

|                       |          |                 |                        |             |                          |
|-----------------------|----------|-----------------|------------------------|-------------|--------------------------|
| 10/01/2015<br>DATE IN | SUSPENSE | PRG<br>ENGINEER | 10-05-245<br>LOGGED IN | SWD<br>TYPE | PMAM1527859159<br>APP NO |
|-----------------------|----------|-----------------|------------------------|-------------|--------------------------|

ABOVE THIS LINE FOR DIVISION USE ONLY

*Need  
proof of  
publication*

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



## ADMINISTRATIVE APPLICATION CHECKLIST

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

### Application Acronyms:

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

### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement  
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify \_\_\_\_\_

*- SWD  
- R360 Permian Basin, LLC  
289936  
W 24  
- Outer Banks  
SWD #1  
30-015-Pending  
POW  
- SWD, Devonian  
96101*

### [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners  
[B] ☒ Offset Operators, Leaseholders or Surface Owner  
[C] ☒ Application is One Which Requires Published Legal Notice  
[D] ☒ Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office  
[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,  
[F] ☐ Waivers are Attached

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

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

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

Luke Brass  
Print or Type Name

[Signature]  
Signature

Legislative & Regulatory Affairs  
Title

10/1/15  
Date

luker@r360es.com  
e-mail Address

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage  
Application qualifies for administrative approval? Yes No
- II. OPERATOR: R360 Permian Basin, LLC (a wholly owned subsidiary of Waste Connections, Inc.)  
ADDRESS: 3 Waterway Square Place, Suite 110, The Woodlands, Texas 77380  
CONTACT PARTY: Chris Ruane, Director of Engineering PHONE: (832) 442-2204
- 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: Luke Bross TITLE: Legislative & Regulatory Affairs  
SIGNATURE: [Signature] DATE: 10/1/15  
E-MAIL ADDRESS: luk6@R360ES.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: \_\_\_\_\_

**OUTER BANKS SWD WELL #1**

**PERMIT APPLICATION**

Unit I (NE/4, SE/4), Section 13

Township 20 South, Range 29 East

Eddy County, New Mexico

LAI Project No. 15-0126-00

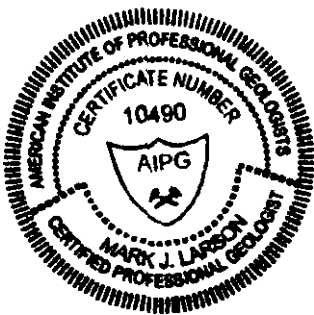
October 2, 2015

Prepared for:

R360 Permian Basin, LLC  
3 Waterway Square Place, Suite 110  
The Woodlands, Texas 79705

Prepared by:

Larson & Associates, Inc.  
507 North Marienfeld, Suite 205  
Midland, Texas 79701



A handwritten signature of Mark J. Larson, consisting of a stylized 'M' and 'J' followed by a horizontal line.

Mark J. Larson

Certified Professional Geologist #10490

A handwritten signature of Michael T. Gant, featuring a stylized 'M' and 'G' followed by a horizontal line.

Michael T. Gant

Staff Geologist



**WASTE CONNECTIONS, INC.**  
*Connect with the Future®*

RECEIVED OCD

2015 OCT -5 P 3: 20

October 2, 2015

Mr. Richard Ezeanyim, Bureau Chief  
Engineering and Geological Services  
New Mexico Oil Conservation Division  
1220 So. St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Commercial SWD Well Application, Outer Banks SWD #1 Well, R360 Permian Basin, LLC, Unit I (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico**

Dear Mr. Ezeanyim,

R360 Permian Basin, LLC (R360), a wholly owned subsidiary of Waste Connections, Inc., submits the enclosed application to the New Mexico Oil Conservation Division (OCD) to permit, construct and operate a commercial salt water disposal (SWD) well (Outer Banks SWD #1) in Unit I (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, in Eddy County, New Mexico. The well will be located 2075' FSL and 1040' FEL. The well will be located on property owned by the U.S. Government and administered by the Bureau of Land Management (BLM). The well will be used to reinject liquid E & P waste into the Devonian section between 13,180 and 14,180 feet. Notification and a copy of the permit application were sent to the NMOCD District 2 office in Artesia, New Mexico, surface mineral and lease owners within ½ mile of the proposed SWD well. Copies of the notification letters and certified mail receipts are presented in Attachment XIII of the application. Please contact me at (281) 873-3202, if you have questions.

Sincerely,

**Waste Connections, Inc.**

Luke Bross  
Legislative & Regulatory Affairs | Development

cc: Randy Dade— OCD District 2

Enc/



**ATTACHMENT III**

**Injection Well Data Sheet**

### Outer Banks Drilling Plan

1. **Location:**

Legal: 2075' FSL 1040' FEL Unit I (NE/4, SE/4) Section 24 Township 20 S Range 29 E,

Eddy County, New Mexico

GPS Coordinates: 32.5718194°, -104.0232778°

O&G Lease #: NMNM-110350

2. **Elevation Above Sea Level: 3333'**

3. **Geologic Name of Surface Formation: Alluvium**

4. **Proposed Drilling Depth: 14,180'**

5. **Estimated Tops of All Geologic Formations:**

| Formation                | Estimated Top (feet) | Bearing                         |
|--------------------------|----------------------|---------------------------------|
| Triassic                 |                      | <10' of perched water @ 40' BGS |
| Dewey Lake               |                      |                                 |
| Salado                   |                      | N/A                             |
| Tansil                   | 1030                 | N/A                             |
| Yates                    | 1140                 | N/A                             |
| Capitan                  | 1450                 | N/A                             |
| Delaware Mountain        | 3820                 | Hydrocarbons                    |
| Bone Spring              | 6350                 | Hydrocarbons                    |
| Wolfcamp                 | 9590                 | Hydrocarbons                    |
| Strawn                   | 10760                | Hydrocarbons                    |
| Atoka                    | 11040                | Hydrocarbons                    |
| Morrow                   | 11650                | Hydrocarbons                    |
| Barnett                  | 12230                | Hydrocarbons                    |
| Mississippian Lime       | 12640                | Hydrocarbons                    |
| Woodford Shale           | 13110                | Hydrocarbons                    |
| <b>Devonian (Target)</b> | <b>13180</b>         | <b>N/A</b>                      |
| Montoya                  |                      | N/A                             |
| Simpson                  |                      | N/A                             |
| Ellenberger              |                      | N/A                             |

6. **Proposed Casing Program:**

| Name                         | Hole (inches) | Size (inches) | Setting Depth (Feet) | Grade | Weight (lbs/ft) | Thread | Condition | Burst SF | Coll. SF | Ten. SF |
|------------------------------|---------------|---------------|----------------------|-------|-----------------|--------|-----------|----------|----------|---------|
| Surface                      | 26            | 20            | 500                  | J55   | 106.4           | LTC    | New       | 1.2      | 1.125    | 1.6     |
| 1 <sup>st</sup> Intermediate | 17 ½          | 13 ¾          | 1500                 | J55   | 68              | LTC    | New       | 1.2      | 1.125    | 1.6     |
| 2 <sup>nd</sup> Intermediate | 12 ¼          | 9 ⅝           | 3800                 | L80   | 53.5            | LTC    | New       | 1.2      | 1.125    | 1.6     |
| Production                   | 8 ½           | 7             | 0-120                | HCL80 | 35              | LTC    | New       | 1.2      | 1.125    | 1.6     |
| Production                   | 8 ½           | 7             | 120-11,230           | P-110 | 29              | LTC    | New       | 1.2      | 1.125    | 1.6     |
| Production                   | 8 ½           | 7             | 11,230-13,180        | HCL80 | 35              | LTC    | New       | 1.2      | 1.125    | 1.6     |
| Tubing                       | 5 ⅞           | 4 ½           | 0-5,000              | P-110 | 11.6            | LTC    | New       | 1.2      | 1.125    | 1.6     |
| Tubing                       | 5 ⅞           | 4 ½           | 5,000-14,180         | L-80  | 11.6            | LTC    | New       | 1.2      | 1.125    | 1.6     |
| Open Hole                    | 5 7/8         |               | 13,180-14,180        | NA    | NA              | NA     | NA        |          |          |         |

7. **Drilling Procedure:** Spud well and drill down each interval to total depth of that interval, staying in compliance with OCD/BLM rules and regulations and following this APD drilling plan. Each casing string will be cemented and cement will be circulated to surface. There are DV Tools in the casing strings to insure getting cement all the way to surface. Mud weights are spelled out below in paragraph 10 – Types and Characteristics of mud system. After reaching total casing depth of 13,180', OH Logs (Paragraph 12) will be run 15,550'-10,960' GR-CNL to surf, we will cement the 7" as spelled out in this APD. We will pick up a 5 7/8" bit to drill the injection interval for the open-hole completion; OH logs (see Paragraph 12) will be run TD-13,180'. The depths from 13,180' to 14,180' will not have a casing string, thus an "open-hole" completion. The Devonian target zone for injecting is a depleted zone considered to be under pressured and will be drilled with cut brine 8.4-8.9 PPG. The injection tubing will be set to depth of 13,180' inside the 7". All intervals will be logged prior to running casing per BLM/OCD requirements.

8. **Pressure Controls:**

A 10M 13-5/8" BOP system (Double Ram and Annular preventer) and 2 power chokes installed on manifold and 1 manual choke per BLM Onshore Order 2, will be installed and tested prior to drilling out the surface casing shoe. The BOP system used to drill the intermediate hole will be test per BLM Onshore Oil and Gas Order 2.

A 10M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the intermediate casing shoe. The BOP system used to drill the production hole will be test per BLM Onshore Oil and Gas Order 2.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories, include a Kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 psi WP.

9. **Cement Program:**

**Surface: TD @ 500' - Float/Landing Collar set @ 458'. We will circulate cement to surface**

| Interval | Amount (sacks) | Ft of Fill | Excess (%) | PPG  | Ft <sup>3</sup> /sx | Volume (ft <sup>3</sup> ) | Cement Type                     |
|----------|----------------|------------|------------|------|---------------------|---------------------------|---------------------------------|
| Tail     | 874            | 500        | 100        | 14.8 | 1.33                | 1159                      | Class C + 0.125 lb/sk Polyflake |

**1<sup>st</sup> Intermediate: TD @ 1500' – Stage 1 float collar @ 1458' We will circulate cement to surface.**

13 3/8 Contingency Cement design as follows:

If hole conditions warrant and we will adjust DVT depth per circulation requirements. The current estimated setting is N/A and cement volumes will be adjusted proportionally to maintain equivalent excess in all slurries.

| Interval     | Amount (sacks) | Ft of Fill | Excess (%) | PPG  | Ft <sup>3</sup> /sx | Volume (ft <sup>3</sup> ) | Cement Type  |
|--------------|----------------|------------|------------|------|---------------------|---------------------------|--|
| Stage 1 Lead | 438            | 900'       | 100        | 11.9 | 2.45                | 243                       | Class C + 2% Sodium Metasilicate + 0.1% Dispersant + 0.2% Antifoam + 0.2% Retarder |
| Stage 1 Tail | 679            | 600'       | 100        | 14.8 | 1.33                | 901                       | Class C + 0.125 lbs/sk Polyflake   |

**2<sup>nd</sup> Intermediate: TD @ 3800'. Stage 1 Float Collar 3758'**

9 5/8 Contingency Cement design as follows:

If hole conditions warrant and we will adjust ECP/DVT depth per circulation requirements. The current estimated setting is N/A and cement volumes will be adjusted proportionally to maintain equivalent excess in all slurries.

| Interval     | Amount (sacks) | Ft of Fill | Excess (%) | PPG  | Ft <sup>3</sup> /sx | Volume (ft <sup>3</sup> ) | Cement Type   |
|--------------|----------------|------------|------------|------|---------------------|---------------------------|---|
| Stage 1 Lead | 528            | 3200       | 50         | 11   | 2.47                | 1302                      | TXI + 2% Sodium Metasilicate + 0.2 % Dispersant + 0.2% Antifoam + 0.4% Retarder |
| Stage 1 Tail | 225            | 600        | 50         | 14.8 | 1.33                | 299                       | Class C + 0.3% Retarder + 0.2% Antifoam   |



**Production: Stage 1 Float/Landing Collar set @ 13,138', Stage 2 Collar set @ 9500'. We will circulate cement to surface.**

7" Contingency Cement design as follows:

If hole conditions warrant and we will adjust ECP/DVT depth per circulation requirements. The current estimated setting is 9500' cement volumes will be adjusted proportionally to maintain equivalent excess in all slurries.

| Interval     | Amount (sacks) | Ft of Fill | Excess (%) | PPG  | Ft <sup>3</sup> /sx | Volume (ft <sup>3</sup> ) | Cement Type  |
|--------------|----------------|------------|------------|------|---------------------|---------------------------|--|
| Stage 1      | 337            | 3070       | 25         | 13.5 | 1.29                | 487                       | TXI + 1.5 gal/sk GASBLOK + 0.08 gal/sk D80 Dispersant + 0.04 gal/sk D801 Retarder + 0.05 gal/sk D175A Antifoam + 2% D176 Expanding Agent |
| Lead         |                |            |            |      |                     |                           |  |
| Stage 1 Tail | 104            | 610        | 25         | 16.4 | 1.09                | 112                       | Class H + 0.4% D167 Fluid loss + 0.3% D800 Retarder + 2% D176 Expanding agent  |
| Stage 2 Lead | 535            | 8700       | 25         | 11.5 | 2.39                | 1271                      | TXI + 10% D154 Extender + 0.6% D112 Fluid loss + 0.1% D208 Viscosifier + 3% D174 Expanding Agent + 4 lbs/sk Mica + 0.2% D65 Dispersant   |
| Stage 2 Tail | 116            | 800        | 25         | 16.4 | 1.09                | 127                       | Class H + 0.4% D167 Fluid loss + 0.3% D800 Retarder + 2% D176 Expanding agent  |

The contingency ECP/DVT tool setting depth may change and cement will be adjusted accordingly.

#### 10. Type and Characteristics of Mud System:

| Depth MD/TVD (ft) | Mud Type   | Mud Density (ppg) | Viscosity (sec/1000cc) | Plastic Viscosity (cP) | Yield Point (lb/100ft <sup>2</sup> ) | API Fluid Loss (cc) | pH         | LGS % |
|-------------------|--|-------------------|------------------------|------------------------|--------------------------------------|---------------------|------------|-------|
| 120 – 450         | New Gel/Soda Spud Mud                            | 8.8 – 9.2         | 60 – 70                | 12 – 28                | 12 – 34                              | 20                  | +/-9.0     | <6    |
| 450 – 2,900       | Brine Water                                      | 10.0 – 10.1       | 29 – 30                | 0 – 1                  | 0 – 1                                | NC                  | 9.5 – 10.0 | <6    |
| 2,900 – 7660      | Existing Brine to New Zan D/White Starch/ Barite | 10.0 -10.1        | 29 – 30                | 0 – 1                  | 0 – 1                                | NC                  | 9.5 – 10.0 | <6    |
| 7660 – 15,550     |  | 10.1 – 11.5       | 36 – 44                | 6 – 14                 | 12 – 18                              | 10 – 12             | 9.5 – 10.0 | <6    |
| 15,550' 16,550    | Cut brine  | 8.4 - 8.9         | 28 - 30                | 0 - 1                  | 0 - 1                                | NC                  | 9. – 9.5   | <6    |

Our goal for all DVT and ECP is to run with full intentions of running the 2 stage job. This will help insure good tail cement and help insure cement to surface.

11. **Air Drilling Description:** Not applicable.
12. **Testing, Coring, and Logging Procedures:**
  - A. Mud logging program: 2 man unit from 2,900' (setting depth of salt string) to TD.
  - B. Electric logging program: open hole logs CNL / LDT / CAL / GR, DLL / SGR (CNL/GR from base of Intermediate casing to surface) from 15,550 to Intermediate casing and TD-15,550  
*Cased Hole Logs*  
CBL w/ CCL from base of Intermediate casing to surface (if cement is not circulated to surface)  
CBL w/ CCL from production casing DV tool at 8,000' to 3,000' (estimated top of cement at 4,000')
  - C. No DST's or cores are planned
  - D. Sonic log: not required but available if needed
13. **Expected Bottom Hole Pressure and Temperature:** 6,440 psi , 170° F.
14. **Abnormal Conditions:**
15. **H<sub>2</sub>S Plan:** Breathing equipment will be available on location. If H<sub>2</sub>S is encountered the operator will comply with the Onshore Oil and Gas Order No. 6. The H<sub>2</sub>S measured amounts and formation will be reported to the BLM. Please see the attached H<sub>2</sub>S Plan and the H<sub>2</sub>S awareness map.
16. **Directional or Horizontal Survey:** The well is neither directional nor horizontal.
17. **Unit Well Current Unit POD:** The well is not in a unit or current unit POD.
18. **Work Schedule:** To be determined.
19. **Completion plans:** MIRU well service unit. PU 2 7/8" PH-6 work string. TIH, release retrievable bridge plug and pull out of hole. Pick up treating packer. TIH to 15,500' and set. Test back side to 1000 psi. Acidize down tubing with five stages – 8000 gallons 15% HCL each stage followed by 1500 lbs of rock salt each stage. Release packer and pull out of hole.  
Trip in hole with tubing with notched collar. Circulate clean to TD. Pull out of the hole and pick up 7" Arrow Set 1X packer. Trip in the hole to 15,500'. Set blanking plug and on/off tool. Release packer and pull out of hole, laying down 2 7/8" work string. Pick up 4 1/2" lined injection tubing. Trip in hole and get on on/off tool. Release packer. Space out. Reset packer. Release on/off tool again. Circulate packer fluid. Get back on on/off tool. Nipple down BOP and nipple up well head. Schedule and perform MIT on tubing casing annulus per OCD and BLM guidelines. Turn well over to R360 for plumbing up surface facilities.

**ATTACHMENT IV**

**The permit application is NOT an expansion of an existing project**

**ATTACHMENT V**

**Well and Lease Maps**

● Outerbanks

2mi Buffer of Outerbanks

Oil & Gas Lease

NM Mineral Lease

NM Oil/Gas Lease

NM Agriculture Lease

Author: MG

0 0.150.3 0.6 0.9 1.2 Miles

TABLE OF ACTIVE WELLS/ OPERATORS WITHIN TWO MILES OF THE PROPOSED OUTER BANKS SWD #1

## R360 Permian Basin, LLC

| API #        | Operator                       | Lease                          | Well # | County | Legal                    | Total depth (ft) | Well Status |
|--------------|--------------------------------|--------------------------------|--------|--------|--------------------------|------------------|-------------|
| 30-015-10326 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 1      | EDDY   | S:13,T:20S,R:29E, UNIT B |                  | PLUGGED     |
| 30-015-40373 | YATES PETROLEUM CORPORATION    | ZIA AHZ FEDERAL COM            | 2      | EDDY   | S:13,T:20S,R:29E, UNIT C | 40               | PLUGGED     |
| 30-015-40404 | YATES PETROLEUM CORPORATION    | ZIA AHZ FEDERAL COM            | 2H     | EDDY   | S:13,T:20S,R:29E, UNIT C | 8376             | ACTIVE OIL  |
| 30-015-33144 | COG OPERATING LLC              | DICE ROLL FEDERAL COM          | 1      | EDDY   | S:13,T:20S,R:29E, UNIT I | 12300            | ACTIVE GAS  |
| 30-015-32598 | COG OEPRATING LLC              | COINFLIP STATE                 | 1      | EDDY   | S:18,T:20S,R:30E, UNIT D | 12280            | ACTIVE OIL  |
| 30-015-41937 | COG OEPRATING LLC              | COINFLIP STATE COM             | 2H     | EDDY   | S:18,T:20S,R:30E, UNIT D |                  | ACTIVE OIL  |
| 30-015-41938 | COG OEPRATING LLC              | COINFLIP STATE COM             | 3H     | EDDY   | S:18,T:20S,R:30E, UNIT D |                  | ACTIVE OIL  |
| 30-015-32873 | COG OPERATING LLC              | DARTHROW 19 STATE              | 1      | EDDY   | S:19,T:20S,R:30E, UNIT 1 | 12300            | ACTIVE GAS  |
| 30-015-04688 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 1      | EDDY   | S:19,T:20S,R:30E, UNIT D |                  | PLUGGED     |
| 30-015-26323 | CIMAREX ENERGY CO. OF COLORADO | SUPERIOR FEDERAL               | 8      | EDDY   | S:1,T:20S,R:29E, UNIT N  | 11908            | PLUGGED     |
| 30-015-24722 | YATES PETROLEUM CORPORATION    | SLINKARD UR FEDERAL COM        | 2      | EDDY   | S:11,T:20S,R:29E, UNIT F | 12100            | ACTIVE GAS  |
| 30-015-23698 | YATES PETROLEUM CORPORATION    | SLINKARD UR FEDERAL COM        | 1      | EDDY   | S:11,T:20S,R:29E, UNIT H | 12229            | ACTIVE GAS  |
| 30-015-03641 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 1      | EDDY   | S:11,T:20S,R:29E, UNIT I |                  | PLUGGED     |
| 30-015-43105 | DEVON ENRGY PRODUCTION COMPANY | GHOST PEPPER 14 23 FEDERAL COM | 1H     | EDDY   | S:11,T:20S,R:29E, UNIT K |                  | NEW OIL     |
| 30-015-43106 | DEVON ENRGY PRODUCTION COMPANY | GHOST PEPPER 14 23 FEDERAL COM | 3H     | EDDY   | S:11,T:20S,R:29E, UNIT K |                  | NEW OIL     |
| 30-015-03642 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 1      | EDDY   | S:11,T:20S,R:29E, UNIT K |                  | PLUGGED     |
| 30-015-43101 | DEVON ENRGY PRODUCTION COMPANY | GHOST PEPPER 14 23 FEDERAL COM | 2H     | EDDY   | S:11,T:20S,R:29E, UNIT L |                  | NEW OIL     |
| 30-015-43100 | DEVON ENRGY PRODUCTION COMPANY | GHOST PEPPER 14 23 FEDERAL COM | 4H     | EDDY   | S:11,T:20S,R:29E, UNIT M |                  | NEW OIL     |
| 30-015-26289 | YATES PETROLEUM CORPORATION    | BURTON FLAT FEDERAL COM        | 1      | EDDY   | S:11,T:20S,R:29E, UNIT N |                  | PLUGGED     |
| 30-015-26262 | YATES PETROLEUM CORPORATION    | ZIA AHZ FEDERAL COM            | 1      | EDDY   | S:11,T:20S,R:29E, UNIT O | 12147            | ACTIVE GAS  |
| 30-015-03643 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 1      | EDDY   | S:12,T:20S,R:29E, UNIT M |                  | PLUGGED     |
| 30-015-25978 | YATES PETROLEUM CORPORATION    | ELAND AFC FEDERAL COM          | 1      | EDDY   | S:12,T:20S,R:29E, UNIT N | 11297            | PLUGGED     |
| 30-015-42735 | COG OPERATING LLC              | MOSSY FEDERAL                  | 1H     | EDDY   | S:12,T:20S,R:29E, UNIT A |                  | ACTIVE OIL  |
| 30-015-26762 | YATES PETROLEUM CORPORATION    | SLINKARD UR FEDERAL COM        | 4      | EDDY   | S:12,T:20S,R:29E, UNIT C | 12175            | ACTIVE GAS  |
| 30-015-42736 | COG OPERATING LLC              | MOSSY FEDERAL                  | 2H     | EDDY   | S:12,T:20S,R:29E, UNIT H |                  | ACTIVE OIL  |
| 30-015-26038 | YATES PETROLEUM CORPORATION    | SLINKARD UR FEDERAL COM        | 3      | EDDY   | S:12,T:20S,R:29E, UNIT L | 12280            | ACTIVE GAS  |
| 30-015-03645 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 1      | EDDY   | S:13,T:20S,R:29E, UNIT C |                  | PLUGGED     |
| 30-015-03646 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 2      | EDDY   | S:13,T:20S,R:29E, UNIT E |                  | PLUGGED     |
| 30-015-03644 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 3      | EDDY   | S:13,T:20S,R:29E, UNIT N |                  | PLUGGED     |
| 30-015-03648 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 1      | EDDY   | S:14,T:20S,R:29E, UNIT J |                  | PLUGGED     |
| 30-015-03647 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 2      | EDDY   | S:14,T:20S,R:29E, UNIT P |                  | PLUGGED     |
| 30-015-42085 | COG OPERATING LLC              | DARTHROW STATE                 | 2H     | EDDY   | S:19,T:20S,R:29E, UNIT D |                  | ACTIVE OIL  |
| 30-015-04689 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 1      | EDDY   | S:19,T:20S,R:29E, UNIT A |                  | PLUGGED     |
| 30-015-42521 | COG OPERATING LLC              | DARTHROW STATE                 | 3      | EDDY   | S:19,T:20S,R:29E, UNIT C | 1804             | PLUGGED     |
| 30-015-42719 | COG OPERATING LLC              | DARTHROW STATE                 | 4H     | EDDY   | S:19,T:20S,R:29E, UNIT C | 12829            | ACTIVE OIL  |
| 30-015-04690 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 1      | EDDY   | S:19,T:20S,R:29E, UNIT G |                  | PLUGGED     |
| 30-015-04691 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 2      | EDDY   | S:19,T:20S,R:29E, UNIT H |                  | PLUGGED     |
| 30-015-04692 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 1      | EDDY   | S:19,T:20S,R:29E, UNIT L |                  | PLUGGED     |
| 30-015-03659 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 2      | EDDY   | S:23,T:20S,R:29E, UNIT A |                  | PLUGGED     |
| 30-015-03657 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 4      | EDDY   | S:23,T:20S,R:29E, UNIT H |                  | PLUGGED     |
| 30-015-03655 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 8      | EDDY   | S:23,T:20S,R:29E, UNIT I |                  | PLUGGED     |
| 30-015-03658 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 5      | EDDY   | S:23,T:20S,R:29E, UNIT K |                  | PLUGGED     |
| 30-015-03656 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                | 9      | EDDY   | S:23,T:20S,R:29E, UNIT P |                  | PLUGGED     |

|              |                                |                                   |         |                          |       |            |
|--------------|--------------------------------|-----------------------------------|---------|--------------------------|-------|------------|
| 30-015-42323 | COG OPERATING LLC              | CRAPSHOOT 13 FEDERAL              | 1H EDDY | S:24,T:20S,R:29E, UNIT A | 8431  | ACTIVE OIL |
| 30-015-43158 | COG OPERATING LLC              | CRAPSHOOT 13 FEDERAL COM          | 2H EDDY | S:24,T:20S,R:29E, UNIT A |       | NEW OIL    |
| 30-015-42972 | DEVON ENRGY PRODUCTION COMPANY | MORUGA SCORPION 23 24 FEDERAL COM | 1H EDDY | S:24,T:20S,R:29E, UNIT A |       | NEW OIL    |
| 30-015-42968 | DEVON ENRGY PRODUCTION COMPANY | MORUGA SCORPION 23 24 FEDERAL COM | 2H EDDY | S:24,T:20S,R:29E, UNIT A |       | NEW OIL    |
| 30-015-42971 | DEVON ENRGY PRODUCTION COMPANY | MORUGA SCORPION 23 24 FEDERAL COM | 3H EDDY | S:24,T:20S,R:29E, UNIT A |       | NEW OIL    |
| 30-015-42973 | DEVON ENRGY PRODUCTION COMPANY | MORUGA SCORPION 23 24 FEDERAL COM | 4H EDDY | S:24,T:20S,R:29E, UNIT A |       | NEW OIL    |
| 30-015-03660 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 3 EDDY  | S:24,T:20S,R:29E, UNIT D |       | PLUGGED    |
| 30-015-03664 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 11 EDDY | S:24,T:20S,R:29E, UNIT D |       | PLUGGED    |
| 30-015-03662 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 7 EDDY  | S:24,T:20S,R:29E, UNIT E |       | PLUGGED    |
| 30-015-03662 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 6 EDDY  | S:24,T:20S,R:29E, UNIT L |       | PLUGGED    |
| 30-015-10044 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 1 EDDY  | S:24,T:20S,R:29E, UNIT M |       | PLUGGED    |
| 30-015-03663 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 10 EDDY | S:24,T:20S,R:29E, UNIT M |       | PLUGGED    |
|              |                                |                                   |         |                          |       |            |
| 30-015-03665 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 1 EDDY  | S:25,T:20S,R:29E, UNIT D |       | PLUGGED    |
|              |                                |                                   |         |                          |       |            |
| 30-015-04662 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 1 EDDY  | S:6,T:20S,R:30E, UNIT L  |       | PLUGGED    |
|              |                                |                                   |         |                          |       |            |
| 30-015-33758 | OWL SWD OPERATING, LLC         | COLLINSOSCOPY FEDERAL             | 1 EDDY  | S:7,T:20S,R:30E, UNIT 4  | 12400 | ACTIVE GAS |
| 30-015-41420 | MEWBOURNE OIL CO               | TWO MESAS 7 MP FEDERAL            | 1H EDDY | S:7,T:20S,R:30E, UNIT M  | 8437  | ACTIVE OIL |
| 30-015-04665 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 1 EDDY  | S:7,T:20S,R:30E, UNIT A  |       | PLUGGED    |
| 30-015-04664 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 1 EDDY  | S:7,T:20S,R:30E, UNIT I  |       | PLUGGED    |
| 30-015-04663 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 1 EDDY  | S:7,T:20S,R:30E, UNIT K  |       | PLUGGED    |
|              |                                |                                   |         |                          |       |            |
| 30-015-04687 | SHACKELFORD OIL CO             | STATE A                           | 4 EDDY  | S:17,T:20S,R:30E, UNIT J | 1539  | PLUGGED    |
| 30-015-04686 | VANGUARD OPERATING, LLC        | STATE                             | 2 EDDY  | S:17,T:20S,R:30E, UNIT N | 1520  | ACTIVE SWD |
| 30-015-04685 | VANGUARD OPERATING, LLC        | STATE 1A                          | 1 EDDY  | S:17,T:20S,R:30E, UNIT O | 1476  | ACTIVE OIL |
|              |                                |                                   |         |                          |       |            |
| 30-015-04693 | VANGUARD OPERATING, LLC        | COLGLAZIER                        | 1 EDDY  | S:20,T:20S,R:30E, UNIT B | 1443  | ACTIVE OIL |
| 30-015-04700 | VANGUARD OPERATING, LLC        | STOVALL WOOD                      | 1 EDDY  | S:20,T:20S,R:30E, UNIT C | 1435  | PLUGGED    |
| 30-015-04697 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 1 EDDY  | S:20,T:20S,R:30E, UNIT D |       | PLUGGED    |
| 30-015-04702 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 1 EDDY  | S:20,T:20S,R:30E, UNIT E |       | PLUGGED    |
| 30-015-04696 | BARBER OIL INC                 | MORRIS & HOOVER                   | 2 EDDY  | S:20,T:20S,R:30E, UNIT F |       | PLUGGED    |
| 30-015-04701 | VANGUARD OPERATING, LLC        | STOVALL WOOD                      | 2 EDDY  | S:20,T:20S,R:30E, UNIT F | 1415  | ACTIVE OIL |
| 30-015-04703 | VANGUARD OPERATING, LLC        | STOVALL WOOD                      | 3 EDDY  | S:20,T:20S,R:30E, UNIT F | 1470  | ACTIVE OIL |
| 30-015-04694 | SHACKELFORD OIL CO             | COLGLAZIER                        | 2 EDDY  | S:20,T:20S,R:30E, UNIT G | 1436  | PLUGGED    |
| 30-015-04695 | VANGUARD OPERATING, LLC        | COLGLAZIER                        | 3 EDDY  | S:20,T:20S,R:30E, UNIT G | 1553  | ACTIVE OIL |
| 30-015-04704 | TOPAT OIL CORP                 | COLGLAZIER                        | 1 EDDY  | S:20,T:20S,R:30E, UNIT J |       | PLUGGED    |
| 30-015-04699 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 1 EDDY  | S:20,T:20S,R:30E, UNIT K |       | PLUGGED    |
| 30-015-04698 | PRE-ONGARD WELL OPERATOR       | PRE-ONGARD WELL                   | 3 EDDY  | S:20,T:20S,R:30E, UNIT N |       | PLUGGED    |



# .5 mile AOR of Outer Banks SWD

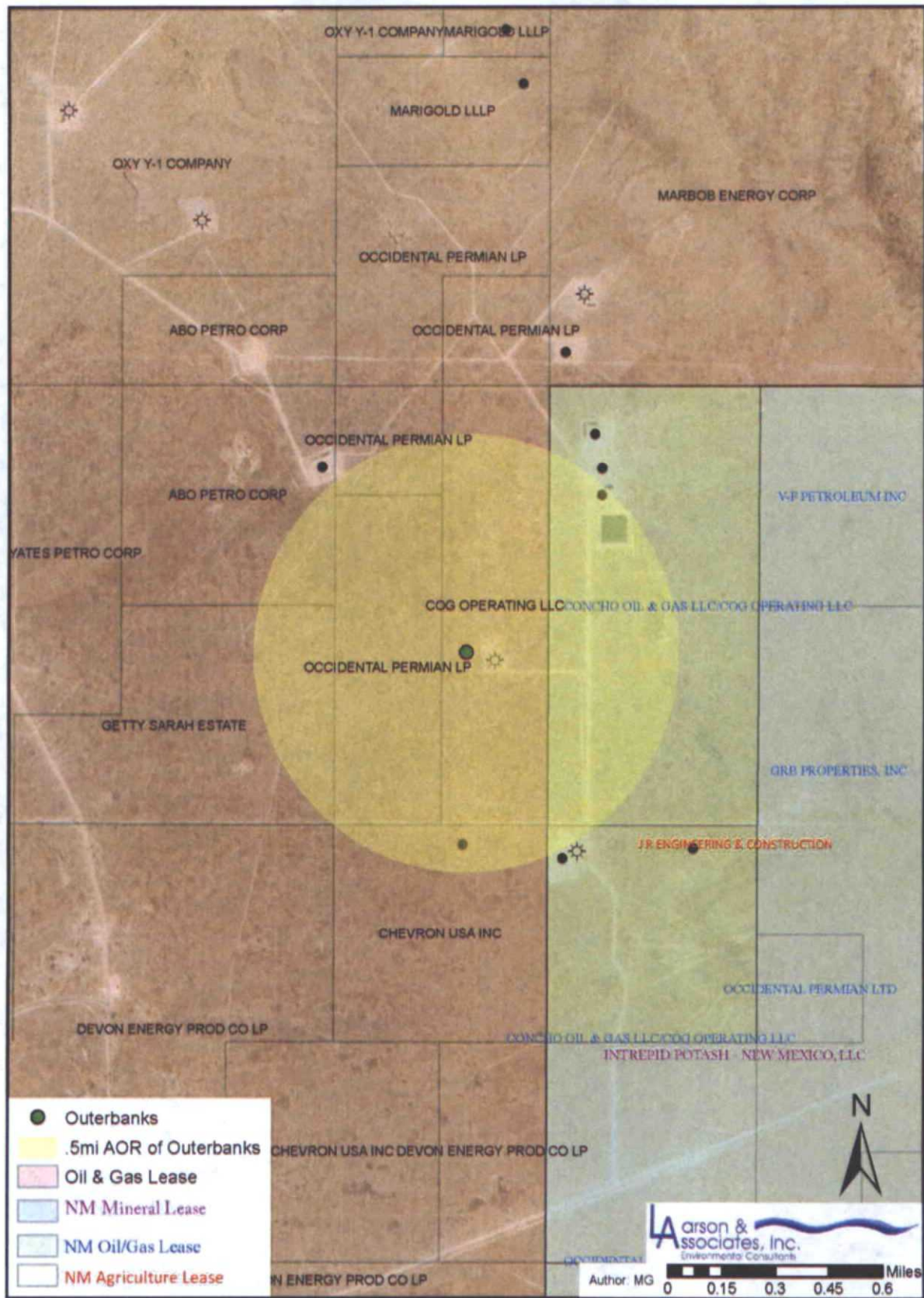




TABLE OF ACTIVE WELLS/ OPERATORS WITHIN THE AREA OF REVIEW OF THE PROPOSED OUTER BANKS SWD #1

R360 Permian Basin, LLC

| API #        | Operator                    | Lease                 | Well # | County | Legal                    | Total depth (ft) | Well Status |
|--------------|-----------------------------|-----------------------|--------|--------|--------------------------|------------------|-------------|
| 30-015-10326 | PRE-ONGARD WELL OPERATOR    | PRE-ONGARD WELL       | 1      | EDDY   | S:13,T:20S,R:29E, UNIT B |                  | PLUGGED     |
| 30-015-40373 | YATES PETROLEUM CORPORATION | ZIA AHZ FEDERAL COM   | 2      | EDDY   | S:13,T:20S,R:29E, UNIT C | 40               | PLUGGED     |
| 30-015-40404 | YATES PETROLEUM CORPORATION | ZIA AHZ FEDERAL COM   | 2H     | EDDY   | S:13,T:20S,R:29E, UNIT C | 8376             | ACTIVE OIL  |
| 30-015-33144 | COG OPERATING LLC           | DICE ROLL FEDERAL COM | 1      | EDDY   | S:13,T:20S,R:29E, UNIT I | 12300            | ACTIVE GAS  |
| 30-015-32598 | COG OEPRATING LLC           | COINFLIP STATE        | 1      | EDDY   | S:18,T:20S,R:30E, UNIT D | 12280            | ACTIVE OIL  |
| 30-015-41937 | COG OEPRATING LLC           | COINFLIP STATE COM    | 2H     | EDDY   | S:18,T:20S,R:30E, UNIT D |                  | ACTIVE OIL  |
| 30-015-41938 | COG OEPRATING LLC           | COINFLIP STATE COM    | 3H     | EDDY   | S:18,T:20S,R:30E, UNIT D |                  | ACTIVE OIL  |
| 30-015-32873 | COG OPERATING LLC           | DARTHROW 19 STATE     | 1      | EDDY   | S:19,T:20S,R:30E, UNIT 1 | 12300            | ACTIVE GAS  |
| 30-015-04688 | PRE-ONGARD WELL OPERATOR    | PRE-ONGARD WELL       | 1      | EDDY   | S:19,T:20S,R:30E, UNIT D |                  | PLUGGED     |

**JACK C. MAGEE**  
*Independent Petroleum Landman*  
**8805 ECR 103**  
**Midland, Texas 79706**

605-28-1895 cell

mageclaw@midconetwork.com

July 30, 2015

Mark Larson  
Larson & Associates, Inc.  
507 N. Marienfeld, Suite 200  
Midland, TX 79702

Re: Outer Banks SWD #1  
Section 13, T20S, R29E  
Eddy County, NM

Dear Mr. Larson:

You asked for an Report of "owners" within ½ mile of your proposed Outer Banks SWD #1 disposal well being permitted in the captioned Section 13.

In this connection I examined the abstract tract records of Caprock Title Company in Midland, Texas; the abstract of title prepared by Schutz Abstract and the public website records of the Bureau of Land Management (BLM); the public website of the New Mexico Oil Conservation Commission (NMOCD); and the public website of the State of New Mexico Land System.

Based on the material examined, I am attaching a Report of the surface owners and "affected persons" being any unleased mineral owner, or Lessee if not producing, or Operator if producing. I am also attaching copies of relevant information used in preparing the Report.

I also wish to bring to your attention that some of the Lessees named in my Report may not be current due to the lack of updated information being filed of record either with the BLM and no attempt has been made to independently tract down the heirs or devisees of any person shown of record.

Thank you and please do not hesitate to call should you have any questions or comments.

Sincerely,



Jack C. Magee

Encl.

Note:

This Lease is held by allocated production and is committed to a commingling agreement NMNM 11176 as to natural gas and associated liquid hydrocarbons producible from the Morrow, Atoka, Wolfcamp, and Strawn formations.

**SW/4 NE/4, W/2 SE/4: Surface down to 12,400'**

Lease: NM 035958 issued 6/1/1963.

**Operator Rights Owner(s)**

COG Operating, LLC  
One Concho Center  
600 West Illinois Avenue  
Midland, TX 79701

Concho Oil & Gas, LLC  
One Concho Center  
600 West Illinois Avenue  
Midland, TX 79701

**SW/4 NE/4, W/2 SE/4: Below 12,400'**

Lease: NM 035958 issued 6/1/1963.

**Operating Rights Owner**

Occidental Permian Ltd. Partnership  
580 Westlake Pk. Blvd.  
Houston, TX 77079

Note:

This Lease is held by allocated production and is committed to a commingling agreement NMNM 11176 as to natural gas and associated liquid hydrocarbons producible from the Morrow, Atoka, Wolfcamp, and Strawn formations.

**E/2 NW/4**

Lease: NM 55125 issued 5/1/1983.

**Operator**

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

**E/2 SW/4**

Lease: LC 028840-A issued on 9/22/1924 (formerly Prospecting Permit Roswell 052196), renewed on 6/1/1998 for 20 years.

**Operating Rights Owner(s): Surface down to 11,397'**

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

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

Myco Industries, Inc.  
105 South 4th Street  
Artesia, NM 88210

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

**Operating Rights Owner(s): Below 11,397'**

Northern Trust Bank of California, NA  
Trustee of the Estate of Sarah C. Getty  
P.O. Box 226270  
Dallas, TX 75222-6270

Potash Lessees

E/2 E/2, NW/4 NE/4, SW/4 NE/4, W/2 SE/4, E/2 NW/4,  
E/2 SW/4

Section 13 is within the federally  
"Designated Potash Area".

No current Potash lease found of record.

**OUTER BANKS SWD #1: OWNERS WITHIN 1/2 MILE RADIUS  
EDDY COUNTY**

**Section 13, Township 20 South, Range 29 East, NMPM - Eddy County**

**Surface Owners**

**E/2 E/2, NW/4 NE/4, SW/4 NE/4, W/2 SE/4, E/2 NW/4,  
E/2 SW/4**

---

United States Dept of the Interior  
Bureau of Land Management  
Carlsbad Field Office  
620 East Greene Street  
Carlsbad, NM 88220

**Oil & Gas Lessees/Operators**

**E/2 E/2**

---

Lease: NM 110350 issued 6/1/2003.

**Operator**

COG Operating, LLC  
One Concho Center  
600 West Illinois Avenue  
Midland, TX 79701

**NW/4 NE/4: Surface down to 12,400'**

---

Lease: NM 0555546 issued 2/1/1965.

**Operator Rights Owner(s)**

COG Operating, LLC  
One Concho Center  
600 West Illinois Avenue  
Midland, TX 79701

Concho Oil & Gas, LLC  
One Concho Center  
600 West Illinois Avenue  
Midland, TX 79701

**NW/4 NE/4: Below 12,400'**

---

Lease: NM 0555546 issued 2/1/1965.

**Operating Rights Owner**

Occidental Permian Ltd. Partnership  
580 Westlake Pk. Blvd.  
Houston, TX 77079

Section 24, Township 20 South, Range 29 East, NMPM - Eddy County

Surface Owners

N/2 NE/4, NE/4 NW/4

United States Dept of the Interior  
Bureau of Land Management  
Carlsbad Field Office  
620 East Greene Street  
Carlsbad, NM 88220

Oil & Gas Lessees/Operators

N/2 NE/4

Lease: LC 029009-B issued 10/14/1931, renewed on  
7/1/2000 for 20 years.

Operating Rights Owner(s)

Chevron USA, Inc.  
15 Smith Road  
Midland, TX 79705

NE/4 NW/4

Lease: NM 129731 issued 4/1/2013.

Operator rights owner(s)/Lessee

Devon Energy Production Company, LP  
333 West Sheridan Avenue  
Oklahoma City, OK 73102

Potash Lessees

N/2 NE/4, NE/4 NW/4

Section 24 is within the federally  
"Designated Potash Area".

No current Potash lease found of record.

**Section 19, Township 20 South, Range 30 East, NMPM - Eddy County**

**Surface Owners**

**Lot 1 (NW/4 NW/4)**

New Mexico State Land Office  
310 Ol Santa Fe Trail  
Box 1148  
Santa Fe, NM 87504-1148

**Oil & Gas Lessees/Operators**

**Lot 1 (NW/4 NW/4)**

Lease VO-6733 issued 11/2002

**Operator**

COG Operating, LLC/ Concho Oil & Gas, LLC  
One Concho Center  
600 West Illinois Avenue  
Midland, TX 79701

**Note:**

According to the Schutz Takeoff, an OGL (VO-6733) was issued to Pitch Energy on 11/1/2002, assigned to Marbob Energy Corporation and Pitch Energy Corporation on 4/13/2004, and then assigned to COG Operating, LLC and Concho Oil and Gas, LLC on 11/12/2010. However, this OGL was not found in the abstract records of Caprock Title. According to the New Mexico State Land Office, COG Operating, LLC is the current Lessee.

**Potash Lessees**

**Lot 1 (NW/4 NW/4)**

Section 19 is within the federally  
"Designated Potash Area".

Intrepid Potash, Inc.  
707 17th Street, Suite 4200  
Denver, CO 80202

Intrepid Potash-New Mexico, LP  
707 17th Street, Suite 4200  
Denver, CO 80202

BOPCO, LP  
201 Main Street, Suite 3100  
Fort Worth, TX 76102

**Note:**

Eddy Potash, Inc. acquired the potash lease in 2000. The lease term was for 10 years and then for an indeterminate time. The lease was apparently assigned to HB Potash, although the instrument (541/657) does not specifically list Section 19, T20S, R30E. HB Potash merged into Intrepid Potash-New Mexico, LP.

According to the New Mexico State Land Office, Land Office Geographic Information Center-General Land Status, this tract is not currently under a "mineral" lease, but is under an oil and gas lease.



Section 18, Township 20 South, Range 30 East, NMPM - Eddy County

Surface Owners

Lots 1, 2, 3, 4, E/2 W/2

New Mexico State Land Office  
310 Ol Santa Fe Trail  
Box 1148  
Santa Fe, NM 87504-1148

Oil & Gas Lessees/Operators

Lots 1, 2, 3, 4, E/2 W/2

Lease V-5391 dated 11/1/1998.

**Operator**

COG Operating, LLC/ Concho Oil & Gas, LLC  
One Concho Center  
600 West Illinois Avenue  
Midland, TX 79701

Potash Lessees

Lots 1, 2, 3, 4, E/2 W/2

Section 18 is within the federally  
"Designated Potash Area".

Intrepid Potash, Inc.  
707 17th Street, Suite 4200  
Denver, CO 80202

Intrepid Potash-New Mexico, LP  
707 17th Street, Suite 4200  
Denver, CO 80202

BOPCO, LP  
201 Main Street, Suite 3100  
Fort Worth, TX 76102

**Note:**

Eddy Potash, Inc. acquired the potash lease in 2000.  
The lease term was for 10 years and then for an  
indeterminate time. The lease was apparently assigned  
to HB Potash, although the instrument (541/657) does  
not specifically list Section 19, T20S, R30E. HB Potash  
merged into Intrepid Potash-New Mexico, LP.

According to the New Mexico State Land Office, Land  
Office Geographic Information Center-General Land  
Status, this tract is not currently under a "mineral"  
lease, but is under an oil and gas lease.

# SCHUTZ ABSTRACT CO., INC.

P.O. BOX 973

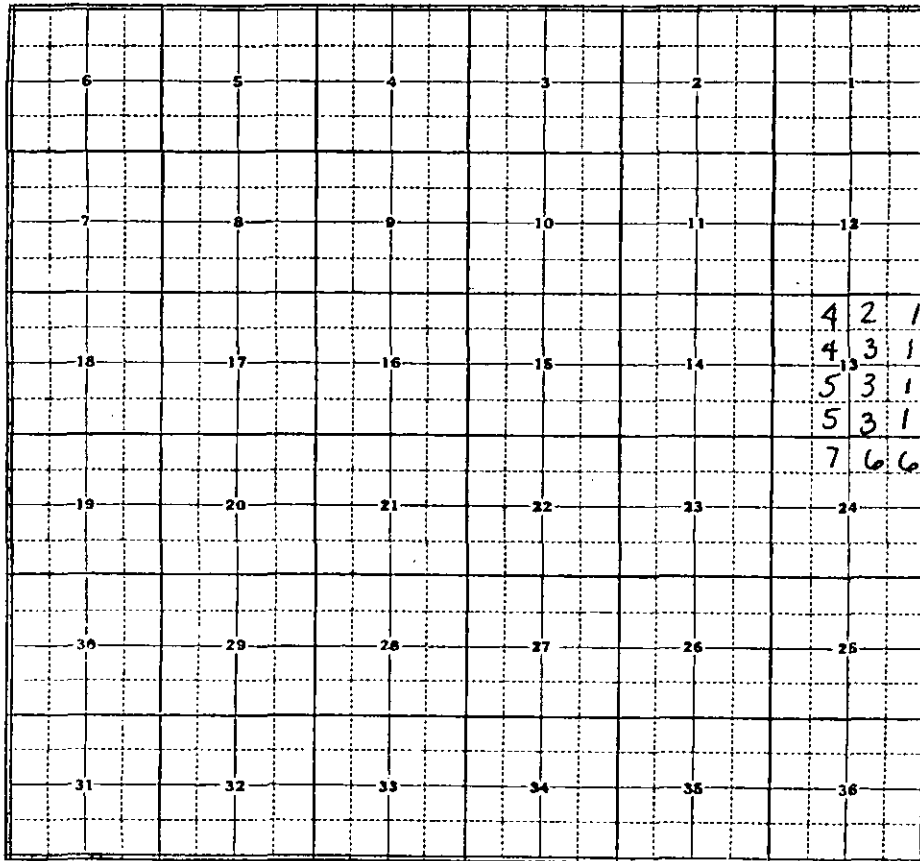
(505) 982-0130

SANTA FE, NEW MEXICO 87504

T. 20 South R. 29 East

Eddy County

7/15/15



RED - STATE LAND  
BLUE - FEE LAND

1. NM 110350
2. NM 0555546
3. NM 0359258
4. NM 55125
5. LC 028840-A
6. LC 029009-B
7. NM 129731

JUL 15 2003

NM 110350

T.20 South - R.29 East  
Section 13:E2E2L-H.B.P  
6/1/2003

## Lessee :

COG Operating LLC  
550 W. Texas, Ste. 100  
Midland, TX 79701

95%

Concho O&G LLC  
550 W. Texas, Ste. 100  
Midland, TX 79701

5%

## RUN SHEET:

Competitive lease NM 110350 issued 6/1/03 to Marbob Energy Corp. for ten yrs. with 12.5% royalty to the USA.

Committed to com. agreement NMNM 111766 as to nat. gas & assoc. liquid hydrocarbons producible from the Morrow, Atoka, Wolfcamp, and Strawn formations in sec. 13: E2.

Marbob Energy Corp. No. 1 Dice Roll Federal Com. was completed 4/6/04 on sec. 13: NESE.

Assign. of record title dated 11/18/10 from Marbob Energy Corp. to Concho O&G LLC 5%, and COG Operating LLC 95% as to all lands, 100% interest.

## OPERATING RIGHTS:

Lessees

100%

## OVERRIDING ROYALTY:

None filed of record.

12.5 % ROYALTY TO THE USA

Notes:

JUL 14 1965

NM 0555546

T.20 South - R.29 East  
Section 13: NWNE

L-H.B.P  
02/01/65

Lessee :

Occidental Permian Ltd. Partnership  
580 Westlake Pk. Blvd.  
Houston, TX 77079

RUN SHEET:

Competitive lease NM 0555546 issued 2/1/65 to Pan American Petroleum Corp. for 5 years with sliding scale royalty to the USA.

Suspension of operations & production was granted effective 7/1/65 for an indefinite period due to potash.

Decision of 3/19/71 recognized the name change from Pan American Petroleum Corp. to Amoco Production Co.

Assignment of record title dated 5/20/97 from Amoco Production Co. to Altura Energy, Ltd. 100% as to sec. 13: NWNE, no overriding royalty reserved.

Altura Energy Ltd. changed its name to Occidental Permian Ltd.

Assign. of oper. rights dated 4/20/04 from Occidental Permian Ltd. Partnership to Marbob Energy Corp. 100% as to sec. 13; NWNE surface to 12,400', reserving 12.5% overriding royalty.

Decision of 10/21/04 stated that the suspension of operations was lifted eff. 4/1/04. At the time the suspension was lifted, there were 4 years and 7 months remaining in the primary term, therefore, the new expiration date is 11/1/08. In addition, this lease is held by allocated production.

Committed to com. agreement NMNM 111766 as to nat. gas & assoc. liquid hydrocarbons producible from the Morrow, Atoka, Wolfcamp and Strawn formations in sec. 13: E2.

Marbob Energy Corp. No. 1 Dice Roll Fed. Com. was completed 4/6/04 on sec. 13: NESE.

Assign. of oper. rights dated 11/18/10 from Marbob Energy Corp. to Concho O&G LLC 5% and COG Operating LLC 95% as to all lands, 100% interest from the surface to 12,400'.

Assign. of oper. rights dated 4/3/14 from COG Operating LLC 95% & Concho O&G LLC 5% to Occidental Permian LP 25% as to sec. 13; NWNE from the surface to 12,400'.

OPERATING RIGHTS:

Surface to 12,400':

COG Operating LLC  
550 W. Texas, Ste. 100  
Midland, TX 79701

71.25%

Concho O&G LLC

3.75%

550 W. Texas, Ste. 100  
Midland, TX 79701

Lessee 25%

Below 12,400':

Lessee 100%

OVERRIDING ROYALTY:

Surface to 12,400':

Lessee 12.5% of 75%

Sliding Scale ROYALTY TO THE USA

Notes:

JUL 14 2015

NM 0359258

T.20 South - R.29 East  
Section 13:SWNE,W2SEL-H.B.P  
06/01/63

## Lessee :

Occidental Permian Ltd.  
580 Westlake Park Blvd.  
Houston, TX 77079

## RUN SHEET:

Competitive lease NM 0359258 issued 6/1/63 to Pan American Petroleum Corp. for 5 years with sliding scale royalty to the USA.

Suspension of operations & production was granted effective 7/1/65 for an indefinite period due to Potash.

Decision of 3/19/71 recognized the name change from Pan American Petroleum Corp. to Amoco Production Co.

Assign. of record title dated 3/20/97 from Amoco Production Co. to Altura Energy Ltd. 100% as to all lands, no overriding royalty reserved.

Altura Energy Ltd. changed its name to Occidental Permian Limited Partnership.

Assign. of oper. rights dated 4/20/04 from Occidental Permian Limited Partnership to Marbob Energy Corp. 100% as to sec. 13: SWNE and W2SE from the surface to 12,400', reserving 12.5% ORRI.

Committed to com. agreement NMNM 111766 as to nat. gas & assoc. liquid hydrocarbons producible from the Morrow, Atoka, Wolfcamp and Strawn formations in sec. 13: E2.

Marbob Energy Corp. No. 1 Dice Roll Federal Com. was completed 4/6/04 on sec. 13: NESE.

Letter of 12/16/04 stated that the suspension of operations terminated as of 4/1/04.

Decision of 1/20/05 stated that the suspension of operations was lifted effective 4/1/04, at the time of suspension, there were 2 years and 11 months remaining in the primary term, therefore, the new expiration date is 3/1/07. In addition, the lease is held by allocated production.

Assign. of oper. rights dated 11/18/10 from Marbob Energy Corp. to Concho O&G LLC 5% and COG Operating LLC 95% as to all lands from the surface to 12,400', 100% interest.

Assign. of oper. rights dated 4/3/14 from COG Operating LLC 95% and Concho O&G LLC 5% to Occidental Permian LP 25% as to all lands surface to 12,400'.

## OPERATING RIGHTS:

Surface to 12,400':

Concho O&G LLC  
550 W. Texas Ave., Ste. 100  
Midland, TX 79701

3.75%

COG Operating LLC  
550 W. Texas Ave., Ste. 100  
Midland, TX 79701

71.25%

Lessee

25%

Below 12,400':

Lessee

100%

OVERRIDING ROYALTY:

Surface to 12,400' as to all lands:  
Lessee

12.5% of 75%

Sliding Scale ROYALTY TO THE USA

Notes:

JUL 15 1985

NM 55125

T.20 South - R.29 East  
Section 13:E2NW

L-H.B.P.  
05/01/83

Lessee :

Yates Petroleum Corp. 10%  
105 S. 4th St.  
Artesia, NM 88210

OXY Y-1 Co. 30%  
P.O. Box 27570  
Houston, TX 77227

ABO Petroleum Corp. 30%  
105 S. 4th St.  
Artesia, NM 88210

Myco Industries Inc. 30%  
105 S. 4th St.  
Artesia, NM 88210

RUN SHEET:

Competitive lease NM 55125 issued 5/1/83 to Yates Petroleum Corp. for 5 years with schedule "B" (sliding scale) royalty to the USA.

Assign. of record title dated 5/5/83 from Yates Petroleum Corp. to Yates Drilling Co. 30%, ABO Petroleum Corp. 30%, & Myco Industries Inc. 30% as to sec. 13: E2NW.

Suspension of operations & production was granted effective 4/1/88 due to potash.

Committed to com. agreement NMNM 72629 as to dry gas & assoc. liquid hydrocarbons producible from the Morrow, Strawn and Wolfcamp formations in sec. 13: W2.

Suspension of operations terminated upon approval of the application for permit to drill the Yates Petroleum Corp. Eland "AFC" Federal Com. no. 1 well.

Decision of 2/16/89 extended the lease for 2 years ending 4/30/90.

The case file shows held by production- actual on 12/10/88 and held by production-allocated on 12/10/88.

Comm. agreement NMNM 72629 expired on 2/19/10 and the lease was extended 2 yrs. through 2/19/12 and so long thereafter as oil or gas is produced in paying quantities.

Yates Drilling Co. changed its name to OXY Y-1 Co.

Yates Petroleum Corp. requested a suspension of operations and prod. due to delays in approving a well site due to close proximity to a potash mine. BLM granted the suspension eff. 12/1/2011 to terminate at the earlier of: the 1st of the month in which approved operations are commenced on the lease or whenever the authorized officer determines that the suspension is no longer needed in the interest of conservation. At the time the suspension is terminated, the lease will have 81 days left in its term. For the lease to remain in effect beyond the 81st day, a well that is capable of producing in paying quantities will have to be



completed. A lease that is beyond its primary term may not receive a 2-yr. extension for drilling over the expiration date.

The suspension was lifed 6/13/2012 with 81 days remaining on the leasehold. The well is presently in drilling status.

Committed to com. agreement NM 128739 as to the Bone Spring formation in sec. 13: N2NW, sec. 14: N2NE.

OPERATING RIGHTS:

|         |      |
|---------|------|
| Lessees | 100% |
|---------|------|

OVERRIDING ROYALTY:

None filed of record.

Sliding Scale ROYALTY TO THE USA

Notes:

JUL 15 2015

LC 028840-A

T.20 South - R.29 East  
Section 13:E2SW

Renewal Lease  
05/31/2018

Lessee :

Northern Trust Bank of California, NA  
Trustee of the Estate of Sarah C. Getty  
P.O. Box 226270  
Dallas, TX 75222-6270

RUN SHEET:

Prospecting permit Roswell 052196 was issued to Horace C. Rawson on 9/22/24. The serial # was later changed to LC 028840.

Operating agreement dated 2/28/27 between Horace C. Rawson and Mesa Oil Co. Inc., granting the right to explore and develop for oil and/or gas as to sec. 13: E2, sec. 14: E2, reserving an overriding royalty of 7.5% as to the "A" or preferred acreage, on which the government royalty shall be 5%.

Second supplementary assign. & agreement dated 11/19/27 between Mesa Oil Co. Inc., party of the 1st part and George F. Getty Oil Co. party of the 2nd part, wherein party of the 1st part assigns to party of the 2nd part the operating agreement of 2/28/27 as to all of the premises covered thereby, in particular conveying all interest of 1st party under said permit and oper. agreement and otherwise as to sec. 13: W2, among other lands.

Lease LC 028840-A issued effective 9/9/29 to Horace C. Rawson for 20 years with the right to renew for successive 10 yr. periods, with 5% royalty to the USA.

Reassignment and quitclaim deed dated 10/26/31 from George F. Getty Oil Co. to Mesa Oil Co. Inc., granting all of assignor's interest as to sec. 13 & 14. This assignment and quitclaim deed is given to relinquish, abandon and reassign to grantee all interest held under oil & gas permit LC 028840, operating agreement dated 2/28/27, assign. & agreement dated 5/10/27, supplementary assign. & agreement dated 7/14/27, second supplementary assign. & agreement dated 11/19/27 and lease LC 028840-A, issued pursuant thereto.

Assign. dated 4/10/33 from Horace C. Rawson to J. Paul Getty 100% as to sec. 13: E2SW, among other lands.

Assign. dated 12/29/33 from J. Paul Getty to Sarah C. Getty conveying all of his interest as to sec. 13: E2SW, among other lands.

Partial release of oil & gas lease dated 8/27/42 from James Stagner as administrator of the Estate of Sarah C. Getty, deceased to the United States of America, all right, title and interest as to sec. 13: E2, E2NW, SWNW (440 acres.) BLM decision of 11/2/42 approved this relinquishment.

Renewal lease LC 028840-A issued 6/1/58 to Jean Paul Getty (aka J. Paul Getty), testamentary trustee of the Estate of Sarah C. Getty, deceased for 10 years with the right to renew for successive 10 yr. periods, with schedule "C" (sliding scale) royalty to the USA.

Assign. of oper. rights dated 1/18/65 from J. Paul Getty, testamentary trustee of the Estate of Sarah C. Getty, deceased to Odessa Natural

Gasoline Co. 1/2 of assignor's working interest as to sec. 13: E2SW, below the base of the Yates formation.

Decision of 6/17/68 stated that the Getty Deep unit agreement terminated 4/24/68.

Renewal lease LC 028840-A issued 6/1/68 to J. Paul Getty, testamentary trustee of the Estate of Sarah C. Getty, deceased for 10 years with the right to renew for successive 10 yr. periods, with sliding scale royalty to the USA.

Assign. of oper. rights dated 8/1/68 from J. Paul Getty, testamentary trustee of the Estate of Sarah C. Getty, deceased, to Odessa Natural Gasoline Co. 1/2 of assignor's working interest as to all lands below the base of the Yates formation. BLM decision of 4/7/69 stated that this assignment was filed merely for the purpose of confirming Odessa's interest in the renewal lease, which issued 6/1/68. The approval to the assign. of 8/1/68 is granted only to the extent of confirming and acknowledging Odessa's interest in the lease.

Assign. of oper. rights dated 6/1/72 from Odessa Nat. Gasoline Co. to J. Paul Getty, testamentary trustee of the Estate of Sarah C. Getty 1/2 interest as to all lands below the base of the Yates formation. BLM decision of 8/3/72 approved this and stated that all of the operating rights are now considered merged with the leasehold estate.

Skelly Oil Co. and Mission Corp. merged into Getty Oil Co.

Renewal lease LC 028840-A issued 6/1/78 to William E. Bell & Lewis E. Drolet, as agents of Title Insurance and Trust Co., successor trustee of the Estate of Sarah C. Getty for 10 years with sliding scale royalty to the USA.

Assign. of record title dated 5/26/88 from Ticor Title Insurance Co. of California (formerly Title Insurance & Trust Co., successor trustee of the Estate of Sarah C. Getty, deceased) to Trust Services of America, Inc., successor trustee of the Estate of Sarah C. Getty, deceased, 100% as to all lands.

Renewal lease LC 028840-A issued 6/1/88 to Trust Services of America, Inc. as successor trustee of the Estate of Sarah C. Getty, deceased for 10 years with 12.5% royalty to the USA.

Assign. of oper. rights dated 4/25/89 from Trust Services of America, Inc., successor trustee of the Estate of Sarah C. Getty to Yates Petroleum Corp. 10%, Yates Drilling Co. 30%, ABO Petroleum Corp. 30% and Myco Industries Inc. 30% as to sec. 13: E2SW from the surface to 11,397', reserving 12.5% before payout, 17.5% after payout.

Yates Petrol. Corp. no. 1 Zia AHZ Federal was completed 4/2/91 on sec. 14: SWNE.

Yates Petrol. Corp. Zia ZS Federal Com. #1 was completed 4/20/90 on sec. 11: SWSE.

Renewal lease LC 028840-A issued 6/1/98 to Northern Trust Bank of California, N.A. (successor to Trust Services of America Inc.), Trustee of the Estate of Sarah C. Getty for 20 years with 12.5% royalty to the USA.

Com. agreement NM 72629 expired 2/19/2010.

Yates Drilling Co. changed its name to OXY Y-1 Co.

OPERATING RIGHTS:

Sec. 13: E2SW from the surface

to 11,397':

|  |     |
|--|-----|
| Yates Petroleum Corp.<br>105 S. 4th St.<br>Artesia, NM 88210 | 10% |
|--|-----|

|  |     |
|--|-----|
| ABO Petroleum Corp.<br>105 S. 4th St.<br>Artesia, NM 88210 | 30% |
|--|-----|

|   |     |
|---|-----|
| Myco Industries Inc.<br>105 S. 4th St.<br>Artesia, NM 88210 | 30% |
|---|-----|

|  |     |
|--|-----|
| OXY Y-1 Co.<br>P.O. Box 27570<br>Houston, TX 77227 | 30% |
|--|-----|

Below 11,397':

|        |      |
|--------|------|
| Lessee | 100% |
|--------|------|

OVERRIDING ROYALTY:

Sec. 13: E2SW from the surface to 11,397':

Lessee reserved 12.5% before payout and 17.5% after payout

The original lessee, Horace Rawson had reserved 7.5% in an operating agreement dated 2/28/27. In application for renewal lease dated 1/28/58, it is stated that the lessee had obtained from Horace Rawson and his wife, Helen Rawson, a release and relinquishment of overriding royalty and the lease is not subject to any overriding royalties. A photocopy of the release is stated to be attached, but it is not filed of record.

12.5% Royalty to U.S.A

Notes:

JUL 15 2015

LC 029009-B

T.20 South - R.29 East  
Section 24:N2NE

Renewal Lease  
06/30/2020

Lessee :

Chevron USA Inc.  
15 Smith Rd.  
Midland, TX 79705

RUN SHEET:

We are unable to provide a run sheet of the instruments in the base lease LC 029009-A, as it has terminated and has been sent to the Federal Records Center in Denver, Co. All prospecting permit instruments and documents before the lease issuance are in this file.

Oil & Gas Lease LC 029009-B issued 10/14/31 to Andrew Dooley for 20 years with the right to renew for successive 10 yr. periods, with a sliding scale royalty to USA

Apparently there was an assignment from Andrew Dooley to George F. Getty Oil Co. on 4/15/32 however it is not located in the file.

Assignment dated 12/30/36 from George F. Getty Oil Co. to George F. Getty, Inc.; 100%

Renewal Lease LC 029009-B issued 7/1/60 to Getty Oil Co for 10 years with the right to renew for successive 10 yr. periods, with a sliding scale royalty to the USA.

Assignment of Operating Rights dated 2/18/66 from Getty Oil Co. to Odessa Natural Gas Co. covering a 1/2 interest as to all lands below the base of the Yates formation.

Assignment of Overriding Royalty dated 7/24/67 from Odessa Natural Gas Co. to El Paso Natural Gas Co. a 1/2 of 1% as to all lands below the base of the Yates formation.

Renewal Lease issued to Getty Oil Co. on 7/1/70 for 10 years with the right to renew for successive 10 yr. periods, with a sliding scale royalty to the USA

Assignment of operating rights dated 2/3/70 from Odessa Natural Gasoline Co. to Getty Oil Co. covering all of assignor's operating rights as to all lands.

Renewal Lease LC 029009-B issued 7/1/80 to Getty Oil Co. for 10 years with the right to renew for successive 10 yr. periods, with a sliding scale royalty to the USA

Assignment of Record Title dated 7/17/85 from Getty Oil Co. to Texaco Producing Inc. 100% as to all lands.

Renewal Lease LC 029009-B issued 7/1/90 for a 10 year period to Texaco Producing, Inc. at a royalty rate of 12.5% to USA.

Decision of 4/9/91 recognized the name change of Texaco Producing Inc. to Texaco Exploration and Production, Inc.

Renewal lease LC 029009-B issued 7/1/00 to Texaco Exploration & Prod. Inc. for 20 years with 12.5% royalty to the USA.

Assign. of record title dated 5/6/02 from Texaco Exploration & Prod. Inc.  
to Chevron USA Inc. 100% as to all lands.

OPERATING RIGHTS:

Lessee

100%

OVERRIDING ROYALTY:

Below the base of the Yates formation as to all lands:

El Paso Nat. Gas Co.  
P.O. Box 1492  
El Paso, TX 79999

.5%

12.5% Royalty to U.S.A

Notes:

02-11-13-2013

JUL 15 2015

NM 129731

T.20 South - R.29 East  
Section 24:NENW

Competitive Lease  
3/31/2023

Lessee :

Devon Energy Prod. Co. LP  
333 West Sheridan Ave.  
Oklahoma City, OK 73102

RUN SHEET:

Competitive lease NM 129731 issued 4/1/13 to Daniel E. Gonzales for 10 yrs.  
with 12.5% royalty to the USA.

Assign. of record title dated 5/15/13 from Daniel E. Gonzales & Iliana  
Gonzales to Devon Energy Prod. Co. LP 100% as to all lands, no overriding  
royalty reserved.

OPERATING RIGHTS:

Lessee

100%

OVERRIDING ROYALTY:

None filed of record.

12.5 % ROYALTY TO THE USA

Notes:

# SCHUTZ ABSTRACT CO., INC.

P.O. BOX 973

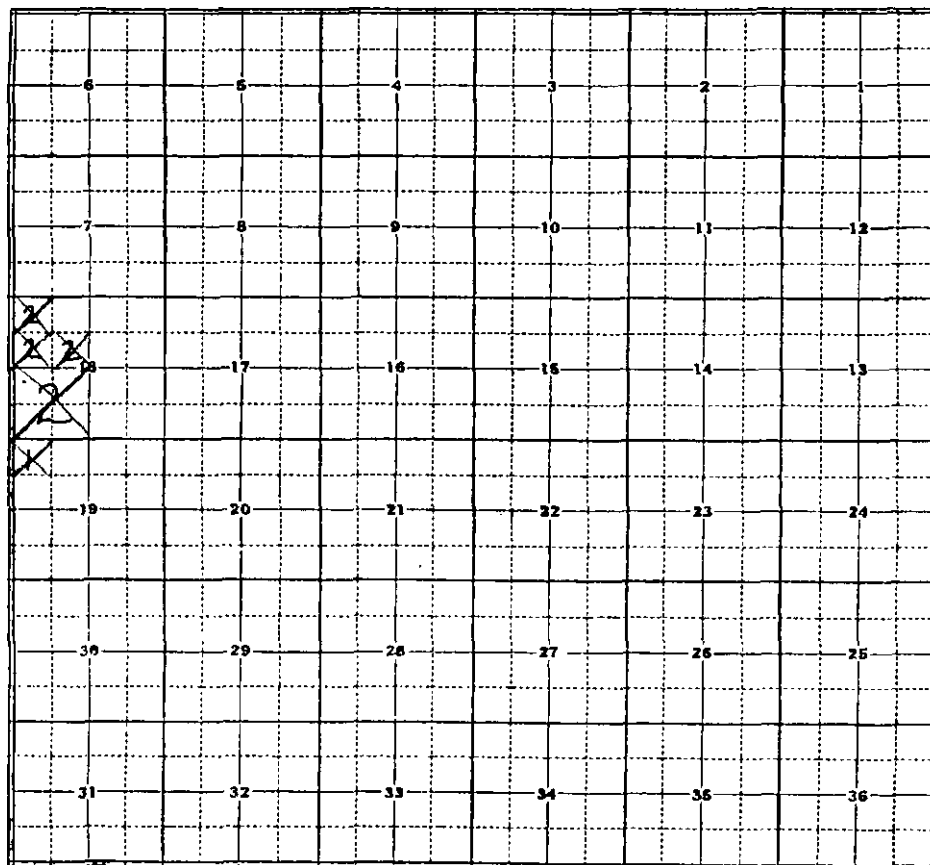
(505) 982-0130

SANTA FE, NEW MEXICO 87504

T. 20 South - R. 30 East

Eddy County

07/14/15



XRED - STATE LAND  
BLUE - FEE LAND

1. V-6733-2

2. V-5391-3



JUL 14 2015

V-6733-2

T.20 South - R.30 East  
Section 19:LOTS 1 (NWNW)

L-H.B.P  
11/01/02

Lessee :

COG Operating LLC/  
Concho Oil & Gas LLC  
One Concho Center  
600 W. Illinois Ave.  
Midland, Texas 79701

Lease issued November 1, 2002 to Pitch Energy Corporation.

Assignment dated April 13, 2004 from Pitch Energy Corporation to Marbob Energy Corporation and Pitch Energy Corporation.

Assignment dated November 12, 2010 from Marbob Energy Corporation and Pitch Energy Corporation to COG Operating LLC/Concho Oil & Gas LLC.

MISCELLANEOUS INSTRUMENTS:

None filed of record.

1/6 ROYALTY TO THE STATE OF NEW MEXICO

Notes:

JUL 14 2015

V-5391-3

T.20 South - R.30 East  
Section 18:LOTS 1,2,3,4,E2W2

L-H.B.P  
11/01/98

Lessee :

COG Operating LLC/  
Concho Oil & Gas LLC  
One Concho Center  
600 W. Illinois Ave.  
Midland, Texas 79701

Lease issued November 1, 1998 to Doug J. Schutz.

Assignment dated December 1, 1998 from Doug J. Schutz to Matador Petroleum Corporation.

Assignment dated July 31, 2003 from Matador E&P Company (formerly Matador Petroleum Corporation) to Marbob Energy Corporation.

Assignment dated November 12, 2010 from Marbob Energy Corporation to COG Operating LLC/Concho Oil & Gas LLC.

MISCELLANEOUS INSTRUMENTS:

None filed of record.

1/6 ROYALTY TO THE STATE OF NEW MEXICO

Notes:

Lot 1,NENW shows to be committed to the Coinflip State Com Well #2H  
Communitization Agreement dated effective January 16, 2014.

Lot 2,SENW shows to be committed to the Coinflip State Com Well #3H  
Communitization Agreement dated effective January 16, 2014.

**ATTACHMENT VI**

**No Wells Penetrate the Injection Zone within the AOR of the Proposed SWD  
Well**

## ATTACHMENT VII

### Operation Summary

Well: Outer Banks SWD #1

Location: 2075' FSL and 1040' FEL

Unit I (NE/4, SE/4), Section 13, Township 20 South, Range 29 East,  
Eddy County, New Mexico

Injection Zone: Devonian

Well TD: 14,000'

#### Summary:

1. Proposed average daily injection rate is 16,000 bbl/day with maximum daily injection rate of 20,000 bbl/day
2. This will be a closed system
3. Proposed average injection pressure is 2,800 psi with maximum pressure of 2,800 psi
4. Source of injection fluid will be exempt liquid E & P waste
5. There are nine wells that exist within the ½ mile AOR of the proposed well, but they do not penetrate the injection zone. Two wells penetrating the injection interval (Federal Dooley #1 [30-015-10044] and Big Eddy Unit #1 [30-015-02475]) were reviewed to evaluate the reservoir quality for the proposed injection interval. The Federal Dooley #1 well, drilled by Odessa Natural Gasoline Company, is located about 1.5 miles southwest of the proposed Outer Banks SWD #1 well, in Unit M (SW/4, SW/4), Section 24, Township 20 South, Range 29 East, in Eddy County, New Mexico. The Big Eddy Unit #1 well, drilled by the Shell Oil Company, is located approximately 10.7 miles south of the proposed Outer Banks SWD #1 well, in Unit C (NE/4, NW/4), Section 36, Township 21 South, Range 28 East, in Eddy County, New Mexico. The Federal Dooley #1 well was drilled to 13,400 feet (TD). The Devonian section was found not to be productive of oil and gas.

## **ATTACHMENT VIII**

### **Geologic Summary**

Information on geological strata for this section was derived in part from a well (Federal Dooley #1) that was drilled about 1.5 miles southwest of the proposed Outer Banks SWD #1 in Unit M (SW/4, SW/4), Section 24, Township 20 South, Range 29 East (Nicholson and Clebsch, 1961). The well was drilled a total depth (TD) of 13,400 feet. Figure 1 presents a type log based on rock descriptions from the Federal Dooley #1 well.

The proposed SWD well is located just north of the Delaware Basin in the Capitan Reef Complex of the Northwestern Shelf. The area is underlain by a thin layer of Quaternary-age alluvium consisting of sand, silty sand and clay that rests directly on Triassic-age red bed (clay, mudstone, etc.) of the Dewey Lake formation.

The Triassic-age rocks are underlain by rocks of Permian-age that have a collective thickness of about 10,700 feet. The Permian formations include, in descending order, the Rustler, Salado, Castile, Artesia Group (Tansill and Yates formations), Capitan, Delaware Mountain Group (Bell Canyon, Cherry Canyon and Brushy Canyon formations), Bone Springs Limestone and Wolfcamp Shale. The Rustler formation generally occurs between about 350 and 550 feet and is composed chiefly of dolomite, dolomitic limestone, gypsum and mudstone. However, the type log used does not show the Rustler Formation.

The Salado and Castile formations are principally anhydrite, shale and limestone. The Salado formation contains economic deposits of potash and anhydrite and varies in thickness from about 1,500 to 2,000 feet. The Tansill and Yates formations are predominantly carbonates with some evaporates and a collective thickness between about 350 and 450 feet.

The Permian-age Capitan formation, also known as the Capitan aquifer, occurs below the Yates formation between approximately 3,500 and 5,000 feet. The formation developed around the margins of the Delaware Basin and is predominately limestone and dolomite.

The Delaware Mountain Group includes the Bell Canyon, Cherry Canyon and Brushy Canyon formations and underlies the Capitan formation. The Delaware Mountain Group occurs between approximately 5,000 to 8,000 feet and consists of a thick sequence of largely of deep marine sandstone interbedded with shale and limestone. Some oil and gas is produced from the Bell Canyon and Brushy Canyon formations.

The Bone Springs Limestone is comprised of thin beds of cherty black limestone and sandstone between approximately 1,500 to 2,500 feet thick. The Bone Springs occurs between

approximately 6,400 and 9,600 feet near the Outer Banks SWD. Oil and gas is produced from several distinct intervals in the Bone Springs Limestone. The Wolfcamp Shale is the lowermost Permian-age formation and is composed of non-organic between approximately 9,600 and 10,700 feet. The Wolfcamp Shale marks the boundary between rocks of Permian and Pennsylvanian-age.

Rocks of Pennsylvanian age comprise a sequence of marine carbonates, shale and clastics with a combined thickness of about 1,500 feet between about 10,700 and 12,200 feet. The Strawn formation (Middle Pennsylvanian) occurs beneath the Wolfcamp Shale and is composed of about 300 feet of shale and sandstone, mudstone and conglomerate. The Atoka and Morrow formations, in descending order, occur beneath the Strawn formation and are about 500 and 600 feet thick, respectively. The Atoka formation is composed interbedded sandstone whereas the Morrow formation is composed of limestone in the upper part and clastics in the lower part.

Rocks of Mississippian age underlie the Morrow formation and are represented by the Barnett Shale and Mississippian Lime, in descending order, with a collective thickness of about 900 feet. The Mississippian-age rocks are underlain by the Upper Devonian-age Woodford Shale, which is approximately 100 feet thick and is composed predominately of black organic-rich marine shale, siltstone and sandstone. The Woodford Shale occurs above the Devonian section at about 13,100 feet. Rocks of Siluro-Devonian age underlie the Woodford Shale and are composed mainly of chert and cherty carbonate rocks. The Siluro-Devonian rocks occur between about 13,200 and 14,500 feet. The proposed depth of the proposed injection well is 14,000 feet with injection interval to be determined from field observations. The Siluro-Devonian rocks are underlain by Ordovician-age rocks represented by the Montoya, Simpson and Ellenberger formations, in descending order.

Figure 1: presents a type log based on a test well (Federal Dooley#1) that was drilled to 13,400 feet (TD) The well was drilled about 1.5 miles southwest of the proposed Outer Banks SWD #1 in Unit M (SW/4, SW/4), Section 24, Township 20 South and Range 29 East.

Figure 2: presents a detailed geological cross section of the injection zone. The geological cross section (A to A') was prepared based on rock descriptions from the Federal Dooley #1 and Big Eddy Unit #1 located in Unit C (NE/4, NW/4), Section 36, Township 21 South, Range 28 East, a distance of about 10.6 miles. The cross section transects the Capitan Reef from north to south. The cross section does not show any offsets that would suggest faulting is present. The cross section shows good correlation of the Siluro – Devonian contact and the potential injection zone.

## **Groundwater Summary**

The Outer Banks SWD #1 is located over the Capitan Reef, a geologic feature that developed around the margins of the Delaware Basin. Groundwater occurs in the Permian-age Rustler and Capitan formations. Groundwater in the Rustler formation occurs in dolomite beds in the upper part and gypsum beds near the base of the formation. Groundwater from the lower part of the Rustler formation is generally very saline to saturated brine. Groundwater occurs in limestone units in the Capitan formation. The Capitan aquifer is the principal water source for the City of Carlsbad, New Mexico. However, near the Outer Banks SWD water quality is generally poor due to elevated levels of sodium, chloride and sulfate.

According to the water report compiled by Geosearch there are no freshwater wells present in the area. Records obtained from the New Mexico Office of the State Engineer and U.S. Geological Survey show no freshwater wells within a one-mile radius of the proposed Outer Banks SWD Well #1.

### **References:**

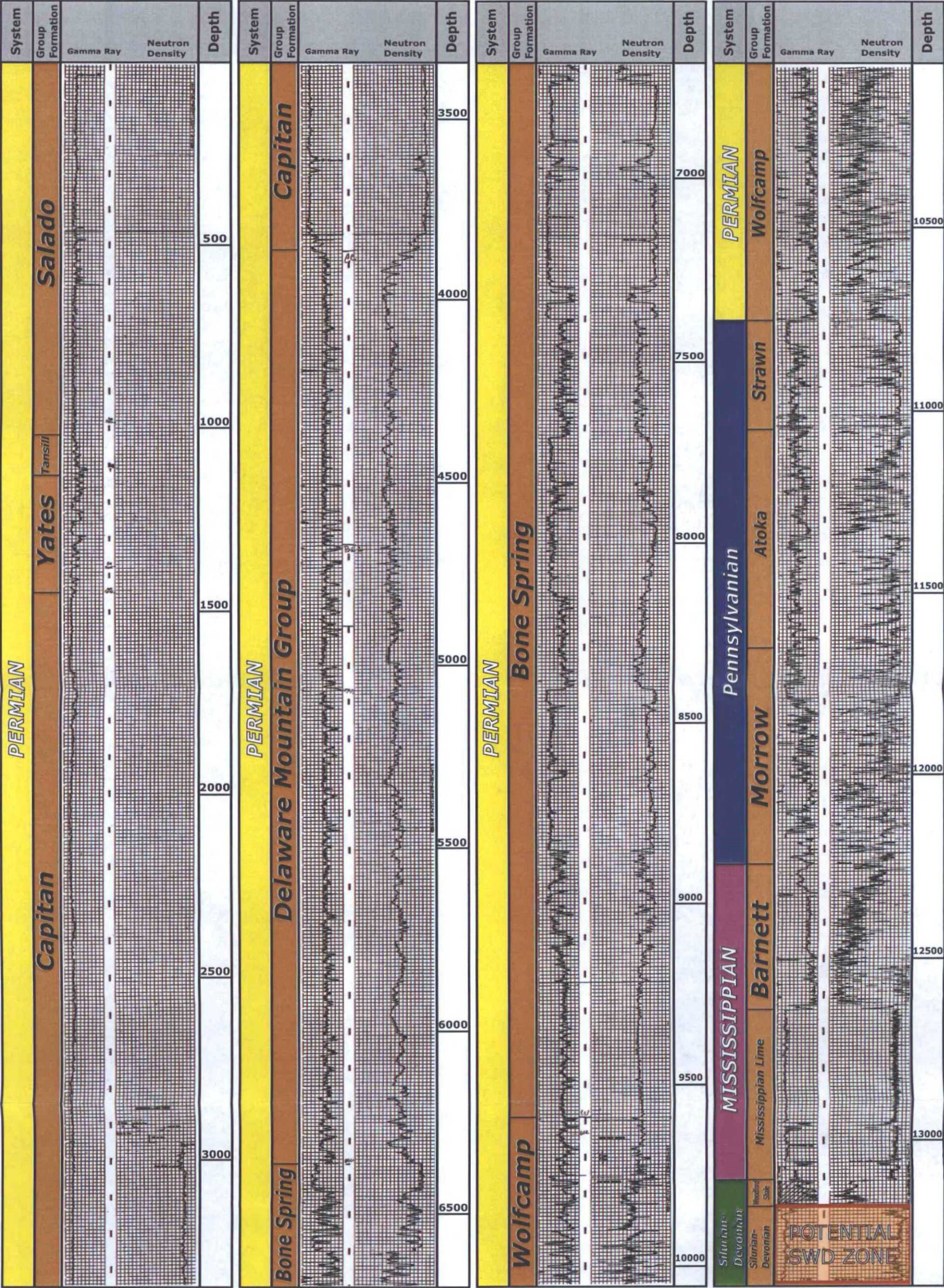
- Nicholson, A., Jr., and A. Clebsch, 1961, Geology and Ground-Water Conditions in Southern Lea County, New Mexico, *in* Ground-Water Report 6: U.S. Geological Survey, State Bureau of Mines and Mineral Resources, New Mexico Institute of Mining and Technology, Campus Station, Socorro, New Mexico. p. 123
- Hendrickson, G.E., and Jones, R.S., 1952, Geology and Groundwater Resources of Eddy County, New Mexico. *in* Ground-Water Report 3: U.S. Geological Survey, State Bureau of Mines and Mineral Resources, New Mexico Institute of Mining and Technology, Campus Station, Socorro, New Mexico.

***Refer to attached figures and copy of Office of the State Engineer Well Inventory  
and Geosearch Water Well Report***



Odessa Natural Gasoline Company      Federal Dooley #1

Sec. 24, T-20-S, R-29-E      Eddy County, New Mexico



Outer Banks SWD Well #1

Eddy County, New Mexico

Type Log



FIGURE 1: TYPICAL SECTION OF ROCKS PENETRATED



**SCHLUMBERGER** SONIC LOG - GAMMA RAY

LOGGING SERVICE WELL SURVEYING CORPORATION  
Houston, Texas

|  |  |                   |
|--|--|-------------------|
| COUNTY: EDDY<br>FIELD: WILDCAT<br>LOCATION: WILDCAT<br>WELL: WILDCAT<br>COMPANY: ODESSA NATURAL GASOLINE COMPANY | COMPANY: ODESSA NATURAL GASOLINE COMPANY ✓ |                   |
|  | WELL: FEDERAL BOOLEY #1 ✓                  |                   |
|  | FIELD: WILDCAT                             |                   |
|  | COUNTY: EDDY                               | STATE: NEW MEXICO |
|  | LOCATION: 550' FSL ✓<br>550' FHL ✓         |                   |

Sec. 24 Twp. 20-S Rge. 29-E

Permeant Depth: 0' Elev. 3310' Elev. R.R. --  
Log Measured From: 0' 15' ft. Above Perm. Datum D.F. 3325  
Drilling Measured From: 0' G.L. 3310

DATUM  
Siluro-Devonian

**GAMMA RAY**  
API UNITS

DEPTH  
FEET

**INTERVAL TRANSIT TIME**  
MICROSECONDS PER FOOT

**SCHLUMBERGER** SONIC LOG - GAMMA RAY

LOGGING SERVICE WELL SURVEYING CORPORATION  
Houston, Texas

|  |  |                   |
|--|--|-------------------|
| COUNTY: EDDY<br>FIELD: WILDCAT<br>LOCATION: WILDCAT<br>WELL: WILDCAT<br>COMPANY: ODESSA NATURAL GASOLINE COMPANY | COMPANY: ODESSA NATURAL GASOLINE COMPANY ✓ |                   |
|  | WELL: FEDERAL BOOLEY #1 ✓                  |                   |
|  | FIELD: WILDCAT                             |                   |
|  | COUNTY: EDDY                               | STATE: NEW MEXICO |
|  | LOCATION: 550' FSL ✓<br>550' FHL ✓         |                   |

Sec. 24 Twp. 20-S Rge. 29-E

Permeant Depth: 0' Elev. 3310' Elev. R.R. --  
Log Measured From: 0' 15' ft. Above Perm. Datum D.F. 3325  
Drilling Measured From: 0' G.L. 3310

DATUM  
Siluro-Devonian

**GAMMA RAY**  
API UNITS

DEPTH  
FEET

**INTERVAL TRANSIT TIME**  
MICROSECONDS PER FOOT





# New Mexico Office of the State Engineer

## Wells with Well Log Information

(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 | Subbasin | County | Source  | q q q | 6416 4 | Sec | Tws | Rng | X      | Y        | Start Date | Finish Date | Log File Date | Depth Well | Depth Water | Driller                        | License Number |
|------------|----------|----------|--------|---------|-------|--------|-----|-----|-----|--------|----------|------------|-------------|---------------|------------|-------------|--------------------------------|----------------|
| CP 00740   |          |          | ED     |         | 2 3 3 | 12     | 20S | 29E |     | 590669 | 3605509* | 02/14/1989 | 02/19/1989  | 03/02/1989    | 150        |             | ABBOTT, MURRELL                | 46             |
| CP 00745   |          |          | ED     | Shallow | 4 1 3 | 12     | 20S | 29E |     | 590653 | 3605782  | 12/09/1989 | 12/09/1989  | 12/19/1989    | 232        |             | GLENN, CLARK<br>A."CORKY" (LD) | 421            |

Record Count: 2

PLSS Search:

Section(s): 12

Township: 20S

Range: 29E

\*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.

9/25/15 7:49 AM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION



---

## *New Mexico Office of the State Engineer* **Wells with Well Log Information**

---

No wells found.

**PLSS Search:**

Section(s): 13

Township: 20S

Range: 29E



---

## *New Mexico Office of the State Engineer* **Wells with Well Log Information**

---

No wells found.

**PLSS Search:**

Section(s): 18

Township: 20S

Range: 30E

---

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.

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9/25/15 7:59 AM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION



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## *New Mexico Office of the State Engineer* **Wells with Well Log Information**

---

No wells found.

**PLSS Search:**

Section(s): 24

Township: 20S

Range: 29E

---

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.

---

9/25/15 7:50 AM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION



---

## *New Mexico Office of the State Engineer* **Wells with Well Log Information**

---

No wells found.

**PLSS Search:**

Section(s): 19

Township: 20S

Range: 30E



On time. On target. In touch.™

---

## **Water Well Report**

---

<http://www.geo-search.net/QuickMap/index.htm?DataID=Standard0000114584>

*Click on link above to access the map and satellite view of current property*

*Target Property:*  
**Outerbanks SWD**  
**Artesia, Eddy County, New Mexico 88210**

*Prepared For:*  
**Larson & Associates**

**Order #: 52472**  
**Job #: 114584**  
**Project #: 15-0126-00**  
**PO #: 1703**  
**Date: 07/22/2015**

*phone: 888-396-0042 · fax: 512-472-9967 · [www.geo-search.com](http://www.geo-search.com)*

## TARGET PROPERTY SUMMARY

**Outerbanks SWD**

**Artesia, Eddy County, New Mexico 88210**

**USGS Quadrangle: Illinois Camp Se, NM**

**Target Property Geometry: Point**

**Target Property Longitude(s)/Latitude(s):**

**(-104.023278, 32.571819)**

**County/Parish Covered:**

**Eddy (NM)**

**Zipcode(s) Covered:**

**Artesia NM: 88210**

**State(s) Covered:**

**NM**

**\*Target property is located in Radon Zone 2.**

**Zone 2 areas have a predicted average indoor radon screening level between 2 and 4 pCi/L (picocuries per liter).**

Disclaimer - The information provided in this report was obtained from a variety of public sources. GeoSearch cannot ensure and makes no warranty or representation as to the accuracy, reliability, quality, errors occurring from data conversion or the customer's interpretation of this report. This report was made by GeoSearch for exclusive use by its clients only. Therefore, this report may not contain sufficient information for other purposes or parties. GeoSearch and its partners, employees, officers and independent contractors cannot be held liable for actual, incidental, consequential, special or exemplary damages suffered by a customer resulting directly or indirectly from any information provided by GeoSearch.

**GeoSearch**

www.geo-search.com · phone: 888-396-0042 · fax: 612-472-9967



## DATABASE FINDINGS SUMMARY

| DATABASE   | ACRONYM | LOCA-<br>TABLE | UNLOCA-<br>TABLE | SEARCH<br>RADIUS<br>(miles) |
|--|---------|----------------|------------------|-----------------------------|
| <b>FEDERAL</b>   |         |                |                  |                             |
| UNITED STATES GEOLOGICAL SURVEY NATIONAL WATER<br>INFORMATION SYSTEM | NWIS    | 0              | 0                | 1.0000                      |
| <b>SUB-TOTAL</b>   |         | <b>0</b>       | <b>0</b>         |                             |
| <b>STATE (NM)</b>  |         |                |                  |                             |
| WATER ADMINISTRATION TECHNICAL ENGINEERING RESOURCE WATERS<br>SYSTEM |         | 0              | 0                | 1.0000                      |
| <b>SUB-TOTAL</b>   |         | <b>0</b>       | <b>0</b>         |                             |

TOTAL

0 0

**GeoSearch**

www.geo-search.com · phone: 888-396-0042 · fax: 512-472-9967

## LOCATABLE DATABASE FINDINGS

| ACRONYM                  | SEARCH<br>RADIUS<br>(miles) | TP/AP<br>(0 - 0.02) | 1/8 Mile<br>(> TP/AP) | 1/4 Mile<br>(> 1/8) | 1/2 Mile<br>(> 1/4) | 1 Mile<br>(> 1/2) | > 1 Mile | Total    |
|--------------------------|-----------------------------|---------------------|-----------------------|---------------------|---------------------|-------------------|----------|----------|
| <b><u>FEDERAL</u></b>    |                             |                     |                       |                     |                     |                   |          |          |
| NWMS                     | 1.000                       | 0                   | 0                     | 0                   | 0                   | 0                 | NS       | 0        |
| <b>SUB-TOTAL</b>         |                             | <b>0</b>            | <b>0</b>              | <b>0</b>            | <b>0</b>            | <b>0</b>          | <b>0</b> | <b>0</b> |
| <b><u>STATE (NM)</u></b> |                             |                     |                       |                     |                     |                   |          |          |
| WATERS                   | 1.000                       | 0                   | 0                     | 0                   | 0                   | 0                 | NS       | 0        |
| <b>SUB-TOTAL</b>         |                             | <b>0</b>            | <b>0</b>              | <b>0</b>            | <b>0</b>            | <b>0</b>          | <b>0</b> | <b>0</b> |

|              |          |          |          |          |          |          |          |          |
|--------------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>TOTAL</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> |
|--------------|----------|----------|----------|----------|----------|----------|----------|----------|

**NOTES:**

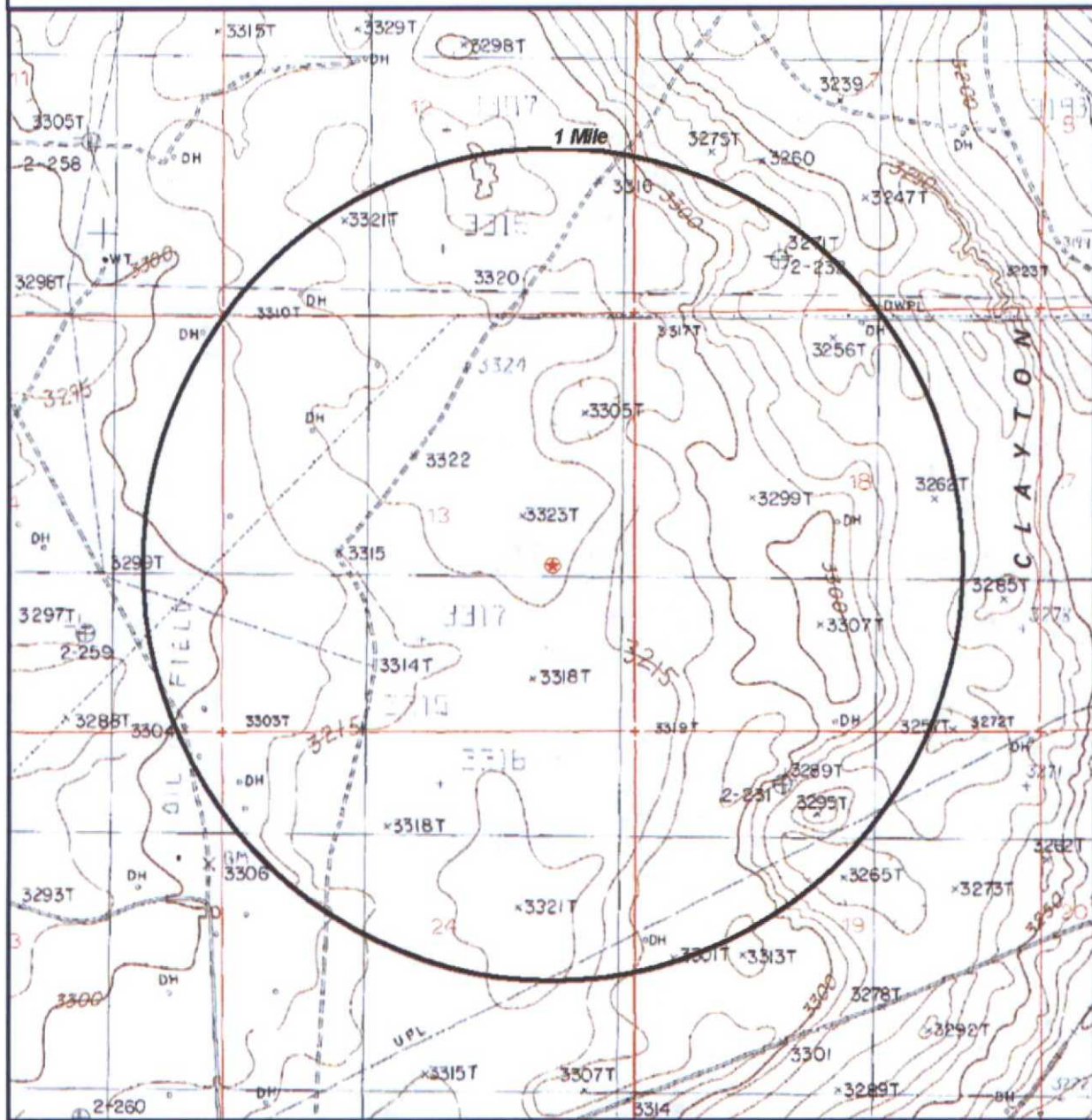
NS = NOT SEARCHED

TP/AP = TARGET PROPERTY/ADJACENT PROPERTY

**GeoSearch**

www.geo-search.com · phone: 888-396-0042 · fax: 612-472-9967

# WATER WELL MAP



Target Property (TP)

**Outerbanks SWD**  
**Artesia, New Mexico**  
**88210**

CONTOUR LINES REPRESENTED IN FEET



0' 1000' 2000' 3000'  
 SCALE: 1" = 2000'

**GeoSearch**

www.geo-search.com - phone: 888-396-0042 - fax: 512-472-9967

## ENVIRONMENTAL RECORDS DEFINITIONS - FEDERAL

**NWIS**

United States Geological Survey National Water Information System

VERSION DATE: 7/2014

This USGS National Water Information System database only includes groundwater wells. The USGS defines this well type as: A hole or shaft constructed in the earth intended to be used to locate, sample, or develop groundwater, oil, gas, or some other subsurface material. The diameter of a well is typically much smaller than the depth. Wells are also used to artificially recharge groundwater or to pressurize oil and gas production zones. Additional information about specific kinds of wells should be recorded under the secondary site types or the Use of Site field. Underground waste-disposal wells should be classified as waste-injection wells.

**GeoSearch**

[www.geo-search.com](http://www.geo-search.com) · phone: 888-396-0042 · fax: 612-472-9967

## ENVIRONMENTAL RECORDS DEFINITIONS - STATE (NM)

### WATERS

Water Administration Technical Engineering Resource System

VERSION DATE: 4/2014

This water well location data was extracted from the NM Office of the State Engineer's Water Administration Technical Engineering Resource System database. Changes are periodically added to the information and may be made at any time. The database may contain information for areas not complete, including in-progress areas, this information should not be relied on as accurate or complete.

**GeoSearch**

[www.geo-search.com](http://www.geo-search.com) · phone: 888-396-0042 · fax: 512-472-9967

## **ATTACHMENT IX**

### **Proposed Stimulation Program**

The well will be perforated in intervals based on porosity and acidized. Coiled tubing will be used to place the acid across the porous zones accurately.

## **ATTACHMENT X**

### **Logging and Test Data**

A type log (Figure 1) was prepared from a test well (Federal Dooley #1) that was drilled 13,200 feet (TD). The well was drilled about 1.5 miles southwest of the proposed SWD in Unit M (SW/4, SW/4), Section 24, Township 20 South and Range 29 East. The well was logged with conventional logging tools available at the time.

## **ATTACHMENT XI**

### **Chemical Analysis from Fresh Water Well**

According to records from the New Mexico Office of the State Engineer and a water report from Geosearch, no fresh water wells are located within 1-mile of the Outer Banks SWD well therefore no chemical analysis for fresh water is available.

***Refer to attached Office of the State Engineer Well Inventory and Geosearch  
Water Well Report  
(Attachment VIII)***




## ATTACHMENT XII

### Faults and Hydrologic Connections

#### Statement

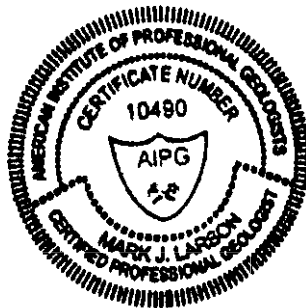
I, Mark J. Larson, have reviewed available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.



Mark J. Larson

10-2-2015

Date



## **ATTACHMENT XIII**

### **Proof of Notice**

The following parties were identified as having surface/mineral/lease ownership within one-half mile of the proposed SWD well and were notified on October 2, 2015:

**Abo Petroleum Corp.**

105 South 4<sup>th</sup> street

Artesia, NM 88210

**Devon Energy Production Company, LP**

333 West Sheridan Avenue

Oklahoma City, OK 73102

**U.S. Bureau of Land Management**

Carlsbad Field Office

620 East Greene Street

Carlsbad, NM 88220

**Myco Industries, Inc.**

105 South 4<sup>th</sup> Street

Artesia, NM 88210

**Chevron USA, Inc.**

15 Smith Road

Midland, TX 79705

**Northern Trust Bank of California, NA**

Trustee of the Estate of Sarah C. Getty

P.O. Box 226270

Dallas, TX 75222-6720

**Concho Oil & Gas, LLC**

One Concho Center

600 West Illinois Avenue

Midland, TX 79701

**OXY USA, Inc.**

P.O. Box 27570

Houston, TX 77227

**Yates Petroleum Corp.**

105 South 4<sup>th</sup> Street

Artesia, NM 88210

***Refer to attached Letters of Notification***



**WASTE CONNECTIONS, INC.**  
*Connect with the Future®*

October 2, 2015

Abo Petroleum Corporation  
105 South 4<sup>th</sup> Street  
Artesia, NM 88210

**Re: Application for Salt Water Disposal (Outer Banks SWD #1) Well, R360 Permian Basin, LLC, Unit 1 (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico**

Dear Lessee:

You are receiving a copy of the enclosed application because you have been identified as having an oil and gas lease within one-half mile of a proposed commercial salt water disposal well (Outer Banks SWD #1). R360 Permian Basin, LLC, a wholly owned subsidiary of Waste Connections, Inc., located at 3 Waterway Square Place, Suite 110, The Woodlands, Texas 77380, has submitted an application to the New Mexico Oil Conservation Division (OCD) in Santa Fe, New Mexico. You have 15 days to submit comments to the OCD at the District 2 office located at 811 South First St. Artesia, New Mexico 88210 or 1220 South St. Francis Drive in Santa Fe, New Mexico 87505. Please forward a copy of your correspondence to Gary Wallace. You may contact Mr. Wallace by phone (281.873.3204 or 432.638.4076) or email [gwallace@r360es.com](mailto:gwallace@r360es.com), if you have questions.

Sincerely,

**Waste Connections, Inc.**

Luke Bross  
Legislative & Regulatory Affairs | Development

Enc/





**WASTE CONNECTIONS, INC.**  
*Connect with the Future®*

October 2, 2015

Bureau of Land Management  
Carlsbad Field Office  
620 East Greene Street  
Carlsbad, NM 88220

**Re: Application for Salt Water Disposal (Outer Banks SWD #1) Well, R360 Permian Basin, LLC, Unit I (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico**

Dear BLM:

The enclosed application has been submitted to the New Mexico Oil Conservation Division (OCD) for permitting a commercial salt water disposal (SWD) well Unit I (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico. You are receiving this letter and application as Administrator of U.S. Government Lands. Please contact me at (281) 873-3202, if you have questions.

Sincerely,

**Waste Connections, Inc.**

Luke Bross  
Legislative & Regulatory Affairs | Development

Enc/





**WASTE CONNECTIONS, INC.**  
*Connect with the Future®*

October 2, 2015

Chevron USA, Inc.  
15 Smith Road  
Midland, TX 79705

**Re: Application for Salt Water Disposal (Outer Banks SWD #1) Well, R360 Permian Basin, LLC, Unit I (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico**

Dear Lessee:

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Sincerely,

**Waste Connections, Inc.**

Luke Bross  
Legislative & Regulatory Affairs | Development

Enc/





**WASTE CONNECTIONS, INC.**  
*Connect with the Future®*

October 2, 2015

Concho Oil & Gas, LLC  
One Concho Center  
600 West Illinois Avenue  
Midland, TX 79701

**Re: Application for Salt Water Disposal (Outer Banks SWD #1) Well, R360 Permian Basin, LLC, Unit I (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico**

Dear Lessee:

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Sincerely,

**Waste Connections, Inc.**

Luke Bross  
Legislative & Regulatory Affairs | Development

Enc/





**WASTE CONNECTIONS, INC.**  
*Connect with the Future®*

October 2, 2015

Devon Energy Production Company, LP  
333 W. Sheridan Ave.  
Oklahoma City, OK 73102

**Re: Application for Salt Water Disposal (Outer Banks SWD #1) Well, R360 Permian Basin, LLC, Unit I (NE/4; SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico**

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Sincerely,

**Waste Connections, Inc.**

Luke Bross  
Legislative & Regulatory Affairs | Development

Enc/





**WASTE CONNECTIONS, INC.**  
*Connect with the Future®*

October 2, 2015

Myco Industries, Inc.  
105 South 4<sup>th</sup> Street  
Artesia, NM 88210

**Re: Application for Salt Water Disposal (Outer Banks SWD #1) Well, R360 Permian Basin, LLC, Unit I (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico**

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Sincerely,

**Waste Connections, Inc.**

Luke Bross  
Legislative & Regulatory Affairs | Development

Enc/







**WASTE CONNECTIONS, INC.**  
*Connect with the Future®*

October 2, 2015

Northern Trust Bank of California, NA  
Trustee of the Estate of Sarah C. Getty  
P.O. Box 226270  
Dallas, TX 75222-6720

**Re: Application for Salt Water Disposal (Outer Banks SWD #1) Well, R360 Permian Basin, LLC, Unit I (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico**

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Sincerely,

**Waste Connections, Inc.**

Luke Bross  
Legislative & Regulatory Affairs | Development

Enc/





**WASTE CONNECTIONS, INC.**  
*Connect with the Future®*

October 2, 2015

OXY USA, Inc.  
P.O. Box 27570  
Houston, TX 77227

**Re: Application for Salt Water Disposal (Outer Banks SWD #1) Well, R360 Permian Basin, LLC, Unit 1 (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico**

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Sincerely,

**Waste Connections, Inc.**

Luke Bross  
Legislative & Regulatory Affairs | Development

Enc/





**WASTE CONNECTIONS, INC.**  
*Connect with the Future®*

October 2, 2015

Yates Petroleum Corp.  
105 South 4<sup>th</sup> Street  
Artesia, NM 88210

**Re: Application for Salt Water Disposal (Outer Banks SWD #1) Well, R360 Permian Basin, LLC, Unit I (NE/4, SE/4), Section 13 Township 20 South, Range 29 East, Eddy County, New Mexico**

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Sincerely,

**Waste Connections, Inc.**

Luke Bross  
Legislative & Regulatory Affairs | Development

Enc/



## **PUBLIC NOTICE**

The attached public notice was submitted to the Carlsbad Current-Argus on October 2, 2015, for one-time publication.

## PUBLIC NOTICE

R360 Permian Basin, LLC, a wholly owned subsidiary of Waste Connections, Inc., 3 Waterway Square Place, Suite 110, The Woodlands, Texas 77380, has submitted an application to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for a commercial salt water disposal well (Outer Banks SWD #1). The well will be located 2075' FSL and 1040' FEL, in Unit 1 (NE/4, SE/4), Section 13, Township 20 South, Range 29 East, in Eddy County, New Mexico. The well will be located approximately 19 miles northeast of Carlsbad, New Mexico. The well is proposed to inject exempt liquid E & P waste into the Devonian between 13,180' and 14,180'. Interested parties must file objections within 15 days of the date of this publication or prior to release of this permit. Objections or concerns should be copied both to this applicant and to the Director of the New Mexico Oil Conservation Division at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, (505) 476-3448.

Tuesday, October 20, 2015  
3:01 PM

**Affidavit of Publication**

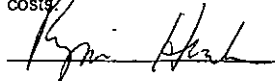
State of New Mexico,  
County of Eddy, ss.

**Rynni Henderson**, being first duly  
sworn, on oath says:

That she is the Publisher of the  
Carlsbad Current-Argus, a  
newspaper published daily at the  
City of Carlsbad, in said county of  
Eddy, state of New Mexico and of  
general paid circulation in said  
county; that the same is a duly  
qualified newspaper under the laws  
of the State wherein legal notices  
and advertisements may be  
published; that the printed notice  
attached hereto was published in the  
regular and entire edition of said  
newspaper and not in supplement  
thereof on the date as follows, to wit:

October 7                      2015

That the cost of publication is **\$68.74**  
and that payment thereof has been  
made and will be assessed as court  
costs.



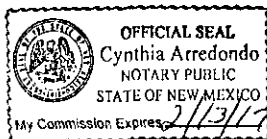
Subscribed and sworn to before me  
this 16 day of October,  
2015



My commission Expires

2/13/17

Notary Public



**October 7, 2015**

**PUBLIC NOTICE**

R360 Permian Basin, LLC, a wholly owned subsidiary of Waste Connections, Inc., 3 Waterway Square Place, Suite 110, The Woodlands, Texas 77380, has submitted an application to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for a commercial salt water disposal well (Outer Banks SWD #1). The well will be located 2075' FSL and 1040' FEL in Unit 1 (NE/4, SE/4), Section 13, Township 20 South, Range 29 East, in Eddy County, New Mexico. The well will be located approximately 19 miles northeast of Carlsbad, New Mexico. The well is proposed to inject exempt liquid E & P waste into the Devonian between 13,180' and 14,180'. Interested parties must file objections within 15 days of the date of this publication or prior to release of this permit. Objections or concerns should be copied both to this applicant and to the Director of the New Mexico Oil Conservation Division at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, (505) 476-3448.

**U.S. Postal Service**  
Certified Mail Receipt

ARTICLE NUMBER  
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ARTICLE ADDRESS TO:  
Abo Petroleum Corp  
105 South 4th Street  
Artesia NM 88210-2177

**FEES**  
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ARTICLE NUMBER  
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ARTICLE ADDRESS TO:  
Devon Energy Production Company, LP  
333 West Sheridan Avenue  
Oklahoma City OK 73102-5010

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Oklahoma City OK 73102-5010

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Chevron USA, Inc  
15 Smith Road  
Midland TX 79705-5423

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15 Smith Road  
Midland TX 79705-5423

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ARTICLE NUMBER  
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ARTICLE ADDRESS TO:  
Concho Oil & Gas, LLC  
One Concho Center  
600 West Illinois Avenue  
Midland TX 79701-4882

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Midland TX 79701-4882

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ARTICLE ADDRESS TO:  
Myco Industries, Inc.  
105 South 4th Street  
Artesia NM 88210-2177

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Artesia NM 88210-2177

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ARTICLE ADDRESS TO:  
OXY USA, Inc.  
P.O. Box 27570  
Houston TX 77227-7570

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Return Receipt Fee 2.80  
Total Postage & Fees: \$13.30

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J. BALLARD  
C. Date of Delivery  
10-7-15  
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RETURN RECEIPT REQUESTED  
Article Addressed To:  
OXY USA, Inc.  
P.O. Box 27570  
Houston TX 77227-7570

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ARTICLE NUMBER  
9402 6118 9956 3833 9607 18

ARTICLE ADDRESS TO:  
Luke Bross  
R360 Environmental Solutions  
3 Waterway Square Pl Suite 110  
The Woodlands TX 77380-3488

**FEES**  
Postage per piece \$0.85  
Certified Fee 3.45  
Return Receipt Fee 2.80  
Total Postage & Fees: \$7.10

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Delivery Address  
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ARTICLE NUMBER  
9402 6118 9956 3833 9622 00

ARTICLE ADDRESS TO:  
Trustees of the Estate of Sarah C. Getty  
Northern Trust Bank of California, NA  
P.O. Box 226270  
Dallas TX 75222-6270

**FEES**  
Postage per piece \$7.05  
Certified Fee 3.45  
Return Receipt Fee 2.80  
Total Postage & Fees: \$13.30

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ROOSEVELT BALLARD  
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P.O. Box 226270  
Dallas TX 75222-6270

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ARTICLE NUMBER  
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ARTICLE ADDRESS TO:  
MARK LARSON  
507 N. MARIENFELD ST. SUITE 205  
MIDLAND, TX 79701

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R360 Environmental Solutions  
3 Waterway Square Pl Suite 110  
The Woodlands TX 77380-3488

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Certified Mail Receipt

ARTICLE NUMBER  
9402 6118 9956 3833 9592 00

ARTICLE ADDRESS TO:  
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507 N. MARIENFELD ST. SUITE 205  
MIDLAND, TX 79701

**FEES**  
Postage per piece \$0.85  
Certified Fee 3.45  
Return Receipt Fee 2.80  
Total Postage & Fees: \$7.10

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Dallas TX 75222-6270



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ARTICLE NUMBER  
9402 6118 9956 3833 9967 24

ARTICLE ADDRESS TO:  
U.S. Bureau of Land Management  
Carlsbad Field Office  
620 East Greene Street  
Carlsbad NM 88220-6292

**FEES**  
Postage per piece \$5.95  
Certified Fee 3.45  
Return Receipt Fee 2.80  
Total Postage & Fees \$12.20

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MIDLAND, TX 79701

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9402 6118 9956 3833 9967 24

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U.S. Bureau of Land Management  
Carlsbad Field Office  
620 East Greene Street  
Carlsbad NM 88220-6292

**U.S. Postal Service**  
Certified Mail Receipt

ARTICLE NUMBER  
9402 6118 9956 3833 9967 37

ARTICLE ADDRESS TO:  
Yates Petroleum Corp.  
105 South 4th Street  
Artesia NM 88210-2122

**FEES**  
Postage per piece \$5.95  
Certified Fee 3.45  
Return Receipt Fee 2.80  
Total Postage & Fees \$12.20

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507 N. MARIENFELD ST. SUITE 205  
MIDLAND, TX 79701

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105 South 4th Street  
Artesia NM 88210-2122

**U.S. Postal Service**  
Certified Mail Receipt

ARTICLE NUMBER  
9402 6118 9956 3833 9641 74

ARTICLE ADDRESS TO:  
Randy Dade  
NMOCD District 2  
811 S. First Street  
Artesia NM 88210-2834

**FEES**  
Postage per piece \$5.95  
Certified Fee 3.45  
Return Receipt Fee 2.80  
Total Postage & Fees \$12.20

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MIDLAND, TX 79701

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Artesia NM 88210-2834

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ARTICLE NUMBER  
9402 6118 9956 3833 9641 73

ARTICLE ADDRESS TO:  
Mr. Richard Ezeanyim  
Bureau Chief  
Engineering and Geological Services  
NMOCD  
1220 South St. Francis Drive  
Santa Fe NM 87505-4225

**FEES**  
Postage per piece \$7.05  
Certified Fee 3.45  
Return Receipt Fee 2.80  
Total Postage & Fees \$13.30

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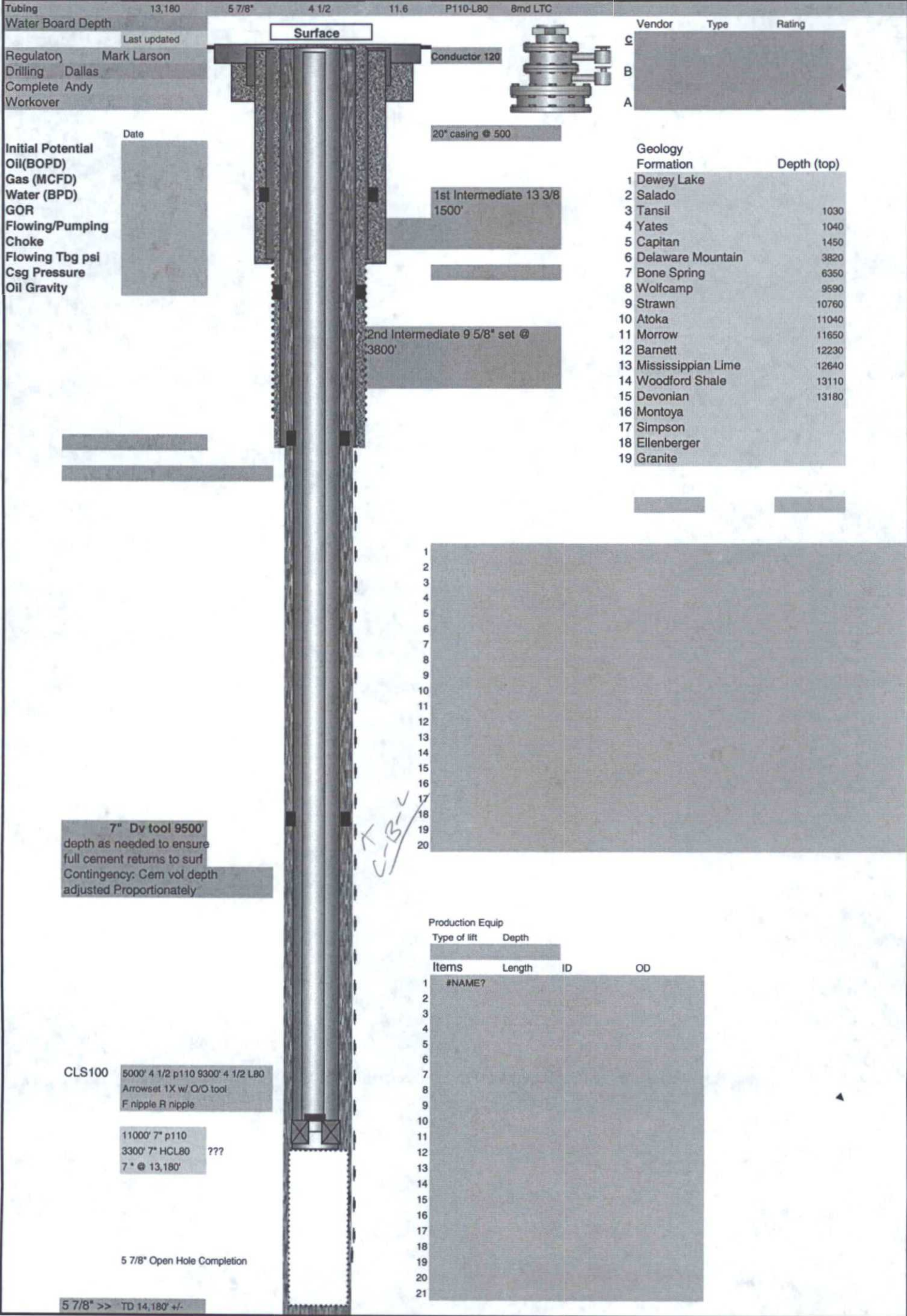
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Bureau Chief  
Engineering and Geological Services  
NMOCD  
1220 South St. Francis Drive  
Santa Fe NM 87505-4225

Cambrian Management  
EXECUTIVE SUMMARY WELLBORE DIAGRAM

|                   |                           |           |             |             |               |           |                           |         |             |              |          |
|-------------------|---------------------------|-----------|-------------|-------------|---------------|-----------|---------------------------|---------|-------------|--------------|----------|
| WELL NAME:        | R 360 Outer Banks         |           |             | STATE:      | New Mexico    |           | Permit #                  |         |             | Job #        |          |
| LOCATION:         | T20S, R29 E Section 24 13 |           |             | COUNTY:     | Eddy          |           | Spud                      | TD      | Rig Release | rig Days     |          |
| LOCATION:         |                           |           |             | DATE        |               | Drill     |                           |         |             | 0            |          |
| ELEVATION:        |                           |           |             | Complete    |               |           |                           |         |             | 0            |          |
| API#              |                           |           |             |             |               |           | TVD                       | 14,180' | PBTD        |              |          |
| Drill Contractor  | TBD                       |           |             | PREPARED BY |               | A Rickard | Total Depth               | 14,180  |             |              |          |
|                   | DEPTH                     | HOLE SIZE | CASING SIZE | WEIGHT      | GRADE         | THREAD    | CMT                       | CMT VOL | TOC         | centralizers | DV Depth |
| Conductor CASING: |                           |           |             |             |               |           | See cement slurries below |         |             |              |          |
| Surf CASING:      | 500                       | 26"       | 20"         | 106.4 ppl   | J55           | LTC       | See cement tab on bottom  |         |             | surface      | TBD none |
| 1st Int CASING:   | 1500                      | 17 1/2"   | 13 3/8"     | 68 ppl      | J-55          | LTC       |                           |         | surface     | TBD          | none     |
| 2nd Int CASING:   | 3,800                     | 12 1/4"   | 9 5/8"      | 53.5        | L-80          | LTC       |                           |         | surface     | TBD          | none     |
| Prod Casing       | 13,180                    | 8 1/2"    | 7"          | 35/29/35    | CL80-P110-HCL | LTC       |                           |         | surface     | Temp Survey  | 9500'    |





C-108 Review Checklist: Received 1/10/10 Add. Request: 1/1/10 Reply Date: \_\_\_\_\_ Suspended: \_\_\_\_\_ [Ver 15]

ORDER TYPE: WFX / PMX / SWD Number: 441 Order Date: \_\_\_\_\_ Legacy Permits/Orders: \_\_\_\_\_

Well No. 1 Well Name(s): OUTER BANKS SWD

API: 30-0 15-Pending Spud Date: TBD New or Old: N (UIC Class II Primacy 03/07/1982)

Footages 2075 FSL Lot 1040 FEL or Unit 7 Sec 13 Tsp 20S Rge 29E County Edley

General Location: 225 SE / Antesia Pool: SWD, Devonian Pool No.: 96101

BLM 100K Map: Antesia Operator: R360 Permian Basin OGRID: 289926 Contact: MARK BOSS

COMPLIANCE RULE 5.9: Total Wells: 2 Inactive: 0 Fincl Assur: Y Compl. Order? NA IS 5.9 OK? Y Date: 11-1-2015

WELL FILE REVIEWED ☐ Current Status: Proposed

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

Planned Rehab Work to Well: C-B-L 7" Production casing to surface

| Well Construction Details               |  | Sizes (in)<br>Borehole / Pipe | Setting<br>Depths (ft) | Cement<br>Sx or C1 | Cement Top and Determination<br>Method |
|---|--|-------------------------------|------------------------|--------------------|--|
| Planned ___ or Existing ___ Surface     |  | <u>26 / 20"</u>               | <u>500</u>             | <u>874</u>         | <u>SURFACE / VISUAL</u>                |
| Planned ___ or Existing ___ Interm/Prod |  | <u>17 1/2 / 13 7/8</u>        | <u>1500</u>            | <u>1179</u>        | <u>SURFACE / VISUAL</u>                |
| Planned ___ or Existing ___ Interm/Prod |  | <u>12 1/4 / 9 5/8</u>         | <u>3800</u>            | <u>755</u>         | <u>SURFACE / VISUAL</u>                |
| Planned ___ or Existing ___ Prod/Liner  |  | <u>8 1/2 / 7</u>              | <u>1308</u>            | <u>950</u>         | <u>SURFACE / VISUAL</u>                |
| Planned ___ or Existing ___ Liner       |  |                               |                        |                    |  |
| Planned ___ or Existing <u>OH</u> PERF  |  | <u>13140-14180</u>            |                        | <u>1000</u>        |  |

| Injection Lithostratigraphic Units | Depths (ft)  | Injection or Confining<br>Units | Tops         |
|------------------------------------|--------------|---------------------------------|--------------|
| Adjacent Unit: Litho. Struc. Por.  | <u>13140</u> | <u>MS</u>                       | <u>13110</u> |
| Confining Unit: Litho. Struc. Por. | <u>13140</u> | <u>MS</u>                       | <u>12640</u> |
| Proposed Inj Interval TOP:         |              |                                 |              |
| Proposed Inj Interval BOTTOM:      | <u>14180</u> |                                 |              |
| Confining Unit: Litho. Struc. Por. | <u>14180</u> |                                 |              |
| Adjacent Unit: Litho. Struc. Por.  | <u>14180</u> |                                 |              |

| Completion/Operation Details: |   |
|-------------------------------|---|
| Drilled TD                    | <u>14180</u> PBDT                       |
| NEW TD                        | NEW PBDT                                |
| NEW Open Hole                 | NEW Peris                               |
| Tubing Size                   | <u>4 1/2</u> in. Inter Coated? <u>Y</u> |
| Proposed Packer Depth         | <u>13180</u> ft                         |
| Min. Packer Depth             | <u>13080</u> (100-ft limit)             |
| Proposed Max. Surface Press.  | <u>2800</u> psi                         |
| Admin. Inj. Press.            | <u>2636</u> (0.2 psi per ft)            |

AOR: Hydrologic and Geologic Information

POTASH: R-111-P Y / Island Noticed? Y BLM Sec Ord WIPP Noticed? Y Salt/Salado T: B NW: Cliff House fm

FRESH WATER: Aquifer CARLSBAD Max Depth 219 HYDRO AFFIRM STATEMENT By Qualified Person Y

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

Disposal Fluid: Formation Source(s) 3040 Spring Analysis? Y On Lease ☐ Operator Only ☐ or Commercial ☐

Disposal Int: Inject Rate (Avg/Max BWPD): 16000/20000 Protectable Waters? Y Source: Y System: Closed or Open

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

AOR Wells: 1/2-M Radius Map? Y Well List? Y Total No. Wells Penetrating Interval: 0 Horizontals? Y

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

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

NOTICE: Newspaper Date 10-2-2015 Mineral Owner BLM Surface Owner BLM N. Date 10-2-2015

RULE 26.7(A): Identified Tracts? COG, Oxy, Abg Affected Persons: COG, Oxy, Abg N. Date 10-2-2015

Order Conditions: Issues: \_\_\_\_\_