RECEIVED:	REVIEWER:	TYPE:	APP NO:
8/07/2018		SWD	DMAM1821955783

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Geological & 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

Applicant: COG Operating, LLC **OGRID Number:** 229137
Well Name: Salt Cedar 16 State SWD 1 **API:** N/A
Pool: - **Pool Code:** -

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

AUG 07 2018 PM03:28

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ☒ Offset operators or lease holders
B. ☐ Royalty, overriding royalty owners, revenue owners
C. ☒ Application requires published notice
D. ☒ Notification and/or concurrent approval by SLO
E. ☐ Notification and/or concurrent approval by BLM
F. ☒ Surface owner
G. ☒ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **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.

Brian Collins
Print or Type Name

Signature

31 July 2018
Date

575-748-6940
Phone Number

bcollins@concho.com
e-mail Address

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: COG Operating, LLC

ADDRESS: One Concho Center, 600 W. Illinois Ave., Midland, TX 79701

CONTACT PARTY: Brian Collins PHONE: 575-748-6940

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).

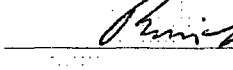
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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: Brian Collins TITLE: Facilities Engineering Advisor

SIGNATURE:  DATE: 31 July 2018

E-MAIL ADDRESS: bcollins@concho.com

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

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

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.

C-108 Application for Authorization to Inject
Salt Cedar 16 State SWD 1
1850' FNL, 2185' FEL
Unit G, Section 16, T26S, R28E
Eddy County, NM

COG Operating, LLC, proposes to drill the captioned well to 16,000' for salt water disposal service into the Devonian/Silurian from approximately 14,490' to 16,000'. A drilling permit will be submitted upon approval of this C-108.

Should this well undergo a mechanical integrity issue while in service in the future, it will be taken out of service immediately per UIC rules and repaired as quickly as possible. The water going to this well will be diverted to other SWD wells via pipeline if applicable; otherwise it will be trucked to other SWD wells. If necessary, producing wells serviced by this SWD well will be curtailed and/or shut-in until this well is repaired.

V. Map is attached.

VI. One well within the 1 mile radius area of review penetrates the proposed injection zone. The SRO 102 SWD will be plugged prior to drilling the Salt Cedar 16 State SWD 1 which is a replacement well located on the same pad as the SRO 102 SWD. We are drilling the replacement well on the same pad in order to utilize the existing surface facilities and water gathering system tie-ins. Current well schematic for the SRO 102 SWD is attached.

VII. 1. Proposed average daily injection rate = 25,000 BWPD
Proposed maximum daily injection rate = 40,000 BWPD

2. Closed system

3. Proposed maximum injection pressure = 2898 psi
(0.2 psi/ft. x 14,490' ft.)

4. Source of injected water will be Delaware, Bone Spring and Wolfcamp produced water. No compatibility problems are expected. Analyses of Delaware, Bone Spring and Wolfcamp waters from analogous source wells are attached. An appropriate chemical treatment program will be put in place should scale formation become apparent.

VIII. The injection zone is the Devonian/Silurian, a mixture of non-hydrocarbon bearing limestone and dolomite from 14,490' to 16,000'. Any underground water sources will be shallower than 500', the estimated top of the Rustler Anhydrite. The estimated top of the Devonian is 14,490'.

IX. The Devonian/Silurian injection interval will be acidized with approximately 40,000 gals of 20 % HCl acid.

X. Well logs will be filed with the Division. Porosity log sections across the Devonian/Silurian are attached for the SRO 102 SWD (G-16-26s-28e) and Willow 17 State SWD 1 (P-17-25s-28e).

XI. There are no fresh water wells within a mile of the proposed SWD well.

XII. After examining the available geologic and engineering data, no evidence was found of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

_____, Facilities Engineering Advisor, 31 July 2018

Seismicity potential statement is attached.

XIII. Proof of Notice is attached.

COG Operating LLC
Salt Cedar 16 State SWD #1
C-108 Attachment
July 30, 2018

Statement Regarding Seismicity and Disposal Well Location.

The Salt Cedar 16 State SWD #1 is a replacement well for the SRO SWD #102 which has injected over 14,000,000 BW since commencing injection in August 2010.

COG Operating LLC interpreted faults based on licensed 3D seismic data in the area around our proposed SWD. Our investigation of the deep formations does not indicate any faults or structures that would increase the chances of induced seismicity. Our map includes a Precambrian fault documented by Ruppel, et al. (2005), which is located approximately 1.4 miles northeast of our proposed SWD.

A recent paper by Snee and Zoback titled, "State of Stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity", was published in the February 2018 edition of The Leading Edge. The authors evaluated the strike-slip probability of known Permian Basin faults. The study predicts that the Precambrian fault located in the vicinity of the proposed SWD has a less than 10% probability of being critically stressed as to create an induced seismicity event. The primary reason for the low probability is the relationship of the strike of the fault to the regional maximum stress orientation (N 35 degrees E).

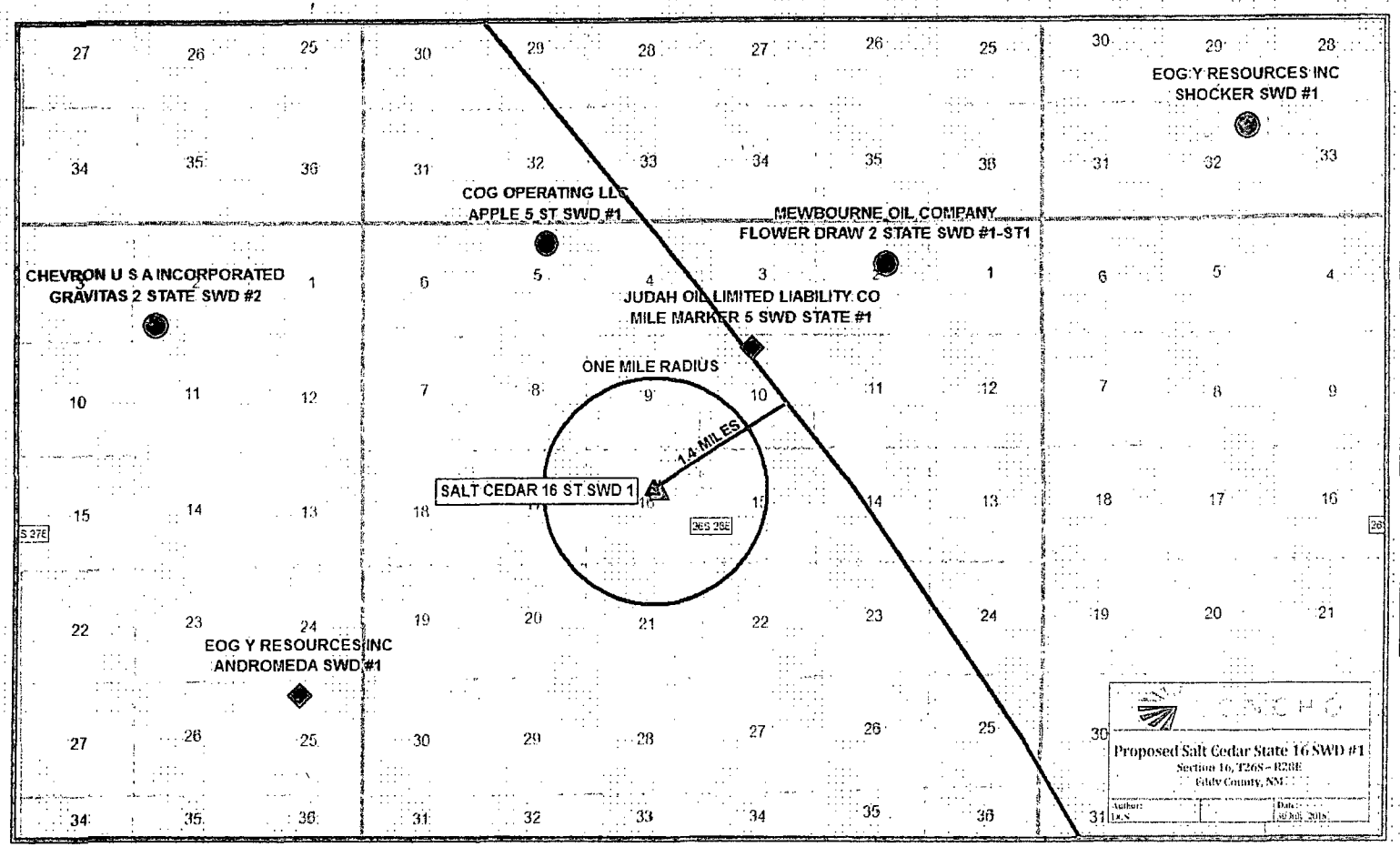
As previously mentioned the Salt Cedar 16 State SWD #1 is a replacement well for the SRO SWD #102, otherwise there are no active, permitted or pending Devonian SWD applications within the one mile radius.

Regards,

Dean C. Snidow

Geoscience Supervisor
COG Operating LLC
dsnidow@concho.com
432-686-3079

Salt Cedar 16 State SWD #1 Local Map



Legend

Devonian SWD Status

- SWD
- PLUGGED
- SHUT-IN
- APD PENDING
- LOC
- TA

Fault Line
(Ruppel et al. 2005)

III.

WELL DATA

INJECTION WELL DATA SHEET

Operator: COG Operating, LLC
Well Name & Number: Salt Cedar 16 State SWD 1
Well Location: 1850' FNL, 2185' FEL, Unit G, Section 16, T26S, R28E

Wellbore Schematic: See attached schematic

Surface Casing:

Hole Size: 26"
Casing Size: 20" @ 500'
Cemented with: 1500 cubic feet
Top of Cement: Surface by design

Intermediate Casing:

Hole Size: 18.5"
Casing Size: 16" @ 2500'
Cemented with: 2350 cubic feet
Top of Cement: Surface by design

Intermediate Casing:

Hole Size: 14.75"
Casing Size: 10-3/4" @ 9500'
Cemented with: 7800 cubic feet
Top of Cement: Surface by design

Production Casing:

Hole Size: 9.5"
Casing Size: 7-5/8" liner @ 9300-14490'
Cemented with: 1200 cubic feet
Top of Cement: Top of liner by design

Injection Interval:

14490' to 16000' (6-1/2" open hole)

Injection Tubing/Packer:

Tubing Size: 5-1/2" 0-9200' inside 10-3/4" casing, 5" 9200-14400' inside 7-5/8" casing
Lining Material: Internally plastic coated or internally fiberglass lined
Type of Packer: Nickel plated 10K double grip retrievable or permanent packer
Packer Setting Depth: 14440'
Other Type of Tubing/Casing Seal: Not Applicable

Additional Data:

1. Is this a new well drilled for injection? Yes
   If no, for what purpose was well originally drilled? N/A

2. Name of Injection Formation: Devonian/Silurian

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

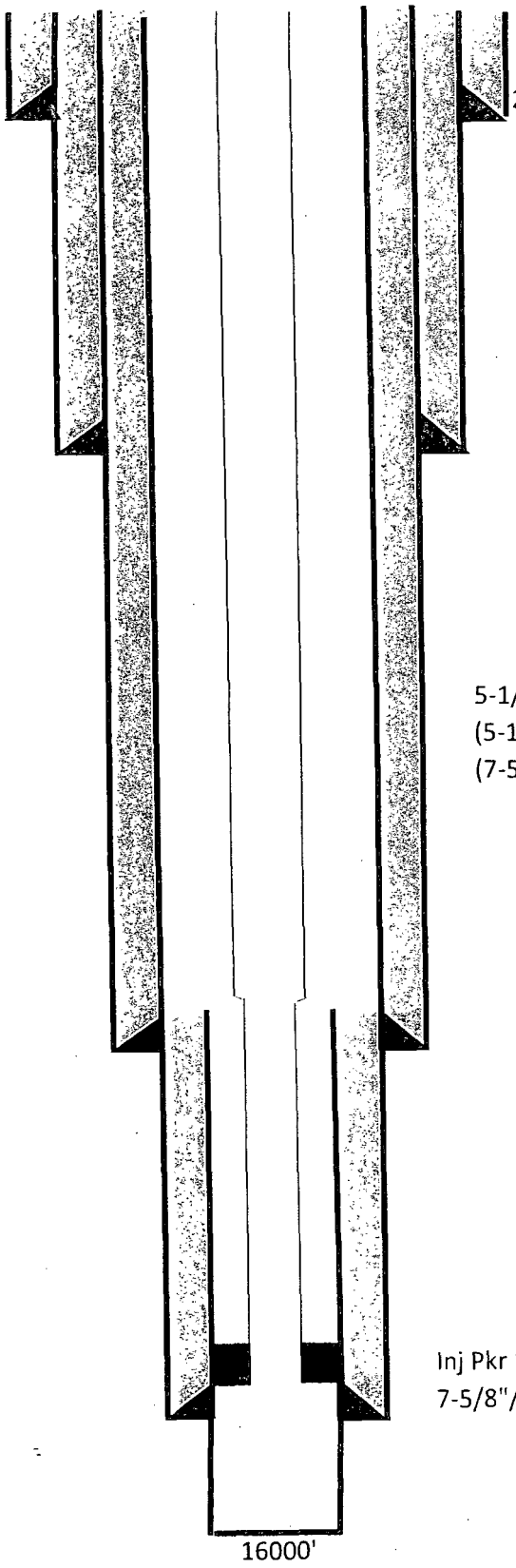
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   Overlying: Possible Delaware Sand 2500-6000', Bone Spring 6250-9200', Wolfcamp 9200-11000', possible Strawn 11850'+, possible Atoka 12100'+, possible Morrow 12500'+

   Underlying: None

Salt Cedar 16 State SWD #1
1850' FNL, 2185' FEL
G-16-26s-28e
Eddy, NM
30-015-xxxxx

Zero:
KB elev:
GL elev:



26"

20"/// @ 500'

1500 CF Cmt (circ to surf)
Set in Rustler

18.5"

16"/// @ 2500'

2350 CF Cmt (circ to surf)
Set in top Delaware Sd

14.75"

5-1/2" x 5" Inj Tbg 0-14440'
(5-1/2" 0-9200' inside 10-3/4", 5" 9200-14440' inside 7-5/8")
(7-5/8" liner top 9300')

10-3/4"/// @ 9500'

7800 CF Cmt (circ to surf)
Set in upper Wolfcamp

9.5"

Inj Pkr 14440'
7-5/8"/// liner 9300-14490'

1200 CF Cmt (circ to liner top)
Set in top Devonian

6.5"

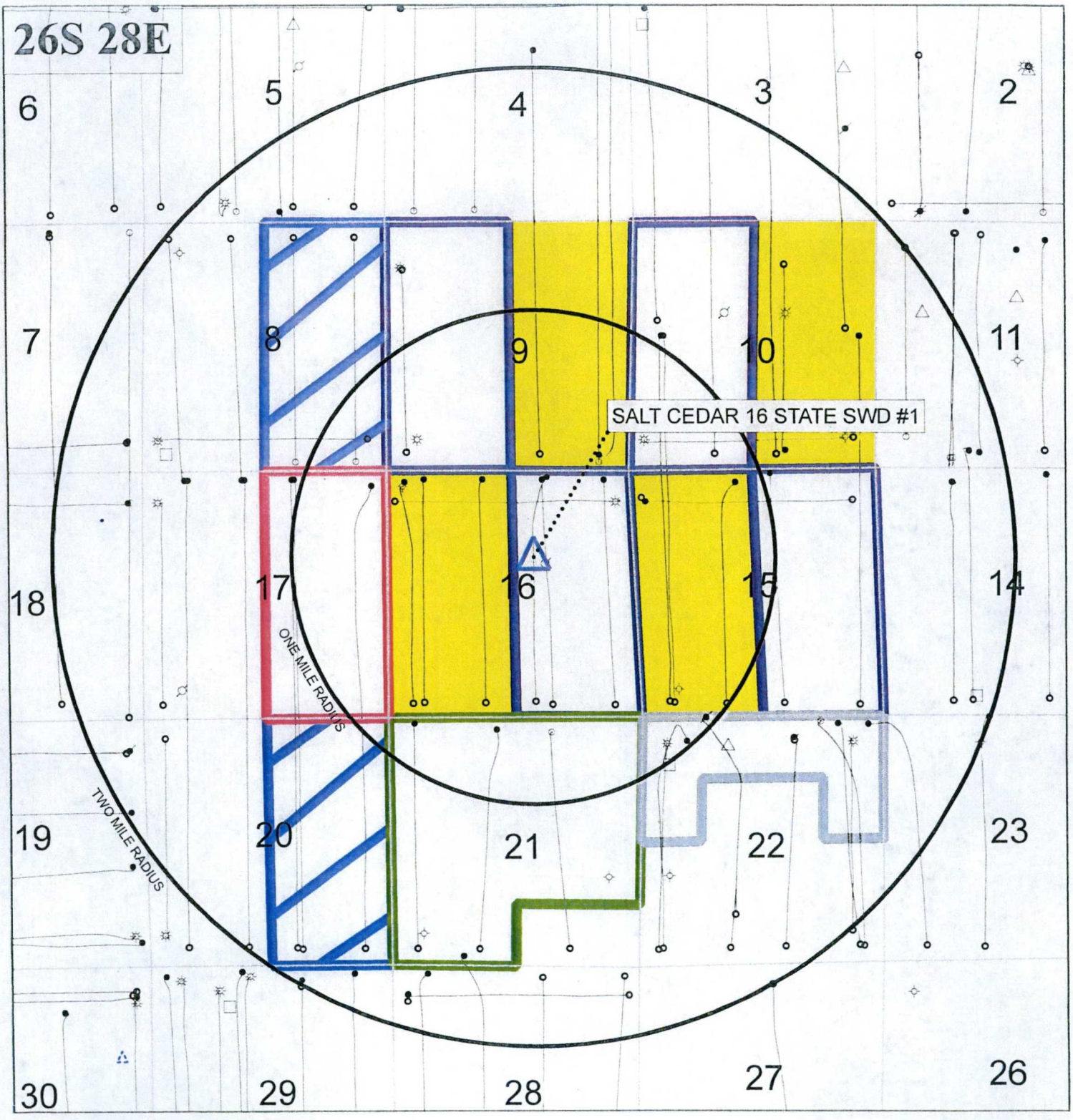
Devonian/Silurian OH

16000'

kbcollins 23-Jul-18

V.

MAP



- The Allar Co & COG Operating, LLC
- EOG Resources Inc., EOG-Y, EOG-A
- EOG-M,OXY Y-1 & COG Operating, LLC
- COG Operating, LLC
- COG Operating, LLC & Chevron USA Inc.
- Mewbourne Oil Company
- COG Operating, LLC & Oxy USA, INC.

Surface: NM State Land Office

CONCHO

Project: NDB

NORTHERN DELAWARE BASIN TEAM

SALT CEDAR 16 STATE SWD #1

1850 FNL 2185 FEL
Sec. 16, T26S, R28E
Eddy Co., New Mexico

Author:		Date:
T Rodriquez		24 July, 2018

File Path: GGX96:Northern_Delaware_Basin:TGR NDB AOI:TGR SALT CEDAR SWD ONE MILE MAP.gmp

C-108 Application for Authorization to Inject
Salt Cedar 16 State SWD 1
1850' FNL, 2185' FEL
Unit G, Section 16, T26S, R28E
Eddy County, NM

List of Affected Persons Within 1 Mile Radius Area of Review

Surface Owner:

New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501

Affected Persons:

The Allar Company
735 Elm Street
Graham, TX 76450

Chevron USA, Inc.
1400 Smith St.
Houston, TX 77002

EOG Resources, Inc.
509 Champions Drive
Midland, TX 79706

EOG Y Resources
104 South Fourth Street
Artesia, NM 88210

EOG A Resources
104 South Fourth Street
Artesia, NM 88210

EOG M Resources
104 South Fourth Street
Artesia, NM 88210

Mewbourne Oil Company
500 W. Texas Ave., Suite 1020
Midland, TX 79701

OXY Y-1
5 Greenway Plaza
Houston, TX 77046

OXY USA, Inc.
5 Greenway Plaza
Houston, TX 77046

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

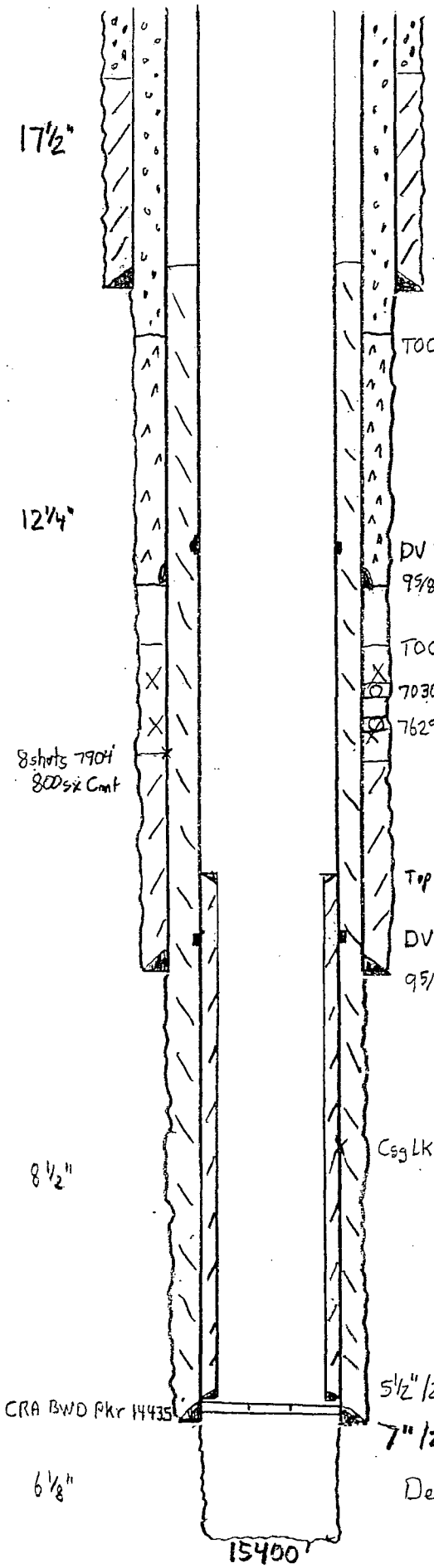
VI.

One Well Penetrates Proposed Disposal Interval Within Half Mile Area of Review

SRO 102 SWD
1980' FNL, 1980' FEL
G-16-26s-28e
Eddy, NM

SWD-1195-A
30-015-21398

GL: 3024'



TOC 7" 2280' CBL
13⅜"/48, 54.5, 61/H40, J55/STC @ 2434' 1600 sx HLC + 400 sx "H"
1" to surface 650 sx "C"

TOC 3150' TS

DV 5691'
9⅝"/40/J55, N80/LTC Tieback 0-5927' 2200 sx HLC + 250 sx "C"
Bradenhead cmt w/
200 sx "C" + 800 sx HLC + 100 sx Thixo

TOC 6408' TS

7030-76' (30) BS

7629-7700' (33) BS

Top Liner 8773'

DV 9305'

9⅝"/40, 43.5, 47/K55, N80, S95/LTC, BTC @ 9441' 500 sx "H"

Csg LK 11466-11528' (7") Sqzd 400 sx "H"

225 sx "H"
5½"/20/L80/FJM Liner 8773-14412'

7"/23, 26/M95-110/LTC @ 14543' ← 1st: 1150 sx Super H (circ gray wtr)
2nd: 400 sx HLC + 100 sx "H" (circ 150 sx)
3rd: 500 sx HLC + 100 sx "H" (circ 90 sx - Fall back)

Devonian OH 14543-15400'

VII.

Water Analysis Produced and Receiving Formation Water

Delaware Sand

BAKER HUGHES

Permian Basin Area Laboratory
2101 Market Street,
Midland, Texas 79703

Upstream Chemicals

REPORT DATE: 5/11/2018

COMPLETE WATER ANALYSIS REPORT SSP v.2010

CUSTOMER:	COG OPERATING LLC	ACCOUNT REP:	KENNETH MORGAN
DISTRICT:	NEW MEXICO	SAMPLE ID:	201401021646
AREA/LEASE:	SRO	SAMPLE DATE:	10/8/2014
SAMPLE POINT NAME	SRO STATE UNIT 46H	ANALYSIS DATE:	10/21/2014
SITE TYPE:	WELL SITES	ANALYST:	SAMUEL NEWMAN
SAMPLE POINT DESCRIPTION:	NOT PROVIDED		

COG OPERATING LLC, SRO, SRO STATE UNIT 46H

FIELD DATA

Initial Temperature (°F):	250
Final Temperature (°F):	80
Initial Pressure (psi):	100
Final Pressure (psi):	15
pH:	
pH at time of sampling:	6.5
aqueous CO_2 (ppm):	370.0
aqueous H_2S (ppm):	0.0
aqueous O2 (ppb):	ND
Calculated TDS (mg/L):	269107
Density/Specific Gravity (g/cm³):	1.1715
Measured Specific Gravity	1.1840
Conductivity (mmhos):	ND
Resistivity:	ND
MCF/D:	No Data
BOPD:	No Data
BWPD:	No Data

ANALYSIS OF SAMPLE

ANIONS:	mg/L	meq/L
Chloride (Cl^-):	168788.9	4761.3
Sulfate (SO_4^{2-}):	0.0	0.0
Borate (H_3BO_3):	84.4	1.4
Fluoride (F^-):	ND	
Bromide (Br^-):	ND	
Nitrite (NO_2^-):	ND	
Nitrate (NO_3^-):	ND	
Phosphate (PO_4^{3-}):	ND	
Silica (SiO_2):	ND	

ALKALINITY BY TITRATION:	mg/L	meq/L
Bicarbonate (HCO_3^-):	146.4	2.4
Carbonate (CO_3^{2-}):	ND	
Hydroxide (OH^-):	ND	

ORGANIC ACIDS:	mg/L	meq/L
Formic Acid:	ND	
Acetic Acid:	ND	
Propionic Acid:	ND	
Butyric Acid:	ND	
Valeric Acid:	ND	

CATIONS:	mg/L	meq/L
Sodium (Na^+):	74214.2	3229.5
Potassium (K^+):	1329.1	34.0
Magnesium (Mg^{2+}):	3949.5	325.1
Calcium (Ca^{2+}):	19033.5	949.8
Strontium (Sr^{2+}):	1511.5	34.5
Barium (Ba^{2+}):	58.0	0.8
Iron (Fe^{2+}):	72.0	2.6
Manganese (Mn^{2+}):	4.3	0.2
Lead (Pb^{2+}):	ND	
Zinc (Zn^{2+}):	0.0	0.0
Aluminum (Al^{3+}):	ND	
Chromium (Cr^{3+}):	ND	
Cobalt (Co^{2+}):	ND	
Copper (Cu^{2+}):	ND	
Molybdenum (Mo^{2+}):	ND	
Nickel (Ni^{2+}):	ND	
Tin (Sn^{2+}):	ND	
Titanium (Ti^{2+}):	ND	
Vanadium (V^{2+}):	ND	
Zirconium (Zr^{2+}):	ND	
Lithium (Li^+):	ND	
Total Hardness:	65621	N/A

Anion/Cation Ratio: 1.04 ND = Not Determined

SCALE PREDICTIONS BASED ON FIELD PROVIDED DATA; FUTHER MODELING MAY BE REQUIRED FOR VALIDATION OF SCALE PREDICTION RESULTS

Conditions		Barite ($BaSO_4$)		Calcite ($CaCO_3$)		Gypsum ($CaSO_4 \cdot 2H_2O$)		Anhydrite ($CaSO_4$)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi		0.000	1.87	36.513		0.000		0.000
99°F	24 psi		0.000	1.91	36.745		0.000		0.000
118°F	34 psi		0.000	1.95	37.065		0.000		0.000
137°F	43 psi		0.000	2.00	37.373		0.000		0.000
156°F	53 psi		0.000	2.04	37.649		0.000		0.000
174°F	62 psi		0.000	2.08	37.891		0.000		0.000
193°F	72 psi		0.000	2.11	38.100		0.000		0.000
212°F	81 psi		0.000	2.14	38.307		0.000		0.000
231°F	91 psi		0.000	2.17	38.507		0.000		0.000
250°F	100 psi		0.000	2.19	38.679		0.000		0.000

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		0.000	-0.33	0.000	-7.87	0.000	1.02	25.822
99°F	24 psi		0.000	-0.35	0.000	-7.98	0.000	1.12	27.471
118°F	34 psi		0.000	-0.36	0.000	-8.05	0.000	1.22	29.120
137°F	43 psi		0.000	-0.38	0.000	-8.09	0.000	1.30	30.487
156°F	53 psi		0.000	-0.40	0.000	-8.13	0.000	1.37	31.543
174°F	62 psi		0.000	-0.41	0.000	-8.16	0.000	1.42	32.317
193°F	72 psi		0.000	-0.43	0.000	-8.19	0.000	1.45	32.843
212°F	81 psi		0.000	-0.44	0.000	-8.21	0.000	1.47	33.226
231°F	91 psi		0.000	-0.46	0.000	-8.22	0.000	1.47	33.457
250°F	100 psi		0.000	-0.47	0.000	-8.23	0.000	1.46	33.494

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. H_2CO_3 is not included in the calculations.

ScaleSoftPitzer™ SSP2010

Comments:

Bone Spring

BAKER HUGHES

Permian Basin Area Laboratory
2101 Market Street,
Midland, Texas 79703

Upstream Chemicals

REPORT DATE: 5/23/2018

COMPLETE WATER ANALYSIS REPORT SSP v.2010

CUSTOMER:	COG OPERATING LLC	ACCOUNT REP:	KENNETH MORGAN
DISTRICT:	NEW MEXICO	SAMPLE ID:	201801031089
AREA/LEASE:	SRO	SAMPLE DATE:	5/15/2018
SAMPLE POINT NAME	SRO STATE 53H	ANALYSIS DATE:	5/23/2018
SITE TYPE:	WELL SITES	ANALYST:	DG
SAMPLE POINT DESCRIPTION:	WELL HEAD		

COG OPERATING LLC, SRO, SRO STATE 53H

FIELD DATA

Initial Temperature (°F):	250
Final Temperature (°F):	80
Initial Pressure (psi):	100
Final Pressure (psi):	15
pH:	
pH at time of sampling:	6.0
aqueous CO_2 (ppm):	280.0
aqueous H_2S (ppm):	0.0
aqueous O2 (ppb):	ND
Calculated TDS (mg/L):	193322
Density/Specific Gravity (g/cm³):	1.1225
Measured Specific Gravity	1.1309
Conductivity (mmhos):	ND
Resistivity:	ND
MCF/D:	No Data
BOPD:	No Data
BWPD:	No Data

ANALYSIS OF SAMPLE

ANIONS:	mg/L	meq/L
Chloride (Cl⁻):	120345.5	3394.8
Sulfate (SO_4^{2-}):	545.2	11.4
Borate (H_3BO_3):	168.1	2.7
Fluoride (F⁻):	ND	
Bromide (Br^-):	ND	
Nitrite (NO_2^-):	ND	
Nitrate (NO_3^-):	ND	
Phosphate (PO_4^{3-}):	ND	
Silica (SiO_2):	ND	

ALKALINITY BY TITRATION:	mg/L	meq/L
Bicarbonate (HCO_3^-):	280.6	4.6
Carbonate (CO_3^{2-}):	ND	
Hydroxide (OH^-):	ND	

ORGANIC ACIDS:	mg/L	meq/L
Formic Acid:	ND	
Acetic Acid:	ND	
Propionic Acid:	ND	
Butyric Acid:	ND	
Valeric Acid:	ND	

CATIONS:	mg/L	meq/L
Sodium (Na^+):	59941.8	2608.4
Potassium (K^+):	1005.0	25.7
Magnesium (Mg^{2+}):	1248.4	102.7
Calcium (Ca^{2+}):	9550.0	476.5
Strontium (Sr^{2+}):	810.2	18.5
Barium (Ba^{2+}):	2.4	0.0
Iron (Fe^{2+}):	90.9	3.3
Manganese (Mn^{2+}):	1.9	0.1
Lead (Pb^{2+}):	0.0	0.0
Zinc (Zn^{2+}):	0.0	0.0
Aluminum (Al^{3+}):	0.0	0.0
Chromium (Cr^{3+}):	ND	
Cobalt (Co^{2+}):	ND	
Copper (Cu^{2+}):	0.0	0.0
Molybdenum (Mo^{2+}):	0.0	0.0
Nickel (Ni^{2+}):	ND	
Tin (Sn^{2+}):	ND	
Titanium (Ti^{2+}):	ND	
Vanadium (V^{2+}):	ND	
Zirconium (Zr^{2+}):	ND	
Lithium (Li^+):	ND	
Total Hardness:	29944	N/A

Anion/Cation Ratio: 1.06 ND = Not Determined

SCALE PREDICTIONS BASED ON FIELD PROVIDED DATA; FUTHER MODELING MAY BE REQUIRED FOR VALIDATION OF SCALE PREDICTION RESULTS.

Conditions		Barite ($BaSO_4$)		Calcite ($CaCO_3$)		Gypsum ($CaSO_4 \cdot 2H_2O$)		Anhydrite ($CaSO_4$)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi	0.60	1.089	0.95	52.409	-0.31	0.000	-0.44	0.000
99°F	24 psi	0.48	0.970	1.01	54.069	-0.30	0.000	-0.35	0.000
118°F	34 psi	0.36	0.820	1.09	56.285	-0.29	0.000	-0.26	0.000
137°F	43 psi	0.25	0.640	1.17	58.434	-0.29	0.000	-0.17	0.000
156°F	53 psi	0.15	0.429	1.25	60.380	-0.29	0.000	-0.08	0.000
174°F	62 psi	0.06	0.188	1.32	62.107	-0.29	0.000	0.02	10.489
193°F	72 psi	-0.02	0.000	1.40	63.638	-0.30	0.000	0.11	61.505
212°F	81 psi	-0.10	0.000	1.48	65.212	-0.30	0.000	0.21	103.001
231°F	91 psi	-0.17	0.000	1.56	66.596	-0.30	0.000	0.31	136.272
250°F	100 psi	-0.24	0.000	1.64	67.828	-0.31	0.000	0.41	162.593

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	0.38	158.632	-0.79	0.000	-8.75	0.000	0.54	26.998
99°F	24 psi	0.39	161.660	-0.80	0.000	-8.81	0.000	0.65	31.223
118°F	34 psi	0.40	163.138	-0.81	0.000	-8.82	0.000	0.77	35.516
137°F	43 psi	0.40	164.084	-0.82	0.000	-8.81	0.000	0.89	39.144
156°F	53 psi	0.40	165.198	-0.83	0.000	-8.79	0.000	0.99	42.047
174°F	62 psi	0.41	166.914	-0.84	0.000	-8.76	0.000	1.07	44.306
193°F	72 psi	0.42	169.446	-0.85	0.000	-8.74	0.000	1.14	46.041
212°F	81 psi	0.43	172.815	-0.85	0.000	-8.70	0.000	1.20	47.591
231°F	91 psi	0.44	176.389	-0.86	0.000	-8.66	0.000	1.25	48.726
250°F	100 psi	0.46	181.414	-0.86	0.000	-8.62	0.000	1.28	49.520

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; H_2CO_3 is not included in the calculations.

ScaleSoftPitzer™ SSP2010

Comments:

Permian Basin Area Laboratory
2101 Market Street,
Midland, Texas 79703

Upstream Chemicals

REPORT DATE: 5/23/2018

COMPLETE WATER ANALYSIS REPORT SSP v.2010

CUSTOMER:	COG OPERATING LLC	ACCOUNT REP:	KENNETH MORGAN
DISTRICT:	NEW MEXICO	SAMPLE ID:	201801031090
AREA/LEASE:	MYOX 5	SAMPLE DATE:	5/15/2018
SAMPLE POINT NAME	MYOX 5 22H;	ANALYSIS DATE:	5/23/2018
SITE TYPE:	WELL SITES	ANALYST:	DG
SAMPLE POINT DESCRIPTION:	WELL HEAD		

COG OPERATING LLC, MYOX 5, MYOX 5 22H

FIELD DATA

Initial Temperature (°F):	250
Final Temperature (°F):	80
Initial Pressure (psi):	100
Final Pressure (psi):	15
pH:	
pH at time of sampling:	6.1
aqueous CO_2 (ppm):	160.0
aqueous H_2S (ppm):	0.0
aqueous O2 (ppb):	ND
Calculated TDS (mg/L):	107807
Density/Specific Gravity (g/cm³):	1.0688
Measured Specific Gravity	1.0748
Conductivity (mmhos):	ND
Resistivity:	ND
MCF/D:	No Data
BOPD:	No Data
BWPD:	No Data

ANALYSIS OF SAMPLE

ANIONS:	mg/L	meq/L
Chloride (Cl^-):	67159.6	1894.5
Sulfate (SO_4^{2-}):	336.6	7.0
Borate ($H_2BO_3^-$):	364.0	5.9
Fluoride (F^-):	ND	
Bromide (Br^-):	ND	
Nitrite (NO_2^-):	ND	
Nitrate (NO_3^-):	ND	
Phosphate (PO_4^{3-}):	ND	
Silica (SiO_2):	ND	

ALKALINITY BY TITRATION:	mg/L	meq/L
Bicarbonate (HCO_3^-):	305.0	5.0
Carbonate (CO_3^{2-}):	ND	
Hydroxide (OH^-):	ND	

ORGANIC ACIDS:	mg/L	meq/L
Formic Acid:	ND	
Acetic Acid:	ND	
Propionic Acid:	ND	
Butyric Acid:	ND	
Valeric Acid:	ND	

CATIONS:	mg/L	meq/L
Sodium (Na^+):	33946.6	1477.2
Potassium (K^+):	541.3	13.8
Magnesium (Mg^{2+}):	608.7	50.1
Calcium (Ca^{2+}):	3969.4	198.1
Strontium (Sr^{2+}):	886.4	20.2
Barium (Ba^{2+}):	2.9	0.0
Iron (Fe^{2+}):	49.3	1.8
Manganese (Mn^{2+}):	1.2	0.0
Lead (Pb^{2+}):	0.0	0.0
Zinc (Zn^{2+}):	0.0	0.0
Aluminum (Al^{3+}):	0.7	0.1
Chromium (Cr^{3+}):	ND	
Cobalt (Co^{2+}):	ND	
Copper (Cu^{2+}):	0.0	0.0
Molybdenum (Mo^{2+}):	0.0	0.0
Nickel (Ni^{2+}):	ND	
Tin (Sn^{2+}):	ND	
Titanium (Ti^{2+}):	ND	
Vanadium (V^{2+}):	ND	
Zirconium (Zr^{2+}):	ND	
Lithium (Li^+):	ND	
Total Hardness:	13444	N/A

Anion/Cation Ratio: 1.09

ND = Not Determined

SCALE PREDICTIONS BASED ON FIELD PROVIDED DATA, FUTHER MODELING MAY BE REQUIRED FOR VALIDATION OF SCALE PREDICTION RESULTS.

Conditions		Barite ($BaSO_4$)		Calcite ($CaCO_3$)		Gypsum ($CaSO_4 \cdot 2H_2O$)		Anhydrite ($CaSO_4$)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi	0.61	1.321	0.33	26.169	-0.83	0.000	-1.03	0.000
99°F	24 psi	0.47	1.162	0.39	30.032	-0.82	0.000	-0.94	0.000
118°F	34 psi	0.35	0.975	0.48	35.334	-0.82	0.000	-0.84	0.000
137°F	43 psi	0.25	0.762	0.58	40.645	-0.81	0.000	-0.75	0.000
156°F	53 psi	0.16	0.531	0.68	45.568	-0.80	0.000	-0.64	0.000
174°F	62 psi	0.08	0.268	0.78	50.075	-0.78	0.000	-0.53	0.000
193°F	72 psi	0.01	0.040	0.89	54.151	-0.77	0.000	-0.42	0.000
212°F	81 psi	-0.05	0.000	1.00	58.159	-0.76	0.000	-0.31	0.000
231°F	91 psi	-0.10	0.000	1.11	61.692	-0.75	0.000	-0.19	0.000
250°F	100 psi	-0.14	0.000	1.22	64.820	-0.74	0.000	-0.08	0.000

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	0.23	76.442	-1.45	0.000	-9.21	0.000	0.08	3.648
99°F	24 psi	0.24	77.965	-1.46	0.000	-9.26	0.000	0.20	8.360
118°F	34 psi	0.25	79.681	-1.47	0.000	-9.25	0.000	0.33	13.119
137°F	43 psi	0.26	82.032	-1.48	0.000	-9.22	0.000	0.46	17.127
155°F	53 psi	0.27	85.297	-1.49	0.000	-9.17	0.000	0.57	20.330
174°F	62 psi	0.28	89.560	-1.49	0.000	-9.12	0.000	0.68	22.832
193°F	72 psi	0.31	94.827	-1.49	0.000	-9.06	0.000	0.77	24.800
212°F	81 psi	0.33	100.951	-1.49	0.000	-8.99	0.000	0.87	26.484
231°F	91 psi	0.36	107.717	-1.49	0.000	-8.92	0.000	0.95	27.756
250°F	100 psi	0.39	114.861	-1.49	0.000	-8.84	0.000	1.01	28.748

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. $\%CO_2$ is not included in the calculations.

ScaleSoftPitzer™ SSP2010

Comments:

Devonian (Receiving Formation)
Sec 19-19s-32e

8.0 RESERVOIR CHARACTERISTICS

8.1 FORMATION FLUID CHEMISTRY

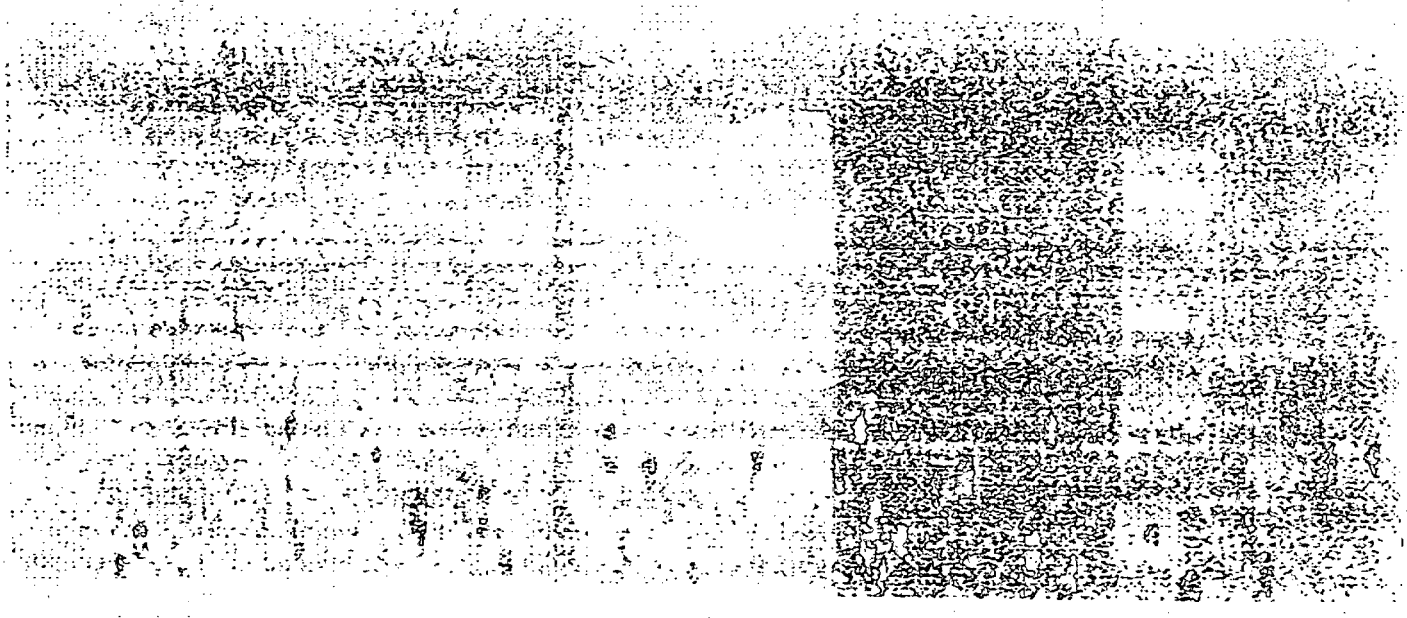
Following the drilling of the 6-inch open-hole section the injection zone was swabbed and 10 samples were sent to Cardinal Laboratories in Hobbs, NM. The laboratory report and analysis, along with a summary table of the results that depict the concentrations of all analytes is included in Appendix D. The average concentrations for major constituents within the formation water in the entire injection interval are as follows:

Chloride: 23,700 mg/L
TDS: 42,750 mg/L
Diesel Range Organics: 5.7 mg/L
Extended Range Organics: 2.7 mg/L
pH: 6.5
Total Alkalinity: 613 mg/L

The maximum concentrations for major constituents within the formation water in the entire injection interval are as follows:

Chloride: 27,000 mg/L
TDS: 44,700 mg/L
Diesel Range Organics: 20.5 mg/L
Extended Range Organics: 5.6 mg/L
pH: 6.7
Total Alkalinity: 670 mg/L

The results of the formation water analysis support and confirm the conclusions presented from the geophysical logs, mud log, and sidewall cores that the injection zone clearly does not contain recoverable hydrocarbons. Included in Appendix D is Geolex's No Recoverable Hydrocarbon Summary report, which was required by the BLMs COA, and submitted to the BLM and NMOCD.



X.

Log Sections Across Proposed Devonian Injection Interval

Schlumberger

SIMULTANEOUS COMPENSATED NEUTRON-FORMATION DENSITY

COMPANY JAKE L. HAMON

SRO #102 SWD #1

WELL STATE LG-1175 #1

ORIGINAL
Artesia West

FIELD WILDCAT

COUNTY EDDY STATE NEW MEXICO

FIELD WILDCAT
LOCATION
WELL STATE LG-1175
COMPANY JAKE L. HAMON

Location: 1980' FNL, & 1980' FEL

Other Services: DLL

API SERIAL NO.	SEC.	TWP.	RANGE
42233	16	26-S	28-E

Permanent Datum: G.L. Elev. 3024
Log Measured From K.B. 18 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. 3042
D.F. 3041
G.L. 3024

Date	1-31-75	4-29-75
Run No.	ONE	TWO
Depth–Driller	5440	14572
Depth–Logger	5440	14554
Btm. Log Interval		14553
Top Log Interval		9437
Fluid in Hole	FRESH WATER	SALT SATURATED
Dens. | Visc.	27	13 | 62
pH | Fluid Loss	ml	6.0 ml
Source of Sample		RETURN PIT
Rm @ Meas. Temp.	1 @ 56 F	.040 @ 75 F
Source: Rmf | Rmc	M	
Rm @ BHT	@ 140 F	.035 @ 200

PROPERTY OF ... Roswell, N.M. 88201

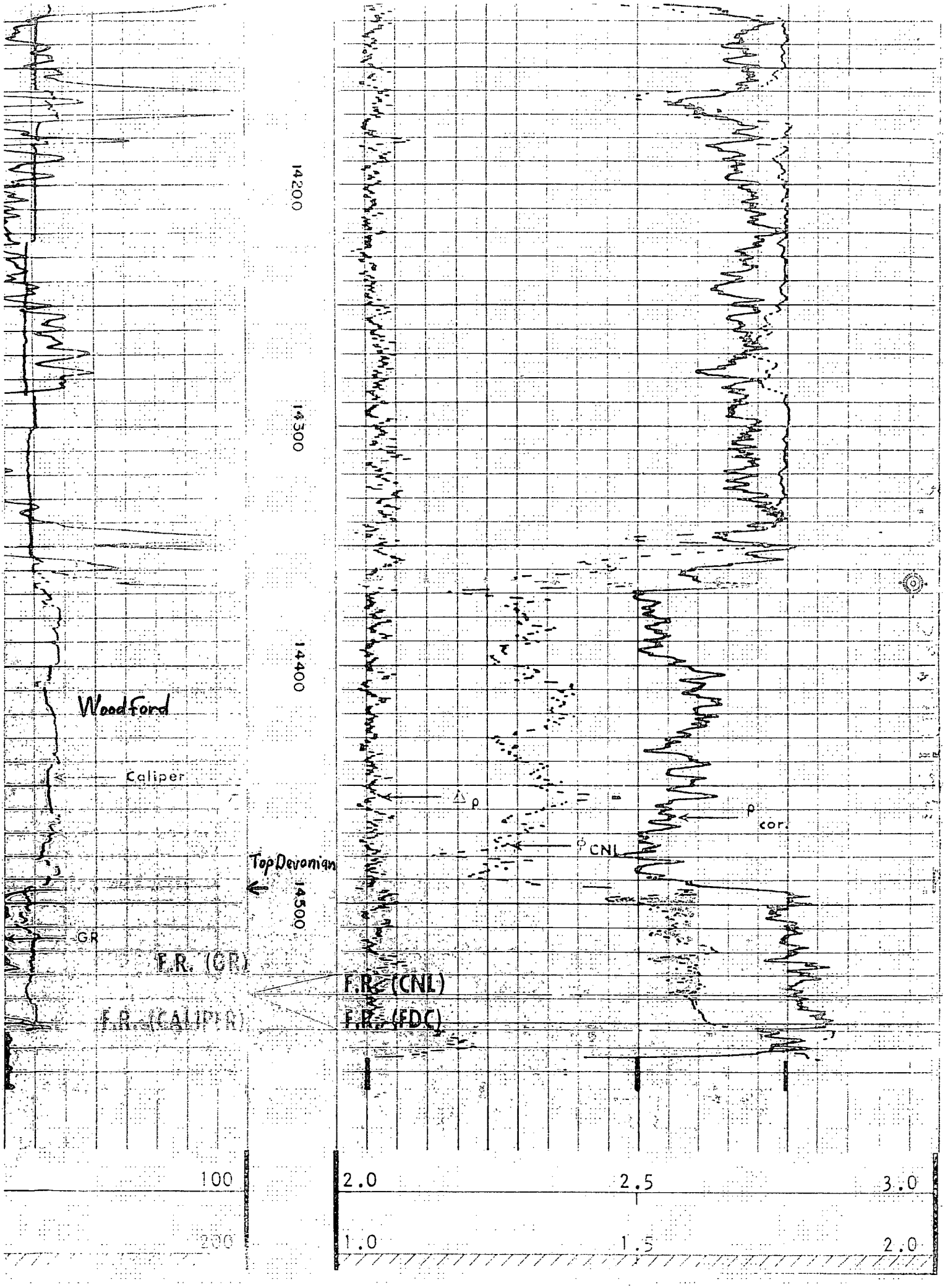
SCALE CHANGES

REMARKS

SATURATED

DATA

ECCENTRALIZING BOWSPRING (RUN 1 & 2)


14200
14300
14400
14500
Woodford
Caliper
Top Devonian
GR
F.R. (GR)
F.R. (CALIPER)
F.R. (CNL)
F.R. (FDC)
Δρ
ρ cor.
ρ CNL
100
200
2.0
2.5
3.0
1.0
1.5
2.0

ORIGINAL
Artesia West

HALLIBURTON

ORIGINAL

SPECTRAL DENSITY
DUAL SPACED NEUTRON
SPECTRAL GAMMA

COMPANY COG OPERATING, LLC.
WELL WILLOW 17 STATE SWD #1
FIELD/BLOCK SWD; DEVONIAN
COUNTY EDDY
STATE NEW MEXICO

COMPANY COG OPERATING, LLC.

WELL WILLOW 17 STATE SWD #1

FIELD/BLOCK SWD; DEVONIAN

COUNTY EDDY

STATE NEW MEXICO

API No 30-015-41606

Location 660'FSL AND 660'FEL

Sect 17 Twp 26S Rge 28E

Other Services
BSAT
DLLT - MSFD

Permanent Datum	GL	Elev 3016.2 ft	Elev K.B	3030.2 ft
Log measured from	KB	22.0 ft above perm. Datum	D.F.	3030.2 ft
Drilling measured from	KB		G.L.	3016.2 ft
Date	21-Apr-14			
Run No	THREE			
Depth - Driller	15292.00 ft			
Depth - Logger	15276.0 ft			
Btm - Logged Interval	15199.0 ft			
Top - Logged Interval	14266.0 ft			
Casing - Driller	7.000 in @ 14266.0 ft	@	@	
Casing - Logger	14266.0 ft			
Bit Size	6.125 in.	@	@	
Type Fluid in Hole	CUT BRINE			
Density	Viscosity	8.6 ppg	28.00 s/qt	
	Fluid Loss	10.00 pH		
Source of Sample		FLOW LINE		
Rm @ Meas. Temperature		0.13 ohmm @ 85.00 degF	@	@
Rmf @ Meas. Temperature		0.10 ohmm @ 85.00 degF	@	@
Rmc @ Meas. Temperature		0.106 ohmm @ 85.00 degF	@	@
Source Rmf / Rmc		MEAS / MEAS		
Rm @ BHT		0.05 ohmm @ 217.0 degF	@	@
Time Since Circulation		18.0000 hr		
Time on Bottom		21-Apr-14 22.00		
Max Rec. Temperature		217.0 degF @ 15276.0 ft	@	@
Equipment / Location		10793700 / HOBBS, NM		
Recorded By		JORDAN MALLOY	AARON ZIELSDORF	
Witnessed By		JIM WOODS		

Service Ticket No 09012887700 API Serial No 30-015-41606 FDN Version WL INSITE R4.2.0 (Build 2)

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

RESISTIVITY SCALE CHANGES

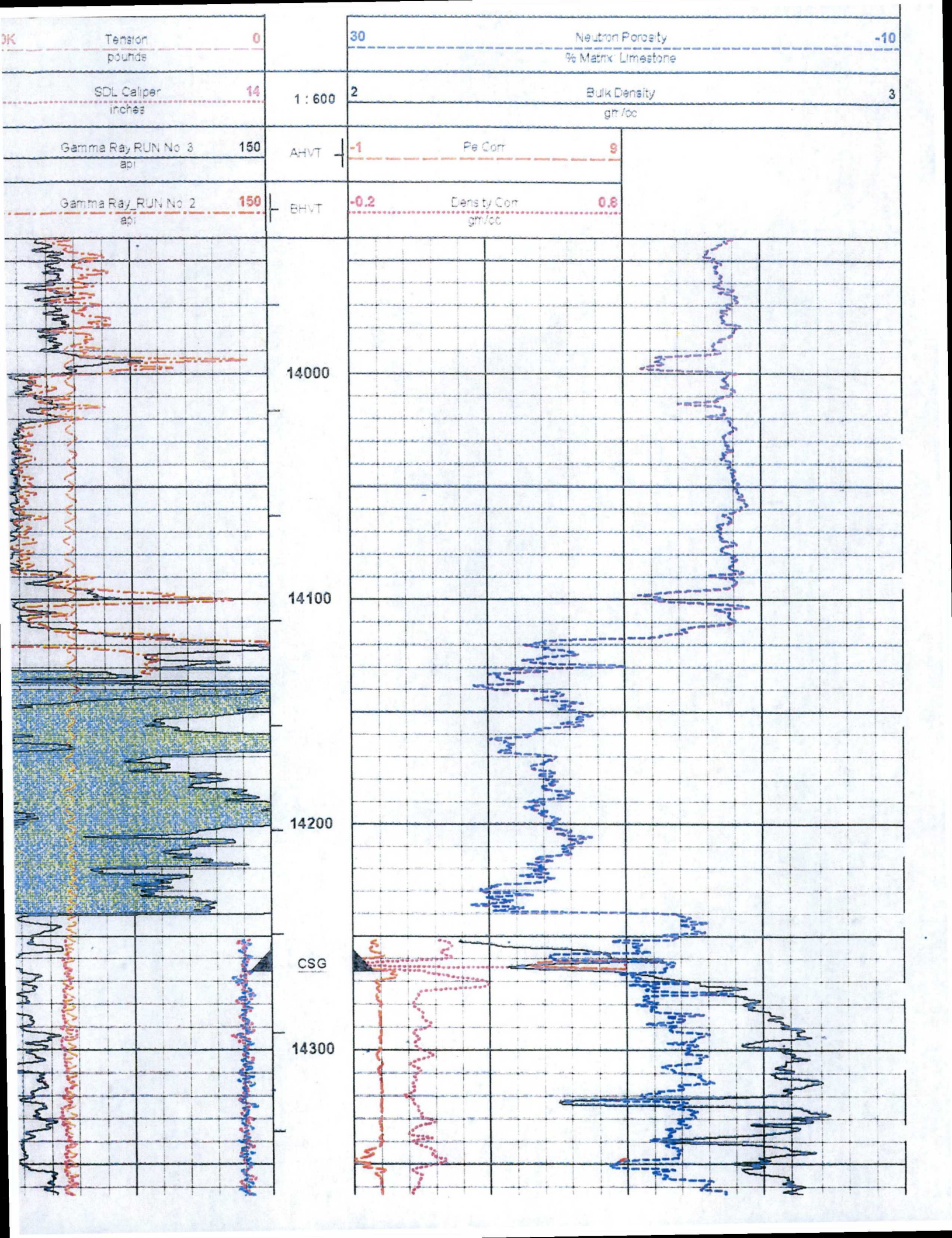
	Type Log	Depth	Scale Up Hole	Scale Down Hole
Date				
Depth-Driller				
Type Fluid in Hole				
Density / Viscosity				
Fluid Loss				

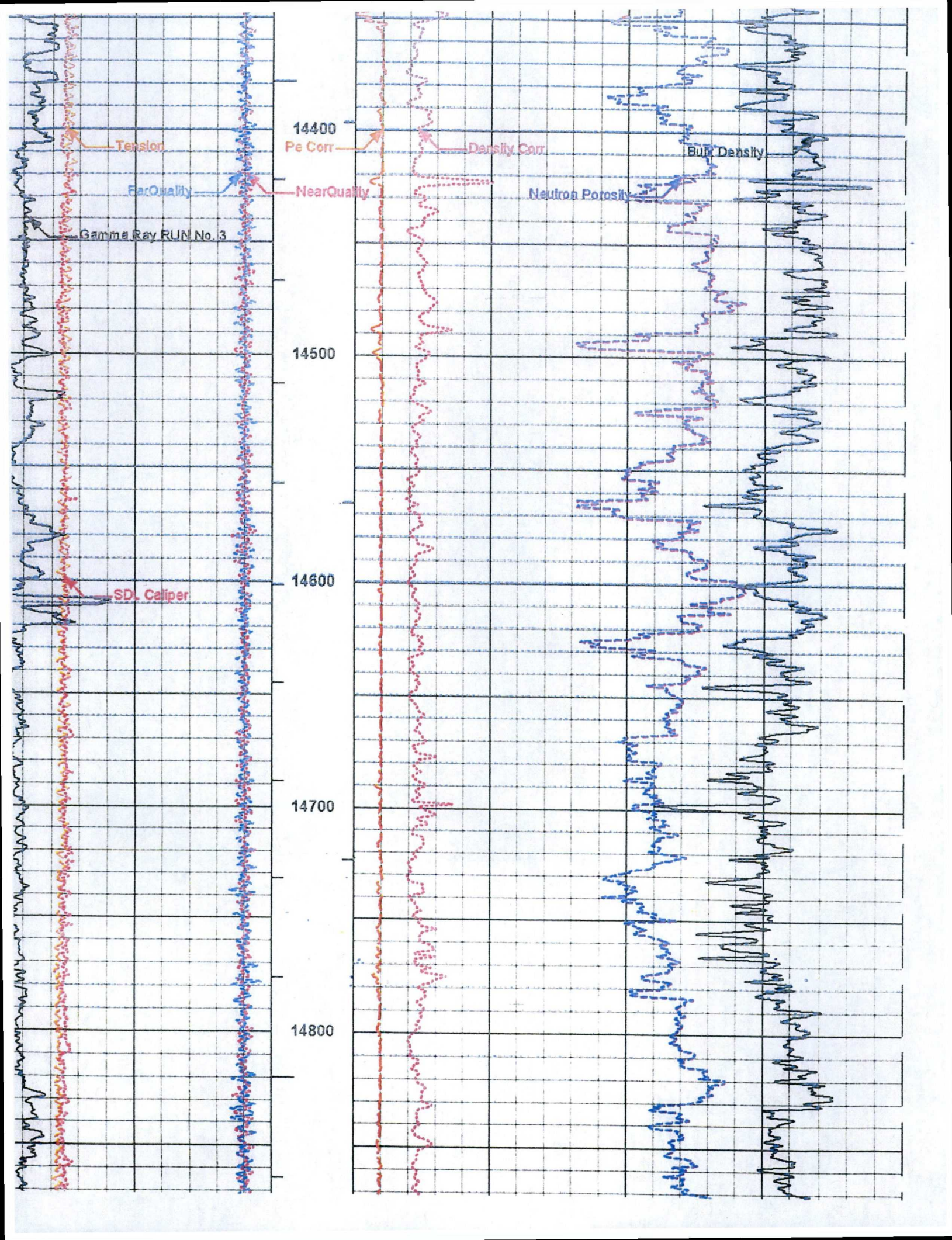
RESISTIVITY EQUIPMENT DATA

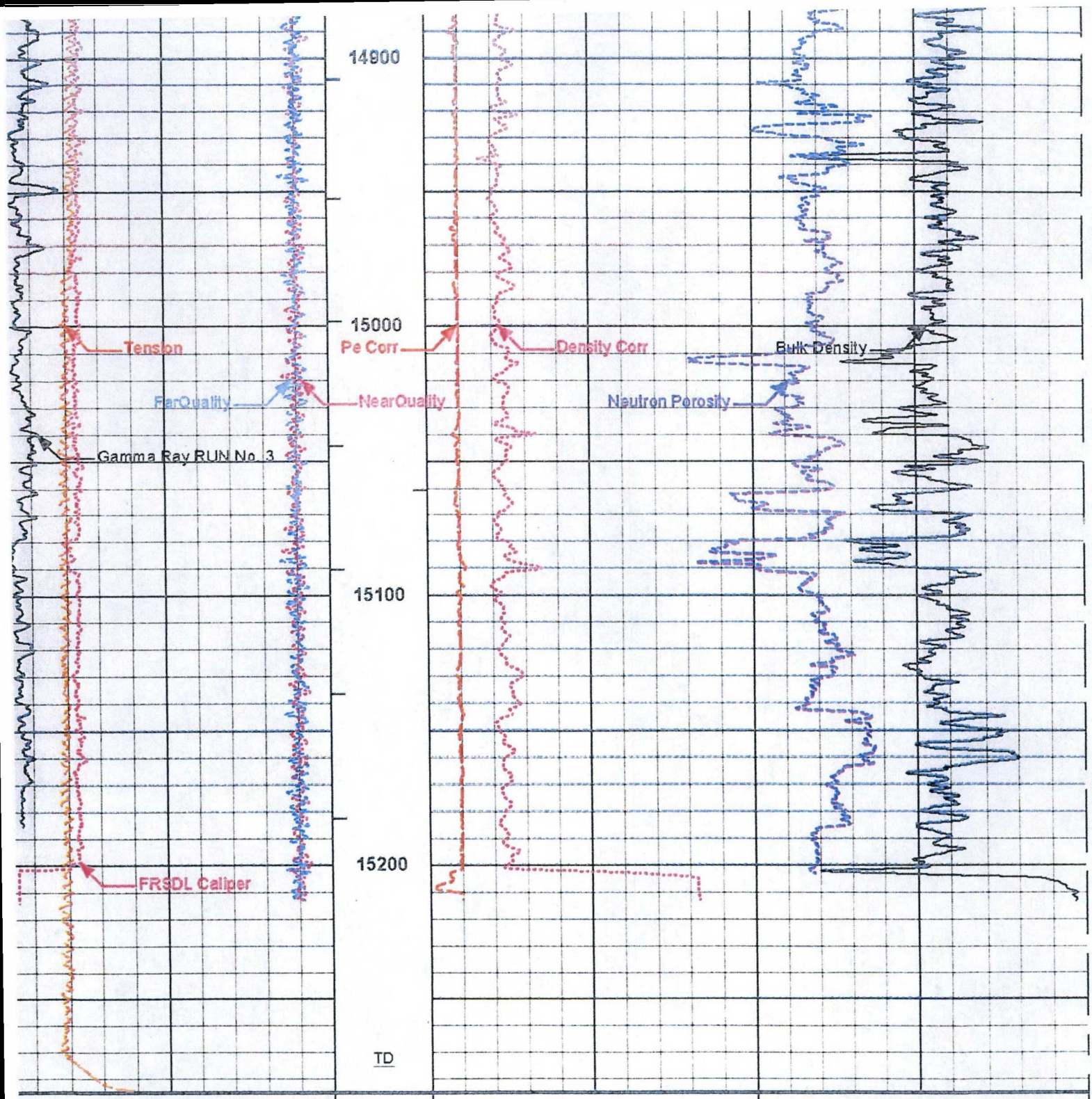
	Run No	Tool Type & No	Tool Pos	Other
Source of Sample				
Rm @ Meas. Temp	@	@		
Rmf @ Meas. Temp	@	@		
Rmc @ Meas. Temp	@	@		
Source Rmf / Rmc				
Rm @ BHT	@	@		
Rmf @ BHT	@	@		
Rmc @ BHT	@	@		

EQUIPMENT DATA

GAMMA		DENSITY		NEUTRON	
Run No	THREE	Run No	THREE	Run No	THREE
Serial No	11930518	Serial No	10353478	Serial No	10759548
Model No	CSNG	Model No	SDLT	Model No	DSNT
Diameter	4.0 in	Diameter	4.5 in	Diameter	3.625 in
Log Type	T-102A	Log Type	GAM-GAM	Log Type	NEU-NEU
Source Type	SCINT	Source Type	Cs137	Source Type	Am241Be
Serial No	12.0 in	Serial No	9068GW	Serial No	DSN-368
LSA (Y/N)	124.0 ft	LSA (Y/N)		LSA (Y/N)	


OK
Tension
pounds
0
30
Neutron Porosity
% Matrix: Limestone
-10
SDL Caliper
inches
14
1 : 600
2
Bulk Density
gm/cc
3
Gamma Ray RUN No. 3
api
150
AHVT
-1
Pe Corr
9
Gamma Ray_RUN No. 2
api
150
BHVT
-0.2
Density Corr
gm/cc
0.8
14000
14100
14200
CSG
14300


Tension
FarQuality
Gamma Ray RUN No. 3
SD. Caliper
14400
Pe Corr
NearQuality
Density Corr
Bulk Density
Neutron Porosity
14500
14600
14700
14800



Gamma Ray_RUN No. 2 150 / api	BHT	-0.2 Density Corr 0.8 / gm/cc	
Gamma Ray RUN No. 3 150 / api	AHVT	-1 Pe Corr 9	
SDL Caliper 14 / inches	1 : 600	2 Bulk Density 3 / gm/cc	
OK Tension 0 / pounds		30 Neutron Porosity -10 / % Matrix Limestone	
6 NearQuality -2			

XI.

There Are No Fresh Water Wells Within a 1 Mile Radius

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 Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twp	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02160 S7 > 1 mile		CUB	ED	3	3	1	22	26S	28E	586638	3543998*	300	120	180
C 02479 > 1 mile		CUB	ED		4	4	10	26S	28E	587909	3546534*	200		
C 02480 > 1 mile		CUB	ED		4	4	10	26S	28E	587909	3546534*	150		
C 04022 POD1 > 1 mile		CUB	ED	4	4	2	15	26S	28E	588082	3545647	220	175	45

Average Depth to Water: **147 feet**

Minimum Depth: **120 feet**

Maximum Depth: **175 feet**

Record Count: 4

PLSS Search:

Section(s): 8, 9, 10, 15, 16, 17, 20, 21, 22 **Township:** 26S **Range:** 28E

***UTM location was derived from PLSS - see Help**

Affidavit of Publication

No. 24738

State of New Mexico

County of Eddy:

Danny Scott

being duly sworn says that she is the

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	June 29, 2018
Second Publication	
Third Publication	
Fourth Publication	
Fifth Publication	
Sixth Publication	
Seventh Publication	

Subscribed and sworn before me this 20th day of July 2018

OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires: 5/12/2019

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

Legal Notice

COG Operating LLC, 2208 W. Main Street, Artesia, New Mexico, 88210, has filed Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Salt Cedar 16 State SWD No. 1, is located 1850' FNL and 2185' FEL, Section 16, Township 26 South, Range 28 East, Eddy County, New Mexico. Disposal water will be sourced from area wells producing from the Delaware, Bone Spring and Wolfcamp formations. The disposal water will be injected into the Devonian/Silurian formation at a depth of 14,490' to 16,000' at a maximum surface pressure of 2898 psi and a maximum rate of 40,000 BWPD. The proposed SWD well is located approximately 17 miles south of Loving. Any interested party who has an objection to this must give notice in writing to the Oil Conservation Division, 1220 South Saint Francis Street, Santa Fe, New Mexico, 87505m within fifteen (15) days of this notice. Any interested party with questions or comments may contact Brian Collins at COG Operating LLC, 2208 W. Main Street, Artesia, New Mexico 88210, or call 575-748-6940

Published in the Artesia Daily Press, Artesia, N.M., June 29, 2018 Legal No. 24738.

CONCHO

July 31, 2018

Oil Conservation Division
Attn: Ray Podany
811 South First Street
Artesia, NM 88210

RE: Application For Authorization To Inject
Salt Cedar 16 State SWD #1
1850' FNL, 2185' FEL
Unit G, Section 16, Township 26 South, Range 28 East, N.M.P.M.
Eddy County, New Mexico

Dear Mr. Podany:

COG Operating LLC respectfully requests administrative approval for authorization to inject for the referenced well. Attached, for your review, is a copy of the C-108 application. Once we receive the newspaper publication and all certified return receipts, we will send you a copy.

This well is a replacement well for the SRO SWD 102 and is located on an extension of the original pad so the original facility can be used. The SRO SWD 102 will be plugged prior to drilling this well. The estimated top of the Devonian is 14490'. Please do not hesitate to contact me at (575) 748-6940 should you have any questions.

Sincerely,

Brian Collins
Facilities Engineering Advisor

BC/mv
Enclosures

CORPORATE ADDRESS
ONE CONCHO CENTER | 600 WEST ILLINOIS AVENUE | MIDLAND, TEXAS 79701
P 432.683.7443 | F 432.683.7441

ARTESIA WEST OFFICE
2208 MAIN STREET | ARTESIA, NEW MEXICO 88210
P 575.748.6940 | F 575.746.2096

CONCHO

July 31, 2018

New Mexico Oil Conservation Division
Attn: Phillip Goetze
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Application For Authorization To Inject
Salt Cedar 16 State SWD #1
1850' FNL, 2185' FEL
Unit G, Section 16, Township 26 South, Range 28 East, N.M.P.M.
Eddy County, New Mexico

Dear Mr. Goetze:

COG Operating LLC respectfully requests administrative approval for authorization to inject for the referenced well. Attached, for your review, is a copy of the C-108 application. Once we receive the newspaper publication and all certified return receipts, we will send you a copy.

This well is a replacement well for the SRO SWD 102 and is located on an extension of the original pad so the original facility can be used. The SRO SWD 102 will be plugged prior to drilling this well. The estimated top of the Devonian is 14490'. Please do not hesitate to contact me at (575) 748-6940 should you have any questions.

Sincerely,

Brian Collins
Facilities Engineering Advisor

BC/mv
Enclosures

CORPORATE ADDRESS
ONE CONCHO CENTER | 600 WEST ILLINOIS AVENUE | MIDLAND, TEXAS 79701
P 432.683.7443 | F 432.683.7441

ARTESIA WEST OFFICE
2208 MAIN STREET | ARTESIA, NEW MEXICO 88210
P 575.748.6940 | F 575.746.2996

CONCHO

July 31, 2018

New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501

RE: Application For Authorization To Inject
Salt Cedar 16 State SWD #1
1850' FNL, 2185' FEL
Unit G, Section 16, Township 26 South, Range 28 East, N.M.P.M.
Eddy County, New Mexico

To Whom It May Concern:

Enclosed for your review is a copy of COG Operating LLC's C-108 Application to Inject for the above referenced well. We plan to drill this well for SWD service if our C-108 is approved. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as the surface owner or an affected person. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter.

Please do not hesitate to contact us at 575-748-6940 should you have any questions.

Sincerely,

Brian Collins
Facilities Engineering Advisor

BC/mv
Enclosures

CONCHO

July 31, 2018

The Allar Company
735 Elm Street
Graham, TX 76450

RE: Application For Authorization To Inject
Salt Cedar 16 State SWD #1
1850' FNL, 2185' FEL
Unit G, Section 16, Township 26 South, Range 28 East, N.M.P.M.
Eddy County, New Mexico

To Whom It May Concern:

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Please do not hesitate to contact us at 575-748-6940 should you have any questions.

Sincerely,

Brian Collins
Facilities Engineering Advisor

BC/mv
Enclosures

CORPORATE ADDRESS
ONE CONCHO CENTER | 600 WEST ILLINOIS AVENUE | MIDLAND, TEXAS 79701
P 432.683.7443 | F 432.683.7441

ARTESIA WEST OFFICE
2208 MAIN STREET | ARTESIA, NEW MEXICO 88210
P 575.748.6940 | F 575.746.2096

CONCHO

July 31, 2018

Chevron USA, Inc.
1400 Smith St.
Houston, TX 77002

RE: Application For Authorization To Inject
Salt Cedar 16 State SWD #1
1850' FNL, 2185' FEL
Unit G, Section 16, Township 26 South, Range 28 East, N.M.P.M.
Eddy County, New Mexico

To Whom It May Concern:

Enclosed for your review is a copy of COG Operating LLC's C-108 Application to Inject for the above referenced well. We plan to drill this well for SWD service if our C-108 is approved. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as the surface owner or an affected person. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter.

Please do not hesitate to contact us at 575-748-6940 should you have any questions.

Sincerely,

Brian Collins
Facilities Engineering Advisor

BC/mv
Enclosures

CONCHO

July 31, 2018

EOG Resources, Inc.
509 Champions Drive
Midland, TX 79706

RE: Application For Authorization To Inject
Salt Cedar 16 State SWD #1
1850' FNL, 2185' FEL
Unit G, Section 16, Township 26 South, Range 28 East, N.M.P.M.
Eddy County, New Mexico

To Whom It May Concern:

Enclosed for your review is a copy of COG Operating LLC's C-108 Application to Inject for the above referenced well. We plan to drill this well for SWD service if our C-108 is approved. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as the surface owner or an affected person. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter.

Please do not hesitate to contact us at 575-748-6940 should you have any questions.

Sincerely,

Brian Collins
Facilities Engineering Advisor

BC/mv
Enclosures

CONCHO

July 31, 2018

EOG Y Resources
104 South Fourth Street
Artesia, NM 88210

RE: Application For Authorization To Inject
Salt Cedar 16 State SWD #1
1850' FNL, 2185' FEL
Unit G, Section 16, Township 26 South, Range 28 East, N.M.P.M.
Eddy County, New Mexico

To Whom It May Concern:

Enclosed for your review is a copy of COG Operating LLC's C-108 Application to Inject for the above referenced well. We plan to drill this well for SWD service if our C-108 is approved. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as the surface owner or an affected person. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter.

Please do not hesitate to contact us at 575-748-6940 should you have any questions.

Sincerely,

Brian Collins
Facilities Engineering Advisor

BC/mv
Enclosures

CONCHO

July 31, 2018

EOG M Resources
104 South Fourth Street
Artesia, NM 88210

RE: Application For Authorization To Inject
Salt Cedar 16 State SWD #1
1850' FNL, 2185' FEL
Unit G, Section 16, Township 26 South, Range 28 East, N.M.P.M.
Eddy County, New Mexico

To Whom It May Concern:

Enclosed for your review is a copy of COG Operating LLC's C-108 Application to Inject for the above referenced well. We plan to drill this well for SWD service if our C-108 is approved. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as the surface owner or an affected person. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter.

Please do not hesitate to contact us at 575-748-6940 should you have any questions.

Sincerely,

Brian Collins
Facilities Engineering Advisor

BC/mv
Enclosures

SENDER: COMPLETE THIS SECTION

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

1

Oil Conservation Division
Attn: Ray Podany
811 South First Street
Artesia, NM 88210
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8100 82

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7791

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) [illegible] C. Date of Delivery 8/6/18

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation
☐ Signature Confirmation Restricted Delivery

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

SENDER: COMPLETE THIS SECTION

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

1

New Mexico Oil Conservation Division
Attn: Phillip Goetze
1220 South St. Francis Drive
Santa Fe, NM 87505
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8100 75

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7784

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) [illegible] C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation
☐ Signature Confirmation Restricted Delivery

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

SENDER: COMPLETE THIS SECTION

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

1

OXY USA, Inc.
5 Greenway Plaza
Houston, TX 77046
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8146 84

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7890

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) [illegible] C. Date of Delivery 8-6-

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation
☐ Signature Confirmation Restricted Delivery

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

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

OXY Y-1
5 Greenway Plaza
Houston, TX 77046
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8146 91

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7883

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery
8-6

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation
- ☐ Signature Confirmation Restricted Delivery

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

SENDER: COMPLETE THIS SECTION

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

New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501
Salt Cedar 16 State SWD 1

9590 9402 3594 7305 7163 87

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7807

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☑ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation
- ☐ Signature Confirmation Restricted Delivery

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

SENDER: COMPLETE THIS SECTION

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

The Allar Company
735 Elm Street
Graham, TX 76450
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8147 69

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7814

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Melanie Barnett ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery
Melanie Barnett 8-2-18

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation
- ☐ Signature Confirmation Restricted Delivery

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

SENDER: COMPLETE THIS SECTION

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

EOG Y Resources
104 South Fourth Street
Artesia, NM 88210
Salt Cedar 16 State SWD 1

9590 9402 3634 [illegible]

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7845

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x Dennis Maupin ☐ Agent ☐ Addressee

B. Received by (Printed Name) DENNIS MAUPIN C. Date of Delivery 8/1/18

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation
☐ Signature Confirmation Restricted Delivery

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

SENDER: COMPLETE THIS SECTION

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

EOG M Resources
104 South Fourth Street
Artesia, NM 88210
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8147 14

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7869

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x Dennis Maupin ☐ Agent ☐ Addressee

B. Received by (Printed Name) DENNIS MAUPIN C. Date of Delivery 8/1/18

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation
☐ Signature Confirmation Restricted Delivery

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

SENDER: COMPLETE THIS SECTION

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

EOG A Resources
104 South Fourth Street
Artesia, NM 88210
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8147 21

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7852

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x Dennis Maupin ☐ Agent ☐ Addressee

B. Received by (Printed Name) DENNIS MAUPIN C. Date of Delivery 8/1/18

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation
☐ Signature Confirmation Restricted Delivery

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

SENDER: COMPLETE THIS SECTION

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

Mewbourne Oil Company
500 W. Texas Ave., Suite 1020
Midland, TX 79701
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8147 07

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7876

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by (Printed Name) | C. Date of Deliver

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 — Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

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

EOG Resources, Inc.
509 Champions Drive
Midland, TX 79706
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8147 45

2. Article Number (Transfer from service label)
7017 2620 0000 8100 7838

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☑ Agent
☐ Addressee

B. Received by (Printed Name) | C. Date of Deliver
8-3-16

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 — Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

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

1.

Chevron USA, Inc.
1400 Smith St.
Houston, TX 77002
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8147 52

2. Article Number *(Transfer from service label)*
7017 2620 0000 8100 7821

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by *(Printed Name)*
C. Date of Delivery
8-8-18

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 — Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

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

1.

CNT USA, Inc.
5 Greenway Plaza
Houston, TX 77046
Salt Cedar 16 State SWD 1

9590 9402 3634 7305 8146 84

2. Article Number *(Transfer from service label)*
7017 2620 0000 8100 7890

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by *(Printed Name)*
C. Date of Delivery
8-9-18

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 — Domestic Return Receipt

CONCHO

July 31, 2018

New Mexico Oil Conservation Division
Attn: Phillip Goetze
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Application For Authorization To Inject
Salt Cedar 16 State SWD #1
1850' FNL, 2185' FEL
Unit G, Section 16, Township 26 South, Range 28 East, N.M.P.M.
Eddy County, New Mexico

Dear Mr. Goetze:

COG Operating LLC respectfully requests administrative approval for authorization to inject for the referenced well. Attached, for your review, is a copy of the C-108 application. Once we receive the newspaper publication and all certified return receipts, we will send you a copy.

This well is a replacement well for the SRO SWD 102 and is located on an extension of the original pad so the original facility can be used. The SRO SWD 102 will be plugged prior to drilling this well. The estimated top of the Devonian is 14490'. Please do not hesitate to contact me at (575) 748-6940 should you have any questions.

Sincerely,

Brian Collins
Facilities Engineering Advisor

BC/mv
Enclosures

CORPORATE ADDRESS
ONE CONCHO CENTER | 600 WEST ILLINOIS AVENUE | MIDLAND, TEXAS 79701
P 432.683.7443 | F 432.683.7441

ARTESIA WEST OFFICE
2208 MAIN STREET | ARTESIA, NEW MEXICO 88210
P 575.748.6940 | F 575.746.2096

FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V17]

DATE RECORD: First Rec: 08/07/18 **Admin Complete:** 08/07/18 or **Suspended:** 03/06/19 Add. Request/Reply: 03/15/19

ORDER TYPE: WFX / PMX / (SWD) Number: 1807 Order Date: 03/27/2019 Legacy Permits/Orders: —

Well No. 1 Well Name(s): Salt Cedar 16 State SWD

API : 30-015 - Pending Spud Date: TBD New or Old (EPA): New (*UIC Class II Primacy 03/07/1982*)

Footages 1850' FNL / 2185' FEL Lot — or Unit G Sec 16 Tsp 26S Rge 28E County Eddy

General Location: ~3 mi N of NM/TX state line; 1.6 mi W of US 285 Pool: SWD; Devonian-Silurian Pool No.: 97869

BLM 100K Map: Carlsbad Operator: COG Operating LLC OGRID: 229137 Contact: Brian Collins, COG

COMPLIANCE RULE 5.9: Total Wells: 4104 Inactive: 1 **Fincl Assur:** OK Compl. Order? No **IS 5.9 OK?** Yes Date: 03/27/19

WELL FILE REVIEWED ✓ Current Status: No APD/API at time of review

WELL DIAGRAMS: NEW: Proposed ✓ or **RE-ENTER:** Before Conv. ○ After Conv. ○ Logs in Imaging: [Require additional geophysical]

Planned Rehab Work to Well: NA

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)		Cement Sx or (Cf)	Cement Top and Determination Method
Planned ✓ or Existing __Surface	26 / 20	0 to 500	Stage Tool	1500	Cir to Surface
Planned ✓ or Existing __(Interm)/Prod	18.5 / 16	0 to 2500	None noted	2350	Cir to Surface
Planned ✓ or Existing __(Interm)/Prod	14.75 / 10 3/4	0 to 9500	None noted	7800 — DV tool	Cir. to Surface
Planned ✓ or Existing __Prod/(Liner)	9.5 / 7 5/8	9300 to 14490	None noted	1200	Cal + (CBL)
Planned__or Existing __Liner	—	—	—	—	—
Planned ✓ or Existing __(OH) / PERF	6.5	14,490 - 16,000	Inj Length		

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		Mississippian	14100
Confining Unit: (Litho) Struc. (Por)	∅ (assumed)	Woodford	? Not listed
Proposed Inj Interval TOP:	14490	Devonian	14494
Proposed Inj Interval BOTTOM:	16000	Silurian	—
Confining Unit: (Litho) Struc. (Por)	<100	Ordovician	16,000+
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:

Drilled TD — PBTD —

NEW TD 16000 NEW PBTD —

NEW Open Hole ✓ or NEW Perfs ○

Tubing Size tapered 5 x 5.5 in. Inter Coated? Yes

Proposed Packer Depth 14440 ft

Min. Packer Depth 14390 (100-ft limit)

Proposed Max. Surface Press. 2898 psi

Admin. Inj. Press. 2898 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P No Noticed? NA **BLM Sec Ord** No **WIPP** No Noticed? NA **Salt/Salado** T: Anhy 485 / 1580 B: 2380 **NW: Cliff House fm** —

USDW: Aquifer(s) Surface alluvial / Rustler Max Depth < 500 **HYDRO AFFIRM STATEMENT By Qualified Person** ✓

NMOSE Basin: Carlsbad **CAPITAN REEF:** thru ___ adj ___ NA ✓ **No. GW Wells in 1-Mile Radius?** ∅ FW Analysis? NA

Disposal Fluid: Formation Source(s) BS / WC / DMG [SRO SWD battery] Analysis? Yes On Lease ○ ~~Operator Only~~ ○ or Commercial ○

Disposal Interval: Inject Rate (Avg/Max BWPD): 25000/40000 Protectable Waters? No Source: Proximity to SRO System: Closed or Open

HC Potential: Producing Interval? No Formerly Producing? No Method: Logs/DST/P&A/Other Proximity to SRO SWD No. 102 2-Mi Radius Pool Map ✓

AOR Wells: 1/2-M ___ or ONE-M ✓ **RADIUS MAP/WELL LIST: Total Penetrating Wells:** 1 [AOR Hor: ∅ AOR SWDs: 1]

Penetrating Wells: No. Active Wells ∅ No. Corrective? — on which well(s)? — Diagrams? ___

Penetrating Wells: No. P&A Wells 1 No. Corrective? ∅ on which well(s)? Demonstration of P&A Diagrams? Yes

Induced-Seismicity Risk Assess: analysis submitted ✓ historical/catalog review ✓ fault-slip model No **probability** low

NOTICE: 1/2-M ___ or ONE-M ✓ : Newspaper Date 6/29/18 **Mineral Owner*** SLO Surface Owner SLO N. Date 7/31/18

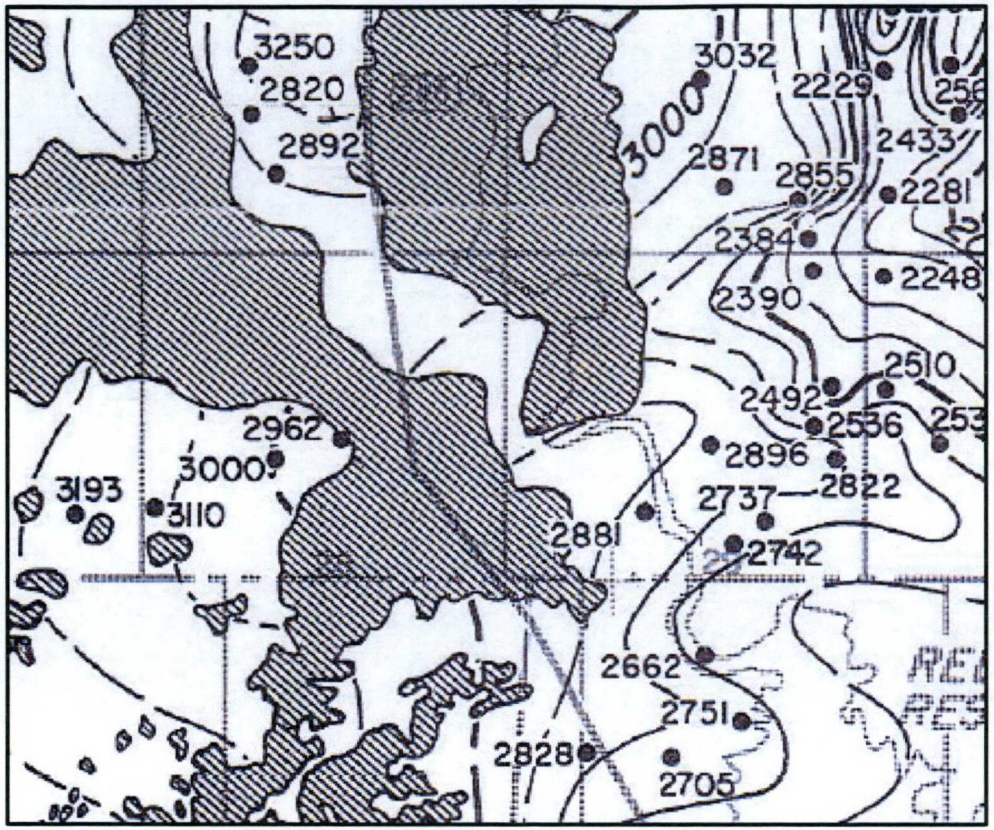
RULE 26.7(A): Identified Tracts? Yes **Affected Persons*:** OXY; Chevron; Allar; NMSLO; EOG-Y/-A/-M; EOG; Mewbourne N. Date 7/31/18

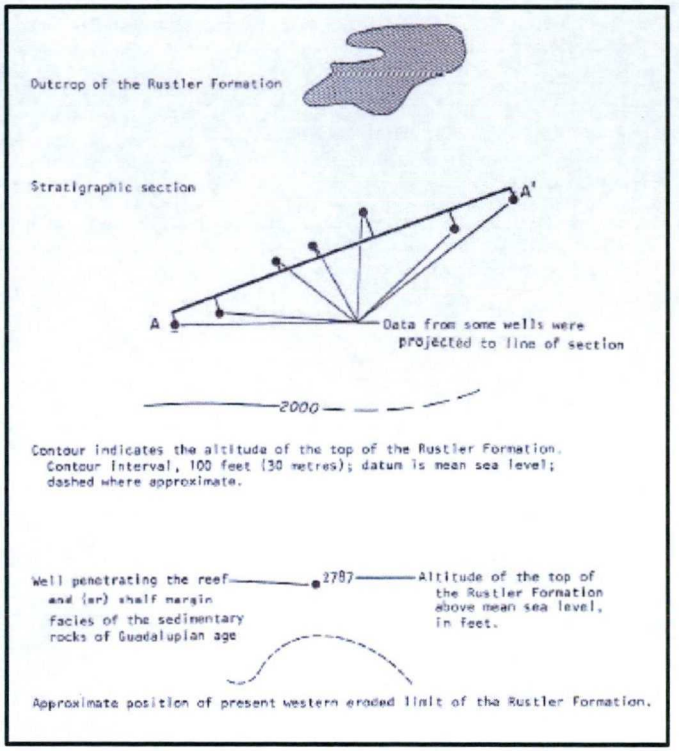
*** new definition as of 12/28/2018** [any the mineral estate of United States or state of New Mexico; SWD operators within the notice radius]

Order Conditions: Issues: SRO SWD No. 102 post P&A; strat control good - interval info following SRO activity

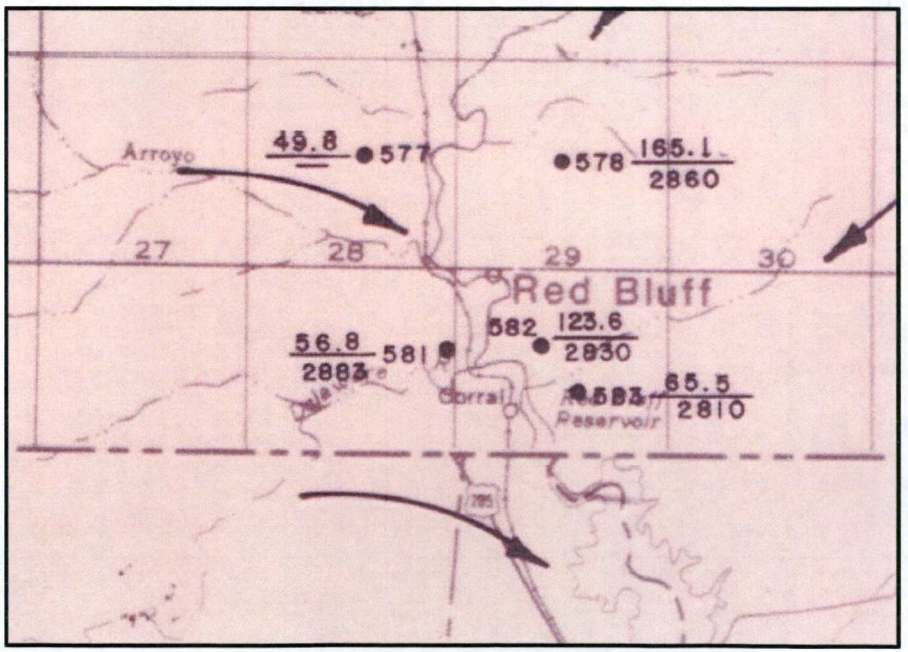
Additional COAs: SRO P&A inspection; BH pressure; geo logs for current form. character; CBL for uncirculated

NMBGMR Resource Map 7





USGS WRI 84-4077



EXPLANATION

APPROXIMATE POSITION OF EXTREME SHELFWARD EDGE OF CAPITAN REEF COMPLEX.

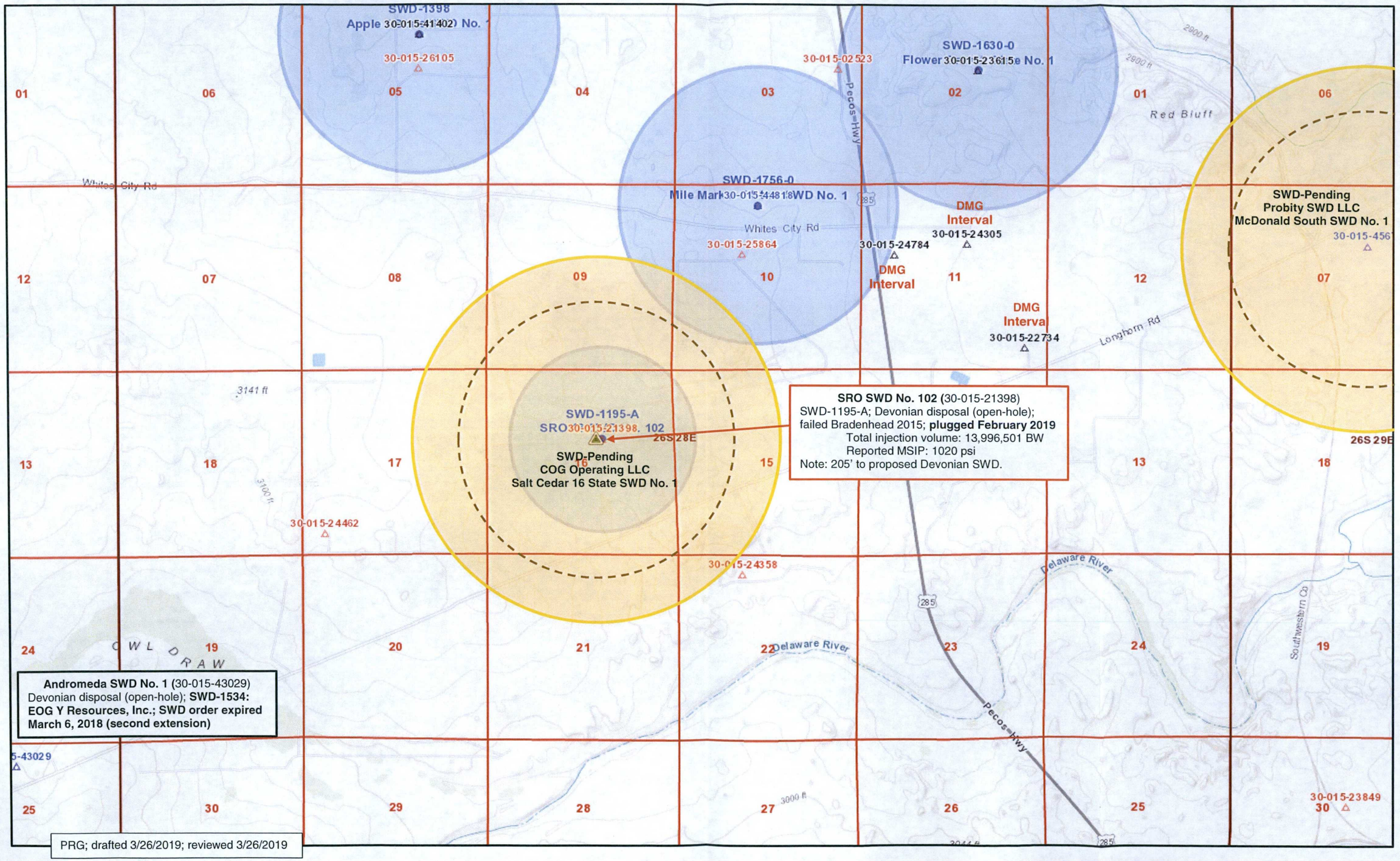
BASINAL EDGE OF CAPITAN REEF COMPLEX--Dashed where approximately located.

584 476.9 / P 3657 — WELL AND IDENTIFICATION NUMBER--Upper number is water level below or above (+) land surface, in feet. Lower number is altitude of water level, in feet. R indicates reported measurement. P indicates well is completed or perforated in undifferentiated Permian rocks. Datum is sea level.

GENERAL DIRECTION OF GROUND-WATER FLOW IN THE RUSTLER FORMATION--Arrows represent regional interpretations and do not necessarily fit individual control points.

APPROXIMATE AREA OF RUSTLER FORMATION.

Pending Application for High-Volume Devonian Disposal Well
C-108 Application for the Salt Cedar 16 State SWD No. 1 – COG Operating LLC



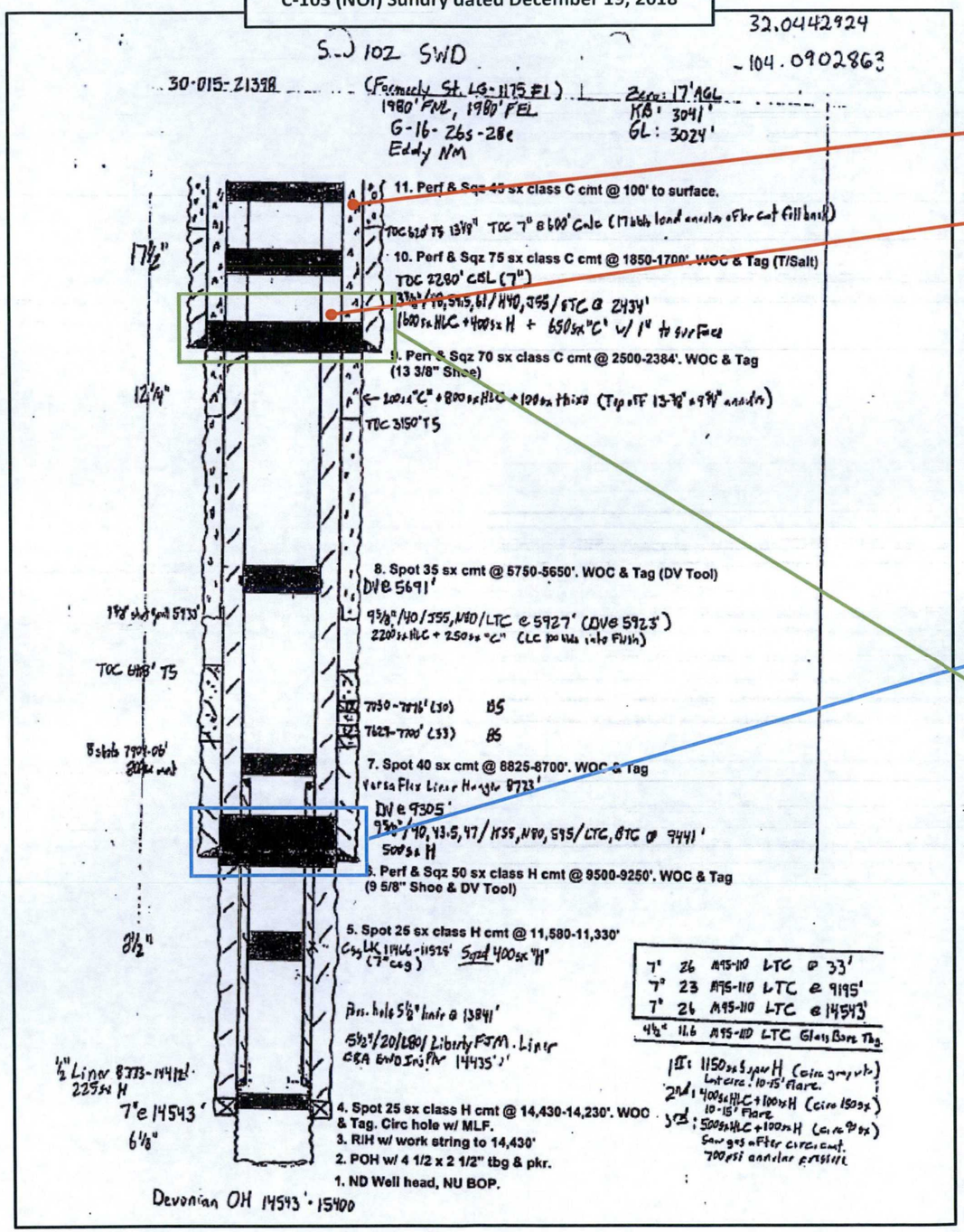
SRO SWD No. 102 (30-015-21398)
SWD-1195-A; Devonian disposal (open-hole);
failed Bradenhead 2015; **plugged February 2019**
Total injection volume: 13,996,501 BW
Reported MSIP: 1020 psi
Note: 205' to proposed Devonian SWD.

Andromeda SWD No. 1 (30-015-43029)
Devonian disposal (open-hole); **SWD-1534: EOG Y Resources, Inc.; SWD order expired March 6, 2018 (second extension)**

PRG; drafted 3/26/2019; reviewed 3/26/2019

Pending Application for High-Volume Devonian Disposal Well
C-108 Application for the Salt Cedar 16 State SWD No. 1 – COG Operating LLC

C-103 (NOI) Sundry dated December 19, 2018



C-103 (Subsequent) Sundry dated December 17, 2015

October 2015: 13-3/8" x 9-5/5" annular shut in pressure = 100 psi. Bled off in 1 minute. 9-5/8" x 7" annular shut in pressure = 575psi. Bled off within 24 hours. Measured an estimated gas flow rate of 30 MCFPD (75 psi on 1/8" choke) while bleeding the pressure off.

3 December 2015: 9-5/8" x 7" annular pressure bled off immediately after being shut in for 2 days. Took approximately 1 bbl fresh water to load annulus. Pressurized to 760 psi and bled off slowly to 700 psi in 35 minutes. No injection rate could be established and the annulus would immediately pressurize when the pump was started. Pumping a bradenhead cement squeeze is not feasible.

Proposed plan of action is to monitor casing annuli for pressure on a weekly basis and bleed off the gas pressure as/if necessary. We will notify NMOCD if substantial increases occur in the casing pressure or if substantial increases occur in the time required to blow the casing pressure down.

C-103 (Subsequent) Sundry dated February 25, 2019

02/01/19 MIRU plugging equipment. 02/04/19 ND wellhead, NU BOP. RIH w/ 197 jts oftbg. 02/05/19 Continued in hole w/ tbg. Tagged Top of 5 1/2" liner@ 8773', tagged RBP@ 14,385'. Unset RBP, well started flowing. SIW. 02/06/19 Pump'd brine H20 to kill well. POH w/ RBP. Set 5½" CIBP@ 14,440'. 02/07/19 RIH w/ muleshoe, tagged CIBP@ 14,440'. Circulated hole w/ MLF. Pressure tested csg, held 600 PSI. Spot'd 25 sx class H cmt@ 14,440-14,196'. WOC. 02/08/19 Tagged TOC@ 14,116'. POH w/ tbg. 02/11/19 RIH to 11,580'. Broke circulation. Spot'd 25 sx class H cmt@ 11,580-11,336'. 02/12/19 Perf'd csg@ 9500'. Pressured up on perfs to 500 PSI. Spot'd 110 sx class H cmt@ 9550-8630'. WOC. Tagged plug@ 8665'. Spot'd 70 sx class C cmt@ 5750-5330'. 02/13/19 Perf'd csg@ 2500'. Pressured up on perfs to 500 PSI. Spot'd 40 sx class C cmt w/ 2%CACL@ 2550-2300'. WOC. Tagged plug@ 2332'. Perf'd csg@ 1850'. Established injection rate of 1200 lbs@ 1-1Jz BPM. Broke circulation up the 9 5/8". Sqz'd 90 sx class C cmt@ 1850-1775'. WOC.

(continued on page 2)

02/14/19 Tagged plug@ 1682'. Perrd 7"csg@ 100'. Broke circulation down the 7" & up the 9 5/8" csg. Pressured up to 1000 PSI on 13 3/8" csg. ND BOP, NU well head. Sqz'd 40 sx class C cmt@ 100' & circulated to surface on 7" & 9 5/8" csg. Rigged down & moved off. 02/15/19 Moved in backhoe and welder, dug out cellar, cut off well head, and verified cement to surface (Kerry Fortner w/ NM OCD as witness). Welded on "Below Ground Dry Hole Marker". Backfilled cellar, cut off dead men, cleaned location and moved off.

Goetze, Phillip, EMNRD

From: McMillan, Michael, EMNRD
Sent: Friday, March 15, 2019 10:10 AM
To: Ocean Munds-Dry; Goetze, Phillip, EMNRD
Subject: RE: [External] RE: COG Salt Cedar 16 State SWD 1 C108 Application (G-16-26s-28e)

Ocean:
I talked to Kerry Fortner in Hobbs, and he needs the paperwork to get the SRO SWD Well No. 102 to be Plugged and released. The SRO SWD Well No. 102 is currently Plugged, not Released.

The OCD will not approve the SWD permit for the Salt Cedar 16 State SWD Well No.1 until it gets the required paperwork for the SRO SWD Well No. 102.

Thanks

Mike

From: Ocean Munds-Dry <OMundsDry@concho.com>
Sent: Wednesday, March 13, 2019 9:01 AM
To: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>
Cc: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Subject: [EXT] Re: [External] RE: COG Salt Cedar 16 State SWD 1 C108 Application (G-16-26s-28e)

Phil and Mike:
Please find attached the C-103 requested/referenced below. Let us know if you need any additional information.

Goetze, Phillip, EMNRD

From: Goetze, Phillip, EMNRD
Sent: Wednesday, March 6, 2019 10:46 AM
To: 'Ocean Munds-Dry'
Cc: Wade, Gabriel, EMNRD; Jones, William V, EMNRD; Brian Collins <BCollins@concho.com> (BCollins@concho.com); McMillan, Michael, EMNRD
Subject: RE: COG Salt Cedar 16 State SWD 1 C108 Application (G-16-26s-28e)
Attachments: COG_ Salt Cedar 16 StateSWD#1_draft.pdf

Ocean:

A quick review of the area finds no conflicts with active or pending application for Devonian SWDs that the Division would oppose. I will request Mike put it on the priority list and would possibly have a draft order for next week.

However, there is one request for COG which could avoid issues in the review process: there is no Subsequent C-103 for the P&A for the SRO SWD No. 102 in the well file, only a NOI (can't have the same C-103 as both a NOI and a Subsequent Sundry as found in the C-103 dated 12/19/2018). Since the new well is only 205 feet west of this Devonian well, it would be beneficial to have a final P&A record since this will be the only penetrating well (for which the AOR would be required). The SRO SWD No. 102 was directed to be shut-in on November 2, 2017 due to failure of mechanical integrity (*"860 on casing. Bled off a couple of bucket fulls down to 840 and closed valve. Pressure built back up to 860."*) The AOR would require whether the P&A was completed as to not to have another incident of fluid migrating out of zone and, with current filings for the SRO SWD No. 102, this is not feasible. Please see what can be done.

Please contact either Mike or me with any questions concerning this application. PRG

Phillip Goetze, PG
Engineering Bureau, Oil Conservation Division, NM EMNRD
1220 South St. Francis Drive, Santa Fe, NM 87505
Direct: 505.476.3466
E-mail: phillip.goetze@state.nm.us

From: Ocean Munds-Dry <OMundsDry@concho.com>
Sent: Wednesday, March 6, 2019 9:12 AM
To: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>; Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>
Cc: Wade, Gabriel, EMNRD <Gabriel.Wade@state.nm.us>; Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>
Subject: [EXT] FW: COG Salt Cedar 16 State SWD 1 C108 Application (G-16-26s-28e)

Dear Mike or Phil:

Concho is at a critical point in needing to decide whether to hold or release a rig for this well. Concho submitted its application on August 7, 2018. If you need additional information, please let us know. If you could provide us any guidance on when this application may be reviewed, that would also be helpful for our planning purposes as well.

Thank you for your attention to this matter.

Sincerely,
Ocean

Ocean Munds-Dry
Senior Counsel
COG OPERATING LLC
1048 Paseo de Peralta
Santa Fe NM 87501
Office 505.780.8000
Cell 505.920.5201
omundsdry@concho.com
CONCHO

From: Brian Collins
Sent: Wednesday, February 13, 2019 8:11 AM
To: McMillan, Michael, EMNRD
Cc: Goetze, Phillip, EMNRD; Jones, William V, EMNRD; Manish Kumar; Ocean Munds-Dry
Subject: COG Salt Cedar 16 State SWD 1 C108 Application (G-16-26s-28e)

Michael:

I'm just checking to make sure you aren't needing anything from us on the captioned C108 application (pMAM1821959783). The proposed Devonian SWD well is a replacement well for the SRO SWD 102 (Devonian, 30-015-21398, G-16-26s-28e) and will be drilled on an extension of the original SRO SWD 102 well pad. Plugging operations are underway right now on the SRO SWD 102 and will be finished next week. We plan to drill the Salt Cedar 16 State SWD 1 just as soon as we receive the approved C108 so we can get produced water off of trucks and back into pipeline on our water disposal system. Thank you.

Brian Collins

Facilities Engineer--Northern Delaware Basin
Direct: 575-748-6924, Main: 575-748-6940
COG Operating, LLC, 2208 W. Main St., Artesia, NM 88210

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

RECEIVED
FEB 25 2019
DISTRICT II-ARTESIA O.C.D.

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

WELL API NO.	**30-015-21398**
5. Indicate Type of Lease	STATE ☒ FEE ☐
6. State Oil & Gas Lease No.	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other **SWD**	7. Lease Name or Unit Agreement Name **SRO SWD**
	8. Well Number **102**
2. Name of Operator **COG Operating, LLC**	9. OGRID Number **229137**
3. Address of Operator **600 W. Illinois Ave, Midland, TX 79701**	10. Pool name or Wildcat **SWD; Devonian**

4. Well Location
Unit Letter **G** : **1980** feet from the **N** line and **1980** feet from the **E** line
Section **16** Township **26S** Range **28E** NMPM County **Eddy**

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* **3024' GR**

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	P AND A	☒
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER:	☐			OTHER:	☐		

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

02/01/19 MIRU plugging equipment. 02/04/19 ND wellhead, NU BOP. RIH w/ 197 jts oftbg. 02/05/19 Continued in hole w/ tbg. Tagged Top of 5 1/2" liner@ 8773', tagged RBP@ 14,385'. Unset RBP, well started flowing. SIW. 02/06/19 Pump'd brine H20 to kill well. POH w/ RBP. Set 5 1/2" CIBP@ 14,440'. 02/07/19 RIH w/ muleshoe, tagged CIBP@ 14,440'. Circulated hole w/ MLF. Pressure tested csg, held 600 PSI. Spot'd 25 sx class H cmt@ 14,440-14,196'. WOC. 02/08/19 Tagged TOC@ 14,116'. POH w/ tbg. 02/11/19 RIH to 11,580'. Broke circulation. Spot'd 25 sx class H cmt@ 11,580-11,336'. 02/12/19 Perf'd csg@ 9500'. Pressured up on perfs to 500 PSI. Spot'd 110 sx class H cmt@ 9550-8630'. WOC. Tagged plug@ 8665'. Spot'd 70 sx class C cmt@ 5750-5330'. 02/13/19 Perf'd csg@ 2500'. Pressured up on perfs to 500 PSI. Spot'd 40 sx class C cmt w/ 2% CACL@ 2550-2300'. WOC. Tagged plug@ 2332'. Perf'd csg@ 1850'. Established injection rate of 1200 lbs@ 1-1/2 BPM. Broke circulation up the 9 5/8". Sqz'd 90 sx class C cmt@ 1850-1775'. WOC.

(continued on page 2)

Spud Date: Rig Release Date:

ENTERED 2-26-19

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE _____ TITLE Regulatory Technician DATE 2/21/2019

Type or print name Delilah Flores E-mail address: dflores2@concho.com PHONE: 575-748-6946

For State Use Only

APPROVED BY: _____ TITLE Staff Mgr DATE 2/26/19

Conditions of Approval (if any):

02/14/19 Tagged plug@ 1682'. Perrd 7"csg@ 100'. Broke circulation down the 7" & up the 9 5/8" csg. Pressured up to 1000 PSI on 13 3/8" csg. ND BOP, NU well head. Sqz'd 40 sx class C cmt@ 100' & circulated to surface on 7" & 9 5/8" csg. Rigged down & moved off. 02/15/19 Moved in backhoe and welder, dug out cellar, cut off well head, and verified cement to surface (Kerry Fortner w/ NM OCD as witness). Welded on "Below Ground Dry Hole Marker". Backfilled cellar, cut off dead men, cleaned location and moved off.

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State of New Mexico
Energy, Minerals and Natural Resources

RECEIVED
FEB 25 2019
DISTRICT II-ARTESIA O.C.D.

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

WELL API NO.	**30-015-21398**
5. Indicate Type of Lease	STATE ☒ FEE ☐
6. State Oil & Gas Lease No.	

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PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER:	☐			OTHER:	☐		

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

02/01/19 MIRU plugging equipment. 02/04/19 ND wellhead, NU BOP. RIH w/ 197 jts oftbg. 02/05/19 Continued in hole w/ tbg. Tagged Top of 5 1/2" liner@ 8773', tagged RBP@ 14,385'. Unset RBP, well started flowing. SIW. 02/06/19 Pump'd brine H20 to kill well. POH w/ RBP. Set 5 ½" CIBP@ 14,440'. 02/07/19 RIH w/ muleshoe, tagged CIBP@ 14,440'. Circulated hole w/ MLF. Pressure tested csg, held 600 PSI. Spot'd 25 sx class H cmt@ 14,440-14,196'. WOC. 02/08/19 Tagged TOC@ 14,116'. POH w/ tbg. 02/11/19 RIH to 11,580'. Broke circulation. Spot'd 25 sx class H cmt@ 11,580-11,336'. 02/12/19 Perf'd csg@ 9500'. Pressured up on perfs to 500 PSI. Spot'd 110 sx class H cmt@ 9550-8630'. WOC. Tagged plug@ 8665'. Spot'd 70 sx class C cmt@ 5750-5330'. 02/13/19 Perf'd csg@ 2500'. Pressured up on perfs to 500 PSI. Spot'd 40 sx class C cmt w/ 2% CACL@ 2550-2300'. WOC. Tagged plug@ 2332'. Perf'd csg@ 1850'. Established injection rate of 1200 lbs@ 1-1Jz BPM. Broke circulation up the 9 5/8". Sqz'd 90 sx class C cmt@ 1850-1775'. WOC.

(continued on page 2)

Spud Date: Rig Release Date:

ENTERED 2-26-19

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE _____ TITLE Regulatory Technician DATE 2/21/2019

Type or print name Delilah Flores E-mail address: dflores2@concho.com PHONE: 575-748-6946

For State Use Only

APPROVED BY: _____ TITLE Staff Mgr DATE 2/26/19

Conditions of Approval (if any):

02/14/19 Tagged plug@ 1682'. Perrd 7"csg@ 100'. Broke circulation down the 7" & up the 9 5/8" csg. Pressured up to 1000 PSI on 13 3/8" csg. ND BOP, NU well head. Sqz'd 40 sx class C cmt@ 100' & circulated to surface on 7" & 9 5/8" csg. Rigged down & moved off. 02/15/19 Moved in backhoe and welder, dug out cellar, cut off well head, and verified cement to surface (Kerry Fortner w/ NM OCD as witness). Welded on "Below Ground Dry Hole Marker". Backfilled cellar, cut off dead men, cleaned location and moved off.

State of New Mexico
Energy, Minerals and Natural Resources Department

Response Required - Deadline Enclosed

Underground Injection Control Program
"Protecting Our Underground Sources of Drinking Water"

02-Nov-17

COG OPERATING LLC
One Concho Center 600 W. Illinois Ave
Midland TX 79701-9701

LETTER OF VIOLATION and SHUT-IN DIRECTIVE
Failed Mechanical Integrity Test

Dear Operator:

The following test(s) were performed on the listed dates on the following well(s) shown below in the test detail section.

The test(s) indicates that the well or wells failed to meet mechanical integrity standards of the New Mexico Oil Conservation Division. To comply with guidelines established by the U.S. Environmental Protection Agency, the well(s) must be shut-in immediately until it is successfully repaired. The test detail section which follows indicates preliminary findings and/or probable causes of the failure. This determination is based on a test of your well or facility by an inspector employed by the Oil Conservation Division. Additional testing during the repair operation may be necessary to properly identify the nature of the well failure.

Please notify the proper district office of the Division at least 48 hours prior to the date and time that the well(s) will be retested so the test may be witnessed by a field representative.

MECHANICAL INTEGRITY TEST DETAIL SECTION

SRO SWD **No.102** **30-015-21398-00-00**
Active Salt Water Disposal Well G-16-26S-28E

Test Date:	11/2/2017	**Permitted Injection PSI:**		**Actual PSI:**	1180
Test Reason:	Annual IMIT	**Test Result:**	F	**Repair Due:**	2/5/2018
Test Type:	Bradenhead Test	**FAIL TYPE:**	Other Internal Failure	**FAIL CAUSE:**	

Comments on MIT: 860 on casing. Bled off a couple of bucket fulls down to 840 and closed valve. Pressure built back up to 860.

COLT STATE SWD No.004 **30-015-41401-00-00**
Active Salt Water Disposal Well D-5-25S-28E

Test Date:	11/2/2017	**Permitted Injection PSI:**		**Actual PSI:**	410
Test Reason:	Annual IMIT	**Test Result:**	F	**Repair Due:**	2/5/2018
Test Type:	Bradenhead Test	**FAIL TYPE:**	Other Internal Failure	**FAIL CAUSE:**	

Comments on MIT: 580psi on casing, bled down with fluid to zero, still flowing fluid. Closed valve and pressure started building up again.

Township 26 South Range 28 East of the New Mexico Principal Meridian, New Mexico

County: Eddy - 015

BLM Field Office: Carlsbad

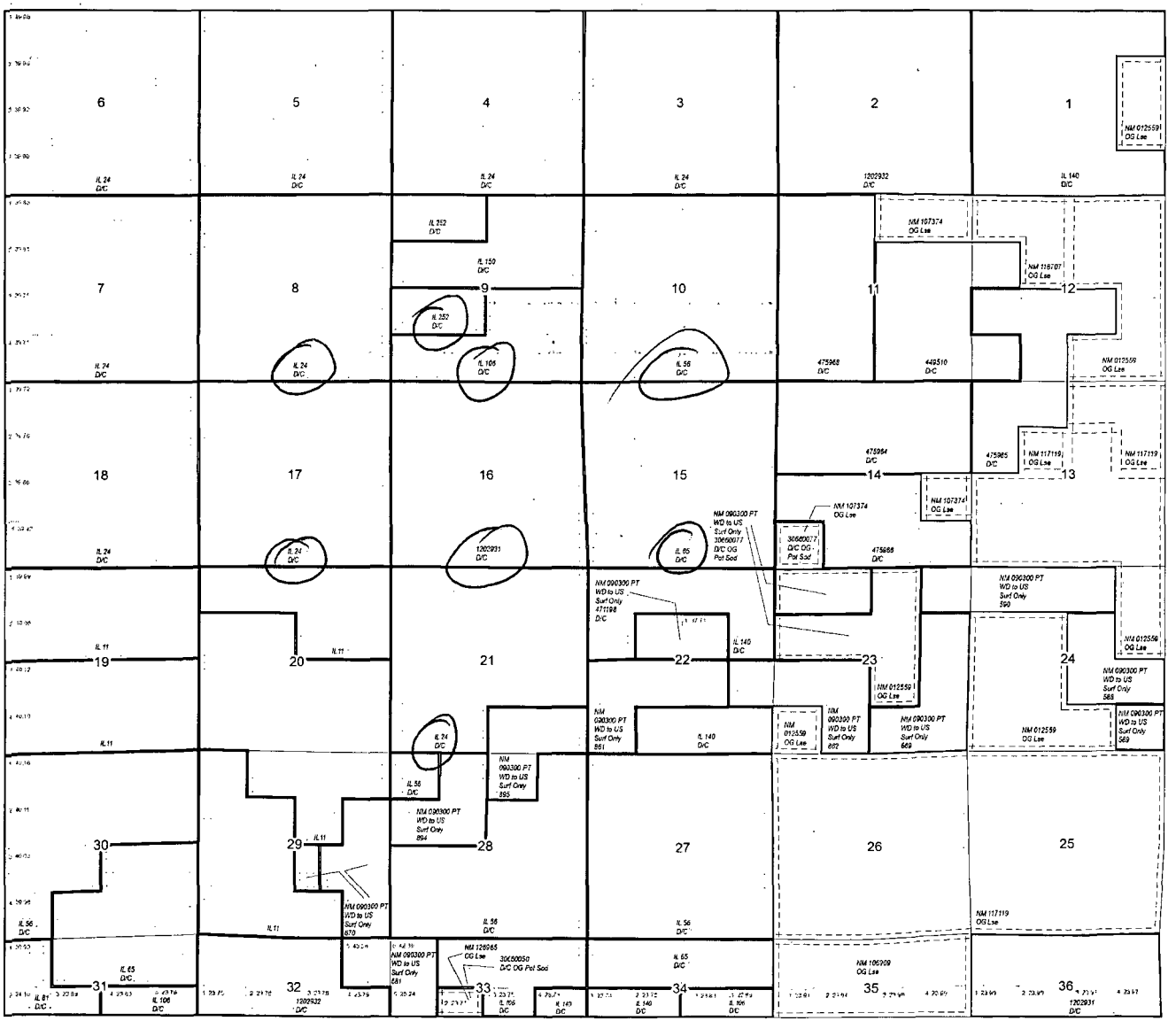
BUREAU OF LAND MANAGEMENT
STATUS OF PUBLIC DOMAIN
LAND AND MINERALS

OG Plat

T26S R28E

CI of Public Lands NM 0560202 (CI No 30-06-01)

COMMUNITIZATION AGREEMENTS
NM 126646
NM 127827
NM 128806
NM 128871
NM 129327
NM 130652
NM 130963
NM 131079
NM 132308
NM 133396
NM 134285
NM 136397



0 0.25 0.5 1 Mile

1 inch = 30 chains
1:23,760

CAVEAT STATEMENT
This plat is the Bureau's Record of Title, and should be used only as a graphic display of the township survey data. Records hereon *do not* reflect title changes which may have been affected by lateral movements of rivers or other bodies of water. Refer to the cadastral surveys for official survey information.

NOTE: The Serial Numbers displayed are in the Bureau's LR2000 system format.
-If there is a zero in the 7th position (from the right), the serial number has a "prefix" zero; example NM 0012345.
-If there is not a zero in the 7th position (from the right) then the serial number does not have a "prefix" zero; example NM 012345.

For **Index to Segregated Tracts,** see survey plat.

T 26 S
R 28 E
NMPM