

ABOVE THIS LINE FOR DIVISION USE ONLY

**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 \_\_\_\_\_
- [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

*Devon Energy Prod LP*  
*Cotton Draw 32 State*  
*SWD#2*  
*30-025 - pending*  
*2013 NOV 22 P 1:20*  
*41529*  
*RECEIVED OGD*  
*New*  
*Dev-si-ord*

[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.**

Stephanie A. Porter  
 Print or Type Name

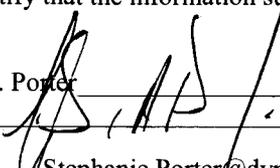
*[Signature]*  
 Signature

Operations Technician  
 Title

*11/21/2013*  
 Date

Stephanie.Porter@dvn.com  
 e-mail Address

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance  Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval?  Yes \_\_\_\_\_ No
- II. OPERATOR: \_\_\_\_\_ Devon Energy Production Company, LP \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ 333 West Sheridan Avenue, Oklahoma City, Oklahoma 73102-5010 \_\_\_\_\_  
CONTACT PARTY: \_\_\_\_\_ Stephanie A. Porter \_\_\_\_\_ PHONE: \_\_\_\_\_ 405-552-7802
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? \_\_\_\_\_ Yes  No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: \_\_\_\_\_ Stephanie A. Porter \_\_\_\_\_ TITLE: \_\_\_\_\_ Operations Technician \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  \_\_\_\_\_ DATE: \_\_\_\_\_ 11/21/03 \_\_\_\_\_  
E-MAIL ADDRESS: \_\_\_\_\_ Stephanie.Porter@dvn.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: \_\_\_\_\_

### III. WELL DATA

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

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

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

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

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

### XIV. PROOF OF NOTICE

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

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

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

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

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

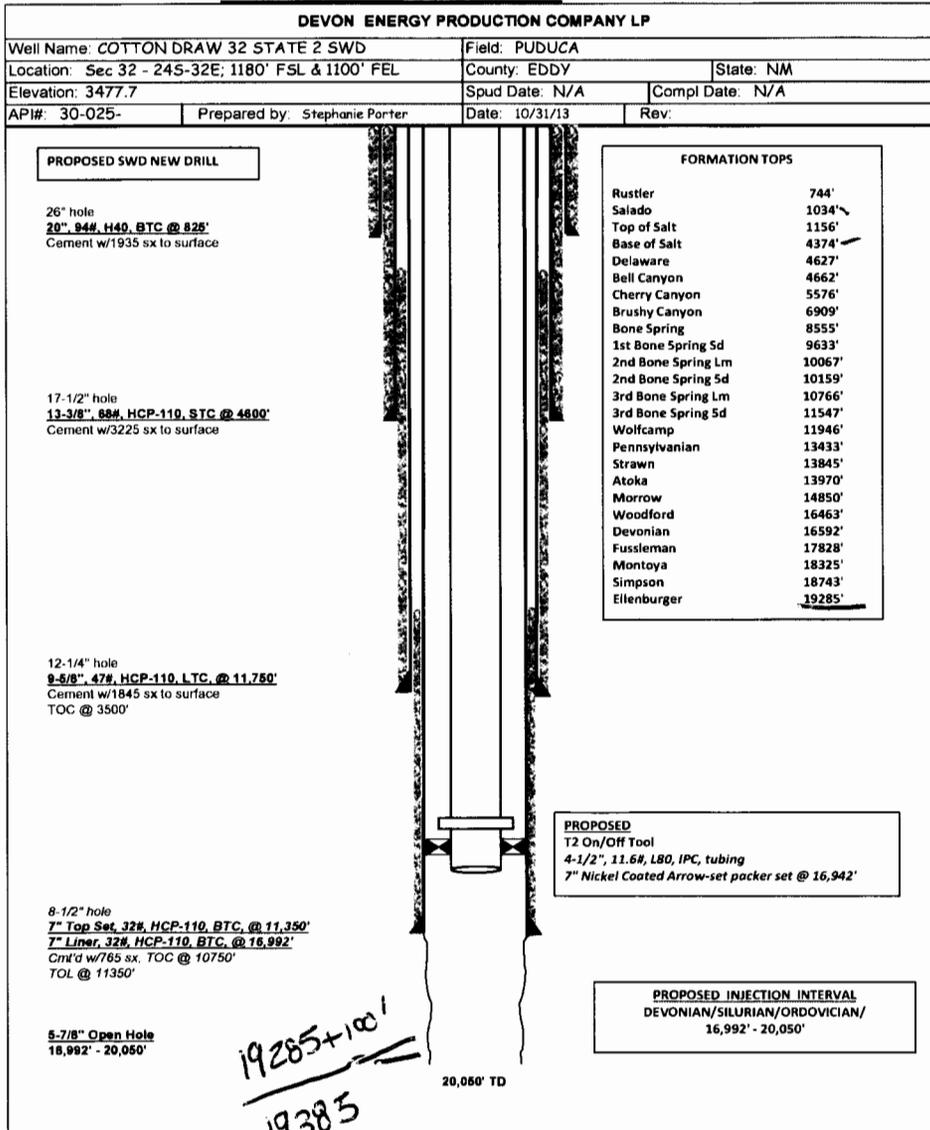
# INJECTION WELL DATA SHEET

OPERATOR: Devon Energy Production Company, LP

WELL NAME & NUMBER: COTTON DRAW 32 STATE SWD 2

WELL LOCATION: 1180' FSL & 1000' FEL P Sec 32 T24S R32E  
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

### WELLBORE SCHEMATIC



### WELL CONSTRUCTION DATA

#### Surface Casing

Hole Size: 26" Casing Size: 20", 94# @ 825'  
 Cemented with: 1935 sx. *or* \_\_\_\_\_ ft<sup>3</sup>  
 Top of Cement: Surface Method Determined: Circ. cement

#### Intermediate Casing

Hole Size: 17-1/2" Casing Size: 13-3/8", 68#, @ 4600'  
 Cemented with: 3225 sx. *or* \_\_\_\_\_ ft<sup>3</sup>  
 Top of Cement: Surface Method Determined: Circ. cement

#### Intermediate Casing

Hole Size: 12-1/4" Casing Size: 9-5/8", 47#, @ 11750'  
 Cemented with: 1845 sx. *or* \_\_\_\_\_ ft<sup>3</sup>  
 Top of Cement: 3500' Method Determined: Calc TOC

#### Production Casing

Hole Size: 7" 8 1/2" Casing Size: 7", 32#, @ 16992'  
 Cemented with: 765 sx. *or* \_\_\_\_\_ ft<sup>3</sup>  
 Top of Cement: 10750' Method Determined: Calc TOC

Total Depth: 20050'  
 Injection Interval (Open Hole) 16992' to 20050'  
19385

(Perforated or Open Hole; indicate which)

**INJECTION WELL DATA SHEET**

Tubing Size: 4-1/2" Lining Material: IPC

Type of Packer: 7" Nickel Coated Arrowset Packer

Packer Setting Depth: +/- 16942'

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

Additional Data

1. Is this a new well drilled for injection? Yes

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

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

3. Name of Field or Pool (if applicable): (to be assigned)

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. n/a

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

Rustler 744 (Barren); Salado 1034 (Barren); Top of Salt 1156 (Barren); Base of Salt 4374 (Barren); Delaware 4627 (Oil); Bell Canyon 4662 (Oil); Cherry Canyon 5576 (Oil); Brushy Canyon 6909 (Oil); Bone Spring 8555 (Oil/Gas); 1st Bone Spring 9633 (Oil/Gas); 2nd Bone Spring Lime 10067 (Oil/Gas); 2nd Bone Spring Sand 10159 (Oil/Gas); 3rd Bone Spring Lime (Oil/Gas) 10766; 3rd Bone Spring Sand 11547 (Oil Gas); Wolfcamp 11946 (Gas); Pennsylvanian 13433 (Gas); Strawn 13845 (Gas); Atoka 13970 (Gas); Morrow 14850 (Gas); Woodford 16463 (Barren), Devonian 16592 (Barren); Fussleman 17828 (Barren); Montoya 18325 (Barren); Simpson 18743' (Barren); Ellenburger 19285 (Barren)



**Proposed Injection Well: Cotton Draw 32 State SWD 2**  
**API: 30-025-**  
**APPLICATION FOR INJECTION**  
**Form C-108 Section III**

**III. Well Data--On Injection Well**

**A. Injection Well Information**

- (1) **Lease** Cotton Draw 32 State SWD  
**Well No** 2  
**Location** 1180' FSL & 1000' FEL  
**Sec.Twn,Rnge** Sec 32-T24S-R32E  
**Cnty, State** Lea County, NM
  
- (2) **Casing** 20", 94#, J55, BTC, @ 825'  
 Cmt'd w/1935 sx, circ cmt to surf  
  
 13-3/8", 68#, HCP-110, STC @ 4600'  
 Cmt'd w/3225 sx, circ cmt to surf  
  
 9-5/8", 47#, HCP-110, LTC, @ 11,750'  
 Cmt'd w/1845, circ cmt to surf  
  
 7" top set, 32#, HCP-110, BTC @ 11750'  
 7" liner, 32#, HCP-110, BTC @ 16992'  
 Cmt w/765 sx, TOL @ 11350'
  
- (3) **Injection Tubing** 4-1/2" IPC injection tubing
  
- (4) **Packer** 7" Nickel Coated Arrowset Packer @ +/- 16942'

**B. Other Well Information**

- (1) **Injection Formation:** Devonian/Silurian/Ordovician  
**Field Name:** (to be assigned)
  
- (2) **Injection Interval:** 16992 - 20050'

(3) **Original Purpose of Wellbore:**

Drill and convert to SWD

(4) **Other perforated intervals:**

n/a

(5) **Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well if any.**

Rustler 744 (Barren); Salado 1034 (Barren); Top of Salt 1156 (Barren); Base of Salt 4374 (Barren); Delaware 4627 (Oil); Bell Canyon 4662 (Oil); Cherry Canyon 5576 (Oil); Brushy Canyon 6909 (Oil); Bone Spring 8555 (Oil/Gas); 1st Bone Spring 9633 (Oil/Gas); 2nd Bone Spring Lime 10067 (Oil/Gas); 2nd Bone Spring Sand 10159 (Oil/Gas); 3rd Bone Spring Lime (Oil/Gas) 10766; 3rd Bone Spring Sand 11547 (Oil Gas); Wolfcamp 11946 (Gas); Pennsylvanian 13433 (Gas); Strawn 13845 (Gas); Atoka 13970 (Gas); Morrow 14850 (Gas); Woodford 16463 (Barren), Devonian 16592 (Barren); Fussleman 17828 (Barren); Montoya 18325 (Barren); Simpson 18743' (Barren); Ellenburger 19285 (Barren)

**Proposed Injection Well: Cotton Draw 32 State SWD 2**  
**API: 30-025-**  
**APPLICATION FOR INJECTION**  
**Form C-108 Section VII to XIII**

**VII Attach data on the proposed operation, including:**

- (1) Proposed average injection rate: 7500 BWPD  
Proposed maximum injection rate: 15000 BWPD
- (2) The system will be a closed system.
- (3) Proposed average injection pressure: 1699 psi  
Proposed max injection pressure: 3398 psi
- (4) The injection fluid will be produced water from area wells producing from the Delaware and/or Bone Spring formation that will be injected into the Devonian/Silurian/Ordovician/Cambrian/Pre-Cambrian formation.
- (5) A representative water analysis is submitted for the Delaware & Bone Spring, Devonian formation(s).

**VIII Geologic Injection Zone Data**

The injection zone is the Devonian formation from 16992' to 20050'. The gross injection interval is 3058' thick. The Devonian/Silurian/Ordovician/Cambrian/Pre-Cambrian formation is a Permian aged sandstone. The average depth to fresh water is 100' in this area.

**IX Proposed Stimulation**

Based on injectivity results this interval could be acid stimulated.

**X Log Data**

Logs will be submitted to the OCD.

**XI Fresh Water Analysis**

A Fresh Water Analysis Report for the Paduca Delaware Water Well, in Sec 2-T25S-R31E located @ Lat 32.09' 56.7" Long -103.44' 51.3" has been provided.

**XII Geologic / Engineering Statement**

An examination of this area has determined there are no open faults or other hydrologic connection between the disposal zone and any underground drinking water.

See supporting documentation and summary next 3 pages.

  
\_\_\_\_\_  
Craig Harran, Geologist  
Direct #: (405)-228-7711  
Cell #: (405)-626-2369

Date: 11/20/13

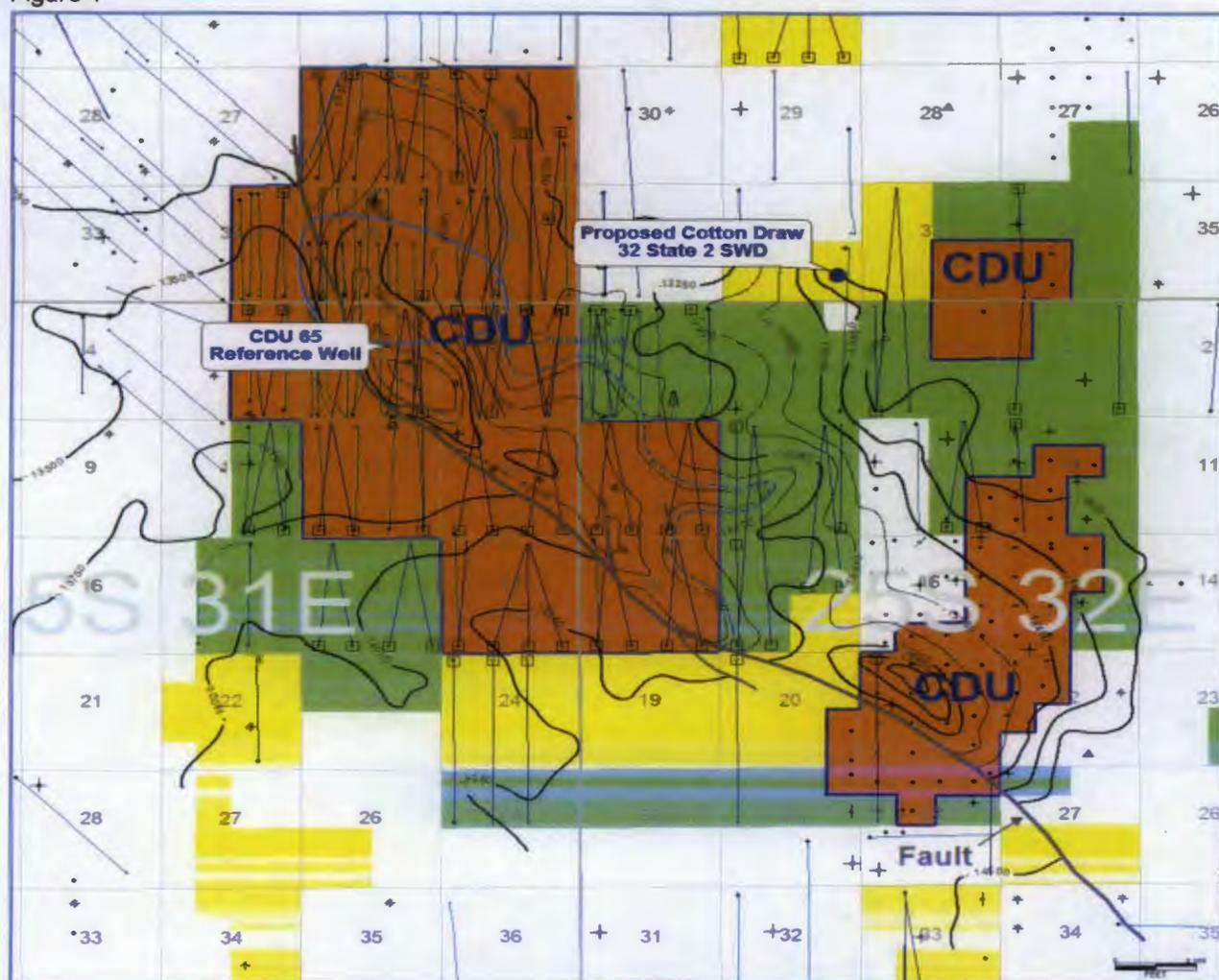
**XIII Proof of Notice**

Proof of notice to surface owner, and public legal notification are attached.

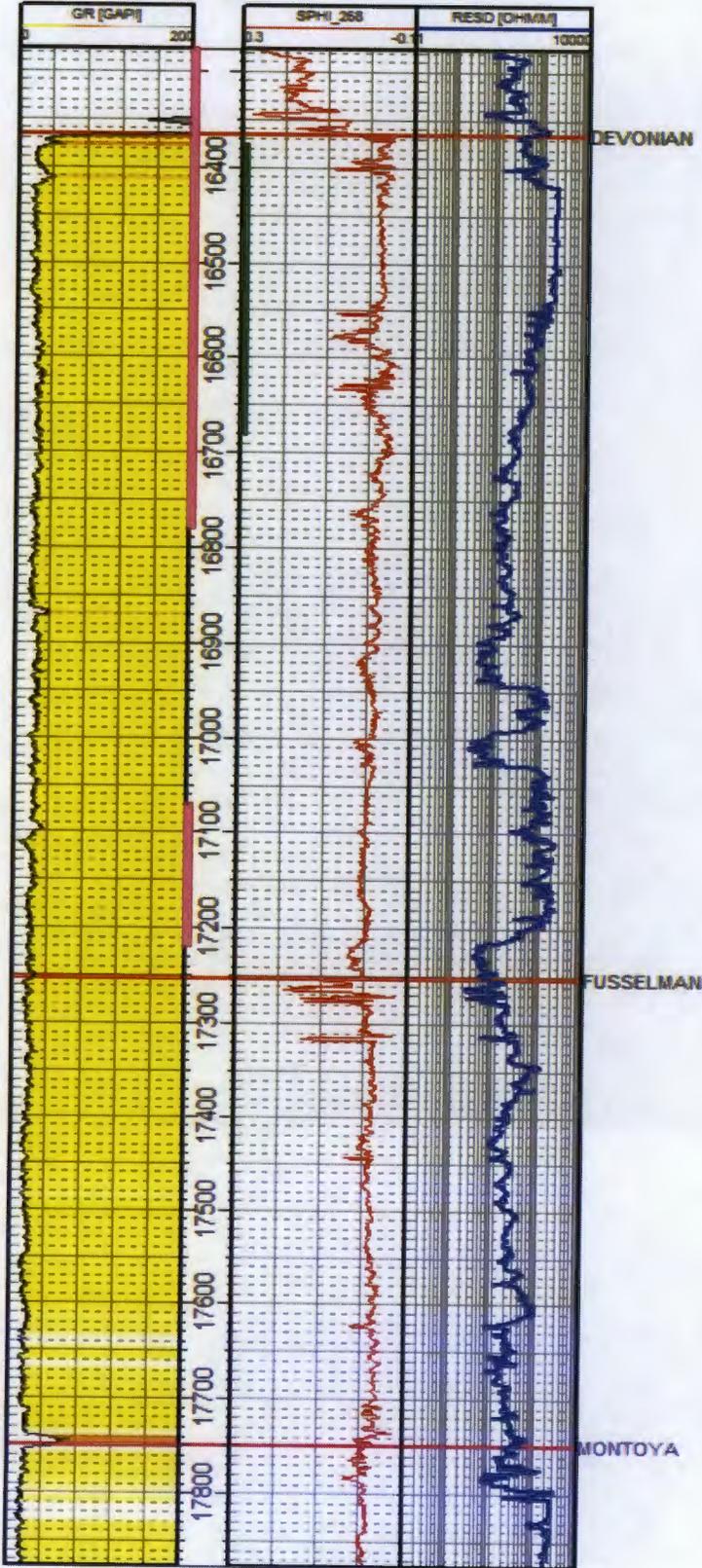
The proposed Cotton Draw 32 State 2 SWD is a Siluro-Devonian injection well that will target injecting produced water into the Devonian, Fusselman, Montoya, Simpson, and Ellenburger Formations. Attached in Figure 1 is a top of Devonian structure map (in feet Mean Sea Level) that shows the location of the Cotton Draw 32 State 2 SWD in T24SR32E, to the east of the main part of Cotton Draw Unit. The proposed location is structurally downdip from historic and current Devonian gas producers to the southwest, so it is anticipated that injection into the Devonian and lower formations from the Cotton Draw 32 State 2 SWD will not impact gas production.

Attached in Figures 2a and 2b are the logs for the CDU 65 reference well (~3.3 miles to the southwest), which was split in two over the proposed injection zone for ease of viewing. To the left of the depth track is gamma ray, with porosity and resistivity to the right, respectively. Figure 2a shows the top of the Devonian to the top of the Montoya Formations, and Figure 2b shows the top of the Montoya to base of the Ellenburger Formations, which is essentially Pre-Cambrian basement at 19,370'. The lithology of the proposed injection intervals is predominately limestone and dolomite, with fractures providing the main porosity and permeability that will take injection water. The proposed injection interval is ~3,000 feet (16,992'-20,050') in the Cotton Draw 32 State 2 SWD, which could be modified based on drilling results or log data which indicate high porosity zones in limestone or dolomite due to fractures.

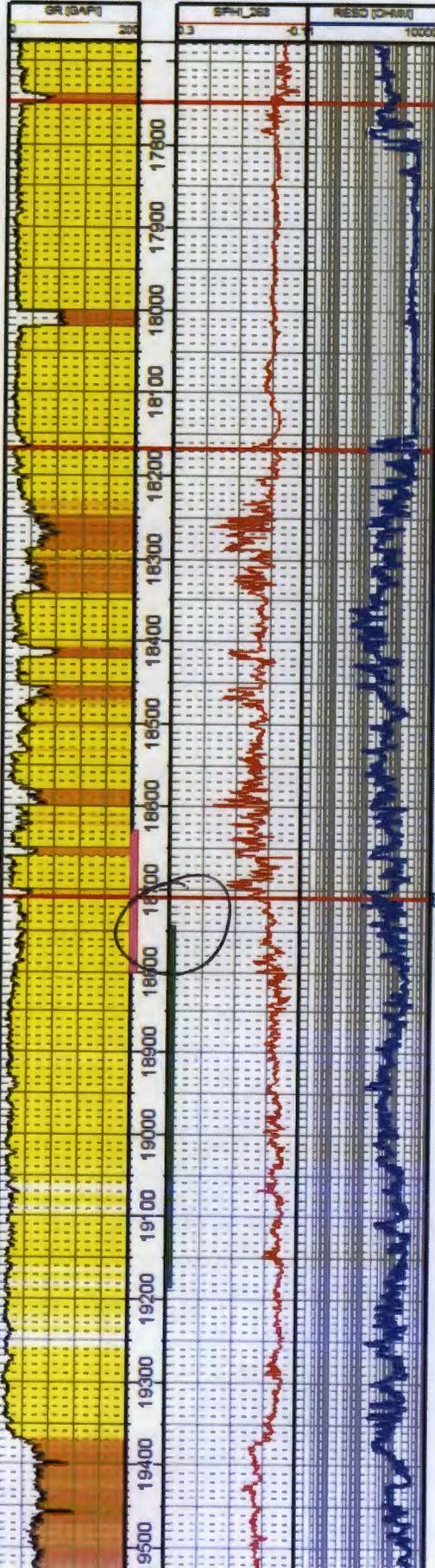
Figure 1



COTTON DRAW UNIT 66  
T255 R31E S2



COTTON DRAW UNIT 65  
T255 R31E S2



MONTOYA

SIMPSON

ELLENBURGER

**DEVON ENERGY PRODUCTION COMPANY LP**

Well Name: <b>COTTON DRAW 32 STATE 2 SWD</b>		Field: <b>PUDUCA</b>	
Location: <b>Sec 32 - 24S-32E; 1180' FSL &amp; 1100' FEL</b>		County: <b>EDDY</b>	State: <b>NM</b>
Elevation: <b>3477.7</b>		Spud Date: <b>N/A</b>	Compl Date: <b>N/A</b>
API#: <b>30-025-</b>	Prepared by: <b>Stephanie Porter</b>	Date: <b>10/31/13</b>	Rev:

**PROPOSED SWD NEW DRILL**

26" hole  
20", 94#, H40, BTC @ 825'  
 Cement w/1935 sx to surface

17-1/2" hole  
13-3/8", 68#, HCP-110, STC @ 4600'  
 Cement w/3225 sx to surface

12-1/4" hole  
9-5/8", 47#, HCP-110, LTC @ 11,750'  
 Cement w/1845 sx to surface  
 TOC @ 3500'

**Proposed SWD Conversion**  
**ACID 40,000 GAL 15% HCL**

8-1/2" hole  
7" Top Set, 32#, HCP-110, BTC, @ 11,350'  
7" Liner, 32#, HCP-110, BTC, @ 16,992'  
 Cmt'd w/765 sx, TOC @ 10750'  
 TOL @ 11350'

5-7/8" Open Hole  
 16,992' - 20,050'

**FORMATION TOPS**

Rustler	744'
Salado	1034'
Top of Salt	1156'
Base of Salt	4374'
Delaware	4627'
Bell Canyon	4662'
Cherry Canyon	5576'
Brushy Canyon	6909'
Bone Spring	8555'
1st Bone Spring Sd	9633'
2nd Bone Spring Sd	10067'
2nd Bone Spring Sd	10159'
3rd Bone Spring Lm	10766'
3rd Bone Spring Sd	11547'
Wolfcamp	11946'
Pennsylvanian	13433'
Strawn	13845'
Atoka	13970'
Morrow	14850'
Woodford	16463'
Devonian	16592' ✓
Fussleman	17828'
Montoya	18325'
Simpson	18743'
Ellenburger	19285' ✓

*Calc.*  
 10700 -  
 11750 -

*Top of ellenburger  
 20,050' TD  
 +100'*

**PROPOSED**  
 T2 On/Off Tool  
 4-1/2", 11.6#, L80, IPC, tubing  
 7" Nickel Coated Arrow-set packer set @ 16,942'

**PROPOSED INJECTION INTERVAL**  
 DEVONIAN/SILURIAN/ORDOVICIAN/  
 16,992' - ~~20,050'~~

32

33

24S 32E

BOMBAY 'BSB' FEDERAL 1H

COTTON DRAW 32 FEDER 1H

COTTON DRAW 32 STATE 2 SWD

1/2 MILE



Cotton Draw 32 State SWD 2

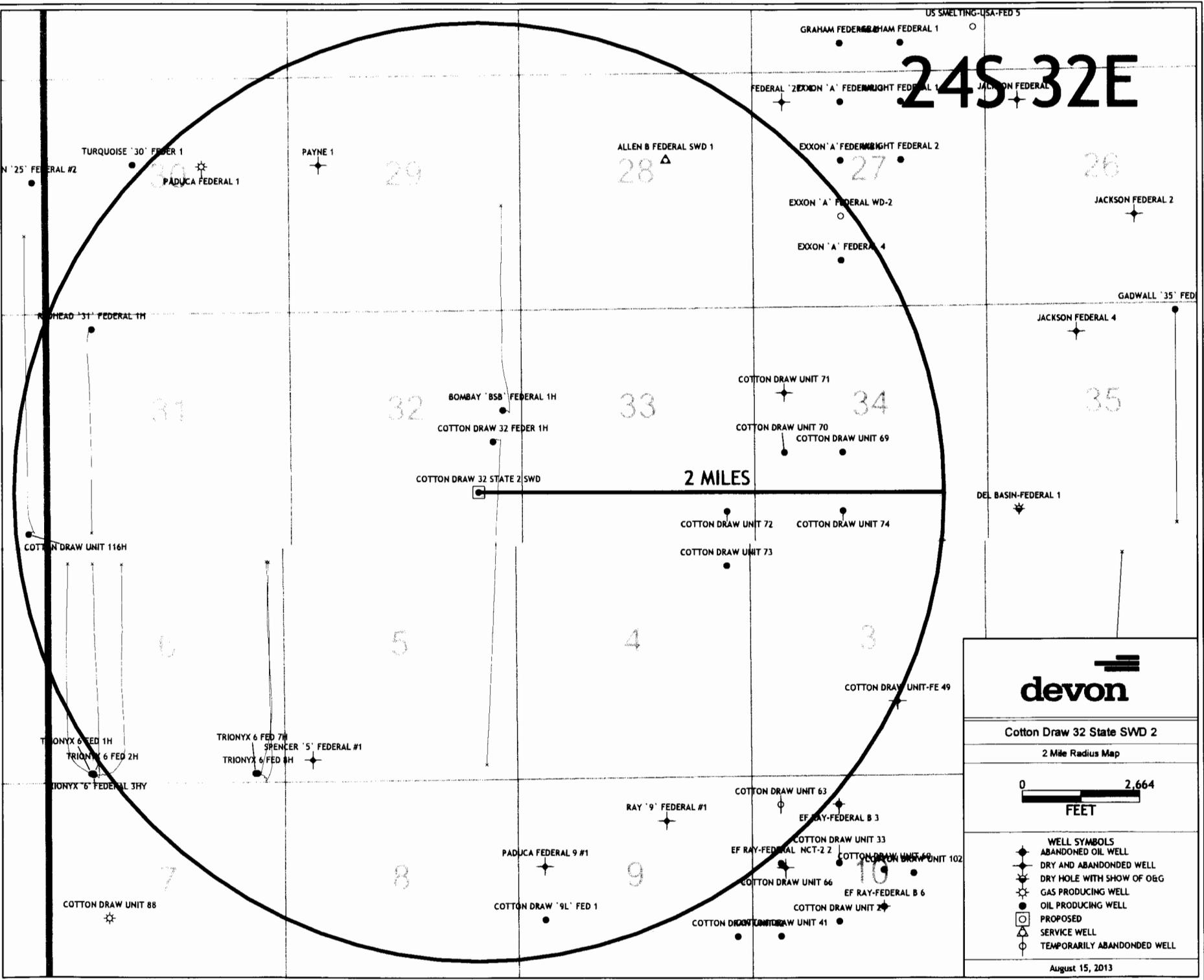
1/2 Mile Radius Map



WELL SYMBOLS  
● OIL PRODUCING WELL  
◻ PROPOSED

August 15, 2013

# 24S 32E





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**Cotton Draw 32 State SWD 2**

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2 Mile Radius Map

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0 2,664  
FEET

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**WELL SYMBOLS**

- ★ ABANDONED OIL WELL
- ⊠ DRY AND ABANDONED WELL
- ⊙ DRY HOLE WITH SHOW OF O&G
- ☀ GAS PRODUCING WELL
- OIL PRODUCING WELL
- PROPOSED
- ⊞ SERVICE WELL
- TEMPORARILY ABANDONED WELL

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August 15, 2013

**C108 ITEM VI--Well Tabulation in 1/2 Mile Review Area**

**Devon Energy Production Company, LP**

**Proposed Inj Well: Cotton Draw 32 State SWD 2**

**Proposed Formation: Devonian/Silurian/Ordovician/Cambrian/Pre-Cambrian**

**Proposed Interval: 16992' - 20050'**

Operator	Well Name	API NO	County	Surf Location	Sec	Twn	Rnge	Type	Status	Spud Date	Comp Date	TD	PBTD	Comp Zone	Comp Interval-Ft	Casing Program	Cement / TOC
Devon Energy Prod Co LP	Cotton Draw 32 State SWD 2	30-025-	Lea	1180' FSL 1000' FEL	32	24S	32E	Inj	To Be Drilled	To Be Drilled	To Be Drilled	20050	20050	Devonian	16992-20050'	20", 94# @ 825' 13-3/8", 68# @ 4600' 9-5/8", 47# @ 11750' 7" top set, 32# @ 11350' 7" liner, 32# @ 16992'	1935 sx / surface 3225 sx / surface 1845 sx / 3500 toc 765 sx / 10750 toc
Devon Energy Prod Co LP	Cotton Draw 32 State 1	30-025-40583	Lea	2310' FSL 660' FEL	32	24S	32E	Oil	Active	0719/2012	10/22/2012	15522	15520	Delaware	8709-15507'	13-3/8", 48# @ 875' 9-5/8", 40# @ 4544' 5-1/2", 17# @ 15522'	1009 sx / surface 1200 sx / surface 2999 sx / 4330 toc
Yates Petroleum Corporation	Bombay BSB Federal Com 1	30-025-40718	Lea	2310' FNL 430' FEL	32	24S	32E	Oil	Active	9/2/2012	12/25/2012	12837	12745	Delaware	8803-12740'	20", @ 40' 3/8", 48# @ 873' 9-5/8", 36# @ 4599' 5-1/2", 17# @ 12837'	13-27 sx / surface 850 sx / surface 1500 sx / surface 1680 sx / 3644 cbl

Ø wells

30

29 Surface Owners  
Cotton Draw 32 State  
SWD 2

28

**24S 32E**

31

32

33

Cotton Draw 32 State SWD 2

1/2 mile

6

5

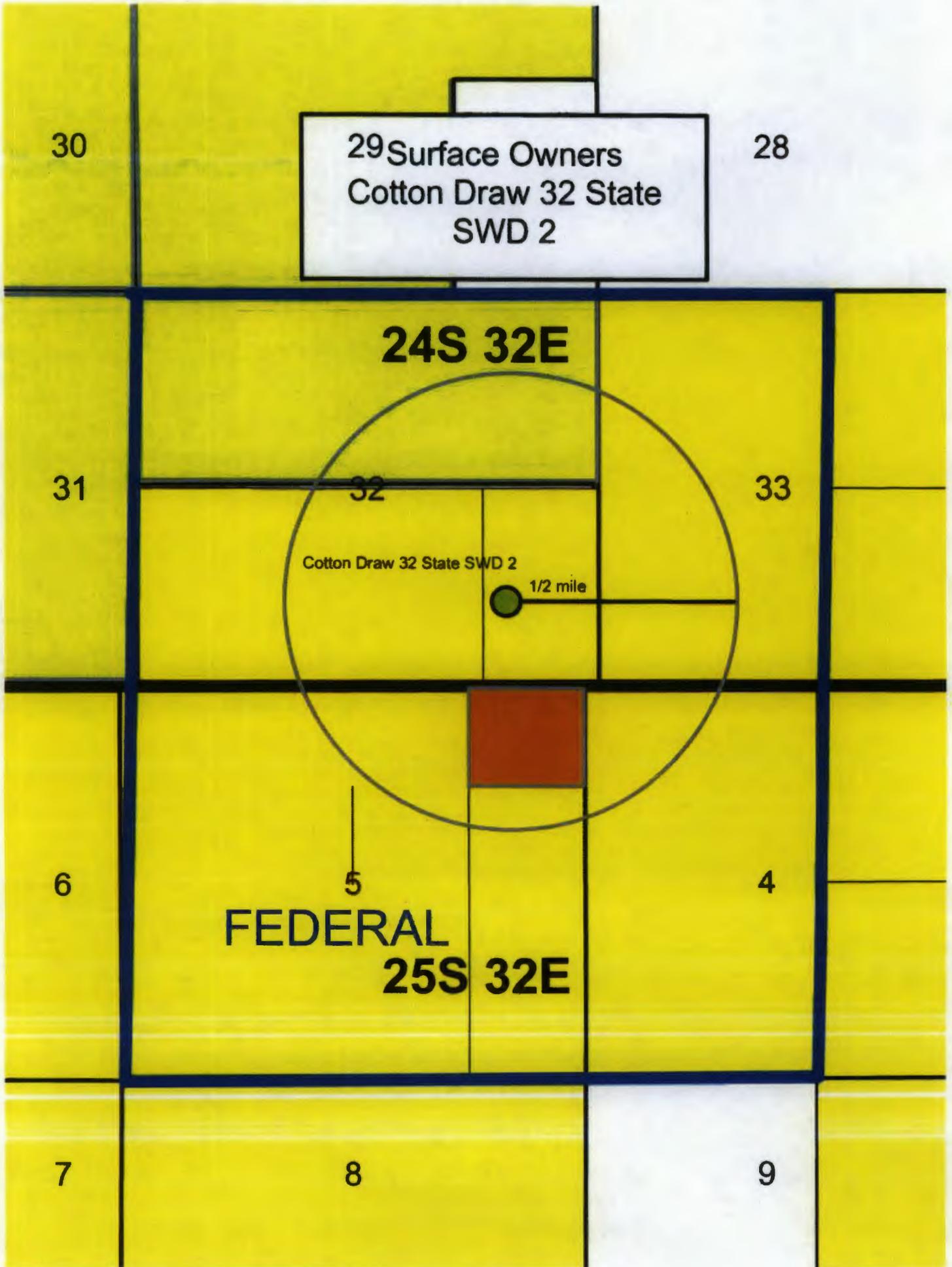
4

FEDERAL  
**25S 32E**

7

8

9



30

29  
Leasehold Owners  
Cotton Draw State 32  
SWD 2

28

OGX Resources **24S 32E**

31

32

33

Cotton Draw 32 State SWD 2

DEVON 100%

1/2 mile

6

DEVON 50%  
CHEVRON 50%

YATES

4

**25S 32E**

7

8

9

**Leasehold Ownership**  
**½ Mile Cotton Draw 32 State SWD 2**

**24S-32E Section 32: S/2**

- |  |                   |            |
|--|-------------------|------------|
| 1. Devon Energy Prod. Co., LP<br>20 N Broadway | Oklahoma City, OK | 73102-0000 |
|--|-------------------|------------|

**24S-32E Section 32: N/2**

- |   |             |       |
|---|-------------|-------|
| 1. OGX Resources, LLC<br>P.O. Box 11148 | Midland, TX | 79702 |
|---|-------------|-------|

**24S-32E Section 33: W/2**

- |  |                   |            |
|--|-------------------|------------|
| 1. Devon Energy Prod. Co., LP<br>20 N Broadway | Oklahoma City, OK | 73102-0000 |
|--|-------------------|------------|

**25S-32E Section 5: All less the NE/4 NE/4**

- |  |                   |            |
|--|-------------------|------------|
| 1. Devon Energy Prod. Co., LP<br>20 N Broadway                           | Oklahoma City, OK | 73102-0000 |
| 2. Chevron North America Exploration and Production<br>1400 Smith Street | Houston, TX       | 77002      |

**25S-32E Section 5: NE/4 NE/4**

- |   |             |            |
|---|-------------|------------|
| 1. Yates Petroleum Company<br>105 South Fourth Street | Artesia, NM | 88210-2118 |
| 2. ABO Petroleum Company<br>105 South Fourth Street   | Artesia, NM | 88210-2118 |
| 3. OXY Y-1 Company<br>105 South Fourth Street         | Artesia, NM | 88210-2118 |

**25S-32E Section 4: W/2**

- |  |                   |            |
|--|-------------------|------------|
| 1. Devon Energy Prod. Co., LP<br>20 N Broadway                           | Oklahoma City, OK | 73102-0000 |
| 3. Chevron North America Exploration and Production<br>1400 Smith Street | Houston, TX       | 77002      |

**24S-32E Section 32: S/2**

Devon Energy Prod Co LP

**APO**

100.00000

Section XIV--Proof of Notice to Leasehold Operators  
Devon Energy Prod Co LP  
C108 Application For Injection  
Proposed Well: Cotton Draw 32 State SWD 2

Proof of Notice to Leasehold Operators within 1/2 mile of Cotton Draw 32 State SWD 2

OGX Resources, LLC  
P.O. Box 11148  
Midland, Texas 79702

Certified receipt No.  
7008 1830 0002 7421 2568

Chevron North America Exploration  
1400 Smith Street  
Houston, Texas 77002

Certified receipt No.  
7008-1830-0003-1986-3403

Yates Petroleum Company  
105 South Fourth Street  
Artesia, New Mexico 88210-2118

Certified receipt No.  
7008-1830-0003-1986-3410

ABO Petroleum Company  
105 South Fourth Street  
Artesia, New Mexico 88210-2118

Certified receipt No.  
7008-1830-0002-7421-5033

OXY Y-1 Company  
105 South Fourth Street  
Artesia, New Mexico 88210-2118

Certified receipt No.  
7008-1830-0002-7421-5026

A copy of this application has been mailed to the above leasehold operators by certified mail, pertaining to Devon Energy's application for salt water disposal in the Cotton Draw 32 State SWD 2.

Date Mailed:

11/24/2013

Signature:

[Handwritten Signature]

Stephanie A. Porter, Operations Technician  
Devon Energy Production Co., L.P.  
333 West Sheridan Avenue  
Oklahoma City, OK 73102

Date:

11/21/2013

Section XIV--Proof of Notice to Surface Land Owner  
Devon Energy Prod Co LP  
C108 Application For Injection  
Proposed Well: Cotton Draw 32 State SWD 2

Proof of Notice to Surface Land Owner of well location site.

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

Certified receipt No.  
7008 1830 0002 7421 2582

A copy of this application has been mailed to the above surface land owner by certified mail, pertaining to Devon Energy's application for salt water disposal in the Cotton Draw 32 State 2 SWD.

Date Mailed: 11/21/2013

Signature: 

Date: 11/21/2013

Stephanie A. Porter, Operations Technician  
Devon Energy Production Co., L.P.  
333 West Sheridan Avenue  
Oklahoma City, OK 73102

**Cotton Draw 32 State 2 SWD  
C108 Application for Injection  
Injection Water Analysis  
Delaware Formation  
Devon Energy Production Co LP**

North Permian Basin Region  
P.O. Box 740  
Sundown, TX 79372-0740  
(806) 229-8121  
Lab Team Leader - Sheila Hernandez  
(432) 495-7240

## Water Analysis Report by Baker Petrolite

Company:	DEVON ENERGY CORPORATION	Sales RDT:	33521.1
Region:	PERMIAN BASIN	Account Manager:	GENE ROGERS (575) 910-1022
Area:	ARTESIA, NM	Sample #:	633542
Lease/Platform:	NEW MEXICO COM UNIT	Analysis ID #:	125781
Entity (or well #):	3	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

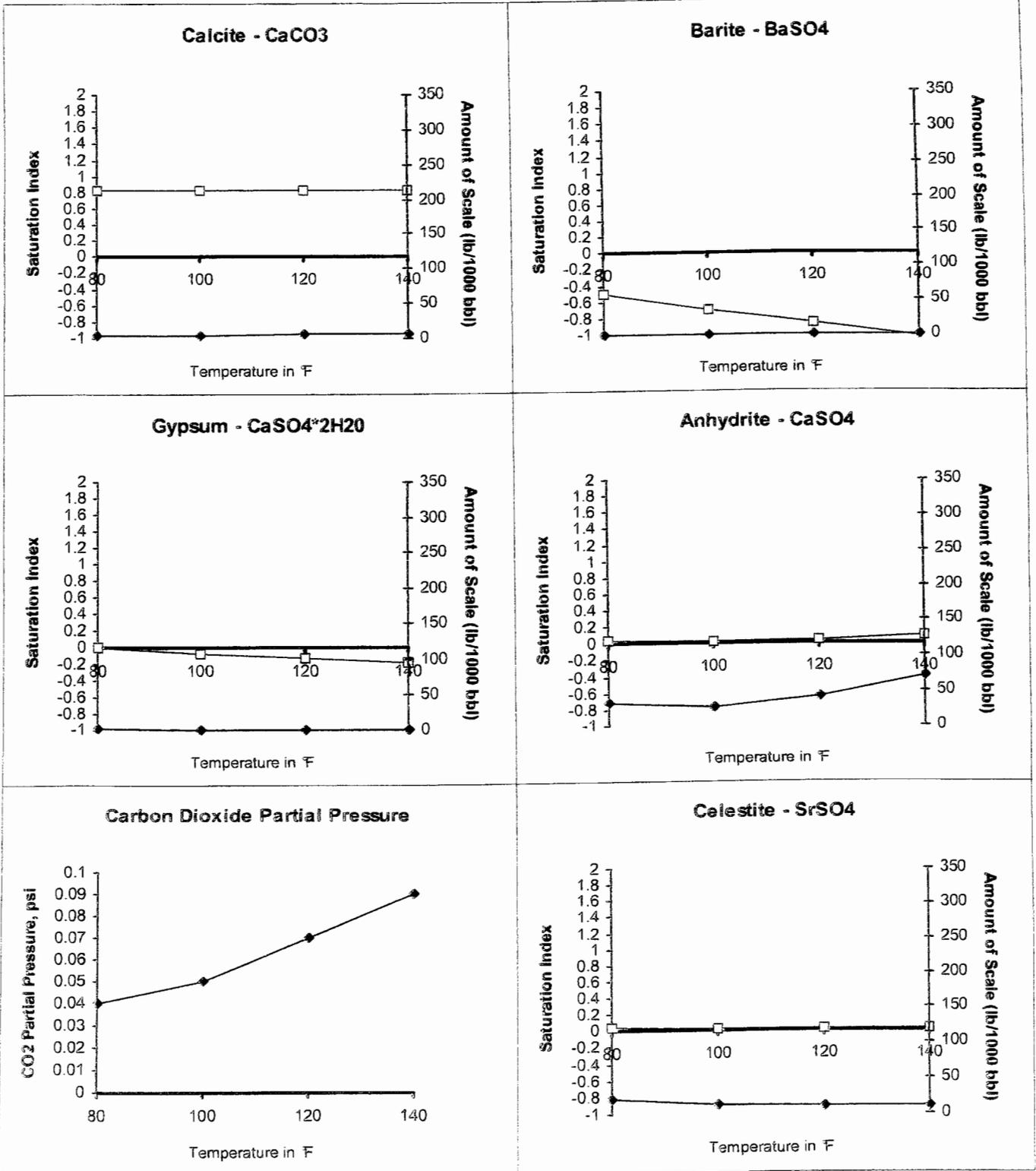
Summary		Analysis of Sample 633542 @ 75 F					
Sampling Date:	10/19/12	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	10/31/12	Chloride:	143232.0	4040.05	Sodium:	67508.7	2936.46
Analyst:	SANDRA GOMEZ	Bicarbonate:	73.2	1.2	Magnesium:	3523.0	289.82
TDS (mg/l or g/m3):	232774.2	Carbonate:	0.0	0.	Calcium:	15857.0	791.27
Density (g/cm3, tonne/m3):	1.16	Sulfate:	387.0	18.47	Strontium:	440.0	10.04
Anion/Cation Ratio:	1	Phosphate:			Barium:	0.1	0.
Carbon Dioxide:	240 PPM	Borate:			Iron:	3.0	0.29
Oxygen:		Silicate:			Potassium:	1245.0	31.84
Comments:		Hydrogen Sulfide:		0 PPM	Aluminum:		
		pH at time of sampling:		7.07	Chromium:		
		pH at time of analysis:			Copper:		
		pH used in Calculation:		7.07	Lead:		
					Manganese:	0.200	0.01
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press psi
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	0.83	4.20	0.00	3.08	0.04	33.62	0.05	21.57	-0.49	0.00	0.04
100	0	0.83	4.76	-0.07	0.00	0.03	27.18	0.03	12.89	-0.69	0.00	0.05
120	0	0.83	5.32	-0.13	0.00	0.05	41.47	0.02	9.53	-0.86	0.00	0.07
140	0	0.84	5.88	-0.18	0.00	0.09	71.16	0.03	10.65	-1.01	0.00	0.09

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.  
 Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.  
 Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

# Scale Predictions from Baker Petrolite

Analysis of Sample 633542 @ 75 °F for DEVON ENERGY CORPORATION, 10/31/12



**Cotton Draw 32 State 2 SWD  
C108 Application for Injection  
Injection Water Analysis  
Bone Spring Formation  
Devon Energy Production Co LP**

North Permian Basin Region  
P.O. Box 740  
Sundown, TX 79372-0740  
(806) 229-8121  
Lab Team Leader - Sheila Hernandez  
(432) 495-7240

## Water Analysis Report by Baker Petrolite

Company:	DEVON ENERGY CORPORATION	Sales RDT:	33521.1
Region:	PERMIAN BASIN	Account Manager:	GENE ROGERS (575) 910-1022
Area:	ARTESIA, NM	Sample #:	633540
Lease/Platform:	CAPELLA UNIT	Analysis ID #:	125780
Entity (or well #):	1	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

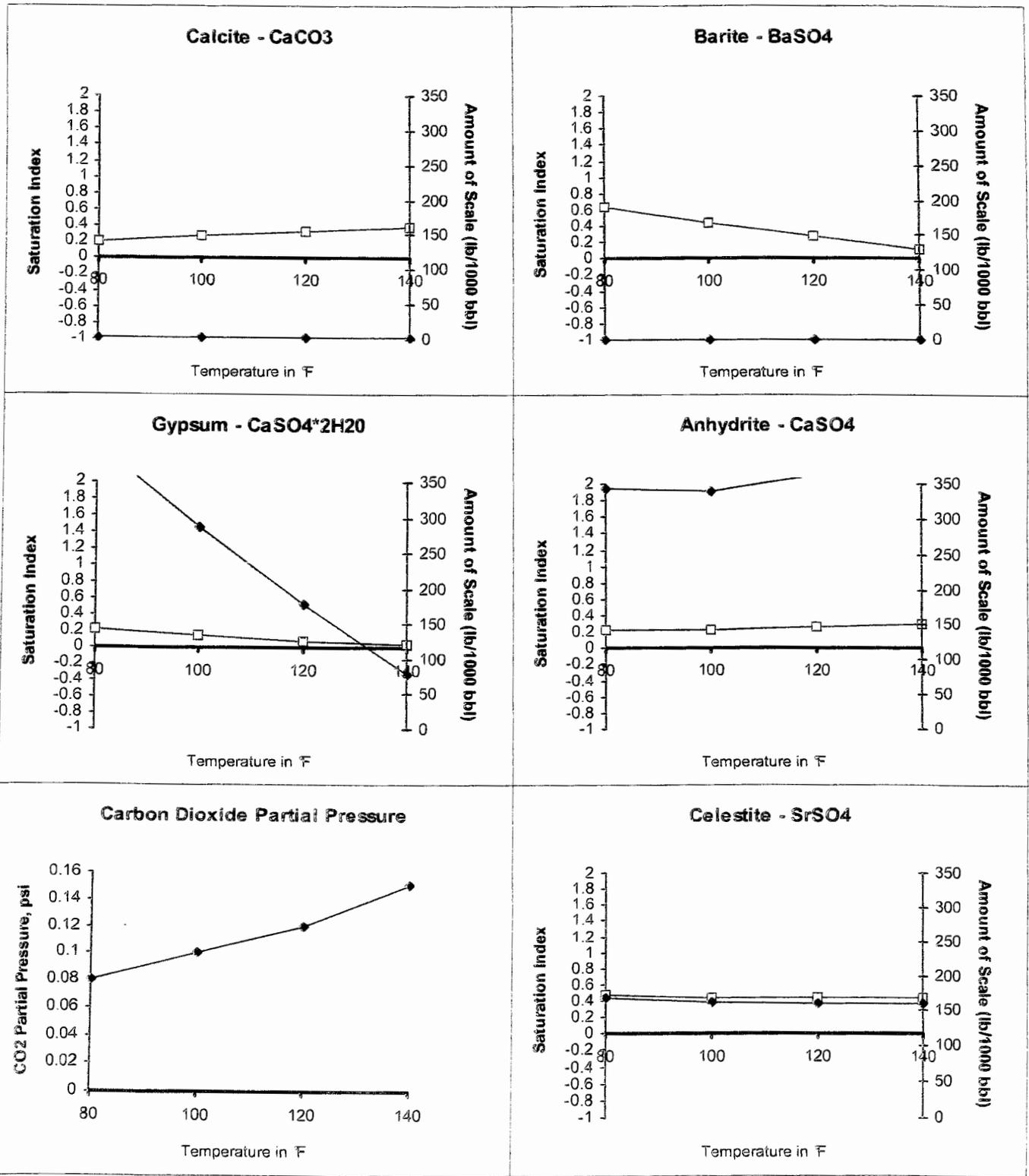
Summary		Analysis of Sample 633540 @ 75 F					
Sampling Date:	10/19/12	<b>Anions</b>	mg/l	meq/l	<b>Cations</b>	mg/l	meq/l
Analysis Date:	10/31/12	Chloride:	120450.0	3397.46	Sodium:	82153.2	2703.51
Analyst:	SANDRA GOMEZ	Bicarbonate:	61.0	1.	Magnesium:	1705.0	140.26
TDS (mg/l or g/m3):	199313.2	Carbonate:	0.0	0.	Calcium:	10875.0	542.66
Density (g/cm3, tonne/m3):	1.142	Sulfate:	1966.0	49.93	Strontium:	431.0	9.84
Anion/Cation Ratio:	1	Phosphate:			Barium:	0.5	0.01
Carbon Dioxide:	250 PPM	Borate:			Iron:	33.0	1.19
Oxygen:		Silicate:			Potassium:	1637.0	41.86
Comments:		Hydrogen Sulfide:		0 PPM	Aluminum:		
		pH at time of sampling:		6.69	Chromium:		
		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.69	Lead:		
					Manganese:	1.500	0.05
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	0.21	1.16	0.21	402.17	0.23	344.60	0.47	167.23	0.63	0.29	0.08
100	0	0.27	1.74	0.14	287.31	0.23	339.39	0.44	161.74	0.44	0.29	0.1
120	0	0.33	2.03	0.08	177.94	0.25	363.40	0.43	159.42	0.27	0.00	0.12
140	0	0.38	2.60	0.03	77.54	0.29	409.12	0.43	159.42	0.12	0.00	0.15

- Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.
- Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.
- Note 3: The reported CO<sub>2</sub> pressure is actually the calculated CO<sub>2</sub> fugacity. It is usually nearly the same as the CO<sub>2</sub> partial pressure.

# Scale Predictions from Baker Petrolite

Analysis of Sample 633540 @ 75 °F for DEVON ENERGY CORPORATION, 10/31/12



**Cotton Draw 32 State 2 SWD  
C108 Application for Injection  
Injection Water Analysis  
Delaware Formation  
Devon Energy Production Co LP**

North Permian Basin Region  
P O. Box 740  
Sundown, TX 79372-0740  
(806) 229-8121  
Lab Team Leader - Sheila Hernandez  
(432) 495-7240

## Water Analysis Report by Baker Petrolite

Company:	DEVON ENERGY CORPORATION	Sales RDT:	33521.1
Region:	PERMIAN BASIN	Account Manager:	GENE ROGERS (575) 910-1022
Area:	ARTESIA, NM	Sample #:	633541
Lease/Platform:	BROWN BEAR	Analysis ID #:	125782
Entity (or well #):	1	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 633541 @ 75 F					
Sampling Date:	10/19/12	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	10/31/12	Chloride:	52707.0	1486.67	Sodium:	23678.3	1029.95
Analyst:	SANDRA GOMEZ	Bicarbonate:	109.3	1.8	Magnesium:	1474.0	121.26
TDS (mg/l or g/m3):	85195.9	Carbonates:	0.0	0.	Calcium:	6421.0	320.41
Density (g/cm3, tonne/m3):	1.061	Sulfate:	77.0	1.6	Strontium:	161.0	3.87
Anion/Cation Ratio:	1	Phosphate:			Barium:	0.3	0.
Carbon Dioxide:	130 PPM	Borate:			Iron:	23.0	0.93
Oxygen:		Silicate:			Potassium:	542.0	13.86
Comments:		Hydrogen Sulfide:		0 PPM	Aluminum:		
		pH at time of sampling:		6.73	Chromium:		
		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.73	Lead:		
					Manganese:	2.500	0.09
					Nickel:		

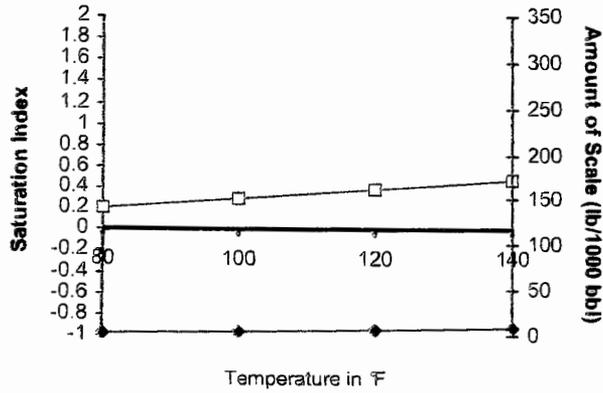
Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lbs/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	0.21	2.90	-1.27	0.00	-1.30	0.00	-1.08	0.00	-0.71	0.00	0.15
100	0	0.29	4.19	-1.31	0.00	-1.28	0.00	-1.09	0.00	-0.88	0.00	0.19
120	0	0.38	5.80	-1.34	0.00	-1.22	0.00	-1.08	0.00	-1.03	0.00	0.24
140	0	0.47	7.41	-1.35	0.00	-1.15	0.00	-1.07	0.00	-1.16	0.00	0.29

- Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.
- Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.
- Note 3: The reported CO<sub>2</sub> pressure is actually the calculated CO<sub>2</sub> fugacity. It is usually nearly the same as the CO<sub>2</sub> partial pressure.

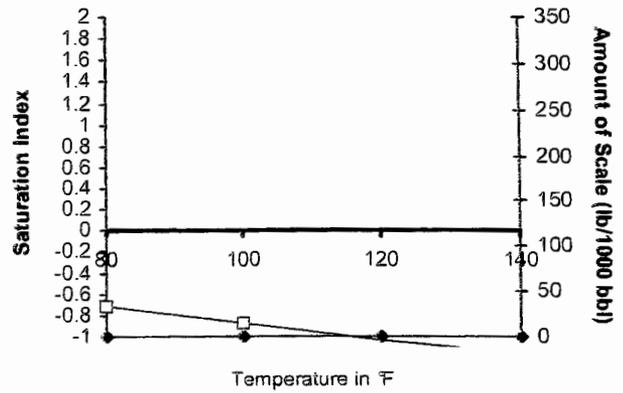
# Scale Predictions from Baker Petrolite

Analysis of Sample 633541 @ 75 °F for DEVON ENERGY CORPORATION, 10/31/12

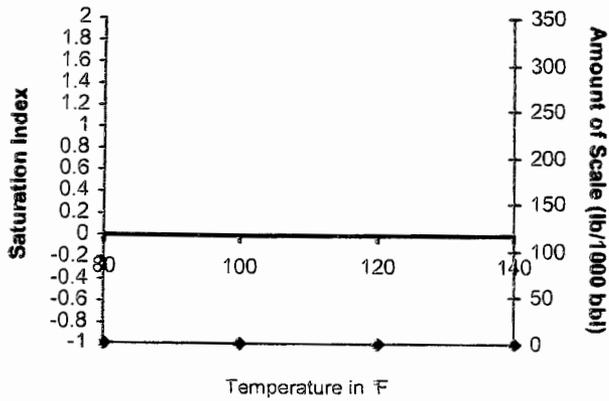
### Calcite - CaCO<sub>3</sub>



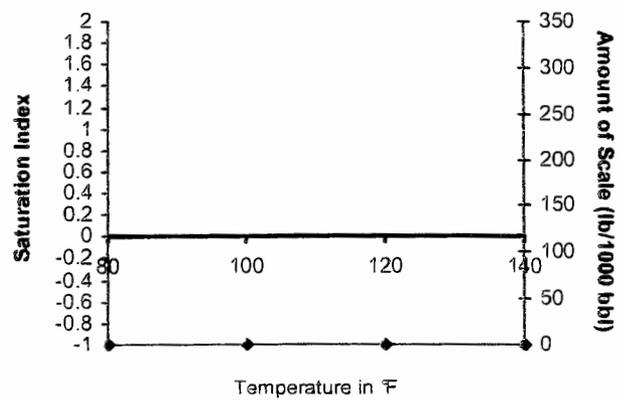
### Barite - BaSO<sub>4</sub>



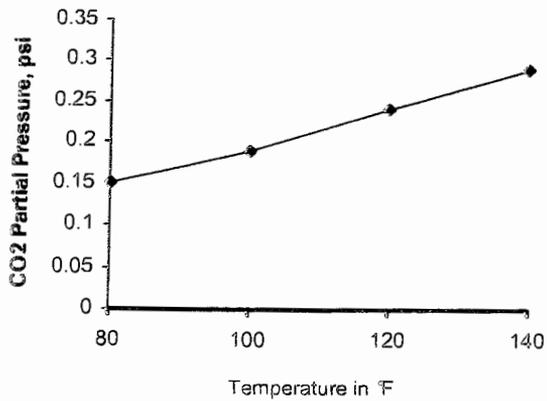
### Gypsum - CaSO<sub>4</sub>·2H<sub>2</sub>O



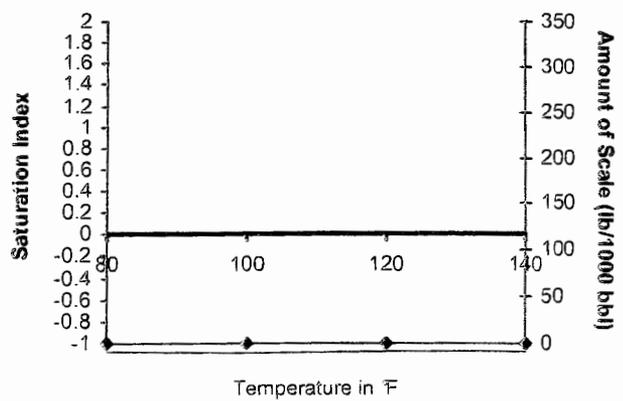
### Anhydrite - CaSO<sub>4</sub>



### Carbon Dioxide Partial Pressure



### Celestite - SrSO<sub>4</sub>



**Fresh Water Analysis Report**  
**Paduca Delaware Water Well**  
**SEC 2-T25S-R31E**  
**Lat 32.09' 56.7" Long -103.44' 51.3"**

North Permian Basin Region  
P.O. Box 740  
Sundown, TX 79372-0740  
(806) 229-8121  
Lab Team Leader - Sheila Hernandez  
(432) 495-7240

## Water Analysis Report by Baker Petrolite

Company:	DEVON ENERGY CORPORATION	Sales RDT:	33521.1
Region:	PERMIAN BASIN	Account Manager:	GENE ROGERS (575) 910-1022
Area:	ARTESIA, NM	Sample #:	575022
Lease/Platform:	PADUCA LEASE	Analysis ID #:	113161
Entity (or well #):	FRESH WATER	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 575022 @ 75 °F					
Sampling Date:	10/06/11	<b>Anions</b>	mg/l	meq/l	<b>Cations</b>	mg/l	meq/l
Analysis Date:	10/10/11	<b>Chloride:</b>	328.0	9.25	<b>Sodium:</b>	452.1	19.66
Analyst:	SANDRA GOMEZ	<b>Bicarbonate:</b>	24.4	0.4	<b>Magnesium:</b>	120.0	9.87
TDS (mg/l or g/m3):	3720.6	<b>Carbonate:</b>	0.0	0.	<b>Calcium:</b>	531.0	26.5
Density (g/cm3, tonne/m3):	1.004	<b>Sulfate:</b>	2248.0	46.8	<b>Strontium:</b>	7.0	0.16
Anion/Cation Ratio:	1.0000004	Phosphate:			<b>Barium:</b>	0.1	0.
Carbon Dioxide:	20 PPM	Borate:			<b>Iron:</b>	0.5	0.02
Oxygen:		Silicate:			Potassium:	9.5	0.24
Comments:		Hydrogen Sulfide:		0	Aluminum:		
		pH at time of sampling:		7	Chromium:		
		pH at time of analysis:			Copper:		
		<b>pH used in Calculation:</b>		7	Lead:		
					Manganese:	0.025	0.
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	-0.84	0.00	-0.03	0.00	-0.10	0.00	-0.26	0.00	1.06	0.00	0.03
100	0	-0.72	0.00	-0.04	0.00	-0.04	0.00	-0.26	0.00	0.90	0.00	0.04
120	0	-0.59	0.00	-0.03	0.00	0.04	55.87	-0.24	0.00	0.78	0.00	0.05
140	0	-0.45	0.00	-0.01	0.00	0.15	173.21	-0.21	0.00	0.68	0.00	0.06

- Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.
- Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.
- Note 3: The reported CO<sub>2</sub> pressure is actually the calculated CO<sub>2</sub> fugacity. It is usually nearly the same as the CO<sub>2</sub> partial pressure.

**Injection Water Analysis Report  
Mad Dog 15 #1  
SEC 15-T23S-R34E  
(Devonian Formation Water)**

North Permian Basin Region  
P.O. Box 740  
Sundown, TX 79372-0740  
(806) 229-8121  
Lab Team Leader - Sheila Hernandez  
(432) 495-7240

## Water Analysis Report by Baker Petrolite

Company:	DEVON ENERGY CORPORATION	Sales RDT:	33517
Region:	PERMIAN BASIN	Account Manager:	FRANK GARDNER (575) 390-5194
Area:	JAL, NM	Sample #:	481511
Lease/Platform:	MAD DOG '15' LEASE	Analysis ID #:	102920
Entity (or well #):	1	Analysis Cost:	\$90.00
Formation:	DEVONIAN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 481511 @ 75 F					
		Anions		Cations			
		mg/l	meq/l	mg/l	meq/l		
Sampling Date:	08/24/10	Chloride:	40711.0	1148.31	Sodium:	24262.3	1055.35
Analysis Date:	09/13/10	Bicarbonate:	366.0	6.	Magnesium:	298.0	24.51
Analyst:	LEAH DURAN	Carbonate:	0.0	0.	Calcium:	1833.0	91.47
TDS (mg/l or g/m3):	69356	Sulfate:	1404.0	29.23	Strontium:	55.0	1.26
Density (g/cm3, tonne/m3):	1.051	Phosphate:			Barium:	1.0	0.01
Anion/Cation Ratio:	1	Borate:			Iron:	4.5	0.16
Carbon Dioxide:	20 PPM	Silicate:			Potassium:	421.0	10.77
Oxygen:	N/A	Hydrogen Sulfide:		153 PPM	Aluminum:		
Comments:		pH at time of sampling:		8.4	Chromium:		
		pH at time of analysis:			Copper:		
		pH used in Calculation:		8.4	Lead:		
					Manganese:	0.200	0.01
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp F	Gauge Press. psi	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press psi
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	1.80	51.07	-0.42	0.00	-0.46	0.00	-0.15	0.00	1.22	0.65	0.01
100	0	1.70	54.67	-0.46	0.00	-0.43	0.00	-0.16	0.00	1.04	0.65	0.02
120	0	1.62	58.60	-0.49	0.00	-0.38	0.00	-0.16	0.00	0.89	0.65	0.05
140	0	1.56	62.86	-0.51	0.00	-0.31	0.00	-0.15	0.00	0.76	0.33	0.08

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.  
 Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.  
 Note 3: The reported CO<sub>2</sub> pressure is actually the calculated CO<sub>2</sub> fugacity. It is usually nearly the same as the CO<sub>2</sub> partial pressure.

**WATER ANALYSIS**  
**Bone Spring Formation**  
**Chimayo 16 ST #1**

North Permian Basin Region  
P.O. Box 740  
Sundown, TX 79372-0740  
(806) 229-8121  
Lab Team Leader - Sheila Hernandez  
(432) 495-7240

## Water Analysis Report by Baker Petrolite

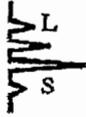
Company:	DEVON ENERGY CORPORATION	Sales RDT:	33521.1
Region:	PERMIAN BASIN	Account Manager:	GENE ROGERS (575) 910-1022
Area:	ARTESIA, NM	Sample #:	492168
Lease/Platform:	CHIMAYO UNIT	Analysis ID #:	100662
Entity (or well #):	16-1	Analysis Cost:	\$90.00
Formation:	Bone Spring		
Sample Point:	HEATER DUMP		

Summary		Analysis of Sample 492168 @ 75 F			
		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	05/12/10	Chloride:	142827.0	Sodium:	76546.4
Analysis Date:	05/18/10	Bicarbonate:	73.0	Magnesium:	1589.0
Analyst:	STACEY SMITH	Carbonate:	0.0	Calcium:	10332.0
TDS (mg/l or g/m3):	235300.4	Sulfate:	1021.0	Strontium:	1192.0
Density (g/cm3, tonne/m3):	1.157	Phosphate:		Barium:	2.5
Anion/Cation Ratio:	1	Borate:		Iron:	379.0
Carbon Dioxide:	1400 PPM	Silicate:		Potassium:	1334.0
Oxygen:		Hydrogen Sulfide:	17 PPM	Aluminum:	
Comments:		pH at time of sampling:	6.5	Chromium:	
		pH at time of analysis:		Copper:	
		pH used in Calculation:	6.5	Lead:	
				Manganese:	4.500
				Nickel:	0.16

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
F	psi											psi
80	0	0.18	1.40	-0.08	0.00	-0.03	0.00	0.58	321.11	1.00	1.12	0.14
100	0	0.24	1.95	-0.16	0.00	-0.05	0.00	0.55	310.50	0.80	1.12	0.18
120	0	0.30	2.51	-0.23	0.00	-0.04	0.00	0.54	304.91	0.62	1.12	0.21
140	0	0.35	3.35	-0.29	0.00	-0.01	0.00	0.53	303.52	0.47	0.84	0.25

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.  
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.  
Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

**WATER ANALYSIS**  
**Delaware Formation**  
**Apache 25 Fed 6**



Laboratory Services, Inc.  
4016 Fiesta Drive  
Hobbs, New Mexico 88240  
Telephone: (505) 397-3713

**Water Analysis**

**COMPANY** Devon Energy

**SAMPLE** Apache 25-6  
**SAMPLED BY**

**DATE TAKEN**  
**REMARKS**

Barium as Ba	0	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	80	
pH at Lab	6.05	
Specific Gravity @ 60°F	1.195	
Magnesium as Mg	59,566	
Total Hardness as CaCO <sub>3</sub>	102,700	
Chlorides as Cl	192,032	
Sulfate as SO <sub>4</sub>	200	
Iron as Fe	33	
Potassium	85	
Hydrogen Sulfide	0	
Rw	0.046	@ 23° C
Total Dissolved Solids	295,500	
Calcium as Ca	43,134	
Nitrate	35	

Results reported as Parts per Million unless stated

**Langelier Saturation Index** 0.65

Analysis by: vickie Biggs  
Date: 3/5/04

# Affidavit of Publication

State of New Mexico,  
County of Lea.

I, DANIEL RUSSELL  
PUBLISHER  
of the Hobbs News-Sun, a  
newspaper published at Hobbs, New  
Mexico, do solemnly swear that the  
clipping attached hereto was  
published in the regular and entire  
issue of said newspaper, and not a  
supplement thereof for a period

of 1 issue(s).  
Beginning with the issue dated  
August 28, 2013  
and ending with the issue dated  
August 28, 2013

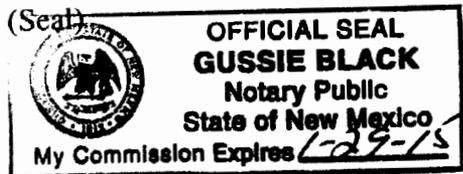
  
PUBLISHER

Sworn and subscribed to before me  
this 28th day of  
August, 2013



Notary Public

My commission expires  
January 29, 2015



This newspaper is duly qualified to  
publish legal notices or  
advertisements within the meaning of  
Section 3, Chapter 167, Laws of  
1937 and payment of fees for said  
publication has been made.



LEGAL NOTICE  
AUGUST 28, 2013

### Legal Notice

Devon Energy Production Company, LP, 333 West Sheridan Avenue, Oklahoma City, OK 73102-8260 has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well, the Cotton Draw 32 State 2 SWD will be a new drill; proposed location is 1180' FSL & 1000' FEL, Section 32, Township 24 South, Range 32 East, in Lea County, New Mexico. Disposal water will be sourced from area wells producing from the Bone Spring and/or Delaware formations. The disposal water will be injected into the Devonian/Silurian/Ordovician/Cambrian/Pre-Cambrian formation at a depth of 16,992' to 20,050', open hole, at a maximum surface pressure of 3398 psi and a maximum rate of 15,000 BWP. Any interested party who has an objection to this must give notice in writing to the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, within (15) days of this notice. Any interested party with questions or comments may contact Trevor Kjaassen at Devon Energy Corporation, 333 West Sheridan Avenue, Oklahoma City, OK 73102-8260, or call (405) 552-5069.  
#28395

67106734

00121321

LEGAL ADS DVNOKC86  
DEVON ENERGY - ATTN: DVNOKC86  
P O BOX 3198  
OKLAHOMA CITY, OK 73101-3198



Devon Energy Corporation  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010

405 235 3611 Phone  
www.devonenergy.com

November 21, 2013

ABO Petroleum Company  
105 South Fourth Street  
Artesia, New Mexico 88210-2118

RE: Form C-108, Application for Authorization to Inject  
Cotton Draw 32 State 2 SWD ; API #30-025-  
Eddy County, NM  
Section 32, T24S, R32E

Dear ABO Petroleum Company:

Please find attached Devon Energy Production Company, LP's Form C-108; Application for Authorization to Inject.

Devon's application proposes to drill and convert the Cotton Draw 32 State 2 SWD to salt water disposal in the Devonian/Silurian/Ordovician formation.

As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as having leasehold ownership within the ½ mile review area around the Parkway West SWD #1 well. Any objections must be submitted in writing to NMOCD, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within (15) days of receipt of this letter.

If you have any questions, please contact Trevor Klaassen (405)-552-5069 or myself at (405)-552-7802.

Sincerely,

Stephanie A. Porter  
Operations Technician

SP/sp  
Enclosure



Devon Energy Corporation  
20 North Broadway  
Oklahoma City, OK 73102-8260

405 235 3611 Phone  
www.devonenergy.com

November 21, 2013

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

RE: Form C-108, Application for Authorization to Inject  
Cotton Draw 32 State 2 SWD; API 30-025-  
Eddy County, NM  
Section 32, T24S, R32E

Dear Bureau of Land Management:

Please find attached Devon Energy Production Company, LP's Form C-108, Application for Authorization to Inject.

Devon's application proposes to drill and convert the Cotton Draw 32 State 2 SWD to salt water disposal in the Devonian/Silurian/Ordovician/Cambrian/Pre-Cambrian formation. The disposal interval will be the Devonian/Silurian/Ordovician formation from 16992' to 20050' open hole.

As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as a surface land owner within the 1/2 mile review area around the Cotton Draw 32 State #2 SWD well. Any objections must be submitted in writing to NMOCD, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within (15) days of receipt of this letter.

If you have any questions, please contact Trevor Klaassen at (405)-552-5069 or myself at (405)-552-7802.

Sincerely,

Stephanie Porter  
Operations Technician

SP/sp

Enclosure



Devon Energy Corporation  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010

405 235 3611 Phone  
www.devonenergy.com

November 21, 2013

Chevron North America Exploration  
1400 Smith Street  
Houston, Texas 77002

RE: Form C-108, Application for Authorization to Inject  
Cotton Draw 32 State 2 SWD ; API #30-025-  
Eddy County, NM  
Section 32, T24S, R32E

Dear Chevron North America Exploration:

Please find attached Devon Energy Production Company, LP's Form C-108; Application for Authorization to Inject.

Devon's application proposes to drill and convert the Cotton Draw 32 State 2 SWD to salt water disposal in the Devonian/Silurian/Ordovician formation.

As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as having leasehold ownership within the ½ mile review area around the Parkway West SWD #1 well. Any objections must be submitted in writing to NMOCD, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within (15) days of receipt of this letter.

If you have any questions, please contact Trevor Klaassen (405)-552-5069 or myself at (405)-552-7802.

Sincerely,

Stephanie A. Porter  
Operations Technician

SP/sp  
Enclosure



Devon Energy Corporation  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010

405 235 3611 Phone  
www.devonenergy.com

November 21, 2013

Oil Conservation Division  
811 S. First Street  
Artesia, New Mexico 88210

RE: Form C-108, Application for Authorization to Inject  
Cotton Draw 32 State 2 SWD; API # 30-025-  
Eddy County, NM  
Section 32, T24S, R32E

Dear Conservation Division-Artesia District Office:

Please find attached Devon Energy Production Company, LP's Form C-108, Application for Authorization to Inject. The original application has been filed with the Oil Conservation Division-Santa Fe Office.

Devon's application proposes to drill and convert the Cotton Draw 32 State 2 SWD to salt water disposal in the Devonian/Silurian/Ordovician formation.

The surface land owner and operators with leasehold ownership have been notified with Devon's application to inject via certified mail.

If you have any questions, please contact Trevor Klaassen at (405)-552-5069 or myself at (405)-552-7802.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephanie A. Porter". The signature is written in a cursive style with a large initial "S" and "P".

Stephanie A. Porter  
Operations Technician

SP/sp

Enclosure



Devon Energy Corporation  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010

405 235 3611 Phone  
www.devonenergy.com

November 21, 2013

OGX Resources, LLC  
P.O. Box 11148  
Midland, Texas 79702

RE: Form C-108, Application for Authorization to Inject  
Cotton Draw 32 State 2 SWD ; API #30-025-  
Eddy County, NM  
Section 32, T24S, R32E

Dear OGX Resources, LLC:

Please find attached Devon Energy Production Company, LP's Form C-108; Application for Authorization to Inject.

Devon's application proposes to drill and convert the Cotton Draw 32 State 2 SWD to salt water disposal in the Devonian/Silurian/Ordovician.

As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as having leasehold ownership within the ½ mile review area around the Parkway West SWD #1 well. Any objections must be submitted in writing to NMOCD, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within (15) days of receipt of this letter.

If you have any questions, please contact Trevor Klaassen (405)-552-5069 or myself at (405)-552-7802.

Sincerely,

Stephanie A. Porter  
Operations Technician

SP/sp  
Enclosure



Devon Energy Corporation  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010

405 235 3611 Phone  
www.devonenergy.com

November 21, 2013

OXY Y-1 Company  
105 South Fourth Street  
Artesia, New Mexico 88210-2118

RE: Form C-108, Application for Authorization to Inject  
Cotton Draw 32 State 2 SWD ; API #30-025-  
Eddy County, NM  
Section 32, T24S, R32E

Dear OXY Y-1 Company:

Please find attached Devon Energy Production Company, LP's Form C-108; Application for Authorization to Inject.

Devon's application proposes to drill and convert the Cotton Draw 32 State 2 SWD to salt water disposal in the Devonian/Silurian/Ordovician formation.

As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as having leasehold ownership within the ½ mile review area around the Parkway West SWD #1 well. Any objections must be submitted in writing to NMOCD, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within (15) days of receipt of this letter.

If you have any questions, please contact Trevor Klaassen (405)-552-5069 or myself at (405)-552-7802.

Sincerely,

Stephanie A. Porter  
Operations Technician

SP/sp  
Enclosure



Devon Energy Corporation  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010

405 235 3611 Phone  
www.devonenergy.com

November 21, 2013

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

RE: Form C-108, Application for Authorization to Inject  
Cotton Draw 32 State 2 SWD; API # 30-025-  
Eddy County, NM  
Section 32, T24S, R32E

Dear Santa Fe Oil Conservation Division:

Please find attached Devon Energy Production Company, LP's Form C-108, Application for Authorization to Inject. Devon's application proposes to drill and convert the Cotton Draw 32 State 2 SWD to salt water disposal in the Devonian/Silurian/Ordovician formation.

The surface land owner and operators with leasehold ownership have been notified with Devon's application to inject via certified mail. A copy of this application has been filed with the OCD-Artesia office.

If you have any questions, please contact Trevor Klaassen at (405)-552-7802 or myself at (405)-552-7802.

Sincerely,

A handwritten signature in black ink, appearing to read "S.A. Porter". The signature is fluid and cursive, with a period at the end.

Stephanie A. Porter  
Operations Technician

SP/sp  
Enclosure



Devon Energy Corporation  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010

405 235 3611 Phone  
www.devonenergy.com

November 21, 2013

Yates Petroleum Company  
105 South Fourth Street  
Artesia, New Mexico 88210-2118

RE: Form C-108, Application for Authorization to Inject  
Cotton Draw 32 State 2 SWD ; API #30-025-  
Eddy County, NM  
Section 32, T24S, R32E

Dear Yates Petroleum Company:

Please find attached Devon Energy Production Company, LP's Form C-108; Application for Authorization to Inject.

Devon's application proposes to drill and convert the Cotton Draw 32 State 2 SWD to salt water disposal in the Devonian/Silurian/Ordovician formation.

As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as having leasehold ownership within the ½ mile review area around the Parkway West SWD #1 well. Any objections must be submitted in writing to NMOCD, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within (15) days of receipt of this letter.

If you have any questions, please contact Trevor Klaassen (405)-552-5069 or myself at (405)-552-7802.

Sincerely,

Stephanie A. Porter  
Operations Technician

SP/sp  
Enclosure

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

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

Form C-101  
Revised December 16, 2011

Permit



**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

<sup>1</sup> Operator Name and Address Devon Energy Production Co., L.P. 333 W. Sheridan Oklahoma City, OK 73102-5015		<sup>2</sup> OGRID Number 6137
		<sup>3</sup> API Number
<sup>4</sup> Property Code	<sup>5</sup> Property Name <b>Cotton Draw 32 State SWD</b>	<sup>6</sup> Well No <b>2</b>

**<sup>7</sup> Surface Location**

UL - Lot <b>P</b>	Section <b>32</b>	Township <b>24S</b>	Range <b>32E</b>	Lot Idn	Feet from <b>1180</b>	N/S Line <b>South</b>	Feet From <b>1000</b>	E/W Line <b>East</b>	County <b>Lea</b>
----------------------	----------------------	------------------------	---------------------	---------	--------------------------	--------------------------	--------------------------	-------------------------	----------------------

**<sup>8</sup> Pool Information**

SWD; Devonian	
---------------	--

**Additional Well Information**

<sup>9</sup> Work Type <b>New Well</b>	<sup>10</sup> Well Type <b>SWD</b>	<sup>11</sup> Cable/Rotary	<sup>12</sup> Lease Type <b>State</b>	<sup>13</sup> Ground Level Elevation <b>3477.7</b>
<sup>14</sup> Multiple <b>N</b>	<sup>15</sup> Proposed Depth <b>20,050'</b>	<sup>16</sup> Formation	<sup>17</sup> Contractor	<sup>18</sup> Spud Date
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

**<sup>19</sup> Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	26"	20"	94#	825'	1935 Cl "C"	0
Int 1	17 1/2"	13 3/8"	68#	4600'	3225 Cl "C"	0
Int 2	12 1/4"	9 5/8"	47#	11750'	1845 Cl "H"	3500'
Prod liner	5 7/8"	7" top set	32#	0 - 11350'	765 Cl "H"	10750'
		7" liner	32#	11350 - 16992		

**Casing/Cement Program: Additional Comments**

Hole size: 5 7/8" Open hole Interval: 16992 - 20050'
See attached for details

**Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Annular Double Ram	5,000	5,000	
	10,000	10,000	

<p>I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOC guidelines <input type="checkbox"/>, a general permit <input type="checkbox"/>, or an (attached) alternative OCD-approved plan <input type="checkbox"/>.</p> <p>Signature: <i>Patti Riechers</i></p> <p>Printed name: Patti Riechers</p> <p>Title: Regulatory Specialist</p> <p>E-mail Address: <a href="mailto:patti.riechers@dvn.com">patti.riechers@dvn.com</a></p> <p>Date: 11/20/2013</p>	<p><b>OIL CONSERVATION DIVISION</b></p> <p>Approved By:</p> <p>Title:</p> <p>Approved Date:                      Expiration Date:</p> <p>Conditions of Approval Attached</p>
--	--

## **DRILLING PROGRAM**

Devon Energy Production Company, L.P.  
**CDU-32 State SWD 2**

### **Pressure Control Equipment:**

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

A 10M 13-5/8" BOP system (Triple Ram and 5M 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 tested 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 10,000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line); **if an H&P rig drills this well. Otherwise no flex line is needed.** The line will be kept as straight as possible with minimal turns.

### **Auxiliary Well Control and Monitoring Equipment:**

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.

**Casing Program:**

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight (lb/ft)	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
26"	0 – 825'	20"	0 – 825'	94#	BTC	J-55	1.35	4.48	4.15
17-1/2"	825' – 4,600'	13-3/8"	0 – 4,600'	68#	STC	HCP-110	1.22	2.89	6.84
12-1/4"	4,600' – 11,750'	9-5/8"	0 – 11,750'	47#	LTC	HCP-110	1.16	1.55	2.70
8-1/2"	11,750' – 16,992'	7" top set	0 – 11,350'	32#	BTC	HCP-110	1.65	1.87	3.21
		7" Liner	11,350- 16,992'	32#	BTC	HCP-110	1.13	1.28	2.20
5-7/8"	16,992' – 20,050'	NA	NA	NA	NA	NA	NA	NA	NA

**Casing Notes:**

- This is an open hole completion, thus no casing is listed for hole interval 16,992' to 20,050'
- All casing is new and API approved
- Casing will not be fully evacuated when running in the hole.

**Proposed mud Circulations System:**

Depth	Mud Weight	Viscosity	Fluid Loss	Type System
0 – 825'	8.4-9.0	30-34	N/C	FW
825' – 4,600'	9.8-10.0	28-32	N/C	Brine
4,600' – 11,750'	8.6-9.0	28-32	N/C	FW
11,750' – 16,992'	10.2 – 12.0	30-34	N/C	FW
16,992' – 20,050'	8.4-9.0	28-32	N/C	FW

The necessary mud products for weight addition and fluid loss control will be on location at all times. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume. If abnormal pressures are encountered, electronic/mechanical mud monitoring equipment will be installed.

**Cementing Table:**

String	Number of sx	Weight lbs/gal	Water Volume g/sx	Yield cf/sx	Stage; Lead/Tail	Slurry Description
20" Surface	1935	14.8	6.34	1.33	Tail	Class C Cement + 63.5% Fresh Water
13-3/8" Intermediate	2280	12.9	1.85	9.81	Lead	(65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 70.9 % Fresh Water
	945	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water, 14.8 ppg
9-5/8" Intermediate	1445	11.9	12.89	2.26	Lead	(50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000 + 76.4% Fresh Water
	400	14.5	5.37	1.22	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water
7" Production liner	765	14.5	5.37	1.22	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water

**TOC for all Strings:**

- 20" Surface Casing 0ft
- 13-3/8" Intermediate Casing 0ft
- 9-5/8" Intermediate Casing 3,500ft
- 7" Production liner 10,750ft

**Notes:**

- Cement volumes Surface 100%, Intermediate 50%, Production based on at least 25% excess
- Actual cement volumes will be adjusted based on fluid caliper and caliper log data

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

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name
		SWD; Devonian
<sup>4</sup> Property Code	<sup>5</sup> Property Name	
	COTTON DRAW 32 STATE SWD	
<sup>7</sup> OGRID No.	<sup>8</sup> Operator Name	<sup>6</sup> Well Number
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	2
		<sup>9</sup> Elevation
		3477.7

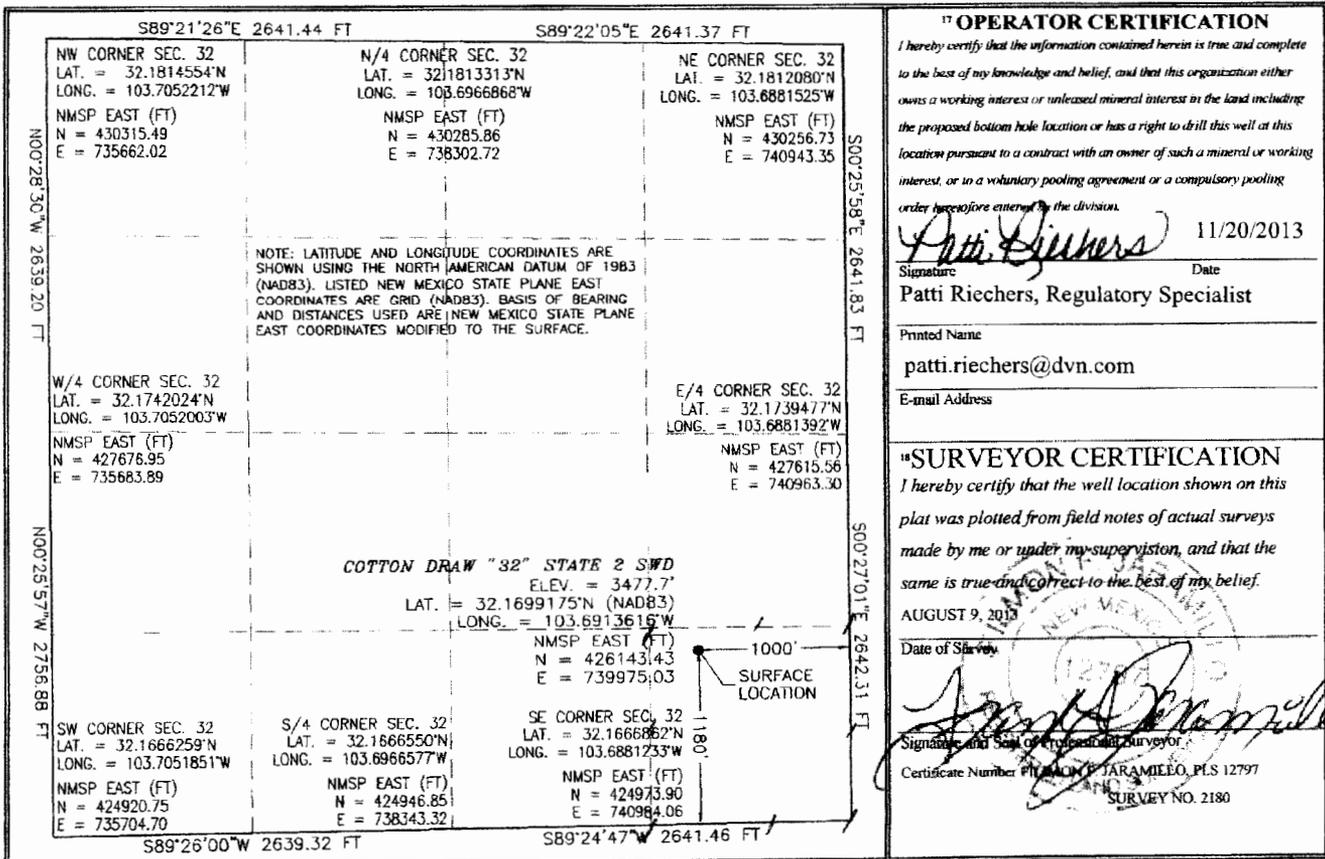
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	32	24 S	32 E		1180	SOUTH	1000	EAST	LEA

<sup>11</sup> Bottom Hole Location If Different From Surface

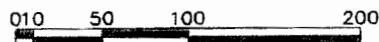
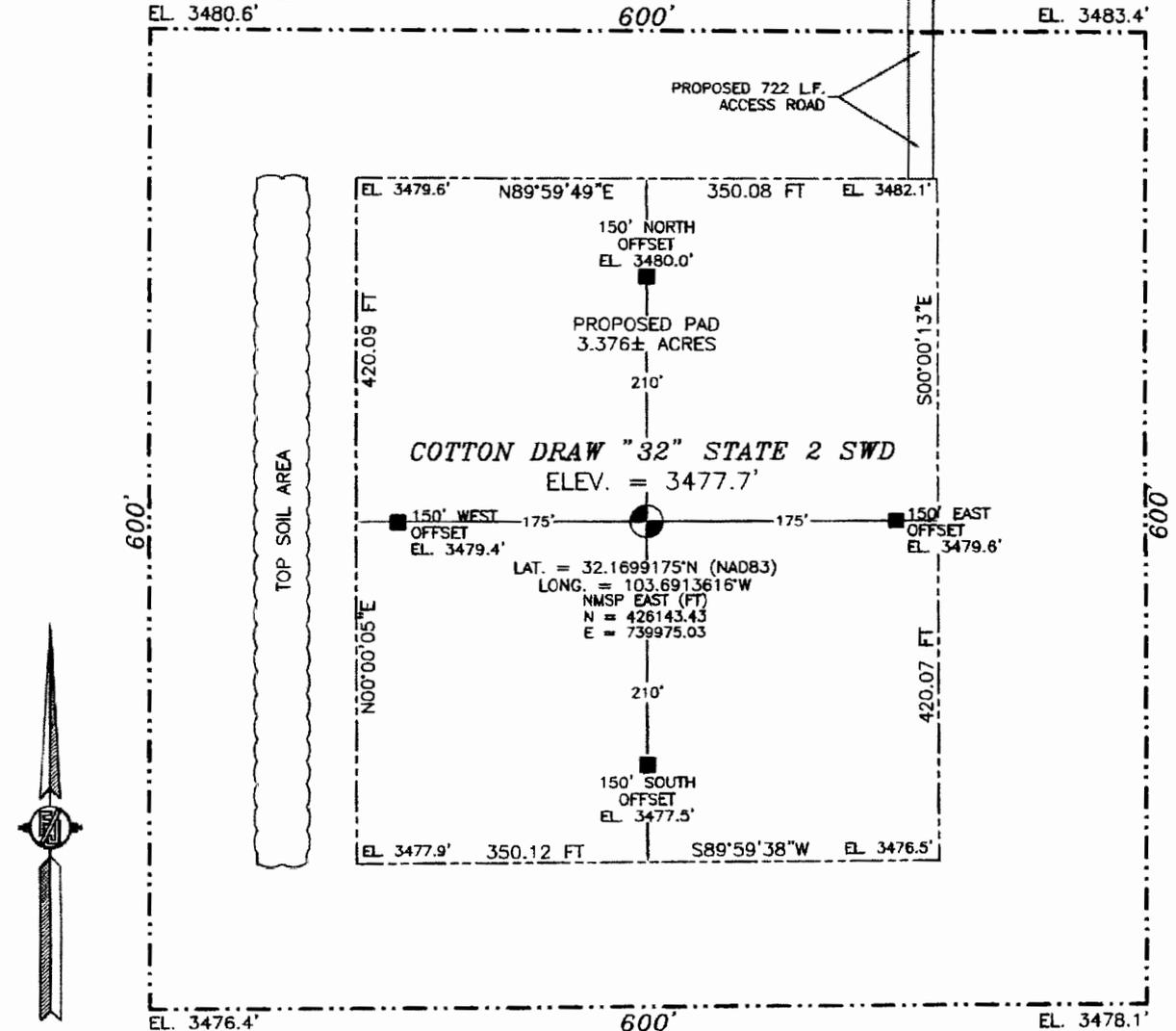
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						
40									

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



**SECTION 32, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
SITE MAP**

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE.



SCALE 1" = 100'  
**DIRECTIONS TO LOCATION**  
 FROM THE INTERSECTION OF STATE HWY #128 AND HWY #1 (ORLA HWY) GO SOUTH ON HWY #1 (ORLA HWY) APPROX. 2.4 MILES TO LEASE ROAD ON RIGHT (WEST) TURN WEST ON LEASE ROAD GO APPROX. 1.0 MILES ROAD TURNS LEFT (SOUTH) TURN SOUTH GO APPROX. 0.8 MILES TO EXISTING PAD AT THE SOUTHWEST CORNER PAD IS A ROAD LATH WITH RED AND WHITE FLAGGING FOLLOW LATHS SOUTH APPROX. 720 FEET TO LOCATION

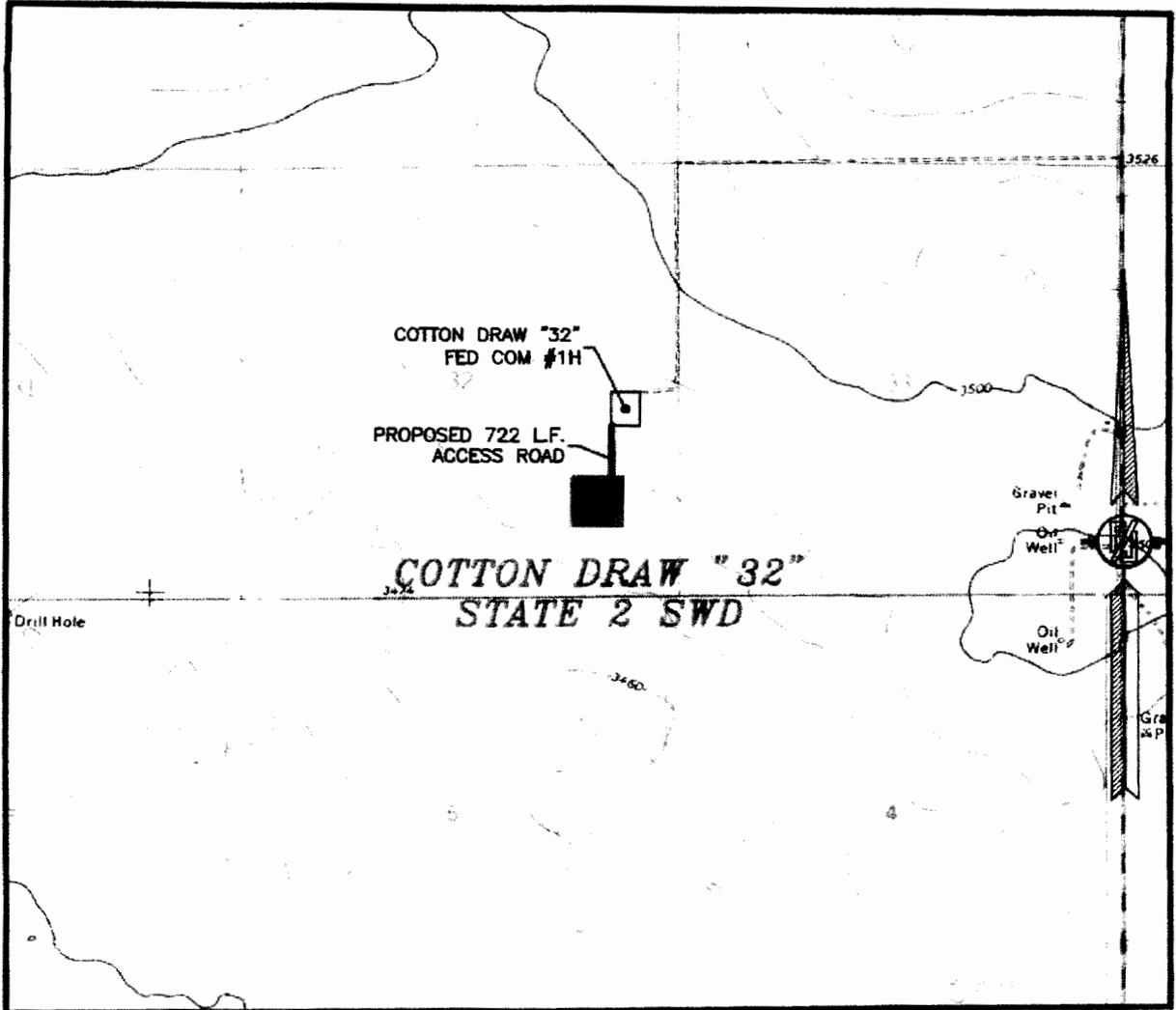
**DEVON ENERGY PRODUCTION COMPANY, L.P.  
COTTON DRAW "32" STATE 2 SWD  
LOCATED 1180 FT. FROM THE SOUTH LINE  
AND 1000 FT. FROM THE EAST LINE OF  
SECTION 32, TOWNSHIP 24 SOUTH,  
RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO**

AUGUST 9, 2013

SURVEY NO. 2180

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-5341

SECTION 32, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
LOCATION VERIFICATION MAP



USGS QUAD MAP:  
PADUCA BREAKS NW

NOT TO SCALE

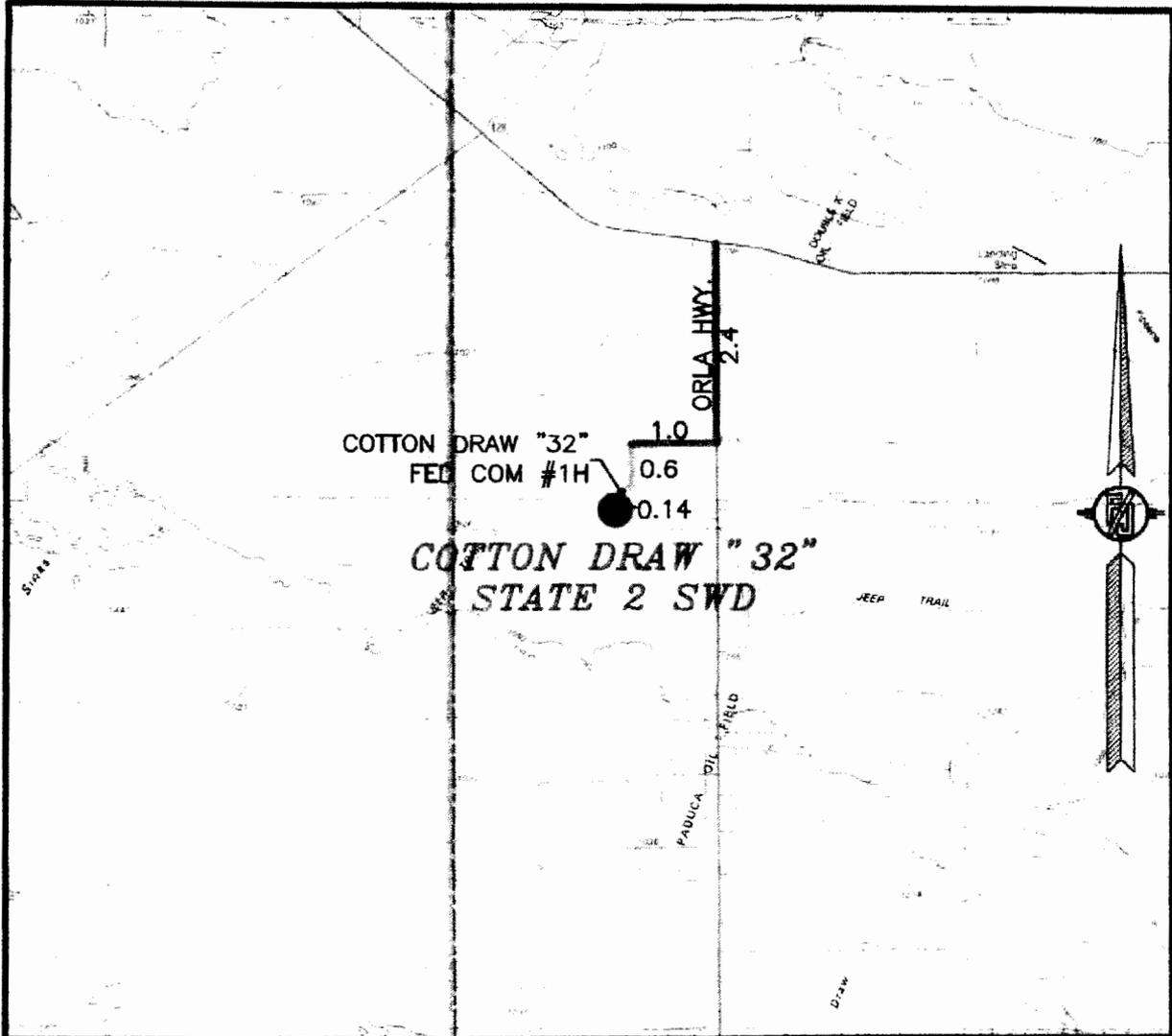
DEVON ENERGY PRODUCTION COMPANY, L.P.  
COTTON DRAW "32" STATE 2 SWD  
LOCATED 1180 FT. FROM THE SOUTH LINE  
AND 1000 FT. FROM THE EAST LINE OF  
SECTION 32, TOWNSHIP 24 SOUTH,  
RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

AUGUST 9, 2013

SURVEY NO. 2180

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SECTION 32, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.  
 LEA COUNTY, STATE OF NEW MEXICO  
 VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF STATE HWY #128 AND HWY #1 (ORLA HWY) GO SOUTH ON HWY #1 (ORLA HWY) APPROX. 2.4 MILES TO LEASE ROAD ON RIGHT (WEST) TURN WEST ON LEASE ROAD GO APPROX. 1.0 MILES ROAD TURNS LEFT (SOUTH) TURN SOUTH GO APPROX. 0.6 MILES TO EXISTING PAD AT THE SOUTHWEST CORNER PAD IS A ROAD LATH WITH RED AND WHITE FLAGGING FOLLOW LATHS SOUTH APPROX. 720 FEET TO LOCATION

DEVON ENERGY PRODUCTION COMPANY, L.P.

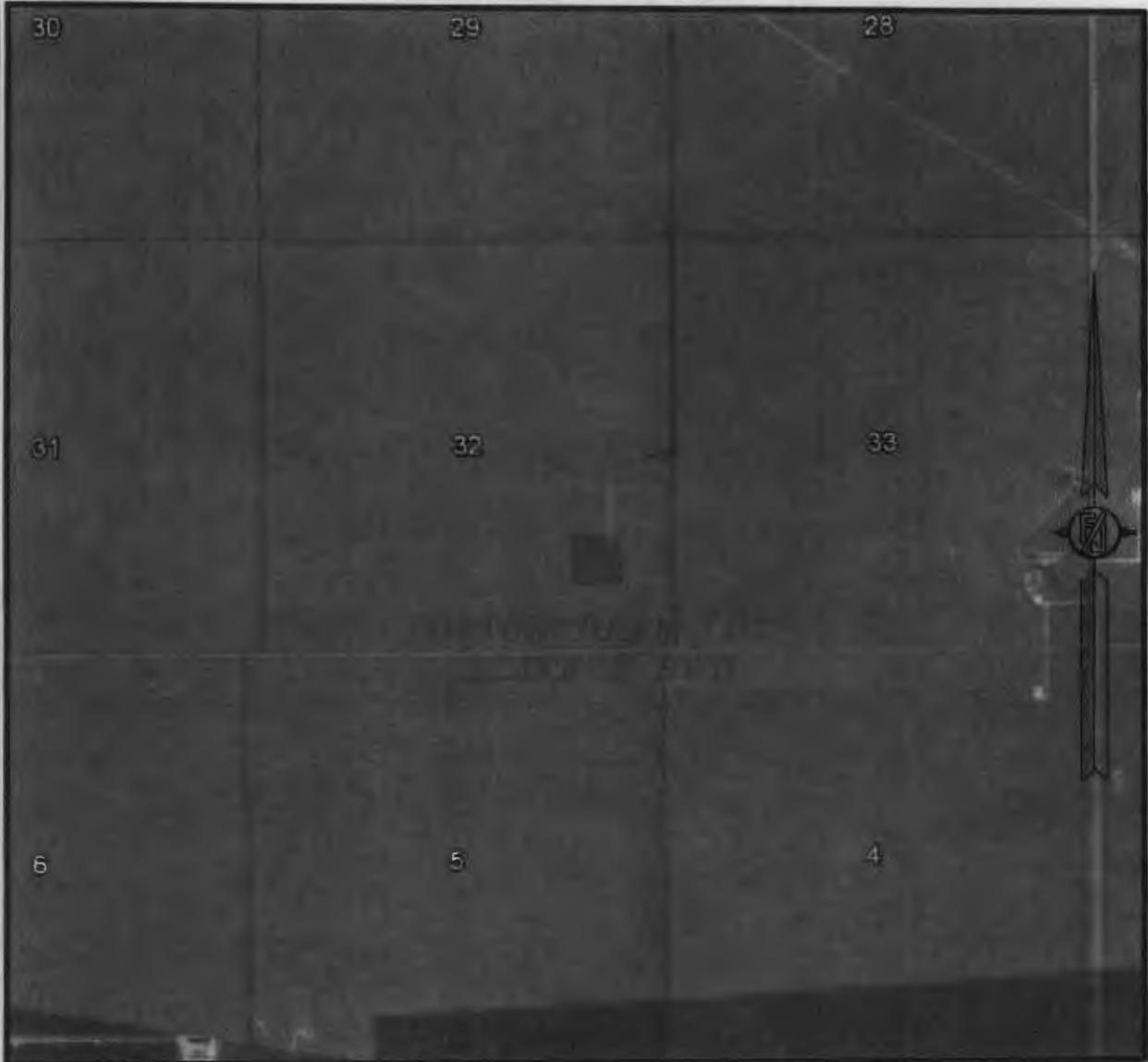
**COTTON DRAW "32" STATE 2 SWD**  
 LOCATED 1180 FT. FROM THE SOUTH LINE  
 AND 1000 FT. FROM THE EAST LINE OF  
 SECTION 32, TOWNSHIP 24 SOUTH,  
 RANGE 32 EAST, N.M.P.M.  
 LEA COUNTY, STATE OF NEW MEXICO

AUGUST 9, 2013

SURVEY NO. 2180

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-5341

SECTION 32, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
AERIAL PHOTO



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
MARCH 2012

DEVON ENERGY PRODUCTION COMPANY, L.P.  
COTTON DRAW "32" STATE 2 SWD  
LOCATED 1180 FT. FROM THE SOUTH LINE  
AND 1000 FT. FROM THE EAST LINE OF  
SECTION 32, TOWNSHIP 24 SOUTH,  
RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

AUGUST 9, 2013

SURVEY NO. 2180

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO



**C-108 Review Checklist:** Received 11/22/13 Add. Request: — Reply Date: — Suspended: — [Ver 12]

PERMIT TYPE: WFX / PMX / SWD Number: 1459 Permit Date: 01/31/14 Legacy Permits/Orders: NA

Well No. 2 Well Name(s): Cotton Draw 32 State SWD

API: 30-025-41524 Spud Date: TBD New or Old: New (UIC Class II Primacy 03/07/1982)

Footages 1180 FSL/1000 FEL Lot — or Unit P Sec 32 Tsp 24S Rge 32E County Lea

General Location: North of Paduca Fields SE of WIPP Pool: SWD: Devonian-5:1-Ord Pool No.: —

BLM 100K Map: Jal Operator: Devon Energy Prod. Co. OGRID: 6137 Contact: Stephanie Porter

COMPLIANCE RULE 5.9: Inactive Wells: 3 of 1845 Total Wells: — Incl Assur: Yes Compl. Order? No IS 5.9 OK? Date: 01/31/14 Yes

WELL FILE REVIEWED  Current Status: APD on file

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

Planned Rehab Work to Well: New well - two liners at depth

Well Construction Details:	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Conductor	—	—	—	—
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/> Surface	26/20	0 to 825	1935	air to surf
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Interm/Prod	17 1/2 / 13 5/8	0 to 4600	3225	air to surf
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Prod/Perm	12 1/4 / 9 5/8	0 to 11,750	1845	<del>Calc</del> 3300' Calc.
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Liner/Prod	8 1/2 / 7	Two sets 0 to 11,350 11,350 to 16,992	765	Calc 10750'
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> OH / PERF	—	16992 - 19385	Inj Length 2393	Completion/Operation Details:

Injection Stratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops?	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.	—	Morrow	—	Drilled TD <u>—</u> PBSD <u>—</u> NEW TD <u>19385</u> NEW PBSD <u>—</u>
Confining Unit: Litho. Struc. Por.	+ 400	Woodford	16463	NEW Open Hole <input checked="" type="checkbox"/> or NEW Perfs <input type="checkbox"/>
Proposed Inj Interval TOP:	16992	Devonian	16592	Tubing Size <u>4 1/2</u> in. Inter Coated? <u>Yes</u>
Proposed Inj Interval BOTTOM:	19385	Ellenburger	19285	Proposed Packer Depth <u>16942</u> ft
Confining Unit: Litho. Struc. Por.	—	Ellenburger	—	Min. Packer Depth <u>16892</u> (100-ft limit)
Adjacent Unit: Litho. Struc. Por.	—	PE	—	Proposed Max. Surface Press. <u>3398</u> psi
				Admin. Inj. Press. <u>3398</u> (0.2 psi per ft)

**AOR: Hydrologic and Geologic Information**

POTASH: R-111-P No Noticed? NR BLM Sec Ord No WIPP No Noticed? NR SALADO: T: 1034 B: 4374 CLIFF HOUSE —

FRESH WATER: Aquifer — Max Depth — 1-Mile Wells? — FW Analysis  HYDRO AFFIRM STAT By Qualified Person

Disposal Fluid: Formation Source(s) Delaware/Bone Spring Analysis? Yes On Lease  Operator Only  or Commercial

Disposal Interval: Inject Rate (Avg/Max BWPD): 7500/15000 Protectable Waters?: Probably CAPITAN REEF: thru  adj  NA

HC Potential: Producing Interval? No Formerly Producing? No Method: Logs/DST/P&A/Other Unknown 2-Mile Radius Pool Map

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

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

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

NOTICE: Newspaper Date 08/28/13 Mineral Owner SLO Surface Owner BLM recomend N. Date 11/21/13

RULE 26.7(A): Identified Tracts? Yes Affected Persons: Devon/OGX/Chevron/Yates/Abo/OXY without minerals N. Date 11/21/13

Permit Conditions: Issues: CBL not identified in APD / limit to top of Ellenburger

Add Permit Cond: Salinity Calc. / CBL for liner / limit deep injection to top 100'