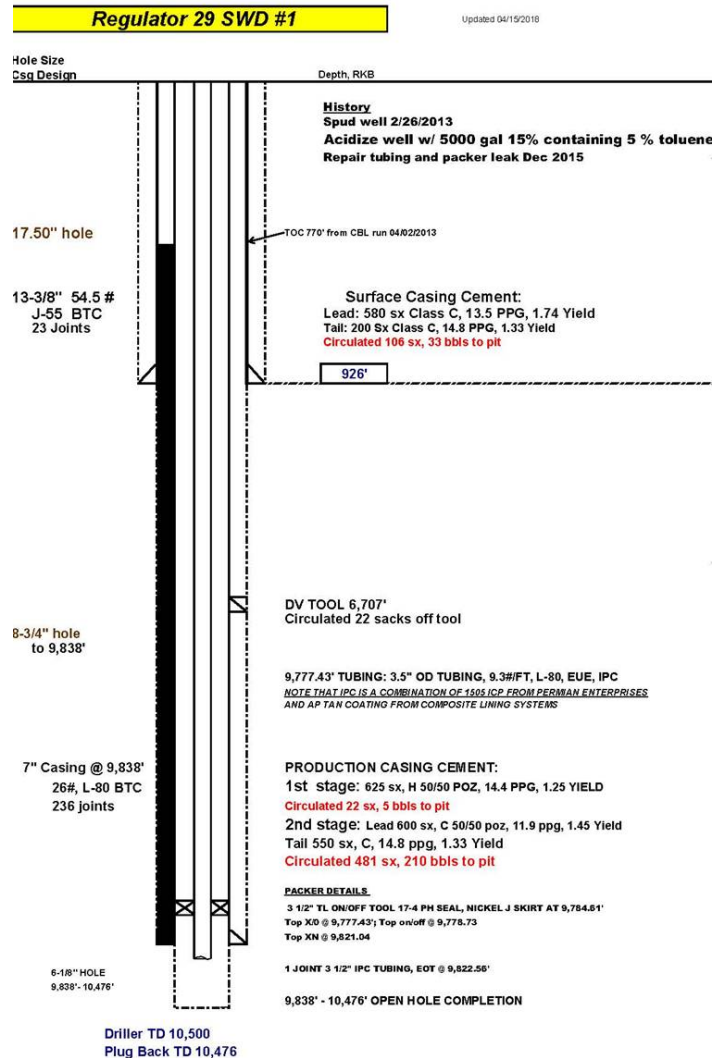
Side 1

INJECTION WELL DATA SHEET

OPERATOR: _____

WELL NAME & NUMBER: Regulator 29 SWD #1

WELL LOCATION: 1650 FSL & 990 FEL I 29 18S 26E
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 17 1/2" Casing Size: 13 3/8"Cemented with: 780 Class C sx. **or** _____ ft³Top of Cement: Surface Method Determined: Circulated to SurfIntermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. **or** _____ ft³

Top of Cement: _____ Method Determined: _____

Production CasingHole Size: 8 3/4" Casing Size: 7" L-80Cemented with: 1,775 Class C sx. **or** _____ ft³Top of Cement: 770' Method Determined: CBL run 04/02/2013Total Depth: 9,838'Injection IntervalOpen Hole 6 1/8" 9,838' feet to 10,476'

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEETTubing Size: 3 1/2" EOT 9,822.56 Lining Material: 9.3#/Ft, L-80, E, IPCType of Packer: Tryton 7"x 3 1/2" 17-26# TX-8 Nickel Coated OD/IDPacker Setting Depth: 9,784.61'

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

Additional Data

1. Is this a new well drilled for injection? _____ Yes X No

If no, for what purpose was the well originally drilled? Well originally drilled as disposal well
Well spud 2/26/2013. Completed ready to dispose 5/2/2013. Original SWD authority was granted
under Administrative Order SWD-1393-A dated May 6, 2013

2. Name of the Injection Formation: Devonian

3. Name of Field or Pool (if applicable): SWD; DEVONIAN

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. No

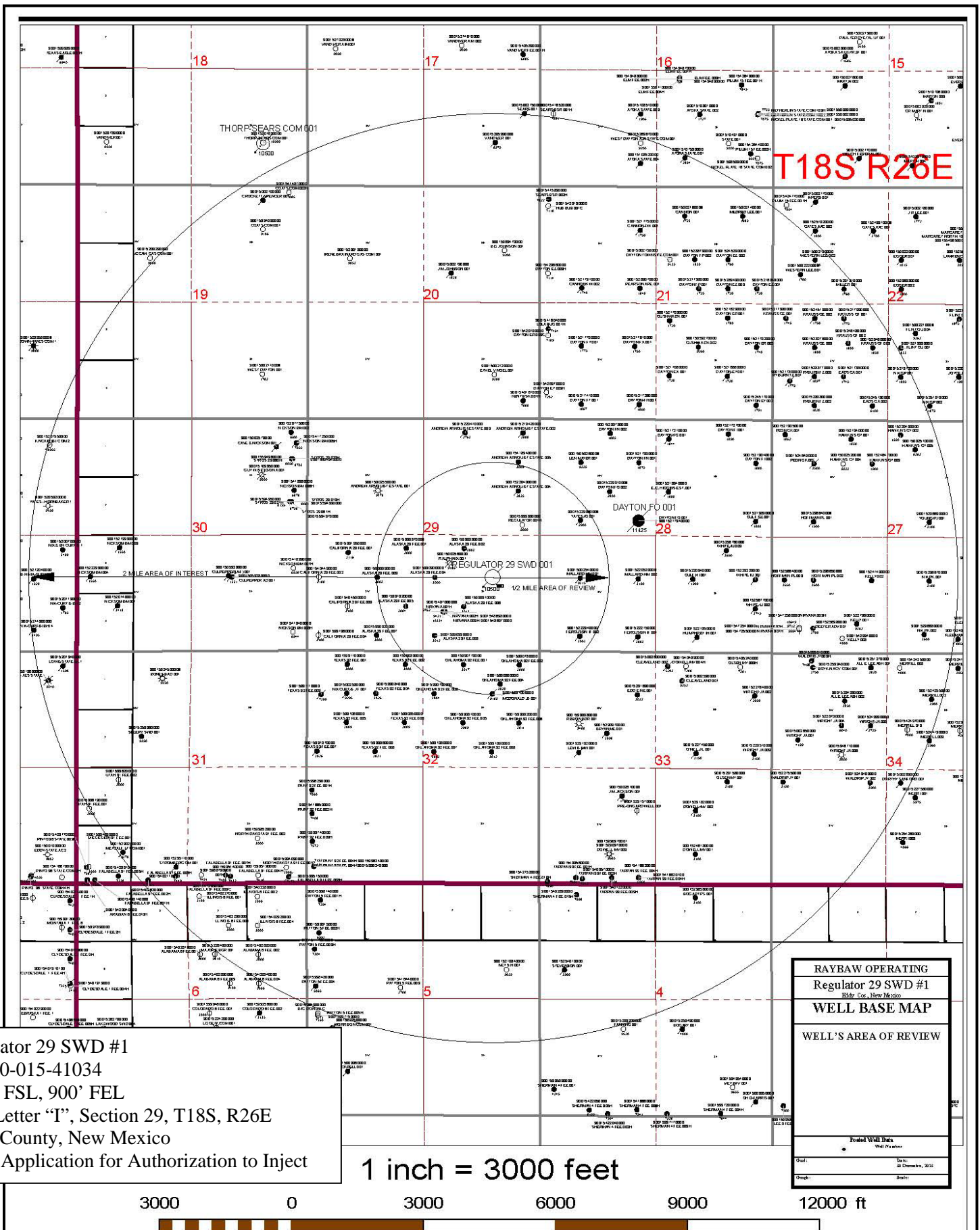
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Overlying Production San Andres, Glorieta, Yeso

No production from zones underlying the completed disposal interval

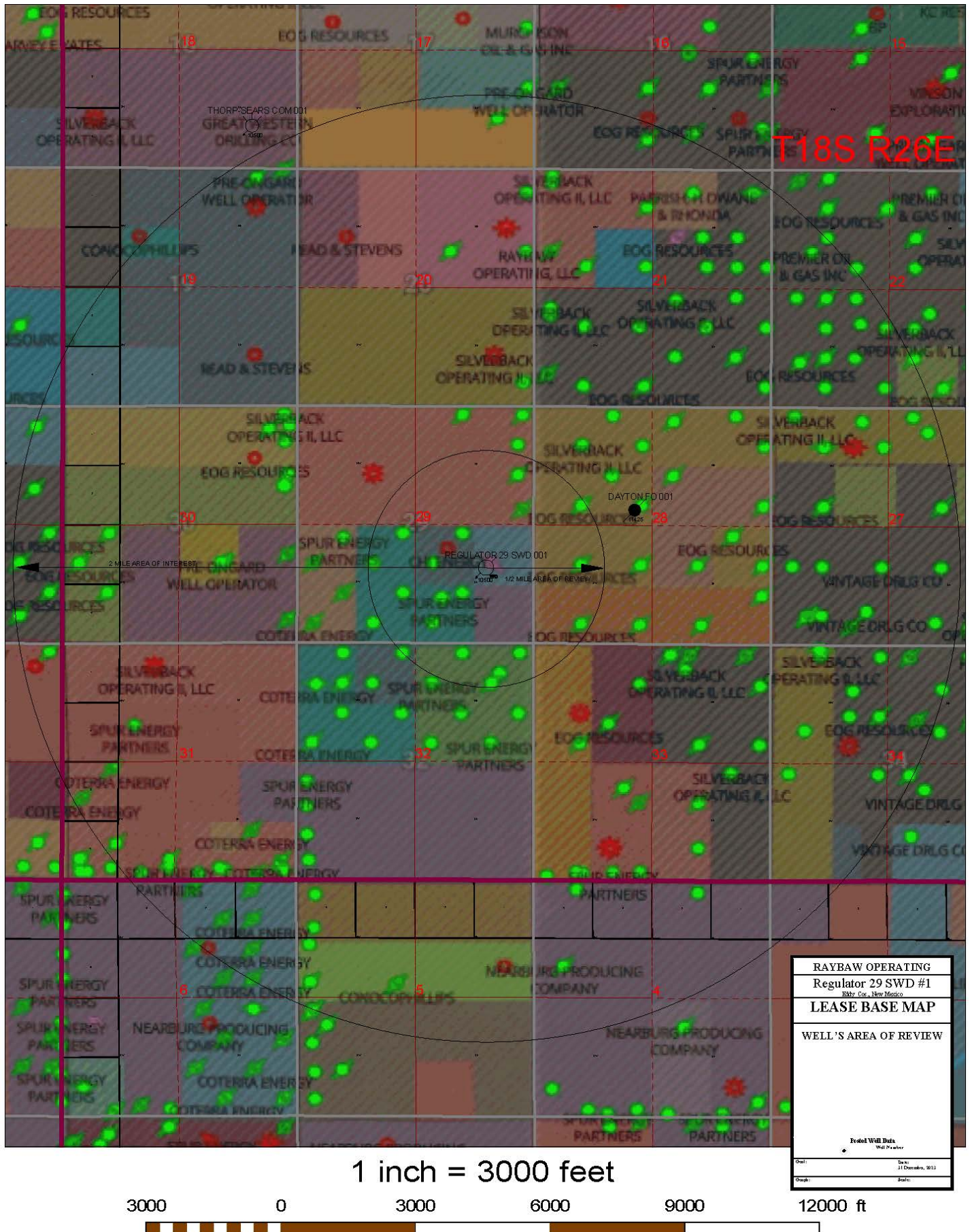
Well Data (Exhibit "A-1")

Raybaw Operating, LLC			
LEASE: Regulator 29 SWD FIELD: Devonian; SWD LOCATION: 1650' FSL and 990' FEL SPUD DATE: 2/26/2013 CONTRACTOR: Silver Oak #1	WELL NO: 1 COUNTY: Eddy LEGAL: Sec. 29, T18S, R26E DRAWN BY: DATE: 04/15/2018	API #: 30-015-41034 STATE: New Mexico GL: 3412' DF: 3430' KB: 18'	
Regulator 29 SWD #1			
Updated 04/15/2018			
Hole Size Csg Design	Depth, RKB	ACTUAL TOPS FT MD	
<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"> <p>17.50" hole</p> <p>13-3/8" 54.5 # J-55 BTC 23 Joints</p> <p>8-3/4" hole to 9,838'</p> <p>7" Casing @ 9,838' 26#, L-80 BTC 236 joints</p> <p>6-1/8" HOLE 9,838' - 10,476'</p> </div> <div style="width: 50%;"> <p>History Spud well 2/26/2013 Acidize well w/ 5000 gal 15% containing 5 % toluene Repair tubing and packer leak Dec 2015</p> <p>TOC 770' from CBL run 04/02/2013</p> <p>Surface Casing Cement: Lead: 580 sx Class C, 13.5 PPG, 1.74 Yield Tail: 200 Sx Class C, 14.8 PPG, 1.33 Yield Circulated 106 sx, 33 bbls to pit</p> <p>926'</p> <p>DV TOOL 6,707' Circulated 22 sacks off tool</p> <p>9,777.43' TUBING: 3.5" OD TUBING, 9.3#/FT, L-80, EUE, IPC <u>NOTE THAT IPC IS A COMBINATION OF 1505 ICP FROM PERMAN ENTERPRISES AND AP TAN COATING FROM COMPOSITE LINING SYSTEMS</u></p> <p>PRODUCTION CASING CEMENT: 1st stage: 625 sx, H 50/50 POZ, 14.4 PPG, 1.25 YIELD Circulated 22 sx, 5 bbls to pit 2nd stage: Lead 600 sx, C 50/50 poz, 11.9 ppg, 1.45 Yield Tail 550 sx, C, 14.8 ppg, 1.33 Yield Circulated 481 sx, 210 bbls to pit</p> <p>PACKER DETAILS 3 1/2" TL ON/OFF TOOL 17-4 PH SEAL, NICKEL J SKIRT AT 9,784.51' Top XO @ 9,777.43'; Top on/off @ 9,778.73 Top XN @ 9,821.04</p> <p>3 1/2" 1 1/2" IPC TUBING, EOT @ 9,822.56'</p> <p>9,838' - 10,476' OPEN HOLE COMPLETION</p> </div> <div style="width: 25%;"> <p>425 Top Queen; Bottom Qal</p> <p>500 Grayburg</p> <p>866 San Andres</p> <p>1,485 Top San Andres Pays</p> <p>2,297 Glorieta SS.</p> <p>2,420 Yeso</p> <p>4,500 Abo Shale</p> <p>5,800 Top Wolfcamp Ls.</p> <p>7,110 Top Cisco-Canyon</p> <p>7,690 Canyon Limestone</p> <p>8,640 Top Atoka 8,698 Atoka Shale</p> <p>8,905 Top Morrow 8,980 Morrow Clastics 9,098 Lower Morrow</p> <p>9,164 Upper Mississippian Barnett Shale</p> <p>9,270 Upper Mississippian Chester Ls.</p> <p>9,427 Lower Mississippian Meramec-Osage Ls.</p> <p>9,838 Devonian Woodford Shale</p> <p>9,895 Devonian-Silurian</p> </div> </div>			
Driller TD 10,500 Plug Back TD 10,476			

Area of Review (Exhibit "B")

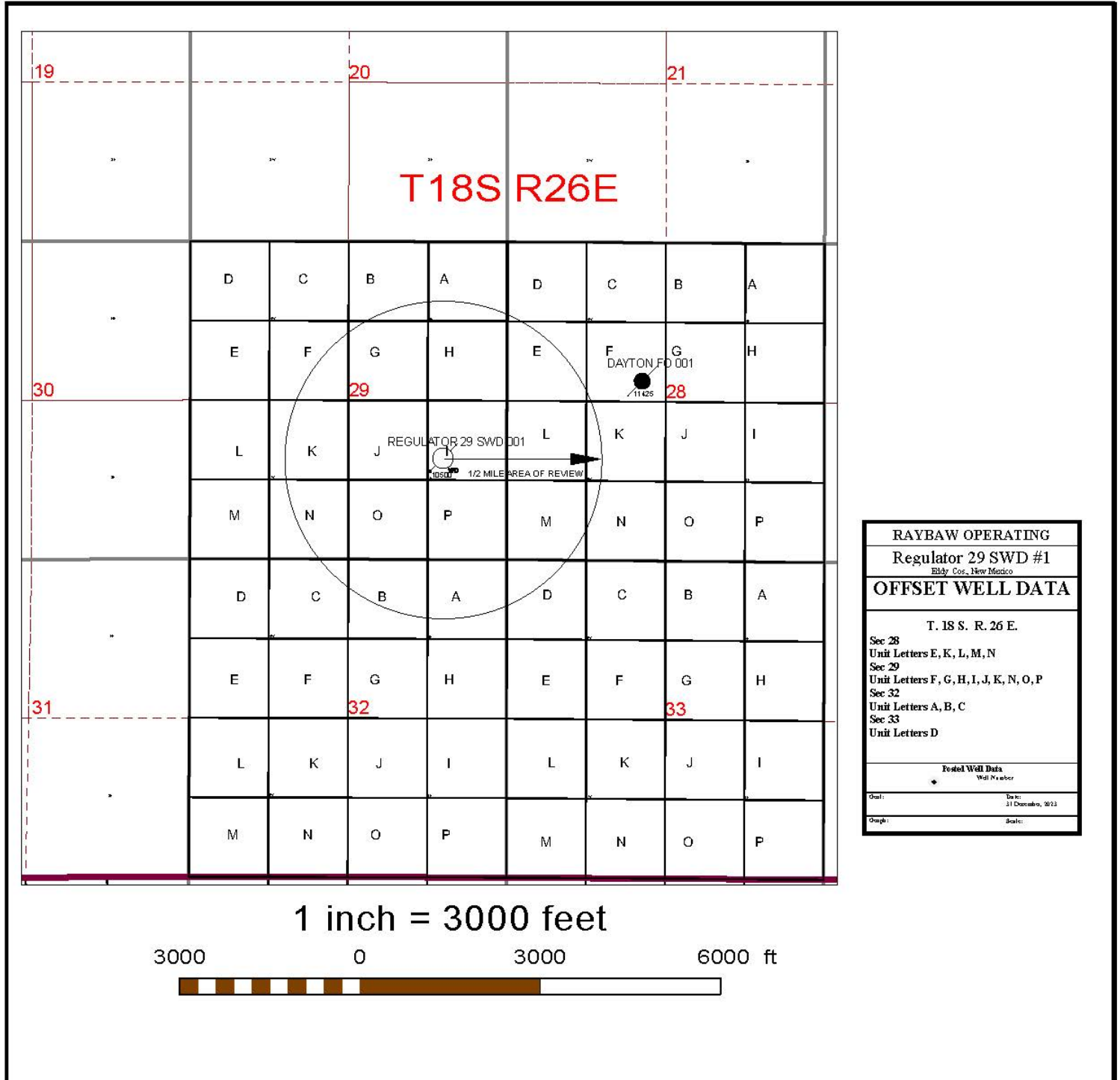


Area of Review (Exhibit "B-1")



Regulator 29 SWD #1
 API 30-015-41034
 1650' FSL, 900' FEL
 Unit Letter "I", Section 29, T18S, R26E
 Eddy County, New Mexico
 C108 Application for Authorization to Inject

Offset Well Data (Exhibit "C")



Regulator 29 SWD #1
 API 30-015-41034
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 Unit Letter "I", Section 29, T18S, R26E
 Eddy County, New Mexico
 C108 Application for Authorization to Inject

Offset Well Data (Exhibit "C-1")

Section 28 Township 18 South Range 26 East								
Unit Letter	API #	Type	Lease Name	Operator	MD	TVD	Class	Status
E	3001522306	V	Yates IQ #1	EOG Resources	2900	2900	Oil	P&A
L	3001500254	V	Mallard HM #1	EOG Resources	9315	9313	Oil	P&A
K	NA							
M	3001522294	V	Ferguson IF #2	EOG Resources	3003	3003	Oil	P&A
Section 29 Township 18 South Range 26 East								
A	NA							
B	NA							
F-G-H	3001553497	H	Stos 29 #61H	Spur Energy Partners	8758	6364	Oil	Active
F-G-H	3001553493	H	Stros 29 #10H	Spur Energy Partners	8081	2678	Oil	Active
F-G-H	3001553495	H	Stros 29 #21H	Spur Energy Partners	8155	2762	Oil	Active
H	3001522040	V	A Arniquist Estate #4	Revenir Energy	2825	2825	Oil	P&A
H	3001539988	H	Regulator #1H	Nadel and Gussman	5000	4036	Oil	Permit
I	3001541034	V	Regulator 29 SWD #1	Raybaw Operating	10500	10476	SWD	SI
J	3001539088	V	Alaska 29 Fee #2	Spur Energy Partners	3003	2996	Oil	Active
J	3001500256	V	Ralph NX #1	Chi Energy	9165	9162	Gas	P&A
J	3001539090	V	Alaska 29 Fee #4	Spur Energy Partners	3000	2993	Oil	Active
K	3001539087	V	Alaska 29 Fee #1	Spur Energy Partners	3000	2993	Oil	Active
K	3001539089	V	Alaska 29 Fee #3	Spur Energy Partners	3003	2996	Oil	Active
N	3001539102	V	Alaska 29 Fee #5	Spur Energy Partners	3004	2998	Oil	Active
O	3001539091	V	Alaska 29 Fee #6	Spur Energy Partners	3013	3006	Oil	Active
O	3001539093	V	Alaska 29 Fee #8	Spur Energy Partners	3012	3005	Oil	Active
O-P-M-N	3001548700	H	Nirvana #2H	Spur Energy Partners	9421	4709	Oil	Active
O-P-M-N	3001548697	H	Nirvana #3H	Spur Energy Partners	10334	6390	Oil	Active
O-P-M-N	3001548698	H	Nirvana #1H	Spur Energy Partners	9762	5399	Oil	Active
O-P-M-N	3001547254	H	Nirvana #2H	Spur Energy Partners	9712	5223	Oil	Cancelled
P	NA							
Section 32 Township 18 South Range 26 East								
A	3001539078	V	Oklahoma 32 Fee #2	Spur Energy Partners	3000	2993	Oil	Active
A	3001539080	V	Oklahoma 32 Fee #4	Spur Energy Partners	3020	3013	Oil	Active
A	3001520100	V	McDonald JB #1	Spur Energy Partners	9185	9185	Oil	P&A
B	3001539077	V	Oklahoma 32 Fee #1	Spur Energy Partners	3017	3010	Oil	Active
Section 33 Township 18 South Range 26 East								
D-E-L-M	3001540056	H	Tarpan 33 Fee #1H	Spur Energy Partners	7604	2617	Oil	Active

Regulator 29 SWD #1
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Produced Water in Area (Exhibit "D")

Data obtained from Go-Tech

API	Formation	TDS	Chorides
3001530694	Yeso	194357	152244
3001503917	Devonian		35100

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Eddy County, New Mexico
C108 Application for Authorization to Inject

Legal Notice (Exhibit "E")

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 C 108

Raybaw Operating, 2626 Cole Avenue, Suite 300, Dallas, Texas 75204 has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to reinstate the Regulator 29 SWD #1, API #30-015-41034, 1650' FSL & 990' FEL, Unit letter I of Section 29, Township 18 South, Range 26 East, NMPM, Eddy County, New Mexico from shut-in status to a private lease into the original open hole completion in the Devonian formation. The disposal interval would be the open hole interval from 9838' to 10,476'. Disposal fluid would be produced water piped in from Raybaw Operating Company producing wells in the area. Anticipated disposal rate of 1000 BWPD with a maximum disposal rate of 10000 BWPD. Anticipated disposal pressure 0 (Zero) psi with a maximum disposal pressure of 1967 psi. Well is approximately 8 miles South 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 Jack Carter 281-387-6515.

Affidavit of PublicationNo. 26730

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 Ad

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

1 Consecutive weeks/day on the same

day as follows:

First Publication January 4, 2024Second Publication Third Publication Fourth Publication Fifth Publication Sixth Publication

Subscribed and sworn before me this

4th day of January 2024

LATISHA ROMINE
Notary Public, State of New Mexico
Commission No. 1076338
My Commission Expires
05-12-2027



Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:**Legal Notice**

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Published in the Artesia Daily Press, Artesia, N.M., Jan. 4, 2024 Legal No. 26730.

Raybaw Operating, LLC
Regulator 29 SWD #1
API 30-015-41034
1650' FSL, 900' FEL
Unit Letter "I", Section 29, T18S, R26E
Eddy County, New Mexico

Notifications (Exhibit "E-1)

Notified Offset Operators:

Silverback Exploration
Land Department
19707 IH West, Suite 201
San Antonio, Texas 78257

Spur Energy Partners
Land Department
9655 Katy Freeway, Suite 500
Houston, Texas 77024

Notified Surface Owner (Surface Owner is Raybaw Operating, LLC – applicant):

Raybaw Operating, LLC
Khanie Nomichit
Land Department
2626 Cole Avenue, Suite 3300
Dallas, Texas 75204

CERTIFIED MAIL® RECEIPT
Domestic Mail Only

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

San Antonio, TX 78257

Certified Mail Fee \$4.35
\$2.55
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$2.07

Total Postage and Fees \$9.97

Sent To: SILVERBACK EXPLORATION
Land Department
19707 IH 10 WEST, SUITE 201
City: SAN ANTONIO, TEXAS 78257

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT

Domestic Mail Only

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

Houston, TX 77024

Certified Mail Fee \$4.35
\$2.55
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$2.07

Total Postage and Fees \$9.97

Sent To: SPUR ENERGY PARTNERS
Land Department
9655 KATY FREEWAY, SUITE 500
City: HOUSTON, TEXAS 77024

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT

Domestic Mail Only

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

Dallas, TX 75204

Certified Mail Fee \$4.35
\$2.55
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$2.55

Total Postage and Fees \$10.45

Sent To: RAYBAW OPERATING
KHANIE NOMICHIT
Land Department
2626 COLE AVENUE, SUITE 300
City: DALLAS, TEXAS 75204

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions



January 4, 2024

Silverback Exploration
Land Department
19707 IH West, Suite 201
San Antonio, Texas 78257

RE: Notice C108 Application for Authorization to Inject into Regulator 29 SWD #1, S29, T18S-R26E

Land Manager:

Per the rules and regulations of the New Mexico Oil Conservation Division you have been identified as an offset leasehold operator party of interest, enclosed is a copy of NMOCD form C 108.

Raybaw Operating, 2626 Cole Avenue, Suite 300, Dallas, Texas 75204 has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to reinstate the Regulator 29 SWD #1, API #30-015-41034, 1650' FSL & 990' FEL, Unit letter I of Section 29, Township 18 South, Range 26 East, NMPM, Eddy County, New Mexico from shut-in status to a private lease into the original open hole completion in the Devonian formation. The disposal interval would be the open hole interval from 9838' to 10,476'. Disposal fluid would be produced water piped in from Raybaw Operating Company producing wells in the area. Anticipated disposal rate of 1000 BWPD with a maximum disposal rate of 10000 BWPD. Anticipated disposal pressure 0 (Zero) psi with a maximum disposal pressure of 1967 psi. Well is approximately 8 miles South 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 Jack Carter 281-387-6515.

If you have any questions, please not hesitate to contact me by phone or email. My contact information is provided below.

Respectfully,
Raybaw Operating, LLC

Jack Carter
Land Consultant
Email: jack@oaknrg.com
Phone: (281) 387-6515



January 4, 2024

Spur Energy Partners
Land Department
9655 Katy Freeway, Suite 500
Houston, Texas 77024

RE: Notice C108 Application for Authorization to Inject into Regulator 29 SWD #1, S29, T18S-R26E

Land Manager:

Per the rules and regulations of the New Mexico Oil Conservation Division you have been identified as an offset leasehold operator party of interest, enclosed is a copy of NMOCD form C 108.

Raybaw Operating, 2626 Cole Avenue, Suite 300, Dallas, Texas 75204 has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to reinstate the Regulator 29 SWD #1, API #30-015-41034, 1650' FSL & 990' FEL, Unit letter I of Section 29, Township 18 South, Range 26 East, NMPM, Eddy County, New Mexico from shut-in status to a private lease into the original open hole completion in the Devonian formation. The disposal interval would be the open hole interval from 9838' to 10,476'. Disposal fluid would be produced water piped in from Raybaw Operating Company producing wells in the area. Anticipated disposal rate of 1000 BWPD with a maximum disposal rate of 10000 BWPD. Anticipated disposal pressure 0 (Zero) psi with a maximum disposal pressure of 1967 psi. Well is approximately 8 miles South of Artesia, New Mexico.

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If you have any questions, please not hesitate to contact me by phone or email. My contact information is provided below.

Respectfully,
Raybaw Operating, LLC

Jack Carter
Land Consultant
Email: jack@oaknrg.com
Phone: (281) 387-6515



January 4, 2024

Raybaw Operating, LLC
Khanie Nomichit
Land Department
2626 Cole Avenue, Suite 3300
Dallas, Texas 75204

RE: Notice C108 Application for Authorization to Inject into Regulator 29 SWD #1, S29, T18S-R26E

Land Manager:

Per the rules and regulations of the New Mexico Oil Conservation Division you have been identified as the surface owner party of interest, enclosed is a copy of NMOCD form C 108.

Raybaw Operating, 2626 Cole Avenue, Suite 300, Dallas, Texas 75204 has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to reinstate the Regulator 29 SWD #1, API #30-015-41034, 1650' FSL & 990' FEL, Unit letter I of Section 29, Township 18 South, Range 26 East, NMPM, Eddy County, New Mexico from shut-in status to a private lease into the original open hole completion in the Devonian formation. The disposal interval would be the open hole interval from 9838' to 10,476'. Disposal fluid would be produced water piped in from Raybaw Operating Company producing wells in the area. Anticipated disposal rate of 1000 BWPD with a maximum disposal rate of 10000 BWPD. Anticipated disposal pressure 0 (Zero) psi with a maximum disposal pressure of 1967 psi. Well is approximately 8 miles South of Artesia, New Mexico.

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If you have any questions, please not hesitate to contact me by phone or email. My contact information is provided below.

Respectfully,
Raybaw Operating, LLC

Jack Carter
Land Consultant
Email: jack@oaknrg.com
Phone: (281) 387-6515



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		0.0	
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 ²⁺):		ND		ND	
BWPD:		No Data								Vanadium (V ²⁺):		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	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 (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
		Bromide (Br ⁻):	ND		Strontium (Sr ²⁺):	4.0	0.1
pH:		Nitrite (NO ₂ ⁻):	ND		Barium (Ba ²⁺):	0.0	0.0
pH at time of sampling:	7.8	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 meq/L						
Bicarbonate (HCO ₃ ⁻):	361.9 5.9				Aluminum (Al ³⁺):	ND	
Carbonate (CO ₃ ²⁻):	ND				Chromium (Cr ³⁺):	ND	
Hydroxide (OH ⁻):	ND				Cobalt (Co ²⁺):	ND	
		Organic Acids:	mg/L meq/L		Copper (Cu ²⁺):	ND	
aqueous CO ₂ (ppm):	ND	Formic Acid:	ND		Molybdenum (Mo ²⁺):	ND	
aqueous H ₂ S (ppm):	ND	Acetic Acid:	ND		Nickel (Ni ²⁺):	ND	
aqueous O ₂ (ppb):	ND	Propionic Acid:	ND		Tin (Sn ²⁺):	ND	
		Butyric Acid:	ND		Titanium (Ti ³⁺):	ND	
Calculated TDS (mg/L):	1439	Valeric Acid:	ND		Vanadium (V ³⁺):	ND	
Density/Specific Gravity (g/cm ³):	0.9983				Zirconium (Zr ²⁺):	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 (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.

ScaleSoftPitter™
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	
Initial Temperature (°F):	250	Chloride (Cl ⁻):	21.1	0.6	Sodium (Na ⁺):	16.7	0.7
Final Temperature (°F):	80	Sulfate (SO ₄ ²⁻):	516.6	10.8	Potassium (K ⁺):	0.0	0.0
Initial Pressure (psi):	100	Borate (H ₃ BO ₃):	0.0	0.0	Magnesium (Mg ²⁺):	61.6	5.1
Final Pressure (psi):	15	Fluoride (F ⁻):	ND		Calcium (Ca ²⁺):	203.5	10.2
		Bromide (Br ⁻):	ND		Strontium (Sr ²⁺):	3.0	0.1
pH:		Nitrite (NO ₂ ⁻):	ND		Barium (Ba ²⁺):	0.0	0.0
pH at time of sampling:	7.9	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				Aluminum (Al ³⁺):	ND	
Bicarbonate (HCO ₃ ⁻):	355.1				Chromium (Cr ³⁺):	ND	
Carbonate (CO ₃ ²⁻):	ND				Cobalt (Co ²⁺):	ND	
Hydroxide (OH ⁻):	ND				Copper (Cu ²⁺):	ND	
					Molybdenum (Mo ²⁺):	ND	
aqueous CO ₂ (ppm):	ND	Organic Acids:	mg/L	meq/L	Nickel (Ni ²⁺):	ND	
aqueous H ₂ S (ppm):	ND	Formic Acid:	ND		Tin (Sn ²⁺):	ND	
aqueous O ₂ (ppb):	ND	Acetic Acid:	ND		Titanium (Ti ⁴⁺):	ND	
		Propionic Acid:	ND		Vanadium (V ³⁺):	ND	
Calculated TDS (mg/L):	1178	Butyric Acid:	ND		Zirconium (Zr ²⁺):	ND	
Density/Specific Gravity (g/cm ³):	0.9980	Valeric Acid:	ND		Total Hardness:	766	N/A
Measured Density/Specific Gravity	1.0009						
Conductivity (mmhos):	ND						
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.

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	
Initial Temperature (°F):	250	Chloride (Cl ⁻):		48.0	1.4	Sodium (Na ⁺):	88.8
Final Temperature (°F):	80	Sulfate (SO ₄ ²⁻):		617.2	12.9	Potassium (K ⁺):	0.0
Initial Pressure (psi):	100	Borate (H ₃ BO ₃):		0.0	0.0	Magnesium (Mg ²⁺):	77.9
Final Pressure (psi):	15	Fluoride (F ⁻):		ND		Calcium (Ca ²⁺):	241.3
		Bromide (Br ⁻):		ND		Strontium (Sr ²⁺):	4.0
pH:		Nitrite (NO ₂ ⁻):		ND		Barium (Ba ²⁺):	0.0
pH at time of sampling:	7.8	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:							
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:				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
		Butyric Acid:		ND		Vanadium (V ²⁺):	ND
Calculated TDS (mg/L):	1439	Valeric Acid:		ND		Zirconium (Zr ²⁺):	ND
Density/Specific Gravity (g/cm ³):	0.9983					Total Hardness:	929
Measured Density/Specific Gravity	1.0010						N/A
Conductivity (mmhos):	ND						
MCF/D:	No Data						
BOPD:	No Data						
BWPD:	No Data	Anion/Cation Ratio:		0.90			

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	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.

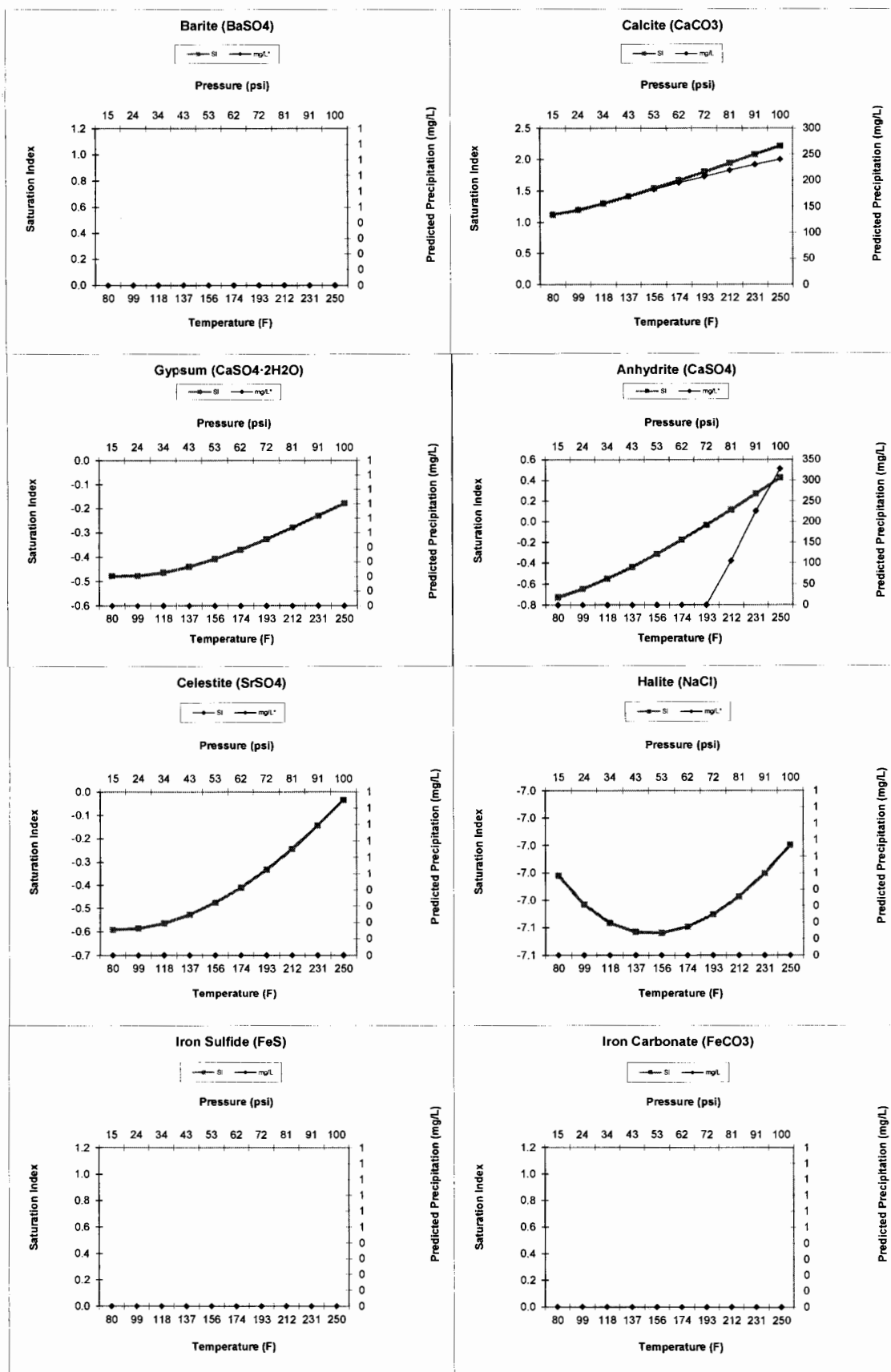
Note 3: Saturation index predictions on this sheet use pH and alkalinity; %CO₂ is not included in the calculations.



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Comments:

Sample ID: 41989 GREAT WESTERN DRILLING, COATS COM, COATS COM DEEP FRESH WATER





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	
Initial Temperature (°F):	250	Chloride (Cl ⁻):		21.1	0.6	Sodium (Na ⁺):	16.7
Final Temperature (°F):	80	Sulfate (SO ₄ ²⁻):		516.6	10.8	Potassium (K ⁺):	0.0
Initial Pressure (psi):	100	Borate (H ₃ BO ₃):		0.0	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:							
Bicarbonate (HCO ₃ ⁻):	355.1					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:				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
Conductivity (mmhos):	ND						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.

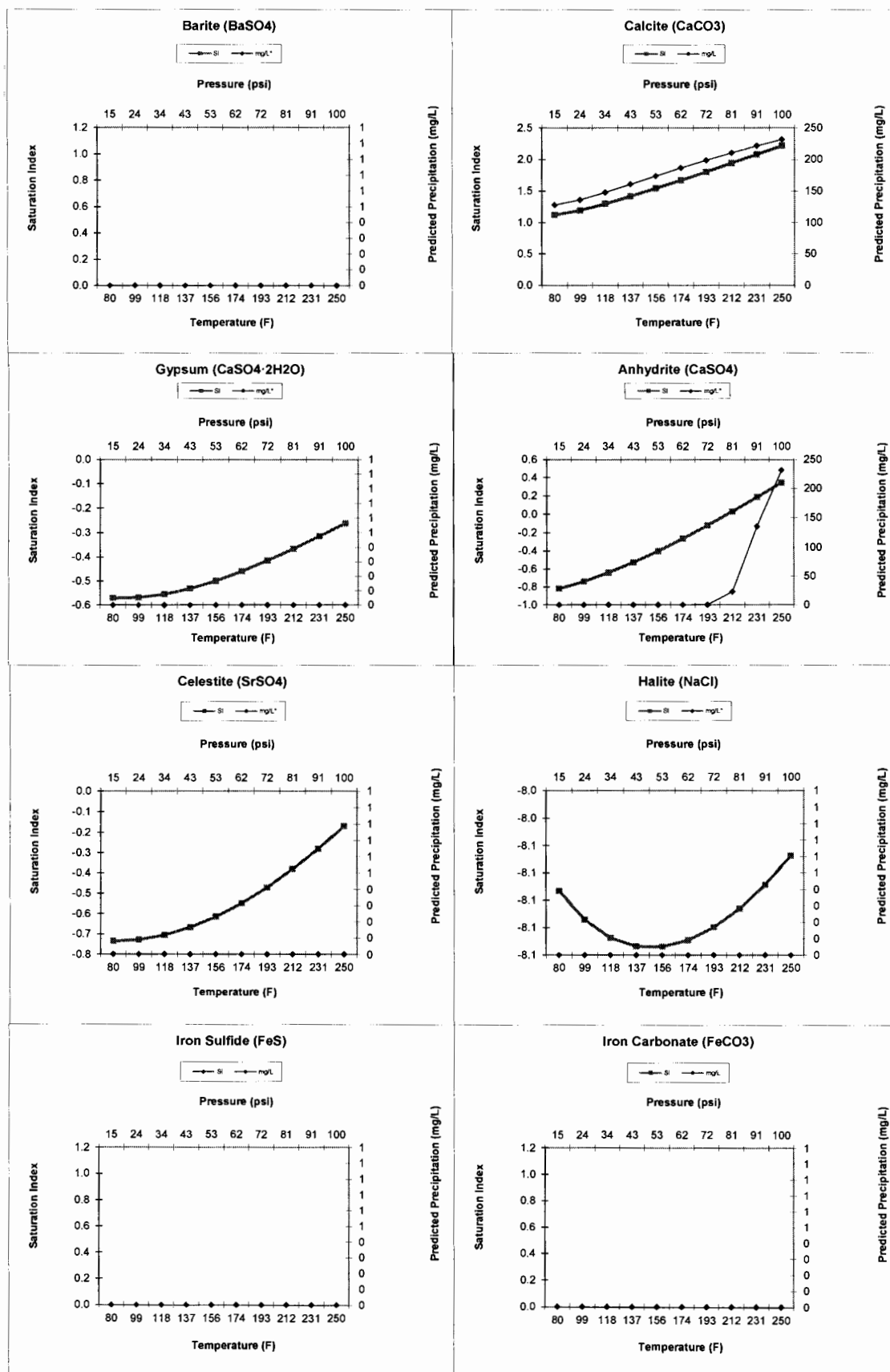
Note 3: Saturation Index predictions on this sheet use pH and alkalinity. %CO₂ is not included in the calculations.



ScaleSoftPitzer™
SSP2010

Comments:

Sample ID: 41989 GREAT WESTERN DRILLING, COATS COM, COATS COM SHALLOW FRESH WATER





New Mexico Office of the State Engineer

Water Column/Average Depth to Water



















(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been 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										Depth	Depth	Water	
		Sub-	Q	Q	Q							Well	Water	Column	
POD Number	Code	basin	County	64	16	4	Sec	Tws	Rng	X	Y				
<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.

4/28/15 8:17 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been 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 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
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.

4/28/15 8:34 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 336696

CONDITIONS

Operator: RAYBAW Operating, LLC 2626 Cole Avenue Dallas, TX 75204	OGRID: 330220
	Action Number: 336696
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	None	4/23/2024