

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505



1413
36-015-24327
East Owl B Federal (SWD)
(Formerly: Federal X
Com #1)
COG operating

ADMINISTRATIVE APPLICATION CHECKLIST

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

Application Acronyms:

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

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
- [A] Location - Spacing Unit - Simultaneous Dedication
 NSL NSP SD
- Check One Only for [B] or [C]
- [B] Commingling - Storage - Measurement
 DHC CTB PLC PC OLS OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
 WFX PMX SWD IPI EOR PPR
- [D] Other: Specify _____

- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply
- [A] Working, Royalty or Overriding Royalty Interest Owners
- [B] Offset Operators, Leaseholders or Surface Owner
- [C] Application is One Which Requires Published Legal Notice
- [D] Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] Waivers are Attached

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

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

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

<u>BRIAN COLLINS</u> Print or Type Name	<u><i>Brian Collins</i></u> Signature	<u>SENIOR OPERATIONS ENGINEER</u> Title	<u>26 Mar 2013</u> Date
		<u>bcollins@concho.com</u> e-mail Address	

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. OPERATOR: COG OPERATING LLC

ADDRESS: 2208 W. Main Street, ARTESIA, NM 88210

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 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).

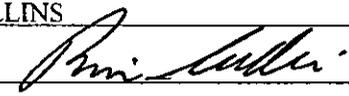
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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: Senior Operations Engineer

SIGNATURE:  DATE: 26 Mar 13

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: _____

RECEIVED OGD

2013 MAR 28 P 2: 25

C-108 Application for Authorization to Inject
EAST OWL 8 FEDERAL SWD 1
Unit J, Sec 8 T26S R27E
Eddy County, NM

Pre-Ongard well
30-015-24327
Fed X Com #1

COG Operating, LLC, proposes to reenter the captioned well, tie back the 7-5/8" casing from 1408' to surface, deepen from 12900' to 14800', run a 5-1/2" liner from 8750' to 13500' and dispose of produced water into the Devonian-Silurian-Ordovician from 13500' to 14800'.

- V. Map is attached.
- VI. No wells within the ½ mile radius area of review penetrate the proposed injection zone.
- VII.
 1. Proposed average daily injection rate = 7000 BWPD
Proposed maximum daily injection rate = 20,000 BWPD
 2. Closed system
 3. Proposed maximum injection pressure = 2700 psi
(0.2 psi/ft. x 13500' ft.)
 4. Source of injected water will be Delaware Sand and Bone Spring produced water. No compatibility problems are expected. Analyses of Delaware and Bone Spring water are attached. There are no Devonian-Silurian-Ordovician receiving formation water analyses available in this area.
- VIII. The injection zone is the Devonian-Silurian-Ordovician Dolomite from 13500' to 14800'. Any underground water sources will be shallower than 379' based on surface casing setting depth.
- IX. The Devonian-Silurian-Ordovician injection interval will be acidized with approximately 40,000 gals of 20% HCl acid.
- X. Well logs, if run, will be filed with the Division. There are no nearby well logs available for the Devonian-Silurian-Ordovician section.
- XI. There are two, possibly three, fresh water wells within a mile of the proposed SWD well. Water analysis for the nearest fresh water well, located in the SE/4 SE/4 SE/4 Section 5-26s-27e, is attached.
- 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.
- XIII. Proof of Notice is attached.

III.

WELL DATA

INJECTION WELL DATA SHEET

OPERATOR: COG Operating, LLC

WELL NAME & NUMBER: East Owl 8 Federal SWD No. 1 (Formerly Federal X Com. 1)

WELL LOCATION: 1780' FSL, 1980' FEL J 8 26s 27e
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA (After Conversion)
Surface Casing

See Attached Before
and After Schematics

Hole Size: 20"
14 3/4"
Cemented with: 475sx
132.5sx or 16" @ 379'
10 3/4" @ 1967' ft³
Top of Cement: Surface
Surface Method Determined: Circulated
Circulated

Intermediate Casing

Hole Size: 9 1/2" Casing Size: 7 5/8" @ 9000'
Cemented with: 2085 or - ft³
Top of Cement: 1885' Method Determined: Temp Survey

Production Casing

Hole Size: 6 1/2" Casing Size: 5 1/2" Liner 8750-13500'
Cemented with: - or 700 ft³
Top of Cement: 8750' Top Liner Method Determined: Design
Total Depth: 14800'

Injection Interval

± 13500' feet to 14800'

(Perforated or Open Hole indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 4 1/2" x 3 1/2" Lining Material: Duoline 20 / CLS Glassbore
 Type of Packer: Nickel plated double grip retrievable
 Packer Setting Depth: ± 13450'
 Other Type of Tubing/Casing Seal (if applicable): N/A

Additional Data

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

If no, for what purpose was the well originally drilled? Oil & Gas

2. Name of the Injection Formation: Devonian - Silurian - Ordovician

3. Name of Field or Pool (if applicable): —

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. Yes, see attached

"before" schematic, Delaware 2790-2802' sqzd, 2520-2593' sqzd, 2100-2131' Will be sqzd.

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

Underlying: None

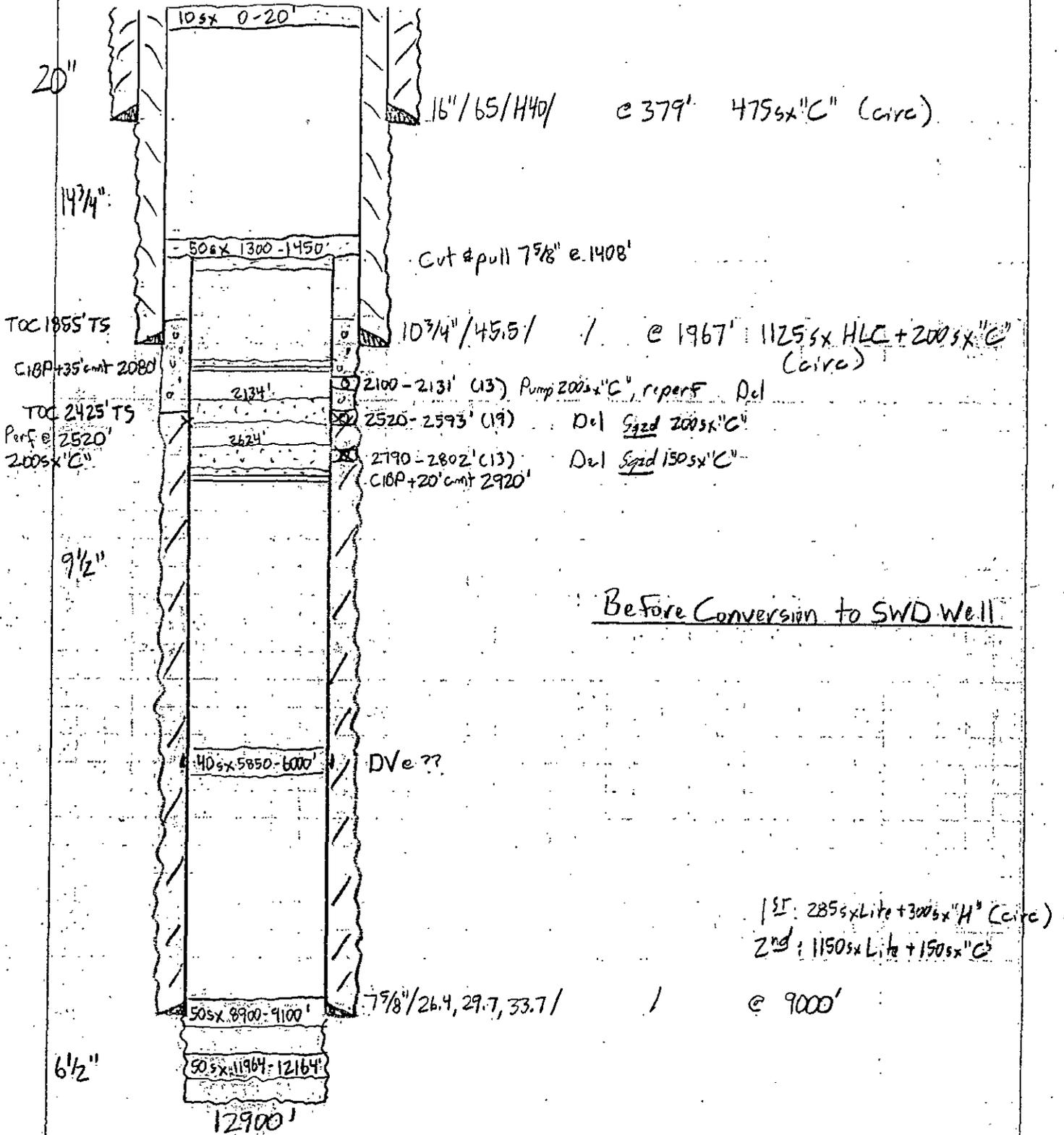
Overlying: Castille 860'-880' Sec 29, 26s-27e, Delaware 2095-2147' Sec 20, 21-26s-27e, 4062-4124' Sec 9, 16

4864-4924' Sec 6-26s-27e, 5406-5428' Sec 13-26s-27e, Bone Spring ±5700'-8700'±,

Wolfcamp ±8700'-111,000'±, Strawn 11611-11660' Sec 11, 21-26s-27e, Morrow 12035-12522' Sec 17, 21-26s-

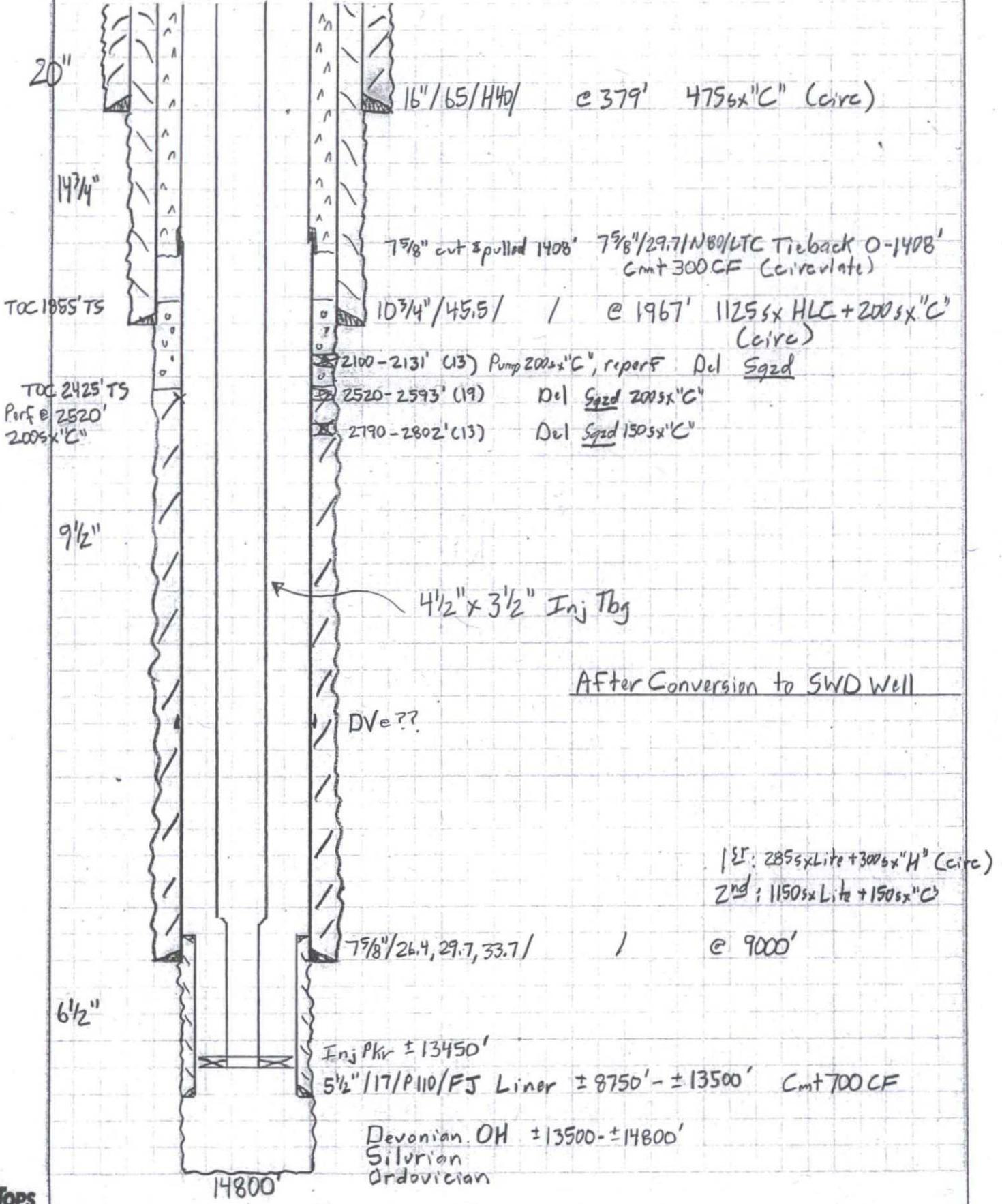
30-015-24327

(Formerly Federal X Com. 1)
1780' FSL, 1980' FEL
J-8-265-27e
Eddy, NM



30-015-24327

• East Owl 8 Federal SWD No. 1
(Formerly Federal X Com. 1)
1780' FSL, 1980' FEL
J-8-26s-27e
Eddy, NM



16" / 65 / H40 / @ 379' 475sx"C" (circ)

7 5/8" cut & pulled 1408' 7 5/8" / 29.7 / N80 / LTC Tieback O-1408' Cmt 300 CF (circulate)

10 3/4" / 45.5 / / @ 1967' 1125sx HLC + 200sx"C" (circ)

2100-2131' (13) Pump 200sx"C", reperF Del Sqzd

2520-2593' (19) Del Sqzd 200sx"C"

2790-2802' (13) Del Sqzd 150sx"C"

4 1/2" x 3 1/2" Inj Tbg

After Conversion to SWD Well

DVe??

1st: 285sx Lite + 300sx"H" (circ)
2nd: 1150sx Lite + 150sx"C"

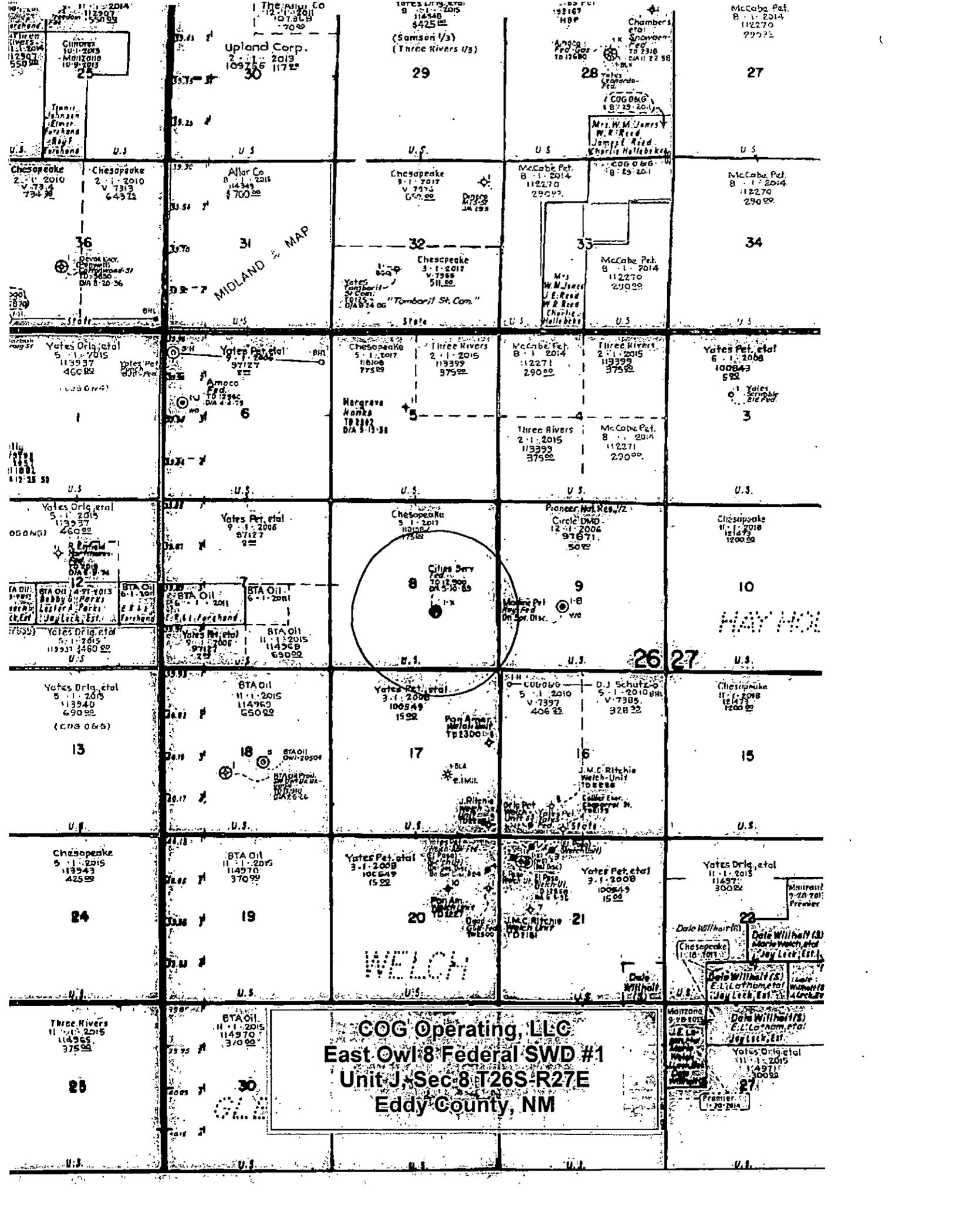
7 5/8" / 26.4, 29.7, 33.7 / / @ 9000'

Inj Pkr ± 13450'

5 1/2" / 17 / P110 / FJ Liner ± 8750' - ± 13500' Cmt 700 CF

Devonian OH ± 13500' - ± 14800'
Silurian
Ordovician

14800'



112307
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112310
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112398
112399
112400

Upland Corp.
2-1-2013
109,715
117,225

29
Chesapeake
3-1-2017
114,548
64,225
(Samson 1/3)
(Three Rivers 1/3)

28
Chambers
192167
HBP
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192199
192200

27
McCabe Pat.
8-1-2014
112,270
290,225

Chesapeake
2-1-2010
734,725

36
Allor Co.
11-1-2015
114,341
\$700.00

32
Chesapeake
3-1-2017
V. 7955
511.00

35
McCabe Pat.
8-1-2014
112,270
290,225

34
McCabe Pat.
8-1-2014
112,270
290,225

Yates Orig. et al
5-1-2015
113,337
460,000

31
Yates Pet. et al
9-1-2016
87,127

33
Chesapeake
5-1-2017
116,008
775,000

3
Three Rivers
2-1-2015
113,359
375,000

3
Yates Pet. et al
6-1-2016
100,843
592

Yates Orig. et al
5-1-2015
113,337
460,000

6
Yates Pet. et al
9-1-2016
87,127

8
Cigna Serv
10-1-2015
10,150,000
DA 5-10-15

9
Pioneer Nat. Res. 72
Circle DWD
12-1-2006
97,671
50,000

10
Chesapeake
11-1-2018
121,479
1200,000

Yates Orig. et al
5-1-2015
113,340
690,000
(COG O&G)

13
BTA Oil
11-1-2015
114,960
650,000

17
Yates Pet. et al
3-1-2016
100,549
15,000

16
D.J. Schutz-o
5-1-2010
V. 7397
406,225

15
Chesapeake
11-1-2018
121,479
1200,000

Chesapeake
5-1-2015
113,343
425,000

19
BTA Oil
11-1-2015
114,970
370,000

20
Yates Pet. et al
3-1-2016
100,549
15,000

21
Yates Pet. et al
3-1-2016
100,549
15,000

22
Yates Orig. et al
11-1-2015
114,971
300,000

Three Rivers
11-1-2015
114,965
375,000

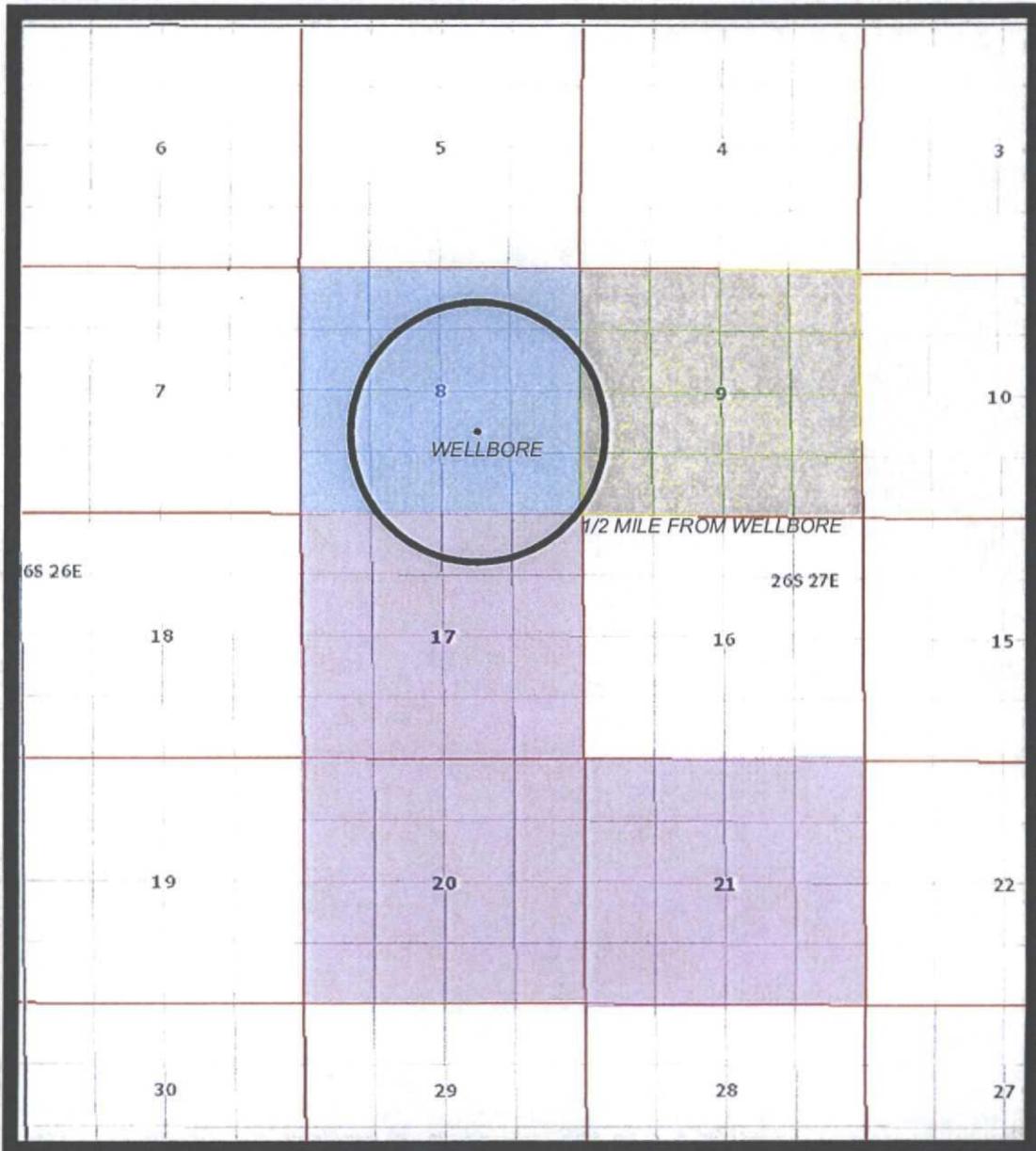
30
BTA Oil
11-1-2015
114,970
370,000

COG Operating, LLC
East Owl 8 Federal SWD #1
Unit J, Sec 8 T26S-R27E
Eddy County, NM

23
Yates Orig. et al
11-1-2015
114,971
300,000

V.

MAP



 Chesapeake Exploration LP

 Abo Petroleum Corp.; MYCO Industries INC.
OXY Y-1 Company; Yates Petroleum Corp

 Bureau of Land Management
New Mexico State Office

East Owl 8 Federal SWD No. 1
1780' FSL & 1980' FEL
Sec. 8; T26s - R27e
Eddy County, New Mexico

VII.

Water Analysis Produced and Receiving Formation Water

WATER SAMPLES REPRESENTATIVE OF WATER BEING INJECTED INTO THE PROPOSED SWD WELL												
Bone Spring												
Lab Test #	Lease	Location	Salesman	Date Out	Sample Date	Specific Gravity	Ionic Strength	TDS	pH	conductivity	Ca (mg/L)	Mg (mg/L)
2011128832	Craig St. Com	1H	William D. Polk	9/30/2011	9/21/2011	1.13	3.15	194940.50	6.80		2390.00	664.00
Delaware												
Lab Test #	Lease	Location	Salesman	Date Out	Sample Date	Specific Gravity	Ionic Strength	TDS	pH	conductivity	Ca (mg/L)	Mg (mg/L)
2011128361	Chicken Hawk State	1	William D. Polk	9/28/2011	9/13/2011	1.12	3.17	189454.89	6.90		4133.30	725.18

TH (CaCO3)	Na (mg/L)	K (mg/L)	Zn (mg/L)	Fe (mg/L)	Ba (mg/L)	Sr (mg/L)	Mn (mg/L)	Resistivity	HCO3 (mg/L)	CO3 (mg/L)	OH (mg/L)	SO4 (mg/L)	Cl (mg/L)	CO2 (mg/L)	H2S (mg/L)
917.56	55296.00	815.00		0.32	2.00	403.00	0.18		1220.00	0.00		150.00	134000.00	540.00	0.00
13854.58	69462.63	1056.00	37.48	2.25	0.00	468.07	0.00		1220.00	0.00		950.00	111400.00	500.00	17.00

XI.

Fresh Water Sample Analyses



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)
 C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File:Nbr	Sub basin Use Diversion Owner	(acre ft per annum)	County	POD Number	Code Grant	Source	q q q 6416 4 Sec Tws Rng	X	Y
<u>C 02218</u>	CUB PLS 3 FOREHAND RANCHES INC		ED	<u>C 02218</u>			4 1 4 07 26S 27E	573039	3546725*
<u>C 02219</u>	CUB PLS 3 FOREHAND RANCHES INC		ED	<u>C 02219</u>	<i>Water sample attached.</i>		4 4 4 05 26S 27E	575033	3547948*
<u>RA 03587</u>	OIL 0 WESTERN VENTURA		ED	<u>RA 03587</u>	<i>No data available</i>		3 1 4 17 26S 27E	574484	3545105*

Record Count: 3

PLSS Search:

Section(s): 4, 5, 6, 7, 8, 9, 16, 17, 18 **Township:** 26S **Range:** 27E

Sorted by: File Number

*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.



Stock Tank Well

SE 1/4 SE 1/4 SE 1/4 5-265-27e

POD C-02219

Date: 04/22/10

2708 West County Road, Hobbs NM 88240
 Phone (505) 392-5556 Fax (505) 392-7307

Source Water

1

Analyzed For

Company	Well Name	County	State
MARBOb	SESESE 5-265-27E	Eddy	New Mexico

Specific Gravity	1.005	SG @ 60 °F	1.007
pH	8.48	Sulfides	Not Tested
Temperature (°F)	72	Reducing Agents	Not Tested

Cations

Sodium (Calc)	in Mg/L	1,849	in PPM	1,835
Calcium	in Mg/L	272	in PPM	270
Magnesium	in Mg/L	161	in PPM	160
Soluble Iron (FE2)	in Mg/L	0.0	in PPM	0

Anions

Chlorides	in Mg/L	720	in PPM	715
Sulfates	in Mg/L	4,000	in PPM	3,971
Bicarbonates	in Mg/L	229	in PPM	228

Total Hardness (as CaCO3)	in Mg/L	1,350	in PPM	1,340
Total Dissolved Solids (Calc)	in Mg/L	7,231	in PPM	7,178

Remarks Fresh Water
 RW = .95 @ 75F



New Mexico Office of the State Engineer

Point of Diversion Summary

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

POD Number	Q64 Q16 Q4	Sec	Tws	Rng	X	Y
C 02218	4 1 4	07	26S	27E	573039	3546725*

Driller License:

Driller Name: J. F. FOREHAND

Drill Start Date:

Drill Finish Date: 05/01/1926

Plug Date:

Log File Date:

PCW Rcv Date:

Source:

Pump Type:

Pipe Discharge Size:

Estimated Yield: 7

Casing Size: 6.00

Depth Well: 35 feet

Depth Water:

*UTM location was derived from PLSS - see Help

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



New Mexico Office of the State Engineer

Point of Diversion Summary

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

POD Number	Q64 Q16 Q4	Sec	Tws	Rng	X	Y
C 02219	4 4 4	05	26S	27E	575033	3547948*

Driller License:

Driller Name: W. A. FOREHAND

Drill Start Date:

Drill Finish Date: 06/01/1926

Plug Date:

Log File Date:

PCW Rcv Date:

Source:

Pump Type:

Pipe Discharge Size:

Estimated Yield: 7

Casing Size: 7.00

Depth Well: 35 feet

Depth Water:

*UTM location was derived from PLSS - see Help

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New Mexico Office of the State Engineer

Point of Diversion Summary

	(quarters are 1=NW 2=NE 3=SW 4=SE)		
	(quarters are smallest to largest)	(NAD83 UTM in meters)	
POD Number	Q64 Q16 Q4 Sec Tws Rng	X	Y
RA 03587	3 1 4 17 26S 27E	574484	3545105*

Driller License:

Driller Name:

Drill Start Date:

Drill Finish Date:

Plug Date:

Log File Date:

PCW Rcv Date:

Source:

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size:

Depth Well:

Depth Water:

*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.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2.

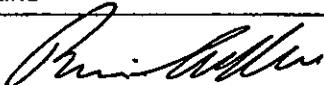
1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other SWD		5. Lease Serial No.
2. Name of Operator COG OPERATING, LLC		6. If Indian, Allottee or Tribe Name
3a. Address 2208 W. MAIN STREET, ARTESIA, NM 88210	3b. Phone No. (include area code) 575-748-6940	7. If Unit of CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SEC 8-T26S-R27E, 1780' FSL & 1980' FEL, UNIT LETTER J		8. Well Name and No. EAST OWL 8 FEDERAL SWD #1
		9. API Well No. 30-015-24327
		10. Field and Pool or Exploratory Area UNDESIGNATED MORROW
		11. Country or Parish, State EDDY COUNTY, NEW MEXICO

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other REENTER /
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	RECOMP AS SWD
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

SUBMITTED FOR C-108 - COPY ATTACHED

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) BRIAN COLLINS		Title SENIOR OPERATIONS ENGINEER
Signature 		Date 01/09/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)



March 25, 2013

Artesia Daily Press
P. O. Box 190
Artesia, NM 88211-0190

Re: Legal Notice
Salt Water Disposal Well
East Owl 8 Federal SWD #1

To Whom It May Concern:

Enclosed is a legal notice regarding New Mexico Oil Conservation Division C-108 Application for Authorization to Inject for a salt water disposal well.

Please run this notice and return the proof of notice to the undersigned at:

COG Operating LLC, 2208 W. Main St., Artesia, NM 88210

Sincerely,

A handwritten signature in black ink, appearing to read "Brian Collins".

Brian Collins
Senior Operations Engineer

BC/bg
Enclosures

ARTESIA DAILY PRESS
LEGAL NOTICES

COG Operating LLC, 2208 W. Main Street, Artesia, NM 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 East Owl 8 Federal SWD No. 1 is located 1780' FSL & 1980' FEL, Section 8, Township 26 South, Range 27 East, Eddy County, New Mexico. Disposal water will be sourced from area wells producing from the Delaware and Bone Spring formations. The disposal water will be injected into the Devonian-Silurian-Ordovician formation at a depth of 13500' to 14800' at a maximum surface pressure of 2700 psi and a maximum rate of 20,000 BWPD. The proposed SWD well is located approximately 13 miles southeast of White's City. Any interested party who has an objection to this must give notice in writing to the Oil Conservation Division, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505, 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, NM 88210, or call 575-748-6940.

Published in the Artesia Daily Press, Artesia, New Mexico
_____, 2013.



March 25, 2013

Oil Conservation Division
Attn: Richard Inge
811 South 1st St.
Artesia, NM 88210

RE: Application For Authorization To Inject
East Owl 8 Federal SWD #1
Township 26 South, Range 27 East, N.M.P.M.
Section 8: 1780' FSL & 1980' FEL
Eddy County, New Mexico

Dear Mr. Inge:

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, I will send you a copy.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Brian Collins".

Brian Collins
Senior Operations Engineer

BC/bg
Enclosures



March 25, 2013

Bureau of Land Management
New Mexico State Office
620 E. Greene Street
Carlsbad, NM 88220

RE: Application For Authorization To Inject
East Owl 8 Federal SWD #1
Township 26 South, Range 27 East, N.M.P.M.
Section 8: 1780' FSL & 1980' FEL
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 reenter 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 operator within a half mile radius area of review. 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,

A handwritten signature in black ink, appearing to read "Brian Collins".

Brian Collins
Senior Operations Engineer

BC/bg



March 25, 2013

Chesapeake Exploration LP
P O Box 18496
Oklahoma City, OK 73154-0496

RE: Application For Authorization To Inject
East Owl 8 Federal SWD #1
Township 26 South, Range 27 East, N.M.P.M.
Section 8: 1780' FSL & 1980' FEL
Eddy County, New Mexico

To Whom It May Concern:

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Sincerely,

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Brian Collins
Senior Operations Engineer

BC/bg
Enclosures



March 25, 2013

Abo Petroleum Corporation
105 S. Fourth Street
Artesia, NM 88210

RE: Application For Authorization To Inject
East Owl 8 Federal SWD #1
Township 26 South, Range 27 East, N.M.P.M.
Section 8: 1780' FSL & 1980' FEL
Eddy County, New Mexico

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

Sincerely,

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Brian Collins
Senior Operations Engineer

BC/bg
Enclosures



March 25, 2013

MYCO Industries, Inc.
P O Box 840
Artesia, NM 88211-0840

RE: Application For Authorization To Inject
East Owl 8 Federal SWD #1
Township 26 South, Range 27 East, N.M.P.M:
Section 8: 1780' FSL & 1980' FEL
Eddy County, New Mexico

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Brian Collins
Senior Operations Engineer

BC/bg
Enclosures



March 25, 2013

Yates Petroleum Corporation
105 S. Fourth Street
Artesia, NM 88210

RE: Application For Authorization To Inject
East Owl 8 Federal SWD #1
Township 26 South, Range 27 East, N.M.P.M.
Section 8: 1780' FSL & 1980' FEL
Eddy County, New Mexico

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Sincerely,

A handwritten signature in black ink, appearing to read "Brian Collins".

Brian Collins
Senior Operations Engineer

BC/bg
Enclosures



March 25, 2013

OXY-Y-1 Company
P O Box 27570
Houston, TX 77227-7570

RE: Application For Authorization To Inject
East Owl 8 Federal SWD #1
Township 26 South, Range 27 East, N.M.P.M.
Section 8: 1780' FSL & 1980' FEL
Eddy County, New Mexico

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Sincerely,

A handwritten signature in black ink, appearing to read "Brian Collins".

Brian Collins
Senior Operations Engineer

BC/bg
Enclosures



March 25, 2013

Chevron USA, Inc.
P O Box 2100
Houston, TX 77252

RE: Application For Authorization To Inject
East Owl 8 Federal SWD #1
Township 26 South, Range 27 East, N.M.P.M.
Section 8: 1780' FSL & 1980' FEL
Eddy County, New Mexico

To Whom It May Concern:

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Sincerely,

A handwritten signature in black ink, appearing to read "Brian Collins".

Brian Collins
Senior Operations Engineer

BC/bg
Enclosures



March 25, 2013

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

RE: Application For Authorization To Inject
East Owl 8 Federal SWD #1
Township 26 South, Range 27 East, N.M.P.M.
Section 8: 1780' FSL & 1980' FEL
Eddy County, New Mexico

Dear Mr. Ezeanyim:

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, I will send you a copy.

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

Sincerely,

Brian Collins
Senior Operations Engineer

BC/bg
Enclosures

RECEIVED OOD
2013 MAR 28 P 2:22

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- 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:

NM Oil Conservation Division
Attn: Richard Ezeanyim
1220 South St. Francis Drive
Santa Fe, NM 87505

2. Article Number
(Transfer from service label) 7012 2210 0001 7109 1459

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X *[Signature]* Agent Addressee

B. Received by (Printed Name) *Heather Miller* C. Date of Delivery *3/28/13*

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

MAR 28 2013
CORONADO STATION

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- 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:

Bureau of Land Management
New Mexico State Office
620 E. Greene Street
Carlsbad, NM 88220

2. Article Number
(Transfer from service label) 7012 2210 0001 7109 1466

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X *[Signature]* Agent Addressee

B. Received by (Printed Name) *Spencer Family* C. Date of Delivery *3/28/13*

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

MAR 28 2013

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- 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:

ABO PETROLEUM CORPORATION
105 S FOURTH ST
ARTESIA NM 88210

2. Article Number
(Transfer from service label) 7011 1570 0000 7781 4872

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X *[Signature]* Agent Addressee

B. Received by (Printed Name) *Underwood* C. Date of Delivery *3-28-13*

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

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- 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:

**CHESAPEAKE EXPLORATION LP
6100 NORTH WESTERN AVE
P O BOX 18496
OKLAHOMA CITY OK 73118**

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 4889

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X RECEIVED

- Agent
- Addressee

B. Received by (Printed Name)

APR 01 2013

C. Date of Delivery

D. Is delivery address different from item 1?

If YES, enter delivery address below:

- Yes
- No

MAILROOM 17

3. Service Type

- Certified Mail
- Registered
- Insured Mail
- Express Mail
- Return Receipt for Merchandise
- C.O.D.

4. Restricted Delivery? (Extra Fee)

- Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- 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:

**CHEVRON USA INC
ATTN SANDY STEDMAN-DANIEL
P O BOX 2100
HOUSTON TX 77252**

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 4896

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

Sandy Stedman-Daniel

- Agent
- Addressee

B. Received by (Printed Name)

Sandy Stedman-Daniel

C. Date of Delivery

4-1-13

D. Is delivery address different from item 1?

If YES, enter delivery address below:

- Yes
- No

3. Service Type

- Certified Mail
- Registered
- Insured Mail
- Express Mail
- Return Receipt for Merchandise
- C.O.D.

4. Restricted Delivery? (Extra Fee)

- Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- 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:

**MYCO INDUSTRIES INC
105 S FOURTH ST
ARTESIA NM 88210**

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 4902

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

Andrew Wood

- Agent
- Addressee

B. Received by (Printed Name)

Andrew Wood

C. Date of Delivery

3-28-13

D. Is delivery address different from item 1?

If YES, enter delivery address below:

- Yes
- No

3. Service Type

- Certified Mail
- Registered
- Insured Mail
- Express Mail
- Return Receipt for Merchandise
- C.O.D.

4. Restricted Delivery? (Extra Fee)

- Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- 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-1 COMPANY
P O BOX 27570
HOUSTON TX 77227-7570**

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 4919

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

[Handwritten Signature]

Agent

Addressee

B. Received by (Printed Name)

C. Date of Delivery

4-2-13

D. Is delivery address different from item 1? Yes

If YES, enter delivery address below: No

3. Service Type

Certified Mail

Express Mail

Registered

Return Receipt for Merchandise

Insured Mail

C.O.D.

4. Restricted Delivery? (Extra Fee)

Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- 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:

**YATES PETROLEUM CORPORATION
105 S 4TH ST
ARTESIA NM 88210**

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 4926

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

[Handwritten Signature]

Agent

Addressee

B. Received by (Printed Name)

C. Date of Delivery

4-2-13

D. Is delivery address different from item 1? Yes

If YES, enter delivery address below: No

3. Service Type

Certified Mail

Express Mail

Registered

Return Receipt for Merchandise

Insured Mail

C.O.D.

4. Restricted Delivery? (Extra Fee)

Yes

Injection Permit Checklist: Received 04/01/13 First Email Date: — Final Reply Date: 05/08/13 Final Notice Date: —

Issued Permit: Type: WFX / PMX / SWD Number: 1415 Permit Date: 06/08/13 Legacy Permits or Orders: NA

Well No. 1 Well Name(s): East Owl 8 Federal SWD (Armey Federal X Com #1)

API: 30-015-24327 Spud Date: — New/Old: X (UIC CI II Primacy March 7, 1982)

Footages 1780 FSL / 1980 FEL Lot - Unit J Sec 8 Tsp 26 S Rge 27 E County Eddy

General Location: Hay Hollow - 11 mi west of 205 near TX border Pool: — Pool No.: NA

Operator: COG operating LLC OGRID: 290631 Contact: Brian Collins

COMPLIANCE RULE 5.9: Inactive Wells: 10 Total Wells: 3471 Fincl Assur: Yes Compl. Order? No IS 5.9 OK? Yes

Well File Reviewed: Current Status: P&A TD at 12,900'; perfs in Devonian squeezed on P&A

Planned Rehab Work to Well: Drill through plugs/deepen to 14800; add liner from 8750-13500

Well Diagrams: Proposed NA Before Conversion After Conversion Are Elogs in Imaging?: Yes/not for deepened well

Well Construction Details:	Sizes (In) Borehole / Pipe	Setting Depths (ft)	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> <u>Cond</u>	<u>20 16</u>	<u>0-349</u>	<u>—</u>	<u>475</u>	<u>Cir to Sur</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> <u>Surface</u>	<u>14 3/4 10 3/4</u>	<u>0-1967</u>	<u>—</u>	<u>1325</u>	<u>Cir to Sur</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> <u>Interm</u>	<u>9 1/2 7 5/8</u>	<u>1408-9000</u>	<u>—</u>	<u>2085</u>	<u>1000/Temp Log</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> <u>LongSt</u>	<u>Prior to deepening</u>	<u>Tieback</u>	<u>7 5/8 to surface</u>	<u>Circ</u>	<u>0</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> <u>Liner</u>	<u>6 1/2 5 1/2</u>	<u>8750-13500</u>	<u>—</u>	<u>—</u>	<u>8750-Calc</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> <u>OH/PERF</u>	<u>6 1/2</u>	<u>13500 to 14800</u>	<u>—</u>	<u>—</u>	<u>—</u>

Completion/Ops Details:

Final Drilled TD 14,800 PBSD NA

Open Hole or Perfs —

Tubing Size 4.500 Inter Coated? Yes

Proposed Packer Depth 13450

Max Packer Depth 13300 (100-ft limit)

Proposed Max. Surface Press 2700

Calc. Injt Press 2700 (0.2 psi per ft)

Calc. FPP — (0.65 psi per ft)

Injection Formation(s):

Depths (ft)	Formation	Tops?
Above Top of Inject Formation <u>~ 2000'</u>	<u>Morrow-TP</u>	<u>11980</u>
Above Top of Inject Formation <u>~ 800</u>	<u>Barnett-Mrs 12716</u>	<u>12716</u>
Proposed Interval TOP: <u>13500</u>	<u>Devonian</u>	<u>13500</u>
Proposed Interval BOTTOM: <u>14800</u>	<u>Ordovician</u>	<u>UNK</u>
Below Bottom of Inject Formation <u>UNK</u>	<u>Ordovician</u>	<u>UNK</u>
Below Bottom of Inject Formation <u>—</u>	<u>—</u>	<u>—</u>

AOR: Hydrologic and Geologic Information

CAPITAN REEF: in N thru POTASH Noticed? N [WIPP N Noticed? N] SALADO Top — Bot — CLIFF HOUSE NA

Fresh Water: Max Depth: 250' FW Formation Quat Wells? 3 with analysis? Yes Hydrologic Affirm Statement Yes

Disposal Fluid: Formation Source(s) Delaware, Bone Spring mile - one PA/not correct X On Lease — Only from Operator X or Commercial —

Disposal Interval: Protectable Waters? No H/C Potential: Log No /Mudlog — DST — /Tested — /Depleted — /Other —

AOR Wells: 1/2-M Radius Map? Well List? Producing in Interval? NA Formerly Produced in Interval? NA

Penetrating Wells: No. Active Wells 0 Num Repairs? 0 on which well(s)? — Diagrams? —

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

NOTICE: Newspaper Date March 13 Mineral Owner BLM Surface Owner BLM N. Date 03/25/13

RULE 26.7(A): Identified Tracts? — Affected Persons: Need final affidavit / Abo / Chesapeake / Myco N. Date 03/25/13

Permit Conditions: None identified. Chevron USA

Issues: —