

62/07/2018  
 RECEIVED: 02/06/2018 REVIEWER: PNC TYPE: SWD APP NO: PMAM1803838008

ABOVE THIS TABLE FOR OGD 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:** Cobra Oil & Gas Corp. **OGRID Number:** 147404  
**Well Name:** State Wishbone SWD #1 **API:** not yet assigned  
**Pool:** SWD; Devonian **Pool Code:** 96101

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

1) **TYPE OF APPLICATION:** Check those which apply for [A]

A. Location - Spacing Unit - Simultaneous Dedication

☐ NSL ☐ NSP (PROTECT AREA) ☐ NSP (PRODUCTION 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

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

**FOR OCD ONLY**

☐ Notice Complete

☐ Application  
Content  
Complete

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.

Kyle Gardner

Print or Type Name

*Kyle Gardner*

Signature

2/5/18  
Date

940-718-5100

Phone Number

kgardner@cobraogc.com

e-mail Address

**MELANIE J WILSON**  
**NM OIL & GAS REGULATORY SERVICES**  
**106 W RIVERSIDE DRIVE**  
**CARLSBAD, NM 88220**  
**575-914-1461**

FEB 06 2018 AM 10:46

February 5, 2018

Delivered via Federal Express  
Tracking No. 771407951974

Oil Conservation Division  
Attn: Mr. Phillip Geotze  
1220 S Saint Francis Drive  
Santa Fe, New Mexico 87505

Re: Cobra Oil & Gas Corp.  
C-108 Application for Authorization to Inject  
State Wishbone SWD #1  
API No. pending  
1672' FSL & 476' FWL  
Section 1, T11S, R31E  
Chaves County, New Mexico

Dear Mr. Goetze,

Cobra Oil & Gas Corp respectfully requests administrative approval for authorization to inject for the above referenced well. Enclosed for your review, please find the C-108 Application for Authorization to Inject along with proof of delivery for required notifications and an Affidavit of Publication for the legal notice.

If you have questions regarding this application, please contact me at 575-914-1461 or by email at [mjp1692@gmail.com](mailto:mjp1692@gmail.com). If you have technical questions, please contact Kyle Gardner by email at [kgardner@cobraogc.com](mailto:kgardner@cobraogc.com) or by phone at 940-716-5100


Sincerely,



Melanie J. Wilson  
for Cobra Oil & Gas Corp.

Enclosures

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance ☒ Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? ☒ Yes \_\_\_\_\_ No
- II. OPERATOR: Cobra Oil & Gas Corp.  
ADDRESS: PO Box 8206, Wichita Falls, TX 76307  
CONTACT PARTY: Kyle Gardner kgardner@cobraogc.com PHONE: 940-716-5100
- 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: Kyle Gardner TITLE: Operations Engineer  
SIGNATURE:  DATE: 1/31/18  
E-MAIL ADDRESS: kgardner@cobraogc.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: \_\_\_\_\_



Application For Authorization To Inject

(C-108 Checklist)

- I. Purpose: Disposal
- II. Operator: Cobra Oil & Gas Corp.  
Address: P.O. Box 8206 Wichita Falls, TX 76307  
Contact Party: Kyle Gardner Phone: 940-716-5100
- III. Well Data:
  - a. Please see Wellbore diagram & Well Data sheet attachments.
  - b. 1.) Injection formation: Devonian. Pool name: SWD, Devonian. Pool code: 96101  
2.) The injection interval will be open hole Devonian from 11,616' -11,800' (base of Devonian)  
3.) Well will be drilled for injection.  
4.) N/A  
5.) Next higher oil/gas zone: Morrow. Next lower oil/gas zone: N/A
- IV. Is this an expansion of an existing project? NO
- V. Attached is a map that identifies all the wells & leases within 2 miles of any proposed injection well with a ½ mile radius circle drawn around each proposed injection well.
- VI. No well penetrated the injection zone in the review area.
- VII. Data on the proposed operation:
  - 1. The average daily rate and max daily rate to be injected are 1500 bwpd and 15,000 bwpd, respectfully. Total volume to be injected is estimated to be 20,000,000 bbls of produced water.
  - 2. The system will be closed.
  - 3. The proposed average and maximum injection pressures are 700 psi and <sup>2323</sup>2225 psi, respectfully.
  - 4. N/A
  - 5. Injected water will be that produced from the San Andres formation. San Andres water analysis attached.
- VIII. The injection zone's lithology is dolomite. The geologic name is the Devonian. The Devonian in this well is approximately 184' thick. The Devonian top is approximately 11,616'. The geologic name and depth of all underground drinking water overlaying the injection interval is unknown to Cobra Oil & Gas Corp.
- IX. The injection interval will be stimulated with 5000 gals of 15% HCl.
- X. This well will be a new drill. Electric logs will be submitted after the well is completed.
- XI. Cobra Oil & Gas Corp. is unable to obtain a chemical analysis of fresh water from 2 or more wells within 1 mile of the disposal well.
- XII. Affirmative Statement attached.
- XIII. Notice list attached along with proof of delivery of notification to surface owner and leasehold operator within one-half mile of proposed well location  
Proof of publication in Roswell Daily Record is attached.

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1287 Fax: (575) 748-9720

DISTRICT III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 96101	Pool Name SWD; Devonian
Property Code	Property Name STATE WISHBONE SWD	Well Number 1
OGRID No 147404	Operator Name COBRA OIL & GAS CORPORATION	Elevation 4503'

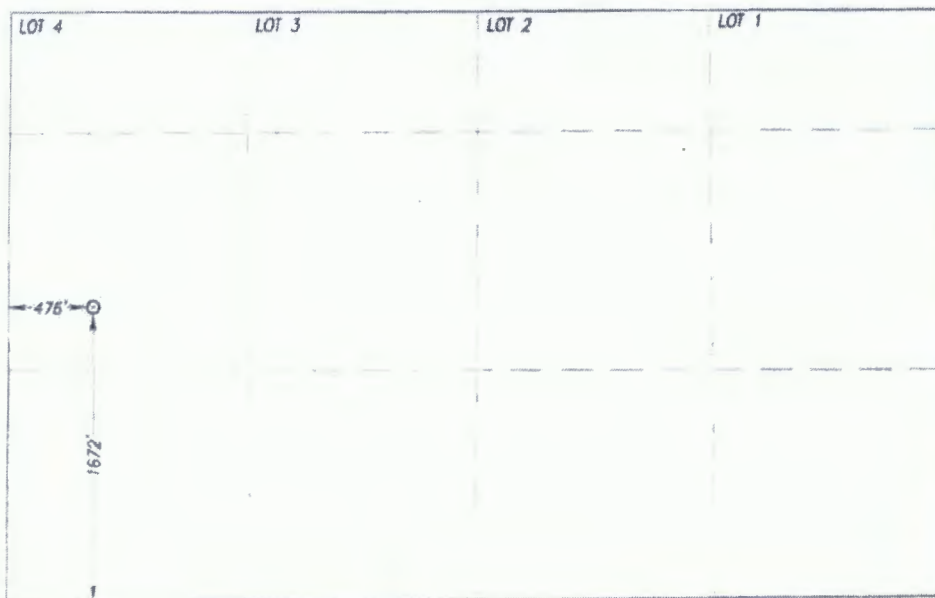
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	1	11-S	31-E		1672	SOUTH	476	WEST	CHAVES

Bottom Hole Location If Different From Surface

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

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



GEODETIC COORDINATES  
NAD 27 NME  
SURFACE LOCATION  
Y=870096.0 N  
X=668408.7 E  
LAT.=33.390573° N  
LONG.=103.781584° W

GEODETIC COORDINATES  
NAD 83 NME  
SURFACE LOCATION  
Y=870161.8 N  
X=709586.2 E  
LAT.=33.390779° N  
LONG.=103.782096° W

OPERATOR CERTIFICATION

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

*Kyle Gardner* 01/31/2018  
Signature Date

Kyle Gardner

Printed Name

kgardner@cobraogc.com

E-mail Address

SURVEYOR CERTIFICATION

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

DECEMBER 11, 2017

Date of Survey  
Signature & Seal of Professional Surveyor

*Ronald J. Eidson*  
NEW MEXICO  
3239  
31/11/2017

Certificate Number  
Gary O. Eidson 12641  
Ronald J. Eidson 3239

ACK JWS: W.O. 17 11 1143



# COBRA OIL & GAS CORP.

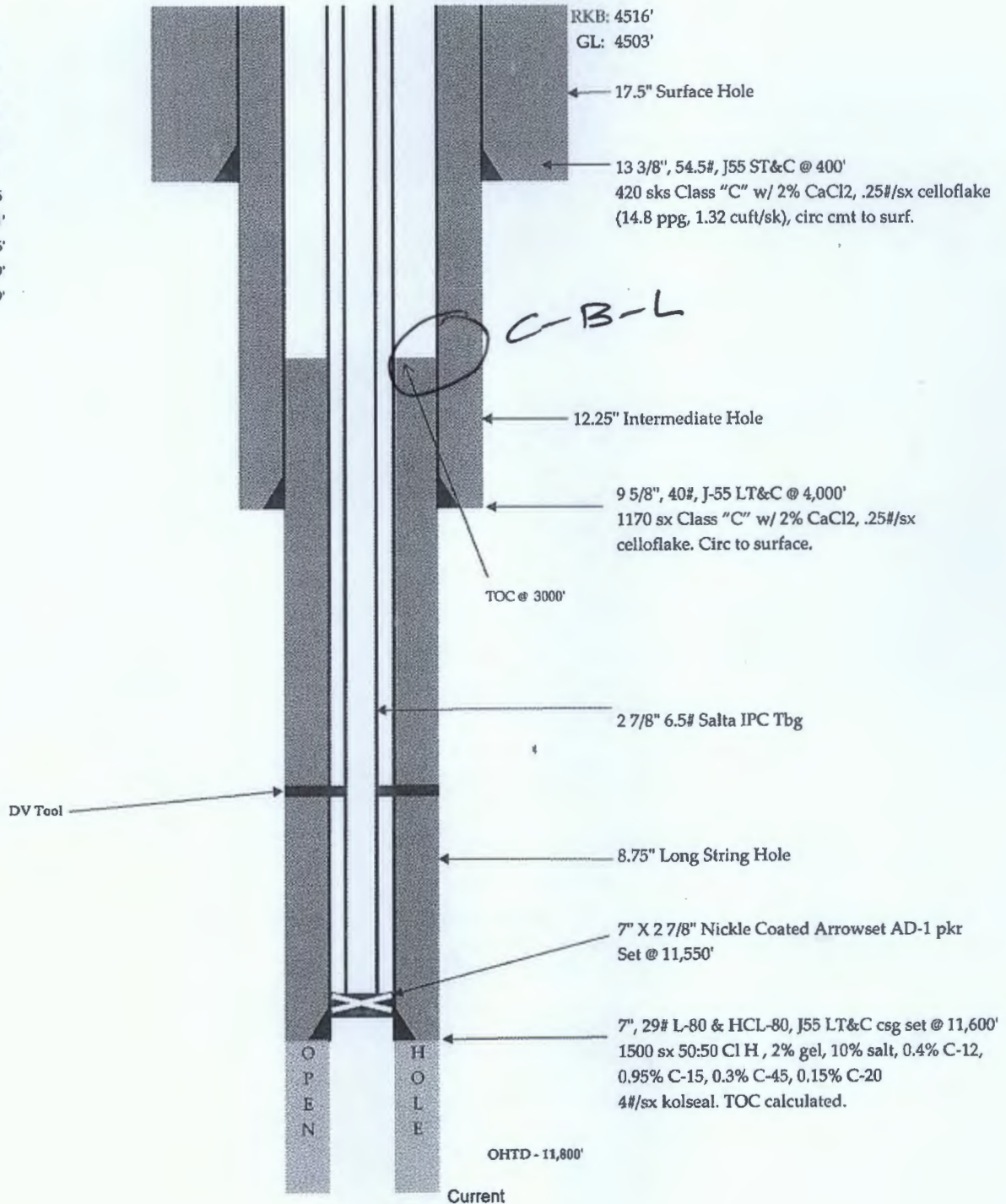
## State Wishbone SWD #1

### Chaves County, New Mexico

1672' FSL, 476' FWL of Sec. 1, T-11-S, R-31-E

#### Geologic Tops:

Rustler	1,568'
Salado Salt	1,640'
Yates	2,258'
San Andres	3,516'
SA D Marker	4,048'
Canyon	9,320'
Atoka	10,296'
Morrow	10,711'
Devonian	11,616'
Pusselman	11,829'
Montoya	12,039'



Proposed well bore diagram  
Amended 02/28/2018

# III. A.

## INJECTION WELL DATA SHEET

Side 1

OPERATOR: Cobra Oil & Gas Corp.

WELL NAME & NUMBER: State Wishbone SWD #1

WELL LOCATION: 1672' FSL & 476' FWL  
FOOTAGE LOCATION

UNIT LETTER L SECTION 1 TOWNSHIP 11S RANGE 31E

### WELLBORE SCHEMATIC

### WELL CONSTRUCTION DATA Surface Casing

Hole Size: 17 1/2" Casing Size: 13 3/8" 54.5# J55 ST&C @ 400'  
Cemented with: 420 sx. or ft<sup>3</sup>  
Top of Cement: Surface Method Determined: Circulate

### Intermediate Casing

Hole Size: 12 1/4" Casing Size: 9 5/8" 40# J55 LT&C @ 4000'  
Cemented with: 1170 sx. or ft<sup>3</sup>  
Top of Cement: Surface Method Determined: Circulate

### Production Casing

Hole Size: 8 3/4" Casing Size: 7" 29# L80 & HCL80, J55 LT&C @ 11600'  
Cemented with: 1500 sx. or ft<sup>3</sup>  
Top of Cement: 3000' Method Determined: Calculated  
Total Depth: 11,800'

### Injection Interval

11,616 feet to 11,800' Open Hole (6")

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 2 7/8" 6.5# Lining Material: Salta IPCType of Packer: 7" x 2 7/8" Nickle Coated Arrowset AD-1Packer Setting Depth: 11,550'

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

III. B.Additional Data

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

If no, for what purpose was the well originally drilled? \_\_\_\_\_

2. Name of the Injection Formation: Devonian3. Name of Field or Pool (if applicable): SWD; Devonian (96101)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. N/A5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Next higher oil/gas zone: Morrow Next lower oil/gas zone: N/A



**McMillan, Michael, EMNRD**

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**From:** Kyle Gardner <kgardner@cobraogc.com>  
**Sent:** Tuesday, February 27, 2018 4:57 PM  
**To:** Kyle Gardner  
**Subject:** Cobra Oil & Gas Corporation - State Wishbone SWD #1 - Lower Paleozoic Geology

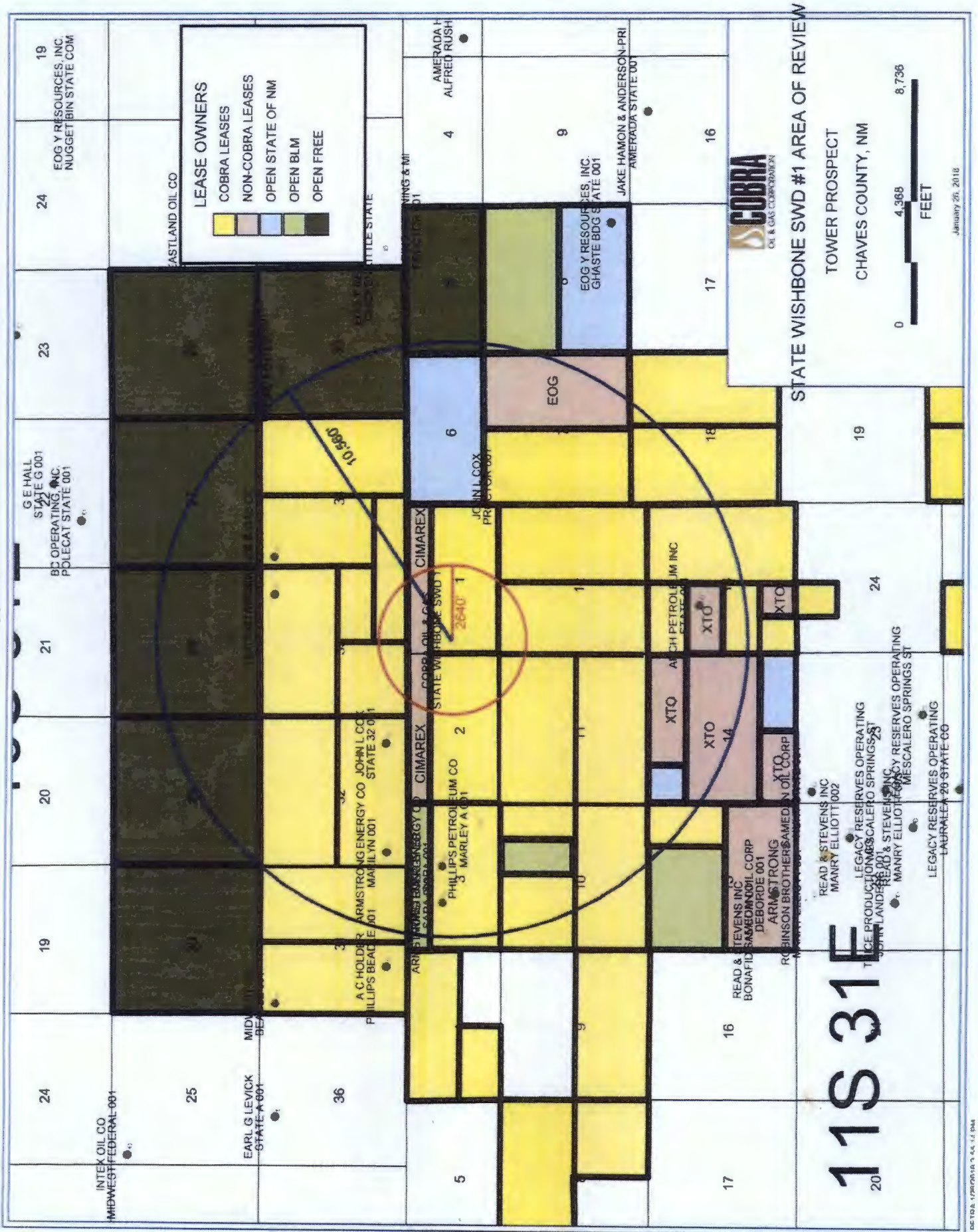
Projected deeper Paleozoic geological formation tops at the Cobra - State Wishbone SWD #1 location are based upon formation tops from the Phillips Petroleum Co. – James A#1 well located in Sec.34, T11S, R31E, the deepest well with logs that penetrates basement in the immediate area. The Devonian top in the Phillips - James A#1 is at a depth of 11632', the Silurian Fusselman at a depth of 11843', the Silurian Montoya at a depth of 12055' and basement at a depth of 12247'. The Cobra - State Wishbone SWD #1 projects the top of the Devonian at a depth of well of 11,616'. As evidenced in the James A#1, the thickness between the Devonian and Fusselman is 211' and Devonian to basement being 615'. With the Cobra – State Wishbone SWD #1 reaching a total depth of 11800 in the Devonian, the projected basement at this location would be at a depth of 12415' and not penetrating the Fusselman, Montoya or basement.

Respectfully submitted,

**Craig Reynolds**  
*Exploration Manager*



V.





**DownHole SAT Rx**  
**SURFACE WATER CHEMISTRY INPUT**

Rockcliff

Sec 18-9S-39E

K2 1H

Chaves Co., NM

Fm: San Andres

Report Date: 07-11-2017

Sampled: 06-28-2017  
at 0826**CATIONS**

Calcium (as Ca)	4742
Magnesium (as Mg)	2423
Barium (as Ba)	0.00
Strontium (as Sr)	109.00
Sodium (as Na)	66694
Potassium (as K)	615.00
Iron (as Fe)	57.00
Manganese (as Mn)	2.70

**ANIONS**

Chloride (as Cl)	117560
Sulfate (as SO <sub>4</sub> )	3770
Bromine (as Br)	119.00
Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	650.00
Bicarbonate (as HCO <sub>3</sub> )	647.00
H <sub>2</sub> S (as H <sub>2</sub> S)	103.00

**PARAMETERS**

Calculated T.D.S.	189340
Molar Conductivity	298055
Resistivity	3.36
Sp.Gr.(g/mL)	1.15
Pressure(bars)	1.00
pH	7.00

*R<sub>w</sub>e<sub>100</sub> = 0.035***FRENCH CREEK SOFTWARE, INC.**  
**1220 VALLEY FORGE ROAD, BUILDING 21, VALLEY FORGE, PA 19460**





**DownHole SAT Rx**  
**SURFACE WATER**  
**DEPOSITION POTENTIAL INDICATORS**

Rockcliff

K2 1H

Report Date: 07-11-2017    Sampled: 06-28-2017  
at 0826

**SATURATION LEVEL**

Calcite (CaCO <sub>3</sub> )	8.31
Aragonite (CaCO <sub>3</sub> )	7.24
Witherite (BaCO <sub>3</sub> )	0.00
Strontianite (SrCO <sub>3</sub> )	0.210
Calcium oxalate (CaC <sub>2</sub> O <sub>4</sub> )	0.00
Magnesite (MgCO <sub>3</sub> )	4.80
Anhydrite (CaSO <sub>4</sub> )	1.13
Gypsum (CaSO <sub>4</sub> *2H <sub>2</sub> O)	1.48
Barite (BaSO <sub>4</sub> )	0.00
Celestite (SrSO <sub>4</sub> )	0.673
Fluorite (CaF <sub>2</sub> )	0.00
Calcium phosphate	0.00
Hydroxyapatite	0.00
Silica (SiO <sub>2</sub> )	0.00
Brucite (Mg(OH) <sub>2</sub> )	< 0.001
Magnesium silicate	0.00
Iron hydroxide (Fe(OH) <sub>3</sub> )	< 0.001
Strengite (FePO <sub>4</sub> *2H <sub>2</sub> O)	0.00
Siderite (FeCO <sub>3</sub> )	61.88
Halite (NaCl)	0.140
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	< 0.001
Iron sulfide (FeS)	656.06

**MOMENTARY EXCESS (Lbs/1000 Barrels)**

Calcite (CaCO <sub>3</sub> )	0.0674
Aragonite (CaCO <sub>3</sub> )	0.0644
Witherite (BaCO <sub>3</sub> )	-29.16
Strontianite (SrCO <sub>3</sub> )	-1.05
Calcium oxalate (CaC <sub>2</sub> O <sub>4</sub> )	-0.0132
Magnesite (MgCO <sub>3</sub> )	0.0547
Anhydrite (CaSO <sub>4</sub> )	100.62
Gypsum (CaSO <sub>4</sub> *2H <sub>2</sub> O)	126.05
Barite (BaSO <sub>4</sub> )	-0.248
Celestite (SrSO <sub>4</sub> )	-45.46
Fluorite (CaF <sub>2</sub> )	-4.21
Calcium phosphate	>-0.001
Hydroxyapatite	-404.28
Silica (SiO <sub>2</sub> )	-61.75
Brucite (Mg(OH) <sub>2</sub> )	0.00709
Magnesium silicate	-128.65
Iron hydroxide (Fe(OH) <sub>3</sub> )	< 0.001
Strengite (FePO <sub>4</sub> *2H <sub>2</sub> O)	>-0.001
Siderite (FeCO <sub>3</sub> )	0.0948
Halite (NaCl)	-117669
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	-89307
Iron sulfide (FeS)	4.19

**SIMPLE INDICES**

Langelier	1.60
Ryznar	3.80
Puckorius	2.38
Larson-Skold Index	328.57
Stiff Davis Index	1.32
Oddo-Tomson	0.454

**BOUND IONS**

Calcium	4742
Barium	0.00
Carbonate	65.74
Phosphate	0.00
Sulfate	3770

**TOTAL**

**FREE**

**OPERATING CONDITIONS**

Temperature (°F)	77.00
Time(mins)	3.00

**FRENCH CREEK SOFTWARE, INC.**  
**1220 VALLEY FORGE ROAD, BUILDING 21, VALLEY FORGE, PA 19460**

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

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

Revised August 1, 2011  
 Submit one copy to appropriate  
 District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

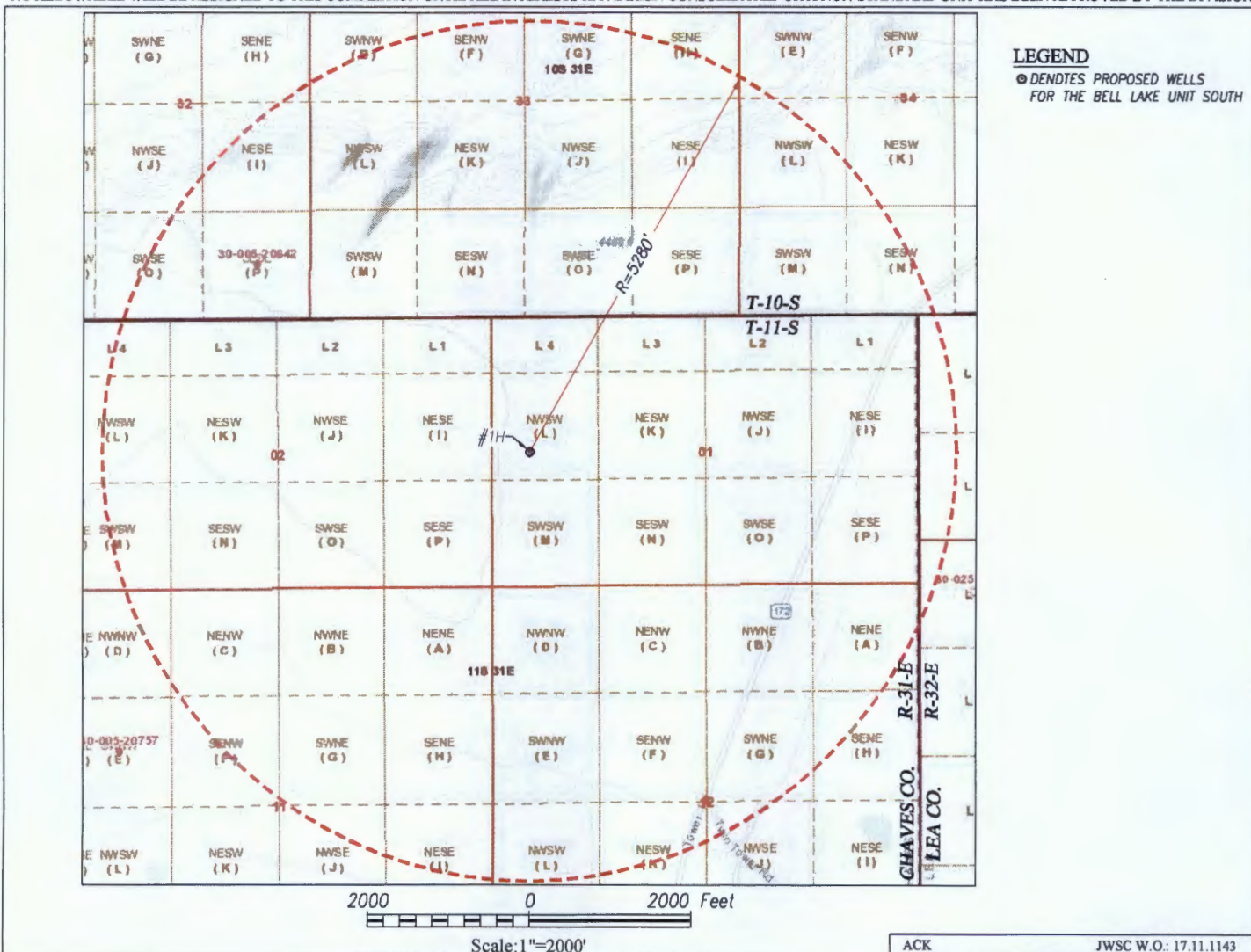
API Number		Pool Code		Pool Name	
Property Code		Property Name <b>STATE WISHBONE SWD</b>			Well Number <b>1</b>
OGRID No.		Operator Name <b>COBRA OIL &amp; GAS CORPORATION</b>			Elevation <b>4503'</b>

Surface Location									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>L</b>	<b>1</b>	<b>11-S</b>	<b>31-E</b>		<b>1672</b>	<b>SOUTH</b>	<b>476</b>	<b>WEST</b>	<b>CHAVES</b>

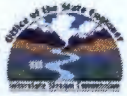
Bottom Hole Location If Different From Surface									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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







## 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	Code	Sub-basin	County	Q 6	Q 4	Q 1	Q 2	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	Water Column
<a href="#">L_03093</a>		L	LE	4	1	4	12	11S	31E		614254	3693674*	330	130	200
<a href="#">L_10134</a>		L	LE	4	2	2	02	11S	31E				147	93	54

Average Depth to Water: 111 feet

Minimum Depth: 93 feet

Maximum Depth: 130 feet

**Record Count:** 2

**PLSS Search:**

**Section(s):** 1, 2, 11, 12    **Township:** 11S    **Range:** 31E

\*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.

1/30/18 1:14 PM

WATER COLUMN/ AVERAGE DEPTH  
TO WATER

POD Number L 03093, Section 12-T11S-R31E - is outside of the one-mile radius

POD Number L 10134, Section 2-T11S-R31E - According to the surface owner, this well has been plugged and abandoned for many years.

Cobra Oil & Gas Corp. is unable to obtain a chemical analysis of any fresh water within a one-mile radius of the proposed SWD well.





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

---

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

No records found.

**PLSS Search:**

**Section(s):** 35, 36

**Township:** 10S

**Range:** 31E

---

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.

---

1/30/18 1:16 PM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



---

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

---

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

No records found.

**PLSS Search:**

**Section(s):** 6

**Township:** 11S

**Range:** 32E

---

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.

---

1/30/18 1:16 PM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

January 29, 2018

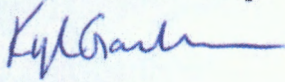
Re: Application for Authorization to Inject (Form C-108)  
State Wishbone SWD #1  
Sec. 1, T11s, R31E  
Chaves County, New Mexico

To Whom It May Concern:

All available geologic and engineering sources of data were reviewed. There is no apparent connectivity between the proposed disposal interval and any existing sources of drinking water.

Regards,

Cobra Oil & Gas Corp.

A handwritten signature in blue ink, appearing to read "Kyle Gardner", with a long horizontal flourish extending to the right.

Kyle Gardner  
Operations Engineer



## NOTICE LIST

### Surface Owner

Robert W. Marley  
Rt. 2, 45 W. Crossroads,  
Roswell, NM 88203

### Offset Operators Within ½ Mile Radius

Cimarex Energy Company (Attn: Cody Elliott)  
600 N. Marienfeld St. Suite 600  
Midland, TX 79701



# Your package has been delivered

Tracking # 771380308522

Ship date:

**Thu, 2/1/2018**

**Melanie Wilson**

CARLSBAD, NM 88220

US



Delivered

Delivery date:

**Fri, 2/2/2018 10:35 am**

**Cody Elliott**

Cimarex Energy Company

600 N Marienfeld St., Suite 600


MIDLAND, TX 79701

US

## Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	<a href="#">771380308522</a>
Status:	Delivered: 02/02/2018 10:35 AM Signed for By: S.GARCIA
Signed for by:	S.GARCIA
Delivery location:	MIDLAND, TX
Delivered to:	Receptionist/Front Desk
Service type:	FedEx Standard Overnight
Packaging type:	FedEx Envelope
Number of pieces:	1
Weight:	0.00 lb.
Special handling/Services:	Deliver Weekday
Standard transit:	2/2/2018 by 3:00 pm

 Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 10:39 AM CST on 02/02/2018.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date and time the package is scheduled to be delivered by, based on the selected service, destination and ship date. Limitations and exceptions may apply. Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

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Thank you for your business.



# Your package has been delivered

Tracking # 771380273502

Ship date:

Thu, 2/1/2018

Melanie Wilson

CARLSBAD, NM 88220

US



Delivery date:

Fri, 2/2/2018 10:21 am

Robert W. Marley

45 W CROSSROADS

ROSWELL, NM 88203

US

## Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	<a href="#">771380273502</a>
Status:	Delivered: 02/02/2018 10:21 AM Signed for By: J.LEE
Signed for by:	J.LEE
Delivery location:	ROSWELL, NM
Delivered to:	Receptionist/Front Desk
Service type:	FedEx Standard Overnight
Packaging type:	FedEx Envelope
Number of pieces:	1
Weight:	0.00 lb.
Special handling/Services:	Deliver Weekday
Standard transit:	2/2/2018 by 3:00 pm

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 11:24 AM CST on 02/02/2018.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date and time the package is scheduled to be delivered by, based on the selected service, destination and ship date. Limitations and exceptions may apply. Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

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Thank you for your business.



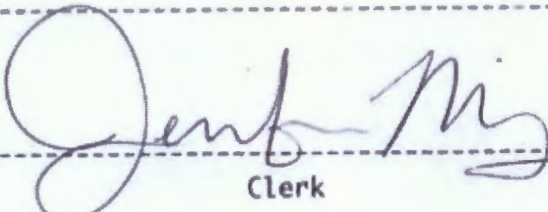
AFFIDAVIT OF PUBLICATION  
STATE OF NEW MEXICO

I, Jenny Martinez  
Legals Clerk

Of the Roswell Daily Record, a daily newspaper published at Roswell, New Mexico do solemnly swear that the clipping hereto attached was published in the regular and entire issue of said paper and not in a supplement thereof for a period of:

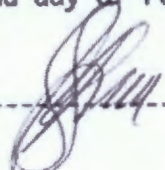
One time with the issue dated

February 2nd, 2018

-----  
  
-----  
Clerk

Sworn and subscribed to before me

this 2nd day of February, 2018

-----  
  
-----  
Notary Public

My Commission expires

June 13th, 2018

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*Legal Notice...*

Publish February 2, 2018

Cobra Oil & Gas Corp. is seeking administrative approval from the New Mexico Oil Conservation Division to drill the State Wishbone SWD No. 1 well, API number pending, located 1672' FSL and 476' FWL of Section 1, T11S, R31E, Chaves County, New Mexico, approximately 3 miles west of Caprock, NM for produced water disposal. The proposed disposal interval is open-hole Devonian from approximately 11,616 to 11,800 feet with a maximum rate of 15,000 BWPD and a maximum pressure of (5700 ps). Parties with questions regarding this proposal should contact Kyle Gardner at PO Box 8206, Wichita Falls, TX 76307, phone 940-716-5100, email [kgardner@cobraogc.com](mailto:kgardner@cobraogc.com). Parties must file objections or requests for hearing within 15 days to the New Mexico Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, NM 87505.

**MELANIE J WILSON**  
**NM OIL & GAS REGULATORY SERVICES**  
**106 W RIVERSIDE DRIVE**  
**CARLSBAD, NM 88220**  
**575-914-1461**

February 1, 2018

Delivered via Federal Express  
Tracking No. 771380308522

Cimarex Energy Company  
Attention: Cody Elliott  
600 N. Marienfeld St., Suite 600  
Midland, TX 79701

Re: Cobra Oil & Gas Corp.  
C-108 Application for Authorization to Inject  
State Wishbone SWD #1  
API No. pending  
1672' FSL & 476' FWL  
Section 1, T11S, R31E  
Chaves County, New Mexico

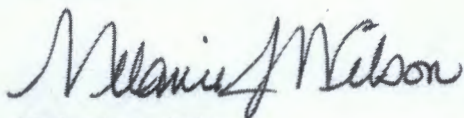
Dear Mr. Elliott,

This letter is being sent to you as notice under OCD Rule 19.15.26.8 that Cobra Oil & Gas Corp has applied for a permit from the NM Oil Conservation Division in Santa Fe, NM for a new salt water disposal well at the above referenced location.

Enclosed please find Cobra Oil & Gas Corp.'s Application for Authorization to Inject for the State Wishbone SWD #1. You are being sent a copy of this application per OCD's requirement to notify offset operators. If you have any objection to this application, notification should be given to OCD within 15 days of receipt of this letter.

If you have questions regarding this application, please contact Kyle Gardner by email at [kgardner@cobraogc.com](mailto:kgardner@cobraogc.com) or by phone at 940-716-5100

Sincerely,



Melanie J. Wilson  
for Cobra Oil & Gas Corp.

Enclosures



**MELANIE J WILSON**  
**NM OIL & GAS REGULATORY SERVICES**  
**106 W RIVERSIDE DRIVE**  
**CARLSBAD, NM 88220**  
**575-914-1461**

February 1, 2018

Delivered via Federal Express  
Tracking No. 771380273502

Robert W. Marley  
Rt. 2, 45 W. Crossroads  
Roswell, New Mexico 88203

Re: Cobra Oil & Gas Corp.  
C-108 Application for Authorization to Inject  
State Wishbone SWD #1  
API No. pending  
1672' FSL & 476' FWL  
Section 1, T11S, R31E  
Chaves County, New Mexico

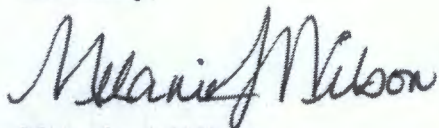
Dear Mr. Marley,

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Enclosed please find Cobra Oil & Gas Corp.'s Application for Authorization to Inject for the State Wishbone SWD #1. You are being sent a copy of this application per OCD's requirement to notify the owner of the surface estate on which the well is proposed. If you have any objection to this application, notification should be given to OCD within 15 days of receipt of this letter.

If you have questions regarding this application, please contact Kyle Gardner by email at [kgardner@cobraogc.com](mailto:kgardner@cobraogc.com) or by phone at 940-716-5100

Sincerely,



Melanie J. Wilson  
for Cobra Oil & Gas Corp.

Enclosures



# STATE ENGINEER OFFICE

## WELL RECORD

### Section 1. GENERAL INFORMATION

(A) Owner of well NM State Hwy. 2 Trans. Dept.  
 Street or Post Office Address P.O. Box 1149  
 City and State Santa Fe, NM 87502  
 Well was drilled under Permit No. L-10, 134 and is located in the:  
 a. S 1/2 E 1/4 NE 1/4 of Section 2 Township 11S Range 31E N.M.P.M.  
 b. Tract No. \_\_\_\_\_ of Map No. \_\_\_\_\_ of the \_\_\_\_\_  
 c. Lot No. \_\_\_\_\_ of Block No. \_\_\_\_\_ of the \_\_\_\_\_  
 d. X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N.M. Coordinate System \_\_\_\_\_  
 Zone in \_\_\_\_\_ the \_\_\_\_\_  
 Grant. \_\_\_\_\_

(B) Drilling Contractor Materials Laboratory (SHU) License No. WD-319  
 Address 2700 Academy Dr., Santa Fe, NM 87502  
 Drilling Began 19 June 90 Completed 26 June 90 Type tools Rotary Size of hole 10 in.  
 Elevation of land surface or \_\_\_\_\_ at well is \_\_\_\_\_ ft. Total depth of well \_\_\_\_\_ ft.  
 Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well \_\_\_\_\_ ft.

### Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
From <u>90.0</u> To <u>120.0</u>	<u>30</u>	<u>gray lignitic med. sand</u>	<u>1.0</u>

### Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations
			Top	Bottom			
<u>7 5/8</u>	<u>-</u>	<u>-</u>	<u>0.0</u>	<u>142.0</u>	<u>142.0</u>	<u>T.D.</u>	<u>94.0</u> From <u>119.0</u> To

### Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				
<u>0.0</u>	<u>80.0</u>	<u>10 in</u>	<u>5.0</u>	<u>-</u>	<u>Wyoming Bentonite thru pit hopper</u>
<u>141.0</u>	<u>143.8</u>	<u>10 in</u>	<u>-</u>	<u>1.0</u>	<u>pour</u>

### Section 5. PLUGGING RECORD

Plugging Contractor \_\_\_\_\_  
 Address \_\_\_\_\_  
 Plugging Method \_\_\_\_\_  
 Date Well Plugged \_\_\_\_\_  
 Plugging approved by: \_\_\_\_\_  
 State Engineer Representative \_\_\_\_\_

No.	Depth in Feet	Cubic Feet of Cement
1	Top	
2	Bottom	
3		
4		

### FOR USE OF STATE ENGINEER ONLY

Date Received Jan. 2, 1991

Quad \_\_\_\_\_ FSL \_\_\_\_\_

File No. L-10, 134 Use STK. D & S & Location No. 11.31.2.224 HWY \_\_\_\_\_

[illegible]

91 JAN 2 AM 10 40  
STATE ENGINEER OFFICE  
ROSWELL, NEW MEXICO

Steve M. Fuddler  
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All questions, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 2 shall be completed.



(This form to be executed in triplicate)

## WELL RECORD

Date of Receipt February 15, 1957 Permit No. 1-3093

Name of permittee, John A. Barnett

Street or P. O. Box 670, City and State Roswell N.M.

1. Well location and description: The shallow well is located in SE  $\frac{1}{4}$ , NW  $\frac{1}{4}$ ,  
(shallow or artesian)  
SE  $\frac{1}{4}$  of Section 12, Township 11N, Range 31E; Elevation of top of  
casing above sea level, 4476 feet; diameter of hole, 7 inches; total depth, 330 feet;  
depth to water upon completion, 130 feet; drilling was commenced 3/6, 1956,  
and completed 4/6, 1956; name of drilling contractor J.W. Matthews  
; Address, Tatum N.M.; Driller's License No. WD-116

2. Principal Water-bearing Strata:

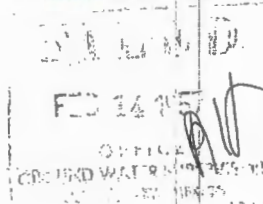
	Depth in Feet		Thickness	Description of Water-bearing Formation
	From	To		
No. 1	<u>251</u>	<u>255</u>	<u>4</u>	<u>Gray sand</u>
No. 2				
No. 3				
No. 4				
No. 5				

3. Casing Record:

Diameter in inches	Pounds per ft.	Threads per inch	Depth of Casing or Liner		Feet of Casing	Type of Shoe	Perforation	
			Top	Bottom			From	To
<u>7</u>	<u>used</u>	<u>10</u>	<u>1</u>	<u>246</u>	<u>247</u>	<u>Collar</u>	<u>Set</u>	<u>above water</u>

4. If above construction replaces old well to be abandoned, give location:  $\frac{1}{4}$ ,  $\frac{1}{4}$ ,  $\frac{1}{4}$   
of Section \_\_\_\_\_, Township \_\_\_\_\_, Range \_\_\_\_\_; name and address of plugging contractor,

date of plugging \_\_\_\_\_, 19\_\_\_\_; describe how well was plugged \_\_\_\_\_



4-3093

Dom.

11.31.12.414



## 5. Log of Well:

Depth in Feet		Thickness in feet	Description of Formation
From	To		
0	23	23	Caliche
23	42	19	Red clay or hardpan
42	43	1	Thin layer of igneous gravel water show
43	48	5	Bright red dirty sand
48	60	12	Caving red clay of red bed nature
60	175	115	Sandy brown shale
175	179	4	Light blue shale
179	247	68	Heavy Gray shale
247	251	4	Brown shale
251	255	4	Gray water sand( 1/2 gal per minute)
255	270	15	Sandy gray shale
270	330	60	Faulty red bed
			L S Elev _____
			Depth to K _____ Trc _____
			Elev of K _____ Trc _____
			Loc. No. _____
			Hydro. Survey _____ Field Check _____
			SOURCE OF ALTITUDE GIVEN
			Interpolated from Topo. Sheet _____
			Determined by Inst. Leveling _____
			Other _____

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

*John Archers*  
Licensed Well Driller

## Instructions

This form shall be executed, preferably typewritten, in triplicate and filed with the State Engineer's Office at Roswell, New Mexico, within 10 days after drilling has been completed. Data on water-bearing strata and on all formations encountered should be as complete and accurate as possible.

L-3093

11.31.12, 414



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

DATE RECORD: First Rec: \_\_\_\_\_ Admin Complete: \_\_\_\_\_ or Suspended: \_\_\_\_\_ Add. Request/Reply: \_\_\_\_\_

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

Well No. I Well Name(s): State Wilsbore SWD

API: 30-0 05-pending Spud Date: TBH New or Old (EPA): N (UIC Class II Primacy 03/07/1982)

Footages 1672 FSL 476 FUL Lot \_\_\_\_\_ or Unit L Sec 1 Tsp 11S Rge 31E County Chaves

General Location: 235 miles E of Roswell Pool: SWD's Devonian Pool No.: 9614

BLM 100K Map: T444 Operator: Cobra Oil & Gas OGRID: 14740y Contact: Wilson

COMPLIANCE RULE 5.9: Total Wells: 1 Inactive: 0 Fincl Assur: OK Compl. Order? N/A IS 5.9 OK? Y Date: 3-27-2018

WELL FILE REVIEWED ☐ Current Status: N/A

WELL DIAGRAMS: NEW: Proposed ☒ or RE-ENTER: Before Conv. ☐ After Conv. ☐ Logs in Imaging: N/A

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

Well Construction Details		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned ___ or Existing ___ Surface		17 1/2" / 13 7/8"	400'	420	Surf / Vis
Planned ___ or Existing ___ Interm/Prod		12 1/4" / 4 5/8"	4000'	1170	Surf / Vis
Planned ___ or Existing ___ Interm/Prod		8 3/4" / 7"	1160'	1500	3000' / C-B-L
Planned ___ or Existing ___ Prod/Liner					
Planned ___ or Existing ___ Liner					
Planned ___ or Existing ___ OH / PERF		11 1/2" / 11 1/2"			

Injection Lithostratigraphic Units	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		BU	1166
Confining Unit: Litho. Struc. Por.		MR	1071
Proposed Inj Interval TOP:			
Proposed Inj Interval BOTTOM:			
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:	
Drilled TD	11800 PBDT
NEW TD	NEW PBDT
NEW Open Hole	or NEW Perfs
Tubing Size	2 7/8 in. Inter Coated? <u>X</u>
Proposed Packer Depth	11400 ft
Min. Packer Depth	11516 (100-ft limit)
Proposed Max. Surface Press	5700 psi
Admin. Inj. Press.	2323 (0.2 psi per ft)

### AOR: Hydrologic and Geologic Information

POTASH: R-111-P N/A Noticed? N/A BLM Sec Ord ☐ WIPP ☐ Noticed? N/A Salt/Salado T: 1510 B: 1510 NW: Cliff House fm

FRESH WATER: Aquifer Quaternary Max Depth 1500 HYDRO AFFIRM STATEMENT By Qualified Person 0

NMOSE Basin: Leh CAPITAN REEF: thru adj NA No. GW Wells in 1-Mile Radius? 0 FW Analysis? N/A

Disposal Fluid: Formation Source(s) San Andres Analysis? Y On Lease ☐ Operator Only ☐ or Commercial ☐

Disposal Interval: Inject Rate (Avg/Max BWPD): 1500 / 1500 Protectable Waters? N/A Source: \_\_\_\_\_ System: Closed or Open

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

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

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

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

NOTICE: Newspaper Date 02-2-2018 Mineral Owner Robert M. M. M. Surface Owner \_\_\_\_\_ N. Date 2-2-2018

RULE 26.7(A): Identified Tracts? \_\_\_\_\_ Affected Persons: Cimrex N. Date 2-2-2018

Order Conditions: Issues: C-B-L from 7" casing 500' top liner to base

Additional COAs: Require SWAB test