

ABOVE THIS LINE FOR DIVISION USE ONLY

*Protested  
By OXI*

**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 \_\_\_\_\_

*30-015-27106  
Todd 27P Fed #16  
Devon Energy  
Delaware Mtn Gp;  
Cherry & Bell  
Canyon*

2013 SEP -5 A 10:10  
RECEIVED

[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

*Reinstated on  
Nov. 11*

*OXI withdrew - interval now*

[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

Operations Technician  
Title

Date

Stephanie.Porter@dv.com  
e-mail Address

*9/24/2013*

**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: \_\_\_\_\_ 8/14/03 \_\_\_\_\_  
E-MAIL ADDRESS: \_\_\_\_\_ Stephanie.Porter@devn.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:

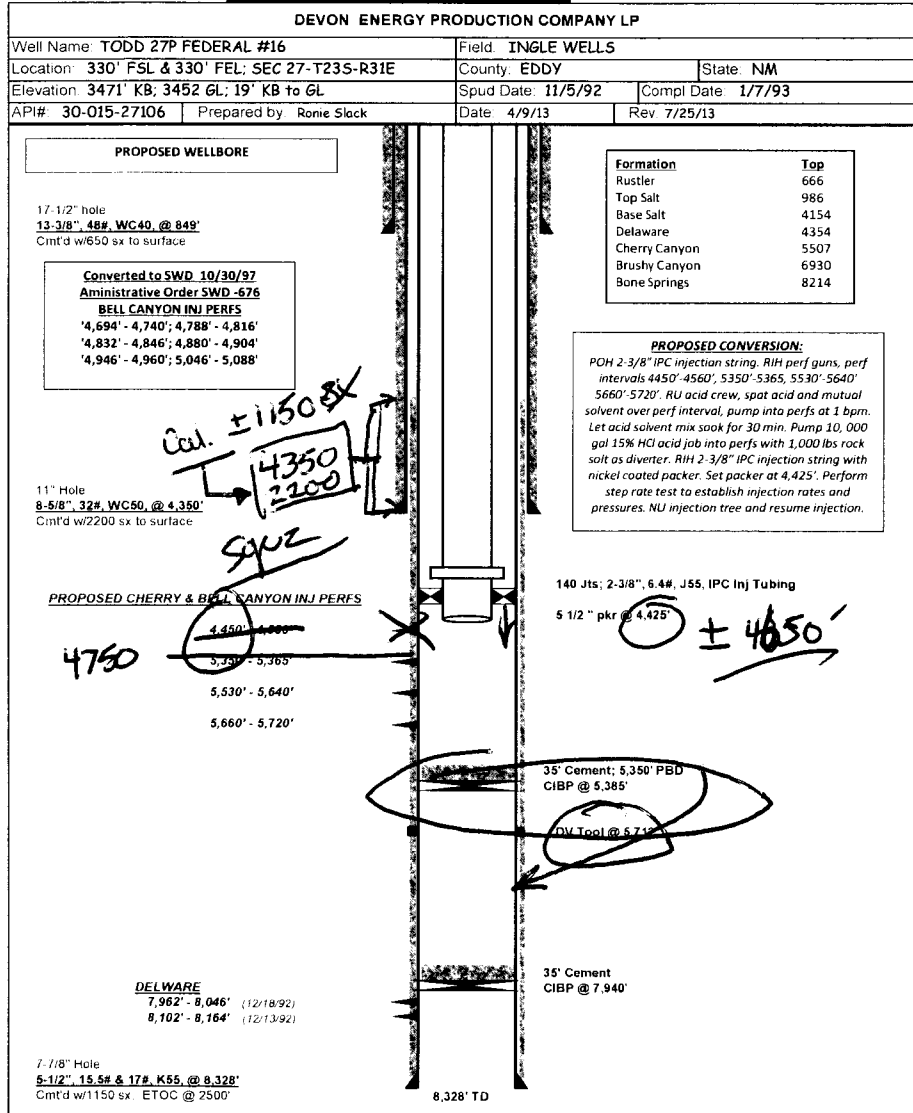
- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates 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, LPWELL NAME & NUMBER: TODD 27P FEDERAL #16WELL LOCATION: 330' FSL & 330' FEL P  Sec 27 T23S R31E  
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE**WELLBORE SCHEMATIC****WELL CONSTRUCTION DATA**Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8", 48# @ 849'

Cemented with: 650 sx. or  ft<sup>3</sup>

Top of Cement: Surface Method Determined: Circ. cement

Intermediate Casing

Hole Size: 11" Casing Size: 8-5/8", 32# @ 4350'

Cemented with: 2200 sx. or  ft<sup>3</sup>

Top of Cement: Surface Method Determined: Circ cement

Production Casing

Hole Size: 7-7/8" Casing Size: 5-1/2, 15.5/17# @ 8328'

Cemented with: 1150 sx. or  ft<sup>3</sup>

Top of Cement: 2500' Method Determined: Calc. TOC

Total Depth: 8328'

Injection Interval (Perforated)

Per Agreement 4750' to 5720'  
with OXY USA Inc.  
(Protestant)

(Perforated or Open Hole; indicate which)

CBL  
ran 12  
1987  
Poor Quality

**INJECTION WELL DATA SHEET**

Tubing Size: 2-3/8" Lining Material: IPC

Type of Packer: 5-1/2" Nickel Coated Arrowset Packer

Packer Setting Depth: ~~4425'~~ 4650 minimum

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

Additional Data

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

If no, for what purpose was the well originally drilled? oil & gas producer/SWD injection

2. Name of the Injection Formation: Delaware; Bell & Cherry Canyon

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.

Delaware: 4694-5088, 7962-8046 & 8102-8164

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

Rustler Surface 666; Top Salt 986 (Barren); Base Salt 4154 (Barren); Delaware 4354 (Oil); Cherry Canyon 5507 (Oil); Brushy Canyon 6930 (Oil); Bone Spring 8214 (Oil)

**Proposed Injection Well: Todd 27P Federal #16**

API: 30-015-27106

**APPLICATION FOR INJECTION**

Form C-108 Section III

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

**A. Injection Well Information**

- (1) Lease Todd 27P Federal  
Well No #16  
Location 330' FSL & 330' FEL  
Sec, Twn, Rnge Sec 27-T23S-R31E  
Cnty, State Eddy County, NM
- (2) Casing 13-3/8", 48#, WC40, @ 849'  
Cmt'd w/650, circ cmt to surf  
  
8-5/8", 32#, WC50, @ 4350'  
Cmt'd w/2200, circ cmt to surf  
  
5-1/2", 15.5 & 17#, K-55 @ 8328'  
Cmt'd w/1150, calc ROC 2500'
- (3) Injection Tubing 2-3/8" IPC injection tubing
- (4) Packer 5 1/2" Nickel Coated Arrowset Packer @ 4425'

1982 CBL  
CBL based on record ~~1982~~ run  
Poor Quality

**B. Other Well Information**

- (1) Injection Formation: Delaware; Bell & Cherry Canyon  
Field Name: (To Be Assigned)  
4750
- (2) Injection Interval: 4450' - 5720' (perforated)

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

Oil & Gas Producer, SWD Injection

- (4) **Other perforated intervals:**

Delaware: 4694-5088, 7962-8046 & 8102-8164

- (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 Surface 666; Top Salt 986 (Barren); Base Salt 4154 (Barren); Delaware 4354 (Oil); Cherry Canyon 5507 (Oil); Brushy Canyon 6930 (Oil); Bone Spring 8214 (Oil)

**Proposed Injection Well: Todd 27P Federal #16**

API: 30-015-27106

**APPLICATION FOR INJECTION**

Form C-108 Section VII to XIII

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

- (1) Proposed average injection rate: 5000 BWPD  
Proposed maximum injection rate: 10000 BWPD
- (2) The system will be a closed system.
- (3) Proposed average injection pressure: 445 psi  
Proposed max injection pressure: 890 psi
- (4) The injection fluid will be produced water from area wells producing from the Delaware formation that will be injected into the Bell & Cherry Canyon formation.
- (5) Representative produced water analysis are submitted for the Delaware formation.

**VIII Geologic Injection Zone Data**

The injection zone is the Bell & Canyon formation from 4450' to 5720'. The gross injection interval is 1270' thick. The Delaware formation formation is a Permian aged sandstone. The average depth to fresh water is above 800' in this area.

**IX Proposed Stimulation**

Based on injectivity results this interval could be acid stimulated.

**X Log Data**

Logs will be submitted with completion report.

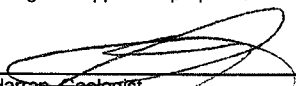
**XI Fresh Water Analysis**

No water wells found on the Office of the State Engineer's website.

**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 geological support for proposed recommended perforations.

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

  
\_\_\_\_\_  
Date:

**XIII Proof of Notice**

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

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

5. Lease Serial No.  
NM-NM0418220-A

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE – Other instructions on page 2.**

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other SWD

2. Name of Operator  
Devon Energy Production Co., LP

3a. Address  
333 West Sheridan Avenue  
OKC, OK 73102

3b. Phone No. (include area code)  
(405)-552-7802

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 27-T23S-R31E  
330' FSL & 330' FEL

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.  
Todd 27P Federal 16

9. API Well No.  
30-015-27106

10. Field and Pool or Exploratory Area  
Ingle Wells; Delaware

11. Country or Parish, State  
Eddy County, NM

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

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

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

PROPOSED SWD CONVERSION: Devon is filing Form C-108 (Application for Authorization to Inject) with the Oil Conservation Division in Santa Fe, New Mexico. Proposed SWD conversion is in the Delaware; Bell & Cherry Canyon formation (perforated from 4,450' - 5,720').

1. MIRU. Establish injection in Delaware perforated interval from 4,550' - 4,560', not to exceed maximum authorized surface injection pressure per C-108.
2. POH 2-3/8" IPC injection string
3. RIH perf guns, perf intervals 4450'-4560', 5350'-5365', 5530'-5640' 5660'-5720'; 4SPF, 90 degree phasing, total 118 shots.
4. Stimulate Delaware formation, if necessary. RU acid crew, spot acid and mutual solvent over perf interval, pump into perfs at 1 bpm. Let acid solvent mix soak for 30 min. Pump 10,000 gal 15% HCl acid job into perfs with 1,000 lbs rock salt as diverter.
5. RIH, initiate and evaluate injection in Delaware formation using existing 2 3/8" production tubing and Arrowset packer.
6. Replace as warranted current 2 3/8 IPC injection tubing and 5 1/2" nickel coated packer @ +/- 4,425'
7. Run MIT test and chart. File MIT with BLM/OCD office.
8. NU injection tree and resume injection.

COPY

14. I hereby certify that the foregoing is true and correct.

Name (Printed/Typed)  
Stephanie A. Porter

Title Operations Technician

Signature

Date

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

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

Office

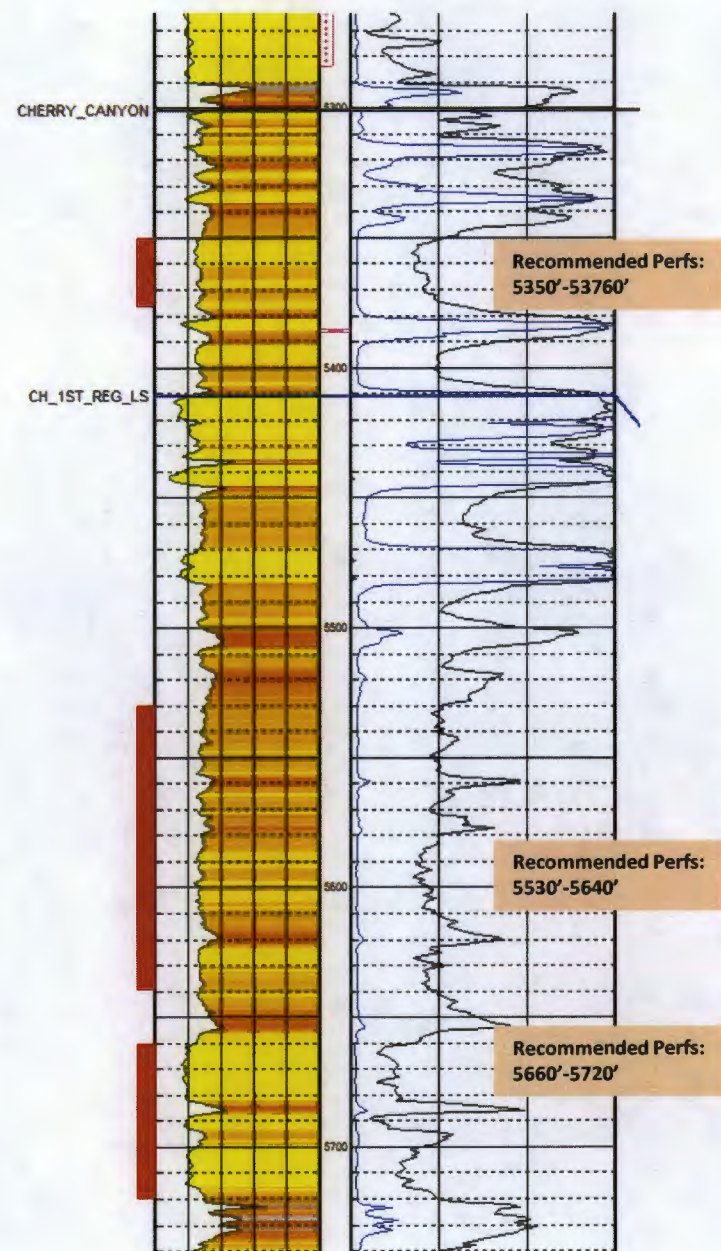
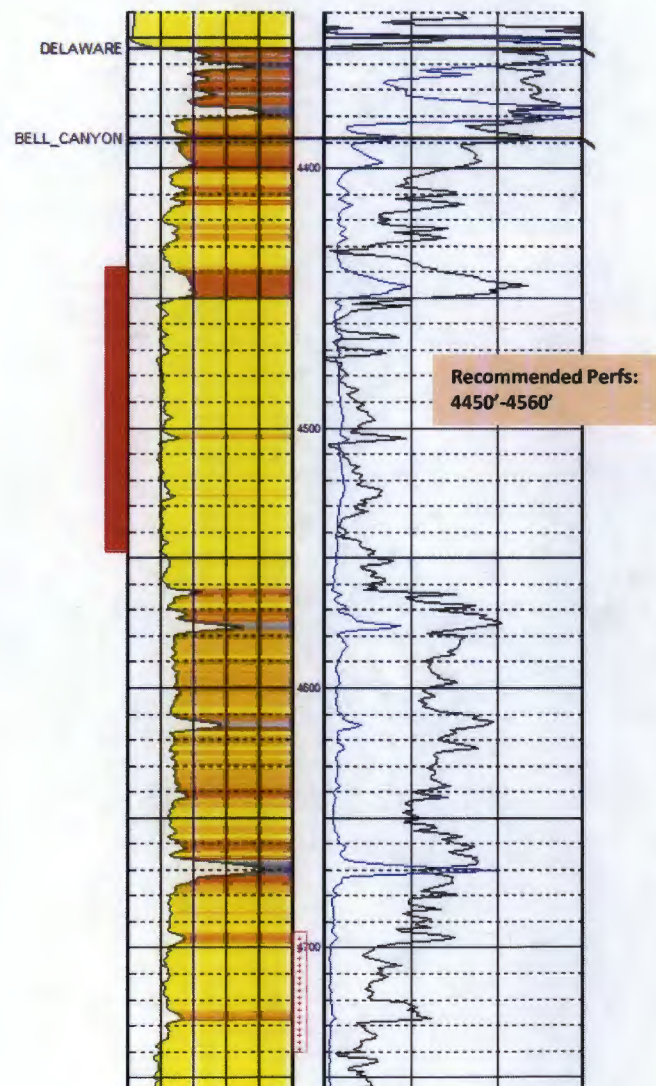
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)









# DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TODD 27P FEDERAL #16		Field: INGLE WELLS	
Location: 330' FSL & 330' FEL; SEC 27-T23S-R31E		County: EDDY	State: NM
Elevation: 3471' KB; 3452 GL; 19' KB to GL		Spud Date: 11/5/92	Compl Date: 1/7/93
API#: 30-015-27106	Prepared by: Ronie Slack	Date: 4/9/13	Rev:

## CURRENT WELLBORE

17-1/2" hole  
13-3/8", 48#, WC40, @ 849'  
 Cmt'd w/650 sx to surface

Formation	Top
Rustler	666
Top Salt	986
Base Salt	4154
Delaware	4354
Cherry Canyon	5507
Brushy Canyon	6930
Bone Springs	8214

11" Hole  
8-5/8", 32#, WC50, @ 4,350'  
 Cmt'd w/2200 sx to surface

Converted to SWD - 10/30/97  
BELL CANYON INJ PERFS

4,694' - 4,740'; 4,788' - 4,816'  
 4,832' - 4,846'; 4,880' - 4,904'  
 4,946' - 4,960'; 5,046' - 5,088'  
 5,164' - 5,216'; 5,254' - 5,284'

145 Jts; 2-7/8", 6.4#, J55, IPC Inj Tubing

AD-1 Pkr @ 4,590' (5/15/04)

35' Cement; 5,350' PBD  
 CIBP @ 5,385'

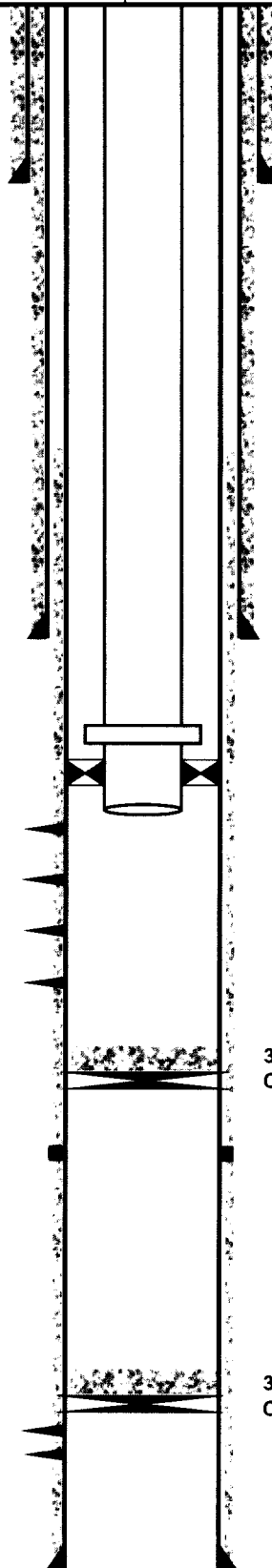
DV Tool @ 5,712'

DELAWARE  
 7,962' - 8,046' (12/18/92)  
 8,102' - 8,164' (12/13/92)

35' Cement  
 CIBP @ 7,940'

7-7/8" Hole  
5-1/2", 15.5# & 17#, K55, @ 8,328'  
 Cmt'd w/1150 sx, ETOC @ 2500'

8,328' TD



# DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TODD 27P FEDERAL #16		Field: INGLE WELLS	
Location: 330' FSL & 330' FEL; SEC 27-T23S-R31E		County: EDDY	State: NM
Elevation: 3471' KB; 3452' GL; 19' KB to GL		Spud Date: 11/5/92	Compl Date: 1/7/93
API#: 30-015-27106	Prepared by: Ronie Slack	Date: 4/9/13	Rev: 7/25/13

## PROPOSED WELLBORE

17-1/2" hole  
13-3/8", 48#, WC40, @ 849'  
 Cmt'd w/650 sx to surface

Converted to SWD 10/30/97  
Administrative Order SWD -676  
BELL CANYON INJ PERFS  
 '4,694' - 4,740'; 4,788' - 4,816'  
 '4,832' - 4,846'; 4,880' - 4,904'  
 '4,946' - 4,960'; 5,046' - 5,088'

Formation	Top
Rustler	666
Top Salt	986
Base Salt	4154
Delaware	4354
Cherry Canyon	5507
Brushy Canyon	6930
Bone Springs	8214

### PROPOSED CONVERSION:

POH 2-3/8" IPC injection string. RIH perf guns, perf intervals 4450'-4560', 5350'-5365', 5530'-5640', 5660'-5720'. RU acid crew, spot acid and mutual solvent over perf interval, pump into perfs at 1 bpm. Let acid solvent mix soak for 30 min. Pump 10,000 gal 15% HCl acid job into perfs with 1,000 lbs rock salt as diverter. RIH 2-3/8" IPC injection string with nickel coated packer. Set packer at 4,425'. Perform step rate test to establish injection rates and pressures. NU injection tree and resume injection.

11" Hole  
8-5/8", 32#, WC50, @ 4,350'  
 Cmt'd w/2200 sx to surface

### PROPOSED CHERRY & BELL CANYON INJ PERFS

*Squid Cmt*  
 ①  
 4,450' - 4,560'  
 5,350' - 5,365'  
 5,530' - 5,640'  
 5,660' - 5,720'

140 Jts; 2-3/8", 6.4#, J55, IPC Inj Tubing

5 1/2" pkr @ 4,425'

35' Cement; 5,350' PBD  
 CIBP @ 5,385' ② move CIBP

DV Tool @ 5,712'

*to within 200' of 5720*  
*[F5920]*

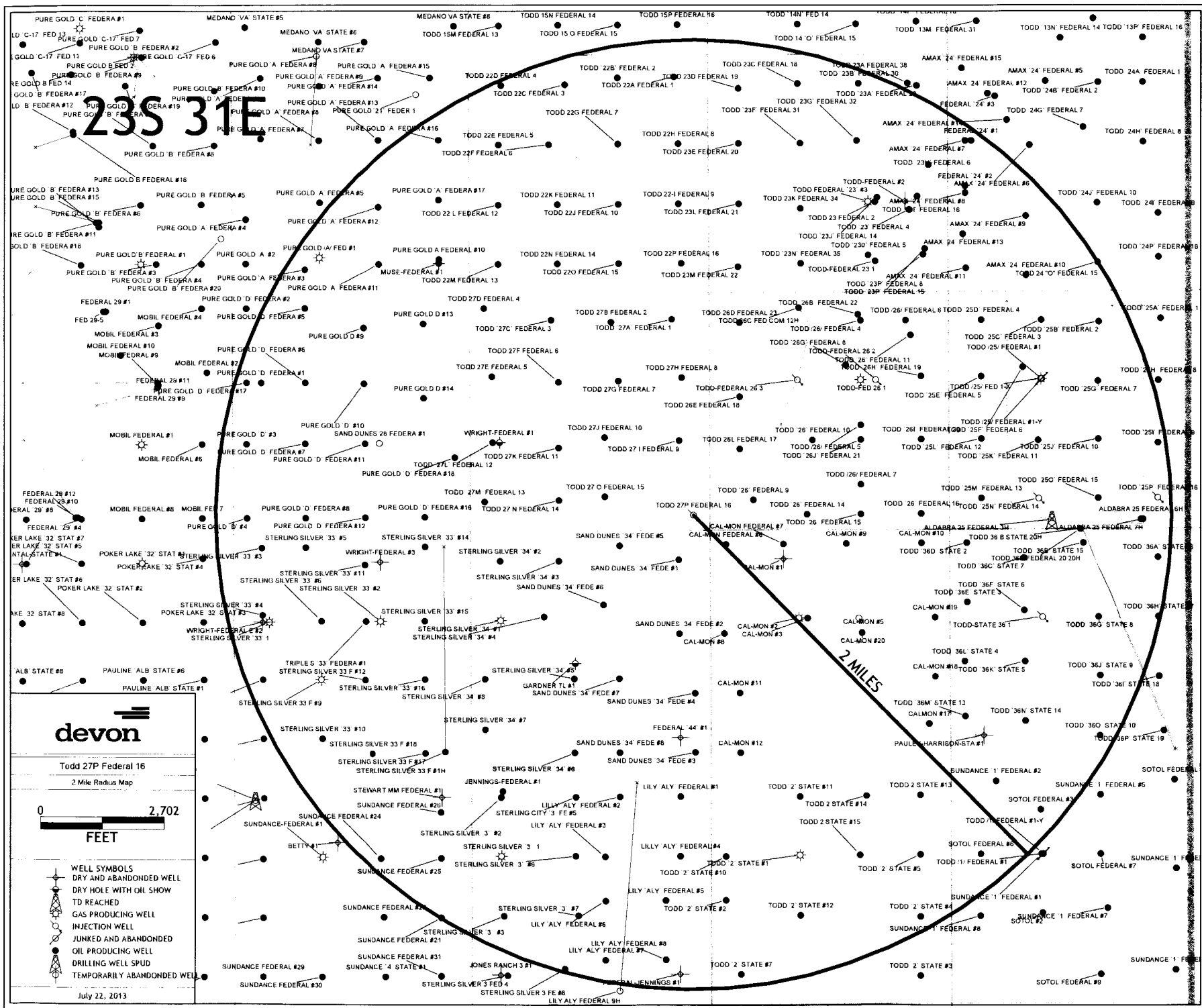
35' Cement  
 CIBP @ 7,940'

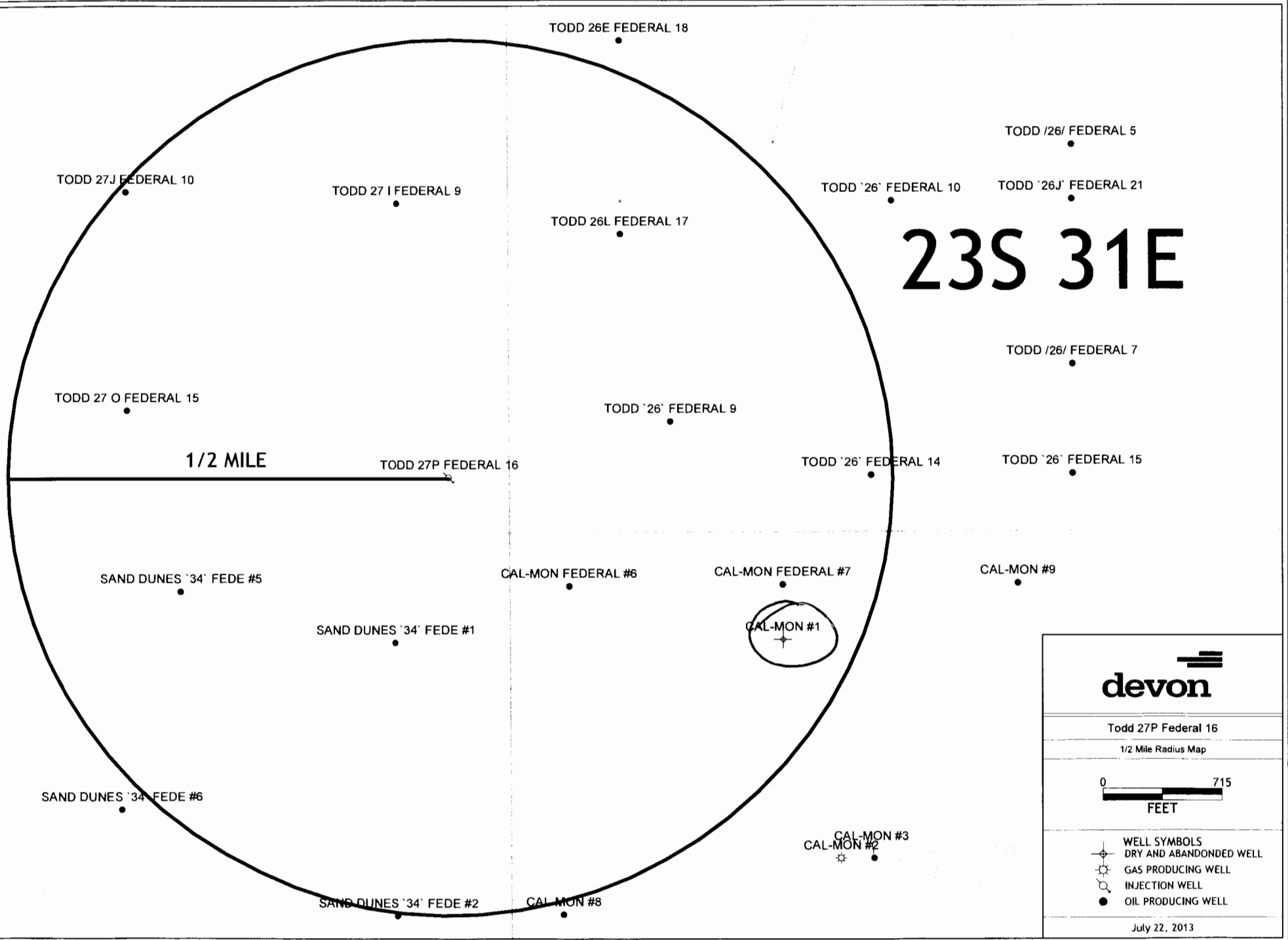
DELAWARE  
 7,962' - 8,046' (12/18/92)  
 8,102' - 8,164' (12/13/92)

7-7/8" Hole  
5-1/2", 15.5# & 17#, K55, @ 8,328'  
 Cmt'd w/1150 sx, ETOC @ 2500'

8,328' TD

③ SWD-676 / injection survey





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

**Devon Energy Production Company, LP**

**Proposed Inj Well: Todd 27P Federal 16**

**Proposed Formation: Delaware; Bell & Cherry Canyon**

**Proposed Interval: 4450 - 5720'**

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	Todd 27P Federal 16 (Originally named Todd 27 Fed 1)	30-015-27106	Eddy	330' FSL 330' FEL	27	23S	31E	Oil	Active	11/5/1992	1/7/1993	8328'	8281'	Delaware	4694-5284 7962-8046 8012-8164	13-3/8", 48#, @ 849' 8-5/8", 32#, @ 4350' 5-1/2 15.5/17#, @ 8328'	650 sx / surface 2200 sx / surface 1200 sx / 1750 cbl
Devon Energy Prod Co LP	Todd 27J Federal 10	30-015-34430	Eddy	1980' FSL 1980' FEL	27	23S	31E	Oil	Active	2/2/06	3/23/06	8245	8194	Delaware	7230-8054	13-3/8", 48#, @ 878' 8-5/8", 32#, @ 4305' 5-1/2", 15.5/17#, @ 8245'	920 sx / surface 1340 sx / surface 1530 sx / surface
Devon Energy Prod Co LP	Todd 26L Federal 17	30-015-36897	Eddy	1800' FSL 660' FWL	26	23S	31	Oil	Active	12/10/09	1/18/10	8400	8282	Delaware	7904-7912 8090-8100	13-3/8", 48#, @ 740' 8-5/8", 24/32#, @ 4378' 5-1/2", 17#, @ 8400'	770 sx / surface 1320 sx / surface 1140 sx / 800 cbl
Devon Energy Prod Co LP	Todd 26M Federal 9	30-015-27075	Eddy	660' FSL 990' FWL	26	23S	31E	Oil	Active	9/15/1992	10/21/1992	8400	8346	Delaware	7335-7344 8006-8046 8112-8130 8146-8164	13-3/8", 48#, @ 869' 8-5/8", 32#, @ 4400' 5-1/2 15.5/17#, @ 8400'	600 sx / surface 2700 sx / surface 1025 sx / 2898 cbl
Devon Energy Prod Co LP	Todd 27O Federal 15	30-015-34432	Eddy	660' FSL 1980' FEL	27	23S	31E	Oil	Active	1/18/2006	2/7/2006	8236	8178	Delaware	6717-6722 7495-7509 8067-8082	13-3/8", 48#, @ 865' 8-5/8", 32#, @ 4278' 5-1/2 15.5/17#, @ 8236'	860 sx / surface 1350 sx / surface 1770 sx / 1830 cbl
Devon Energy Prod Co LP	Todd 27I Federal 9	30-015-35521	Eddy	1980' FSL 660' FEL	27	23S	31E	Oil	Active	1/10/2008	2/19/2008	8255	8206	Delaware	7900-7907 7984-7994 8070-8080	13-3/8", 48#, @ 830' 8-5/8", 32#, @ 4350' 5-1/2 15.5/17#, @ 8255'	860 sx / surface 1400 sx / surface 1310 sx / 3320 cbl
Devon Energy Prod Co LP	Todd 26N Federal 14	30-015-27104	Eddy	330' FSL 2180' FWL	26	23S	31E	Oil	Active	12/12/1992	2/20/1993	8400	8357	Delaware	6980-6998 8020-8064 8128-8184	13-3/8", 48#, @ 850' 8-5/8", 32#, @ 4412' 5-1/2 15.5/17#, @ 8400'	650 sx / surface 2050 sx / surface 1050 sx / 2500 cbl
Oxy USA	Cal-Mon Federal 6	30-015-26885	Eddy	330' FNL 380' FWL	35	23S	31E	Oil	Active	2/20/1992	3/24/1992	8340	8270	Delaware	8007-8046	13-3/8", 54.5#, @ 825' 8-5/8", 24/32#, @ 4340' 5-1/2", 15.5/17#, @ 8309'	950 sx / surface 1575 sx / surface 1404 sx / 4400 cbl
Oxy USA	Cal-Mon Federal 7	30-015-27081	Eddy	330' FNL 1650' FWL	35	23S	31E	Oil	Active	8/10/1992	9/8/1992	8400	8360	Delaware	6996-7014 7962-8070 8125-8201	13-3/8", 54.5#, @ 797' 8-5/8", 24/32#, @ 4275' 5-1/2", 15.5/17#, @ 8400'	1000 sx / surface 1525 sx / surface 1275 sx / 2800 cbl
Oxy USA	Sand Dune 34 Federal 1	30-015-27255	Eddy	1650' FNL 2310' FEL	35	23S	31E	Oil	Active	12/29/1992	1/28/1993	8338	8291	Delaware	8114-8182	13-3/8", 54.5#, @ 806' 8-5/8", 24/32#, @ 4220' 5-1/2", 15.5/17#, @ 8338'	1000 sx / surface 1650 sx / surface 1485 sx / surface
Oxy USA	Sand Dune 34 Federal 6	30-015-27499	Eddy	1650' FNL 2310' FEL	35	23S	31E	Oil	Active	9/13/1994	10/18/1994	8340	8294	Delaware	7976-8012 8074-8130	13-3/8", 54.5#, @ 720' 8-5/8", 24/32#, @ 4235' 5-1/2", 15.5/17#, @ 8290'	950 sx / surface 1600 sx / surface 1740 sx / surface
Pogo Producing	Calmon 1	30-015-24608	Eddy	660' FNL 1650' FWL	35	23S	31E	Oil	P&A	9/28/1983	10/18/1983	7100	Surf	n/a	n/a	10 3/4" @ 850'	275 sx / surface Set cmt plugs: 6521-6671' 4610-5150' 4158-4458' 720-1020' 50' plug at surf

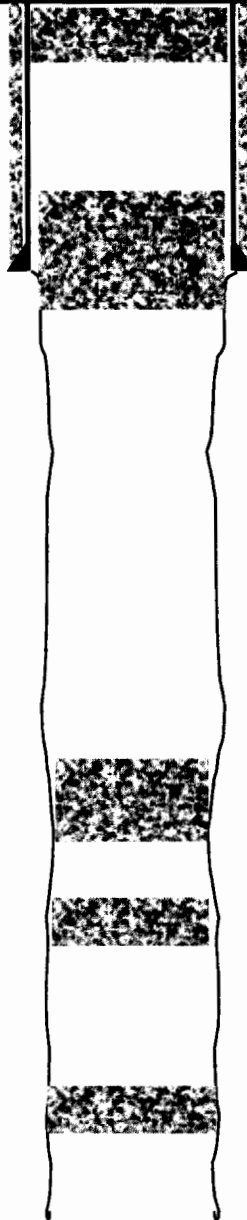
10 - active / Delaware  
1 P&A

**DEVON ENERGY PRODUCTION COMPANY LP**

Well Name: <b>CAL MON #1</b>		Field: <b>WILDCAT BRUSHY CANYON</b>	
Location: <b>660' FNL &amp; 1650' FWL; SEC 35-T23S-R31E</b>		County: <b>EDDY</b>	State: <b>NM</b>
Elevation: <b>3484' KB; 3467' GR</b>		Spud Date: <b>9/28/83</b>	Compl Date: <b>Plugged 10/19/83</b>
API#: <b>30-015-24608</b>	Prepared by: <b>Ronnie Slack</b>	Date: <b>7/30/13</b>	Rev:

**Wellbore Plugged & abandoned 10/19/83**

12-1/4" hole  
10-3/4", 43.5#, J55, STC, @ 820'  
 Cmt'd w/275 sx, circ'd 50 sx to surf



**Spot 30 sx cmt (50') surface plug**

**Spot 131 sx cmt @ 720' - 1,020'**

**Spot 86 sx cmt @ 4,158' - 4,458'**

**7-7/8" Open Hole**

5. Drilled out cmt to 4,500'.
4. Respot 50 sx cmt @ 4,610'. Tagged TOC @ 4,493'
3. Respot 50 sx cmt @ 4,610'. Tag TOC @ 4,798'
2. Respot 60 sx cmt @ 4,610'. No plug
1. Spot 60 sx cmt @ 4,610'. Tag TOC @ 5,150'

**50 sx cmt @ 6521' - 6671'**

**7,100' TD**



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

6. FIELD OR WILDCAT NAME  
7. UND AGREEMENT NAME  
8. FARM OR LEASE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen a well. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other ☒ Dry Hole
2. NAME OF OPERATOR  
Pogo Producing Company
3. ADDRESS OF OPERATOR  
P.O. Box 10304 Midland, Texas 79701
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 660' FNL & 1650' FWL  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH: 660' FNL & 1650' FWL
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

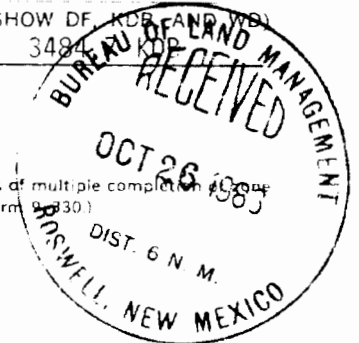
- TEST WATER SHUT-OFF ☐  
FRACTURE TREAT ☐  
SHOOT OR ACIDIZE ☐  
REPAIR WELL ☐  
PULL OR ALTER CASING ☐  
MULTIPLE COMPLETE ☐  
CHANGE ZONES ☐  
ABANDON\* ☐  
(other) ☐

SUBSEQUENT REPORT OF:

- ☐  
☐  
☐  
☐  
☐  
☐  
☐  
☒

15. ELEVATIONS (SHOW DE KOB AND WOB)  
3467.6 GP 3484

(NOTE: Report results of multiple completion (COP) change on Form 9-330.)



17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

10/11/83 TD 7100' - TD 7 7/8" hole at 7100' 10/10/83. Start POH and pipe stuck at 4210'.

10/12-14/83 TD 7100' - Fish stuck pipe. Start running open-hole logs.

10/15/83 TD 7100' - Finish running open-hole logs. RIH and spot 50 sx cmt plug from 6521'-6671' (150'). Pull DP to 4610' and spot 60 sx cmt plug. Tag cmt plug @ 5150'.

10/16/83 TD 7100' - PU DP to 4610' and spot 60 sx cmt plug. No cmt plug. PU DP to 4610' and Spot 50 sx cmt plug tag top of cmt at 4798'. PU DP to 4610' and spot 50 sx cmt plug. Tag top of cmt at 4493'. Drill cmt from 4493'-4500'. Circ hole clean.

CONTINUED ON ATTACHED SHEET

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft

18. I hereby certify that the foregoing is true and correct

SIGNED \_\_\_\_\_ TITLE Division Engineer DATE 10/19/83

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE 12-11-86

CONDITIONS OF APPROVAL, IF ANY:

and present to J. A. Hall.

10/18/83 TD 7100' - R/H and spot 86 sx cmt fr. 4450'-4158' spot 131 sx cmt from 1020'-720', cut-off wellhead and spot 30 sx cmt (50' plug) at the surface. Rig released 2:30 pm MDT 10/17/83. Cmt plug work witnessed by Bird Jones BLM.

10/19/83 TD 7100' - Weld steel cap and install permanent P & A marker. Well P & A complete 10/18/83.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE\*

Form approved  
Bureau Bureau No. 42 R3333

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input checked="" type="checkbox"/> Other <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. N-19199	
b. TYPE OF COMPLETION: NEW WELL <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> Other <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Pogo Producing Company		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR P.O. Box 10340 Midland, Texas 79702		8. FARM OR LEASE NAME Cal-Mon	
4. LOCATION OF WELL (Report location clearly and in accordance with any State regulations) At surface 660' FNL & 1650' FWL At top prod. interval reported below 600' FNL & 1650' FWL At total depth 660' FNL & 1650' FWL		9. WELL NO. 1	
14. PERMIT NO.		10. FIELD AND POOL, OR WILDCAT Sand Dunes	
DATE ISSUED 9/20/83		11. SEC. T. R. M., OR BLOCK AND SURVEY OR AREA Sec. 35, T-23-S, R-31-E	
15. DATE SPUDDED 9/28/83		12. COUNTY OR PARISH Eddy	
16. DATE T.D. REACHED 10/10/83		13. STATE New Mexico	
17. DATE COMPL. (Ready to prod.)		18. ELEVATIONS (OF, RKB, RT, GR, ETC.)* 3467.6' GR, 3484.7' RKB*	
19. ELEV. CASING HEAD		20. TOTAL DEPTH, MD & TVD 7100'	
21. PLUG BACK T.D., MD & TVD Surface		22. IF MULTIPLE COMPL., HOW MANY*	
23. INTERVALS DRILLED BY 7100'		24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* None P & A	
25. WAS DIRECTIONAL SURVEY MADE No		26. TYPE ELECTRIC AND OTHER LOGS RUN GR - BHC Sonic, GR- Dual Laterolog	
27. WAS WELL CORED Yes		28. CASING RECORD (Report all strings set in well)	
CASING SIZE 10 3/4"		WEIGHT, LB./FT. 40.50	
DEPTH SET (MD) 820'		HOLE SIZE 12 1/4"	
CEMENTING RECORD 275 sxs CI C, Circulated		AMOUNT PULLED None	
29. LINER RECORD		30. TUBING RECORD	
SIZE None		SIZE None	
TOP (MD) None		DEPTH SET (MD) None	
BOTTOM (MD) None		PACKER SET (MD) None	
SACKS CEMENT* None		SCREEN (MD) None	
31. PERFORATION RECORD (Interval, size and number) None		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL (MD) None	
		AMOUNT AND KIND OF MATERIAL USED None	
33. PRODUCTION		WELL STATUS (Producing or shut-in) P & A	
DATE FIRST PRODUCTION P & A		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	
DATE OF TEST		HOURS TESTED	
CHOKE SIZE		PROD'N. FOR TEST PERIOD	
OIL—BBL.		GAS—MCF.	
WATER—BBL.		GAS-OIL RATIO	
FLOW. TUBING PRESS.		CASING PRESSURE	
CALCULATED 24-HOUR RATE		OIL—BBL.	
WATER—BBL.		OIL GRAVITY-API (CORR.)	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)		TEST WITNESSED BY	
NOV 1 1983		Past ID-2 11-4-83 P & A	
35. LIST OF ATTACHMENTS DST, Inclination Report, BHC Sonic Log, Dual Laterolog, Mud Log, Core Analyses.		36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records ROSWELL, NEW MEXICO	
SIGNED <i>Stallions</i>		TITLE Division Operations Manager DATE 10/24/83	

\*(See Instructions and Spaces for Additional Data on Reverse Side)

**Todd 27P Federal 16 SWD  
C-108 Application for Injection  
Injection Water Analysis for  
Aldabra 25 Fed 6H  
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 #:	578342
Lease/Platform:	ALDABRA 25 FED	Analysis ID #:	135090
Entity (or well #):	6 H	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 578342 @ 75 °F							
Sampling Date:	07/19/13	Anions		mg/l	meq/l	Cations		mg/l	meq/l
Analysis Date:	08/08/13	Chloride:	105600.0		2978.59	Sodium:	61003.0		2653.48
Analyst:	SANDRA SANCHEZ	Bicarbonate:	2196.0		35.99	Magnesium:	310.0		25.5
TDS (mg/l or g/m3):	173088	Carbonate:	0.0		0.	Calcium:	1287.0		64.22
Density (g/cm3, tonne/m3):	1.116	Sulfate:	1522.0		31.69	Strontium:	97.0		2.21
Anion/Cation Ratio:	0.9104169	Phosphate:				Barium:	0.4		0.01
		Borate:				Iron:	49.0		1.77
		Silicate:				Potassium:	1023.0		26.16
Carbon Dioxide:	50 PPM	Hydrogen Sulfide:			0 PPM	Aluminum:			
Oxygen:		pH at time of sampling:			6.3	Chromium:			
Comments:		pH at time of analysis:				Copper:			
		pH used in Calculation:			6.3	Lead:			
						Manganese:	0.600		0.02
						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
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.53	161.40	-0.71	0.00	-0.70	0.00	-0.14	0.00	0.59	0.30	8.69
100	0	0.62	188.35	-0.79	0.00	-0.71	0.00	-0.17	0.00	0.39	0.00	10.7
120	0	0.71	215.59	-0.86	0.00	-0.70	0.00	-0.19	0.00	0.20	0.00	12.74
140	0	0.80	243.43	-0.92	0.00	-0.67	0.00	-0.20	0.00	0.04	0.00	14.78

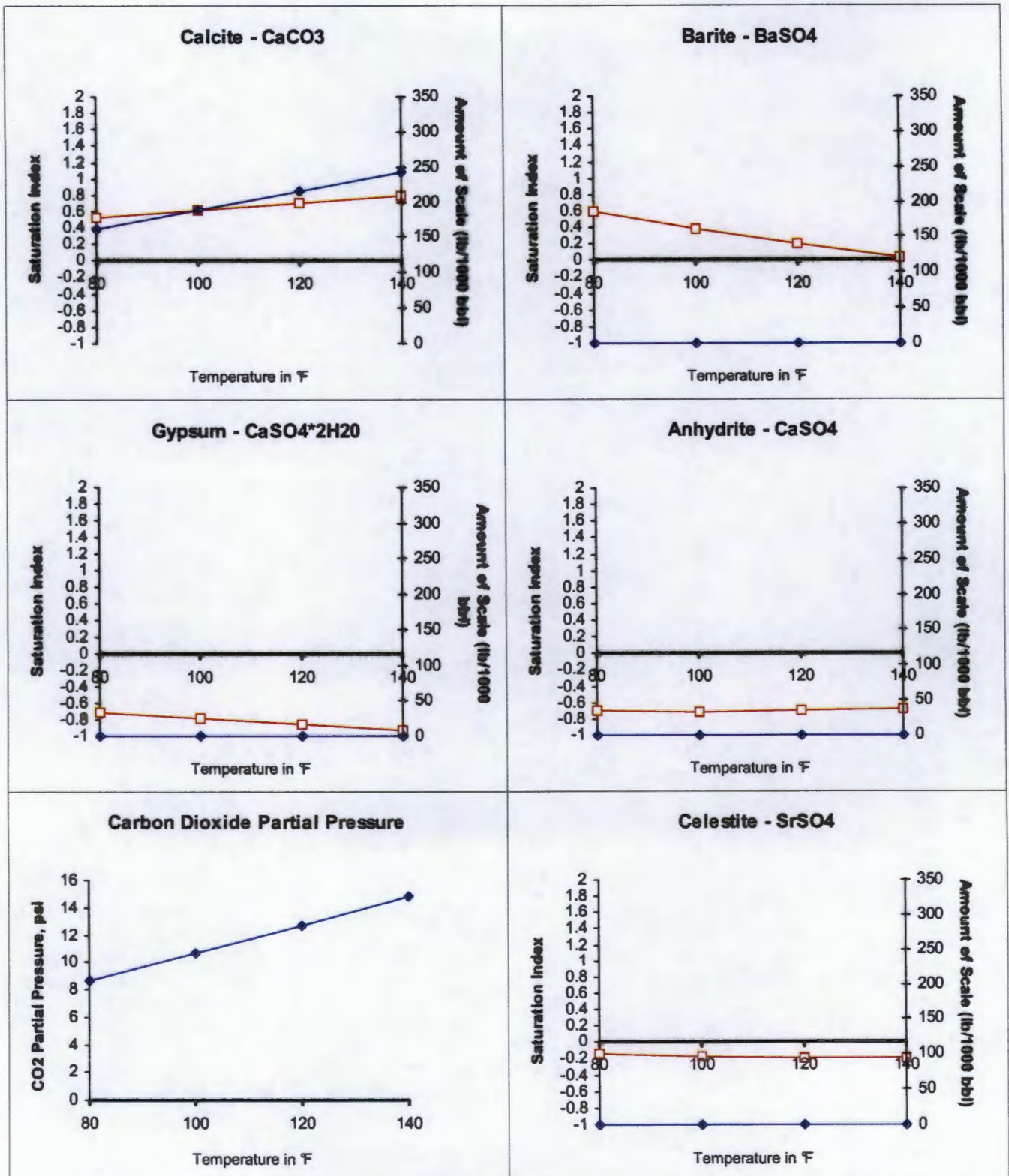
Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

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 578342 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13



**Todd 27P Federal 16 SWD  
C-108 Application for Injection  
Injection Water Analysis for  
Aldabra 25 Fed 7H  
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 #:	578343
Lease/Platform:	ALDABRA 25 FED	Analysis ID #:	135091
Entity (or well #):	7 H	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 578343 @ 75 °F					
Sampling Date:	07/19/13	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	08/08/13	Chloride:	102800.0	2899.61	Sodium:	62260.0	2708.16
Analyst:	SANDRA SANCHEZ	Bicarbonate:	2318.0	37.99	Magnesium:	304.0	25.01
TDS (mg/l or g/m3):	171838.1	Carbonate:	0.0	0.	Calcium:	1330.0	66.37
Density (g/cm3, tonne/m3):	1.115	Sulfate:	1636.0	34.06	Strontium:	101.0	2.31
Anion/Cation Ratio:	0.9524124	Phosphate:			Barium:	0.4	0.01
		Borate:			Iron:	53.0	1.92
		Silicate:			Potassium:	1035.0	26.47
Carbon Dioxide:	60 PPM	Hydrogen Sulfide:		0 PPM	Aluminum:		
Oxygen:		pH at time of sampling:		6.1	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.1	Lead:		
					Manganese:	0.700	0.03
					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
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.37	133.42	-0.67	0.00	-0.66	0.00	-0.09	0.00	0.62	0.30	14.42
100	0	0.46	165.14	-0.75	0.00	-0.67	0.00	-0.13	0.00	0.41	0.00	17.69
120	0	0.55	197.46	-0.82	0.00	-0.66	0.00	-0.15	0.00	0.23	0.00	20.95
140	0	0.65	230.08	-0.88	0.00	-0.63	0.00	-0.16	0.00	0.07	0.00	24.08

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.

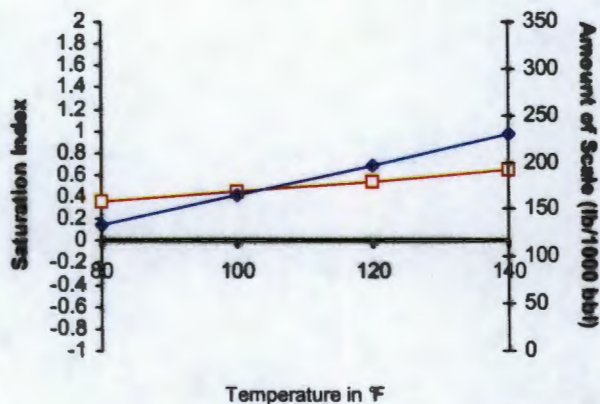
Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.



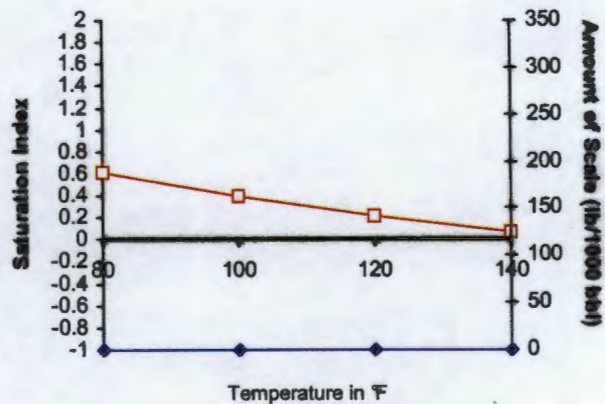
# Scale Predictions from Baker Petrolite

Analysis of Sample 578343 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13

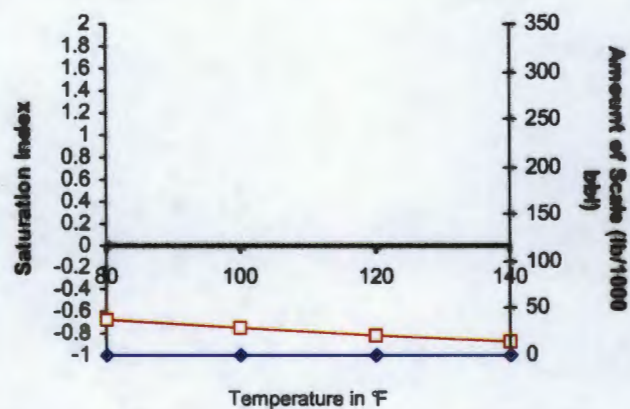
**Calcite -  $\text{CaCO}_3$**



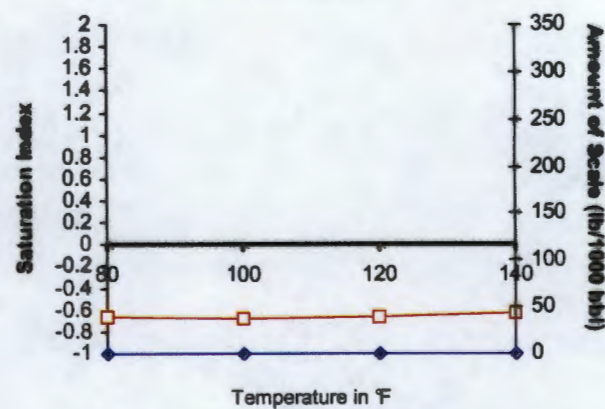
**Barite -  $\text{BaSO}_4$**



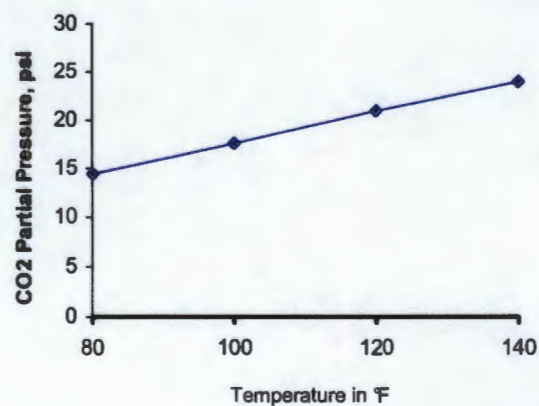
**Gypsum -  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$**



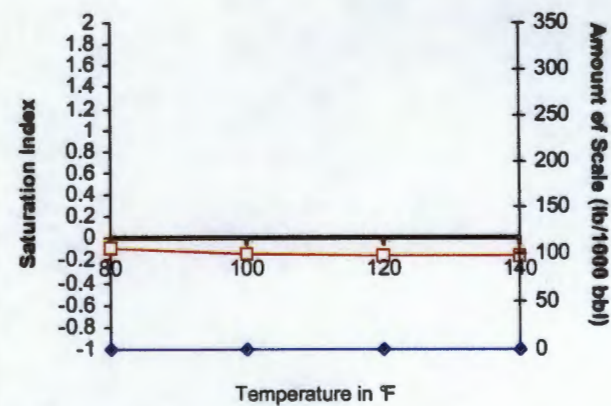
**Anhydrite -  $\text{CaSO}_4$**



**Carbon Dioxide Partial Pressure**



**Celestite -  $\text{SrSO}_4$**



**Todd 27P Federal 16 SWD  
C-108 Application for Injection  
Injection Water Analysis for  
Aldabra 25 Fed 8H  
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Devon Energy Production Co LP**

North Permian Basin Region  
P.O. Box 740  
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(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 #:	578345
Lease/Platform:	ALDABRA 25 FED	Analysis ID #:	135092
Entity (or well #):	8 H	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 578345 @ 75 F							
Sampling Date: 07/19/13 Analysis Date: 08/08/13 Analyst: SANDRA SANCHEZ  TDS (mg/l or g/m3): 173144 Density (g/cm3, tonne/m3): 1.115 Anion/Cation Ratio: 0.911777   Carbon Dioxide: 60 PPM Oxygen: Comments:		Anions		mg/l	meq/l	Cations		mg/l	meq/l
		Chloride:	105600.0	2978.59	Sodium:	61249.0	2664.18		
		Bicarbonate:	2074.0	33.99	Magnesium:	290.0	23.86		
		Carbonate:	0.0	0.	Calcium:	1211.0	60.43		
		Sulfate:	1603.0	33.37	Strontium:	92.0	2.1		
		Phosphate:			Barium:	0.4	0.01		
		Borate:			Iron:	43.0	1.55		
		Silicate:			Potassium:	981.0	25.09		
					Aluminum:				
					Chromium:				
		Hydrogen Sulfide:		0 PPM	Copper:				
		pH at time of sampling:		6.4	Lead:				
		pH at time of analysis:			Manganese:	0.600	0.02		
		pH used in Calculation:		6.4	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
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.58	156.92	-0.71	0.00	-0.70	0.00	-0.14	0.00	0.62	0.30	6.54
100	0	0.67	181.20	-0.79	0.00	-0.71	0.00	-0.17	0.00	0.41	0.00	8.07
120	0	0.76	206.07	-0.86	0.00	-0.70	0.00	-0.19	0.00	0.23	0.00	9.67
140	0	0.84	231.53	-0.92	0.00	-0.67	0.00	-0.20	0.00	0.06	0.00	11.3

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.

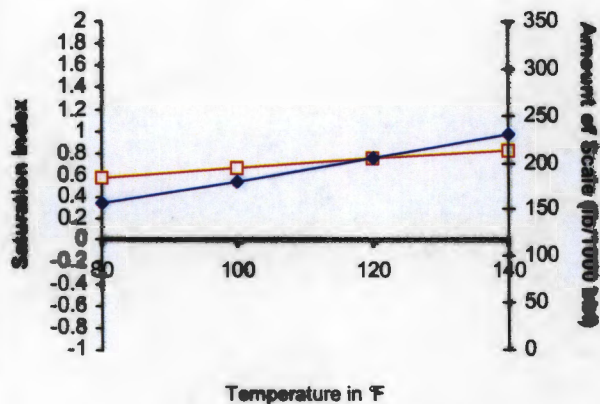
Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.



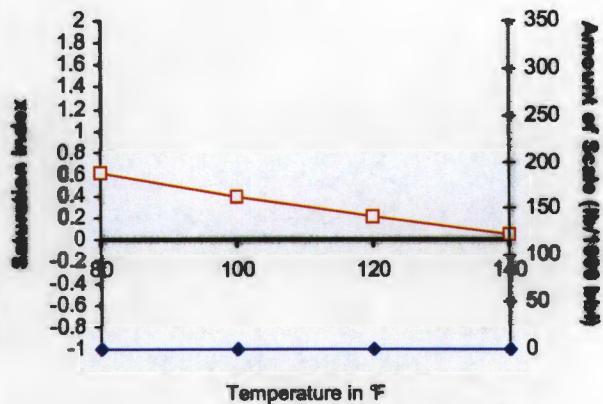
# Scale Predictions from Baker Petrolite

Analysis of Sample 578345 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13

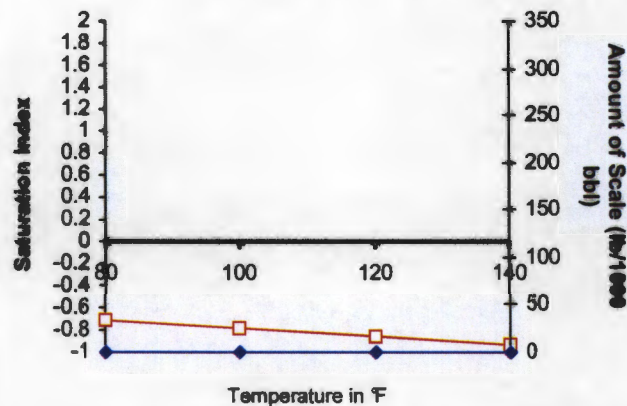
**Calcite -  $\text{CaCO}_3$**



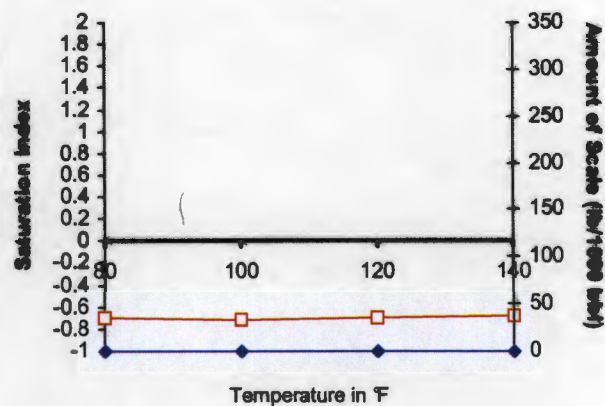
**Barite -  $\text{BaSO}_4$**



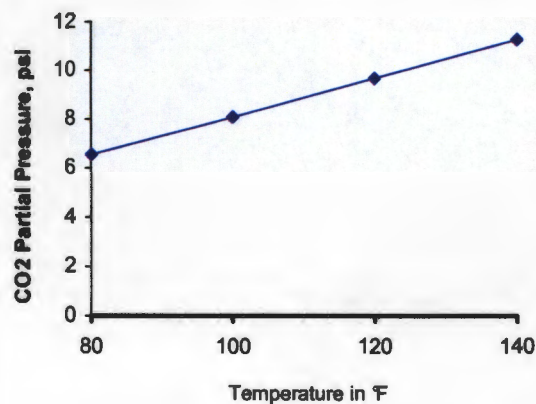
**Gypsum -  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$**



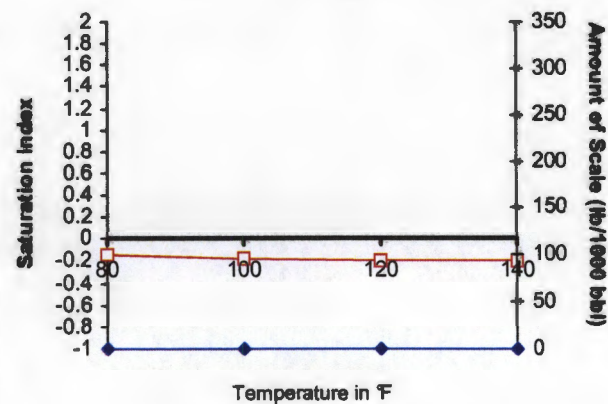
**Anhydrite -  $\text{CaSO}_4$**



**Carbon Dioxide Partial Pressure**



**Celestite -  $\text{SrSO}_4$**



**Todd 27P Federal 16 SWD  
C-108 Application for Injection  
Injection Water Analysis for  
Todd 25 Federal 4  
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:	CARLSBAD, NM	Sample #:	578346
Lease/Platform:	TODD 25 FEDERAL	Analysis ID #:	135089
Entity (or well #):	4	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 578346 @ 75 F							
Sampling Date:	07/19/13	Anions		mg/l	meq/l	Cations		mg/l	meq/l
Analysis Date:	08/08/13	Chloride:	176800.0	4986.88	Sodium:	73552.0	3199.33		
Analyst:	SANDRA SANCHEZ	Bicarbonate:	24.4	0.4	Magnesium:	3682.0	302.9		
TDS (mg/l or g/m3):	279046.9	Carbonate:	0.0	0.	Calcium:	21722.0	1083.93		
Density (g/cm3, tonne/m3):	1.192	Sulfate:	166.0	3.46	Strontium:	1433.0	32.71		
Anion/Cation Ratio:	0.9340873	Phosphate:			Barium:	3.5	0.05		
		Borate:			Iron:	24.0	0.87		
		Silicate:			Potassium:	1634.0	41.79		
Carbon Dioxide:	20 PPM	Hydrogen Sulfide:		0 PPM	Aluminum:				
Oxygen:		pH at time of sampling:		5.9	Chromium:				
Comments:		pH at time of analysis:			Copper:				
		pH used in Calculation:		5.9	Lead:				
					Manganese:	6.000	0.22		
					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
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	-0.61	0.00	-0.59	0.00	-0.53	0.00	-0.25	0.00	0.24	0.81	0.16
100	0	-0.53	0.00	-0.67	0.00	-0.55	0.00	-0.27	0.00	0.04	0.27	0.18
120	0	-0.45	0.00	-0.74	0.00	-0.54	0.00	-0.28	0.00	-0.13	0.00	0.21
140	0	-0.37	0.00	-0.80	0.00	-0.51	0.00	-0.27	0.00	-0.28	0.00	0.23

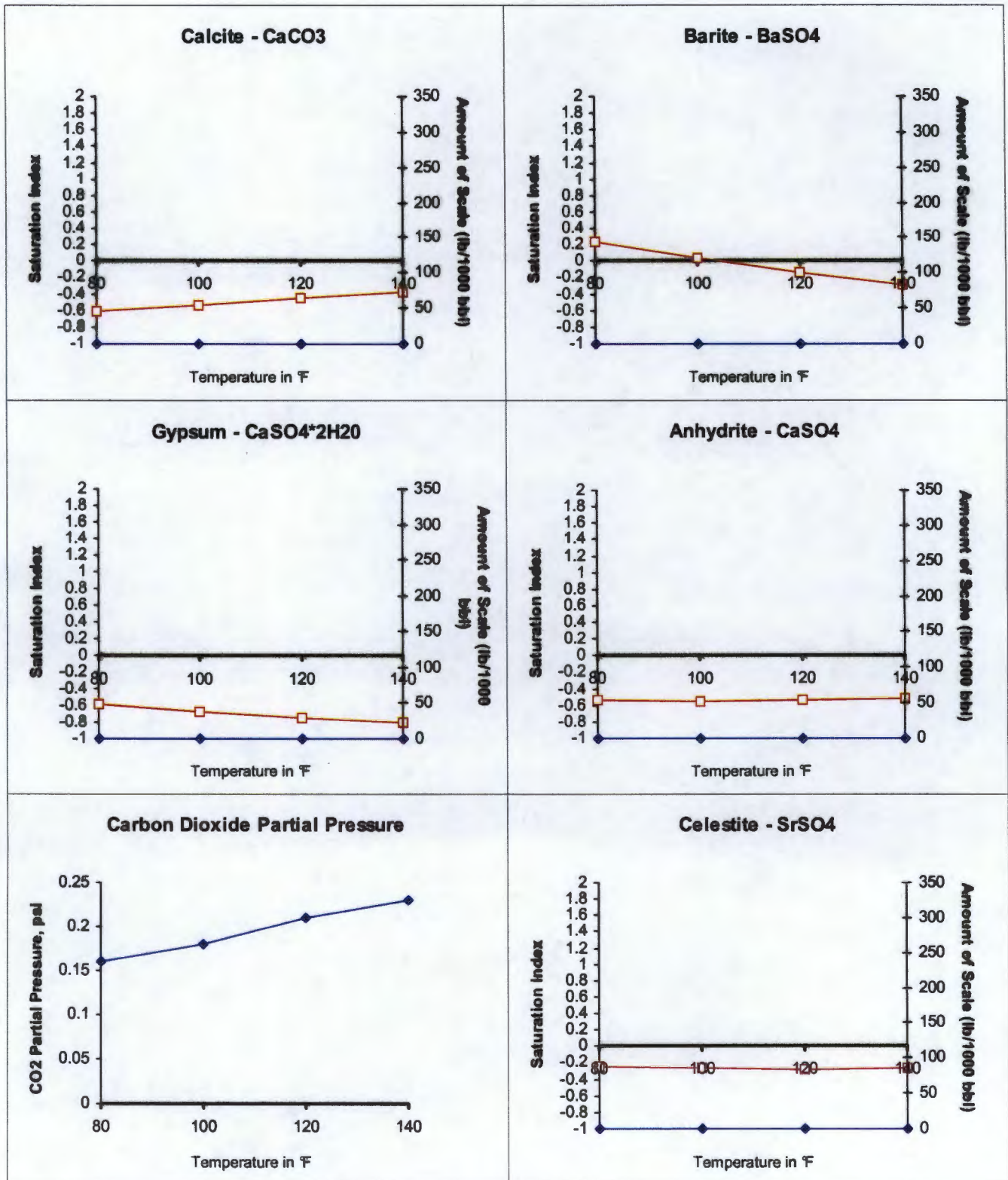
Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

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 578346 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13



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C-108 Application for Injection  
Injection Water Analysis for  
Todd 25 Federal 15  
Delaware Formation  
Devon Energy Production Co LP**

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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:	CARLSBAD, NM	Sample #:	578319
Lease/Platform:	TODD 25 FEDERAL	Analysis ID #:	135097
Entity (or well #):	15	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 578319 @ 75 F					
Sampling Date:	07/19/13	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	08/08/13	Chloride:	137200.0	3869.91	Sodium:	54071.0	2351.96
Analyst:	SANDRA SANCHEZ	Bicarbonate:	24.4	0.4	Magnesium:	2820.0	231.98
TDS (mg/l or g/m3):	214854.9	Carbonate:	0.0	0.	Calcium:	17724.0	884.43
Density (g/cm3, tonne/m3):	1.15	Sulfate:	231.0	4.81	Strontium:	1493.0	34.08
Anion/Cation Ratio:	0.9124160	Phosphate:			Barium:	2.5	0.04
		Borate:			Iron:	19.0	0.69
		Silicate:			Potassium:	1263.0	32.3
					Aluminum:		
Carbon Dioxide:	20 PPM	Hydrogen Sulfide:		0 PPM	Chromium:		
Oxygen:		pH at time of sampling:		6.7	Copper:		
Comments:		pH at time of analysis:			Lead:		
		pH used in Calculation:		6.7	Manganese:	7.000	0.25
					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
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	-0.01	0.00	-0.55	0.00	-0.52	0.00	0.02	4.85	0.34	0.57	0.03
100	0	0.05	0.00	-0.61	0.00	-0.52	0.00	0.00	0.00	0.15	0.29	0.04
120	0	0.10	0.29	-0.67	0.00	-0.50	0.00	-0.01	0.00	-0.02	0.00	0.04
140	0	0.15	0.29	-0.71	0.00	-0.45	0.00	0.00	0.00	-0.16	0.00	0.05

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.

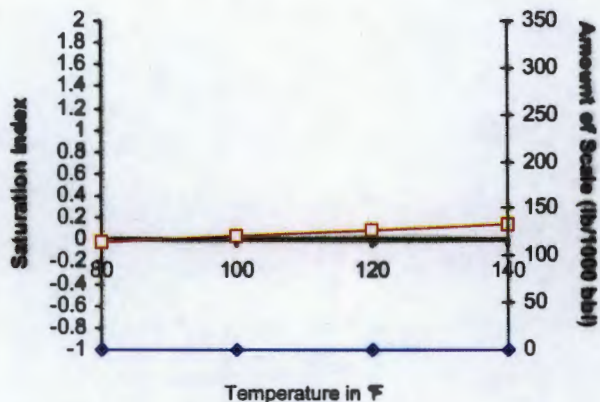
Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.



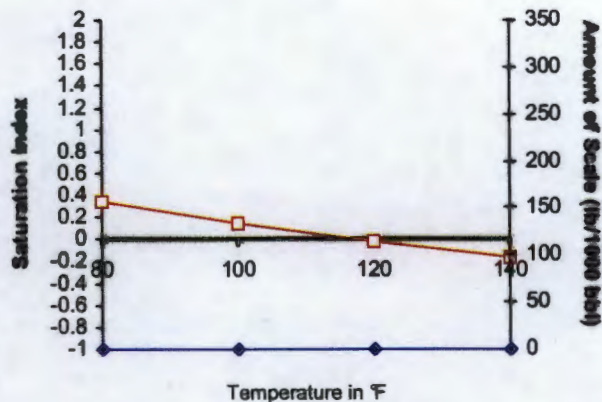
# Scale Predictions from Baker Petrolite

Analysis of Sample 578319 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13

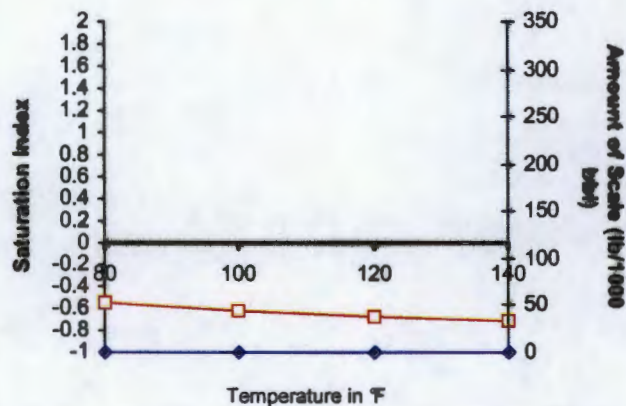
**Calcite -  $\text{CaCO}_3$**



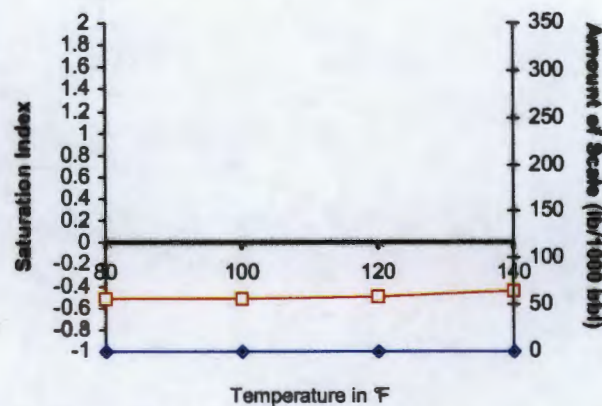
**Barite -  $\text{BaSO}_4$**



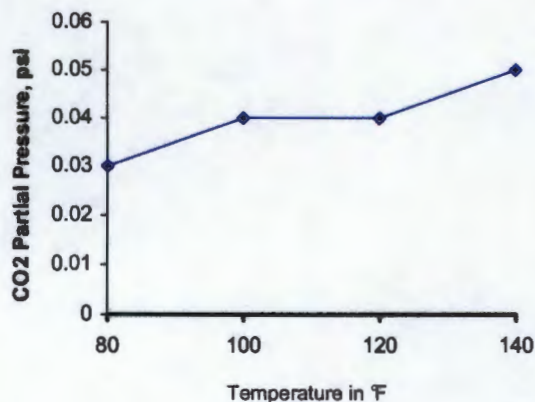
**Gypsum -  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$**



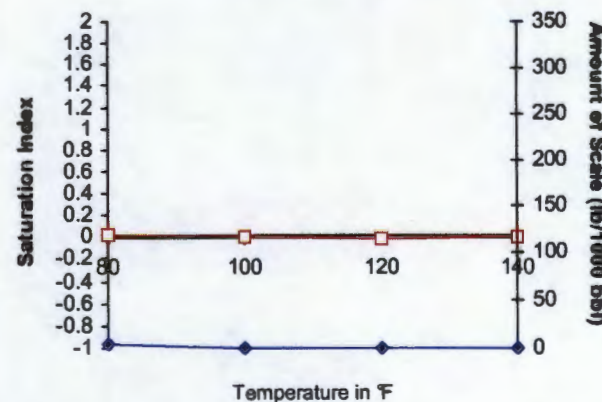
**Anhydrite -  $\text{CaSO}_4$**



**Carbon Dioxide Partial Pressure**



**Celestite -  $\text{SrSO}_4$**



**Todd 27P Federal 16 SWD  
C-108 Application for Injection  
Injection Water Analysis for  
Todd 26 Federal 9  
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Devon Energy Production Co LP**

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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:	CARLSBAD, NM	Sample #:	636966
Lease/Platform:	TODD 26 FEDERAL	Analysis ID #:	135093
Entity (or well #):	9	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 636966 @ 75 °F					
Sampling Date:	07/22/13	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	08/08/13	Chloride:	177600.0	5009.45	Sodium:	77282.0	3361.58
Analyst:	SANDRA SANCHEZ	Bicarbonate:	24.4	0.4	Magnesium:	4610.0	379.24
TDS (mg/l or g/m3):	288374.9	Carbonate:	0.0	0.	Calcium:	25263.0	1260.63
Density (g/cm3, tonne/m3):	1.198	Sulfate:	177.0	3.69	Strontium:	1540.0	35.15
Anion/Cation Ratio:	1.0142425	Phosphate:			Barium:	3.5	0.05
		Borate:			Iron:	28.0	1.01
		Silicate:			Potassium:	1842.0	47.11
Carbon Dioxide:	20 PPM	Hydrogen Sulfide:		0 PPM	Aluminum:		
Oxygen:		pH at time of sampling:		6.9	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.9	Lead:		
					Manganese:	5.000	0.18
					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
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.42	0.53	-0.52	0.00	-0.46	0.00	-0.22	0.00	0.22	0.80	0.02
100	0	0.43	0.53	-0.60	0.00	-0.47	0.00	-0.24	0.00	0.03	0.00	0.02
120	0	0.44	0.80	-0.67	0.00	-0.46	0.00	-0.25	0.00	-0.14	0.00	0.03
140	0	0.44	0.80	-0.73	0.00	-0.43	0.00	-0.24	0.00	-0.29	0.00	0.04

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

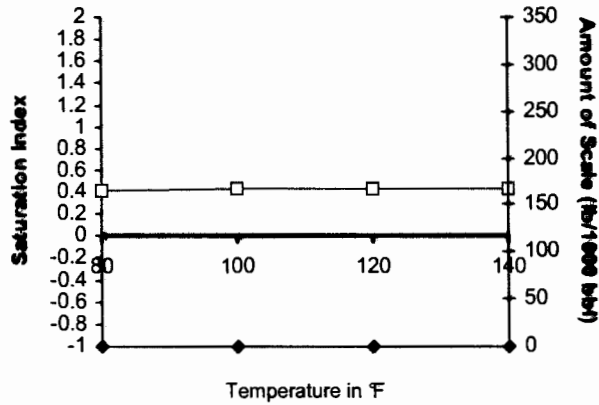
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

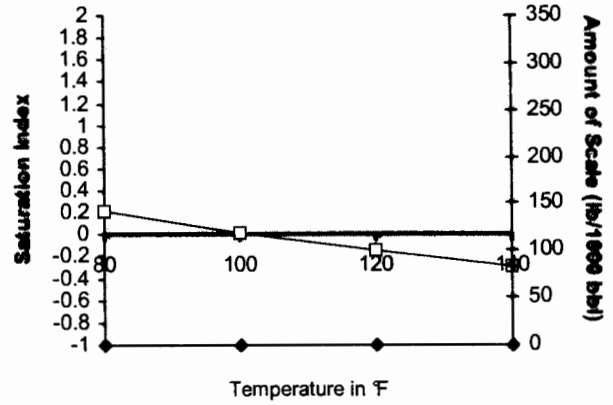
# Scale Predictions from Baker Petrolite

Analysis of Sample 636966 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13

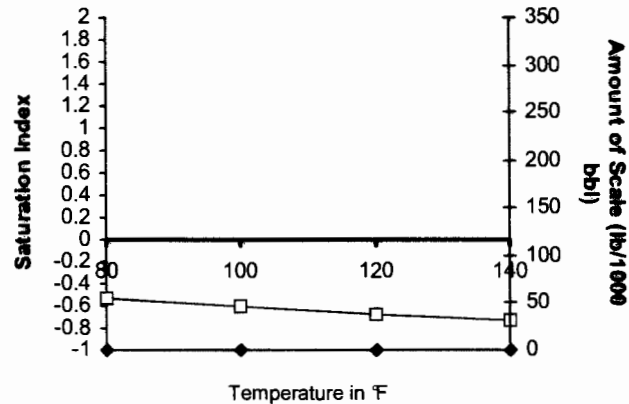
## Calcite - $\text{CaCO}_3$



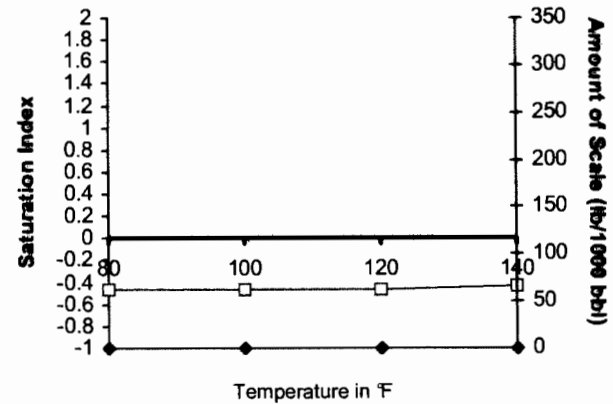
## Barite - $\text{BaSO}_4$



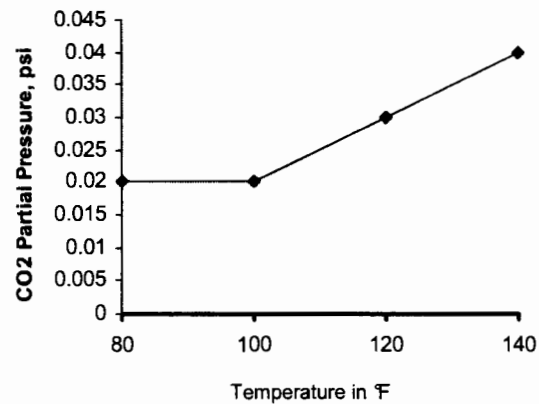
## Gypsum - $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$



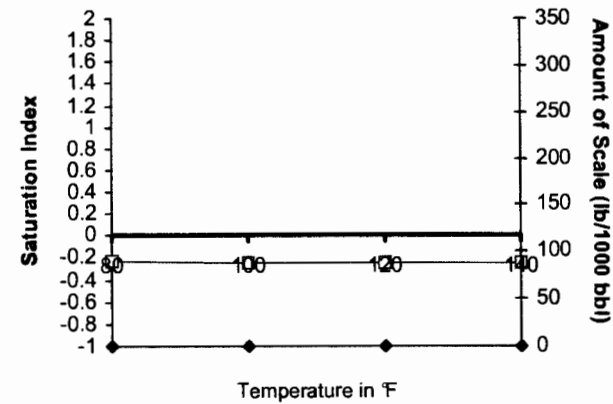
## Anhydrite - $\text{CaSO}_4$



## Carbon Dioxide Partial Pressure



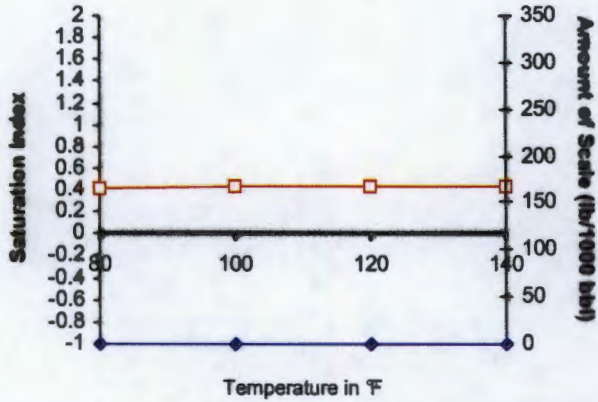
## Celestite - $\text{SrSO}_4$



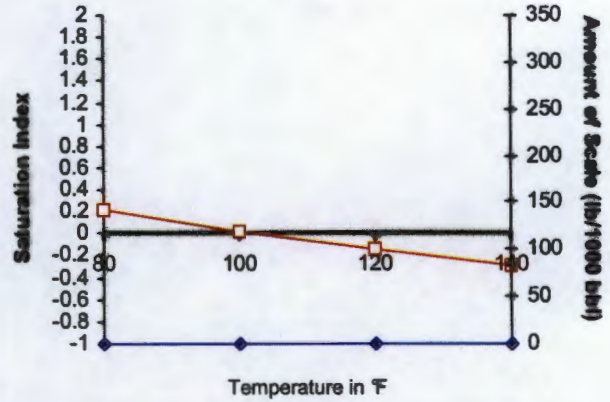
# Scale Predictions from Baker Petrolite

Analysis of Sample 636966 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13

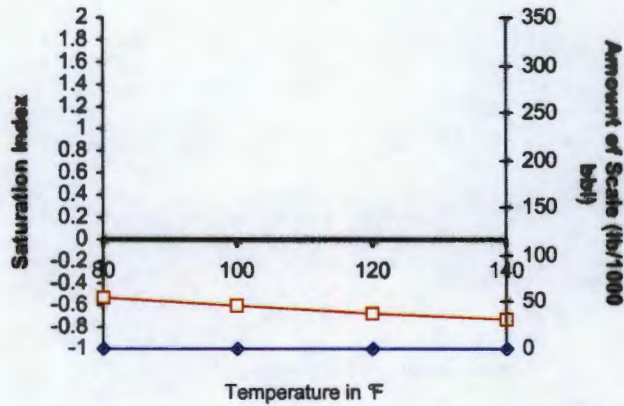
**Calcite -  $\text{CaCO}_3$**



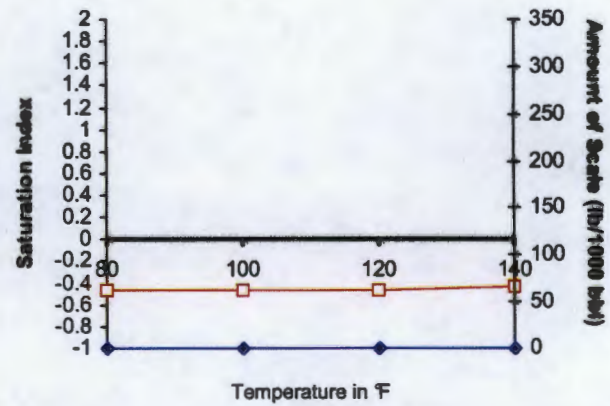
**Barite -  $\text{BaSO}_4$**



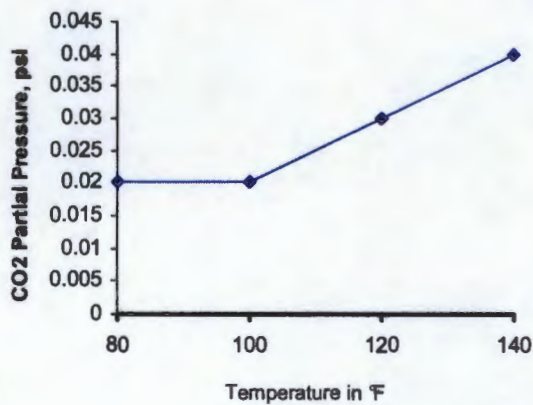
**Gypsum -  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$**



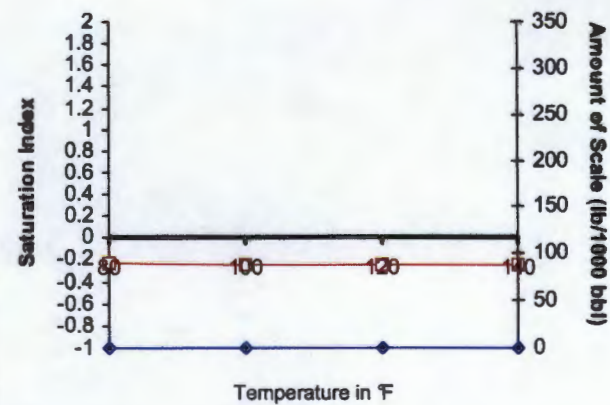
**Anhydrite -  $\text{CaSO}_4$**



**Carbon Dioxide Partial Pressure**



**Celestite -  $\text{SrSO}_4$**





**Todd 27P Federal 16 SWD  
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## 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:	CARLSBAD, NM	Sample #:	578320
Lease/Platform:	TODD 26 FEDERAL	Analysis ID #:	135096
Entity (or well #):	14	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 578320 @ 75 °F					
Sampling Date:	07/22/13	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	08/08/13	Chloride:	168800.0	4761.23	Sodium:	72270.0	3143.57
Analyst:	SANDRA SANCHEZ	Bicarbonate:	36.6	0.6	Magnesium:	3279.0	269.74
		Carbonate:	0.0	0.	Calcium:	19844.0	990.22
TDS (mg/l or g/m3):	267337.1	Sulfate:	186.0	3.87	Strontium:	1334.0	30.45
Density (g/cm3, tonne/m3):	1.186	Phosphate:			Barium:	3.5	0.05
Anion/Cation Ratio:	0.9389719	Borate:			Iron:	24.0	0.87
		Silicate:			Potassium:	1553.0	39.72
					Aluminum:		
Carbon Dioxide:	20 PPM	Hydrogen Sulfide:		0 PPM	Chromium:		
Oxygen:		pH at time of sampling:		6.8	Copper:		
Comments:		pH at time of analysis:			Lead:		
		pH used in Calculation:		6.8	Manganese:	7.000	0.25
					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
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.41	1.09	-0.58	0.00	-0.53	0.00	-0.21	0.00	0.31	0.81	0.03
100	0	0.44	1.09	-0.66	0.00	-0.54	0.00	-0.23	0.00	0.11	0.27	0.04
120	0	0.46	1.36	-0.73	0.00	-0.53	0.00	-0.24	0.00	-0.06	0.00	0.05
140	0	0.49	1.63	-0.79	0.00	-0.50	0.00	-0.23	0.00	-0.21	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.

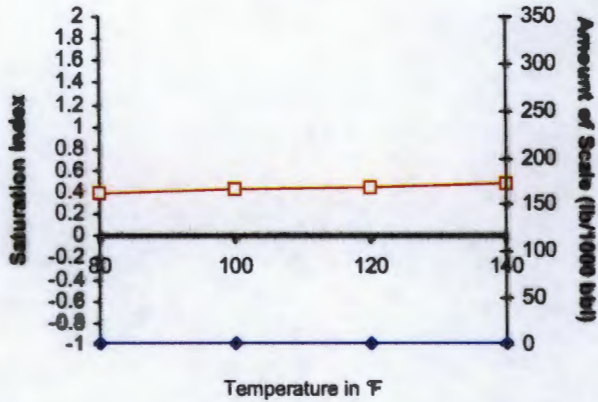
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

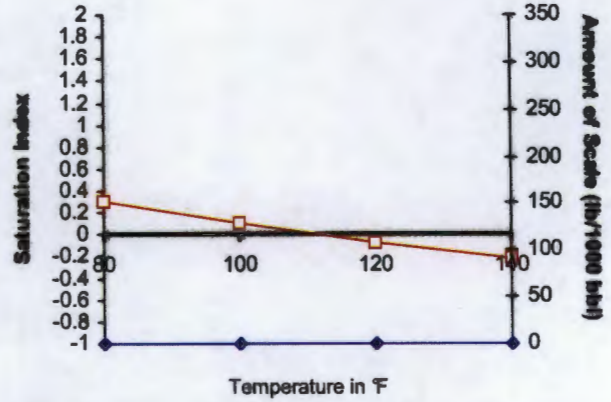
## Scale Predictions from Baker Petrolite

Analysis of Sample 578320 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13

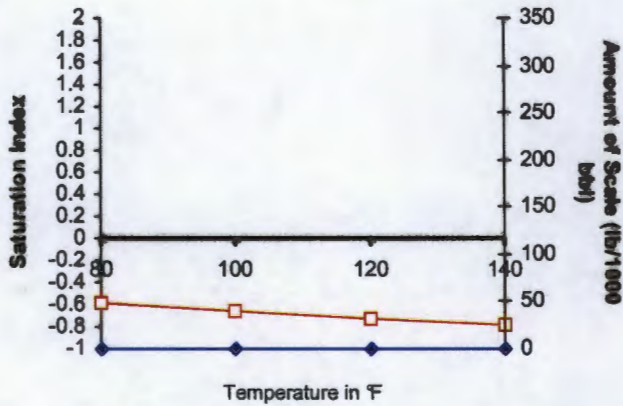
**Calcite -  $\text{CaCO}_3$**



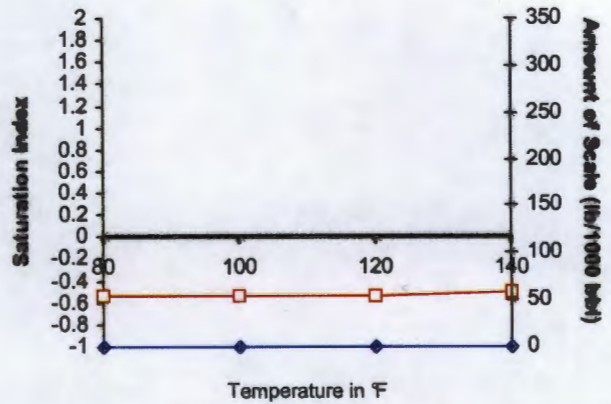
**Barite -  $\text{BaSO}_4$**



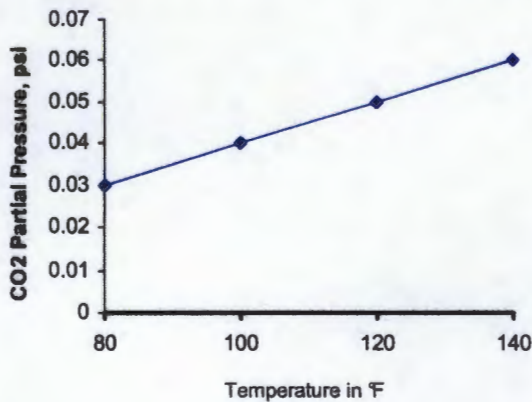
**Gypsum -  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$**



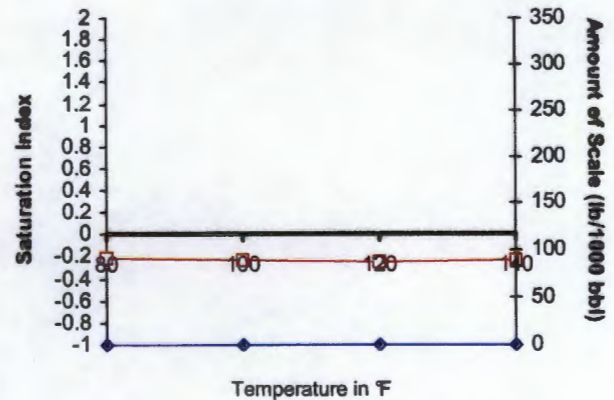
**Anhydrite -  $\text{CaSO}_4$**



**Carbon Dioxide Partial Pressure**



**Celestite -  $\text{SrSO}_4$**



**Todd 27P Federal 16 SWD  
C-108 Application for Injection  
Injection Water Analysis for  
Todd 27 Federal 10  
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:	CARLSBAD, NM	Sample #:	578347
Lease/Platform:	TODD 27 FEDERAL	Analysis ID #:	135094
Entity (or well #):	10	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 578347 @ 75 °F			
		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	07/22/13	Chloride:	181200.0	Sodium:	78069.0
Analysis Date:	08/08/13	Bicarbonate:	36.6	Magnesium:	4015.0
Analyst:	SANDRA SANCHEZ	Carbonate:	0.0	Calcium:	22585.0
TDS (mg/l or g/m3):	289296.1	Sulfate:	156.0	Strontium:	1406.0
Density (g/cm3, tonne/m3):	1.195	Phosphate:		Barium:	3.0
Anion/Cation Ratio:	0.9643071	Borate:		Iron:	30.0
		Silicate:		Potassium:	1791.0
Carbon Dioxide:	20 PPM	Hydrogen Sulfide:	0 PPM	Aluminum:	
Oxygen:		pH at time of sampling:	6.8	Chromium:	
Comments:		pH at time of analysis:		Copper:	
		pH used in Calculation:	6.8	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
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.49	1.06	-0.60	0.00	-0.53	0.00	-0.30	0.00	0.12	0.27	0.03
100	0	0.52	1.33	-0.68	0.00	-0.55	0.00	-0.32	0.00	-0.07	0.00	0.04
120	0	0.53	1.59	-0.75	0.00	-0.55	0.00	-0.33	0.00	-0.24	0.00	0.05
140	0	0.55	1.86	-0.82	0.00	-0.52	0.00	-0.33	0.00	-0.39	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.

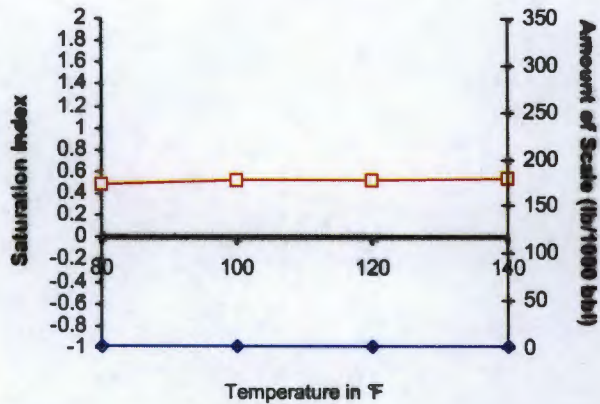
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

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.

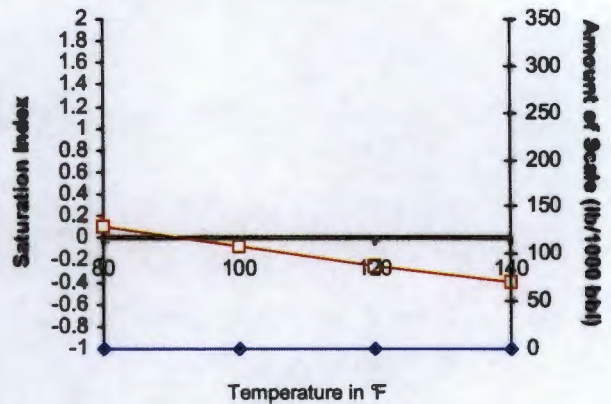
# Scale Predictions from Baker Petrolite

Analysis of Sample 578347 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13

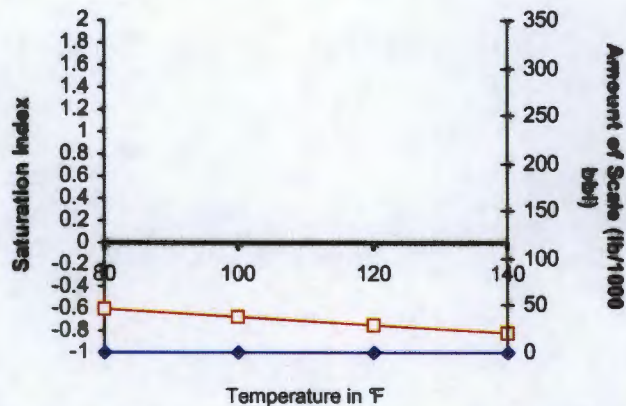
**Calcite -  $\text{CaCO}_3$**



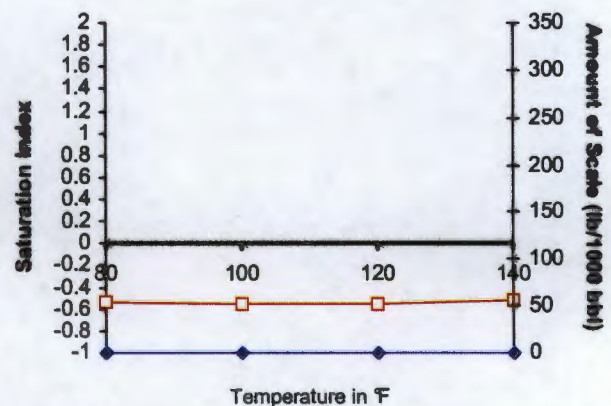
**Barite -  $\text{BaSO}_4$**



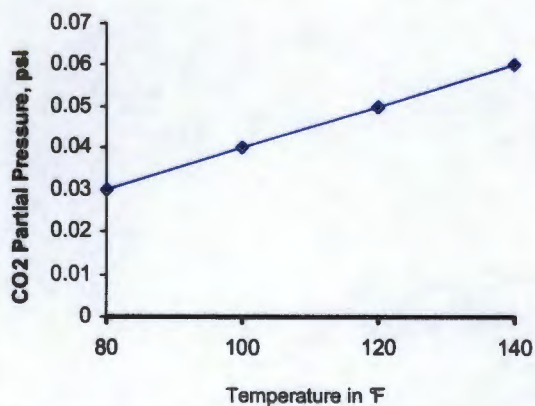
**Gypsum -  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$**



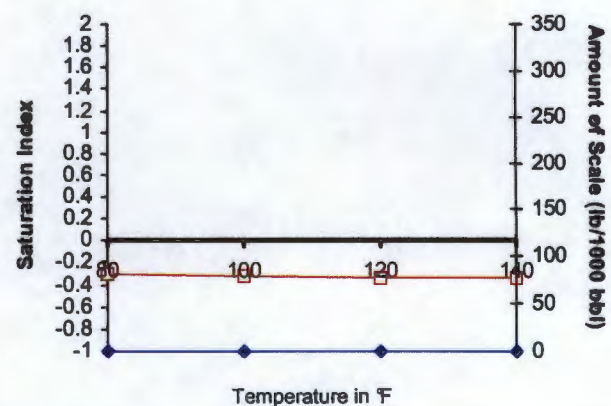
**Anhydrite -  $\text{CaSO}_4$**



**Carbon Dioxide Partial Pressure**



**Celestite -  $\text{SrSO}_4$**





**Todd 27P Federal 16 SWD  
C-108 Application for Injection  
Injection Water Analysis for  
Todd 27 Federal 11  
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:	CARLSBAD, NM	Sample #:	578318
Lease/Platform:	TODD 27 FEDERAL	Analysis ID #:	135095
Entity (or well #):	11	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 578318 @ 75 °F					
Sampling Date:	07/22/13	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	08/08/13	Chloride:	133200.0	3757.09	Sodium:	60929.0	2650.26
Analyst:	SANDRA SANCHEZ	Bicarbonate:	36.6	0.6	Magnesium:	2829.0	232.72
		Carbonate:	0.0	0.	Calcium:	13493.0	673.3
TDS (mg/l or g/m3):	212734.1	Sulfate:	28.0	0.58	Strontium:	1050.0	23.97
Density (g/cm3, tonne/m3):	1.146	Phosphate:			Barium:	55.0	0.8
Anion/Cation Ratio:	0.9604896	Borate:			Iron:	19.0	0.69
		Silicate:			Potassium:	1090.0	27.88
					Aluminum:		
Carbon Dioxide:	20 PPM	Hydrogen Sulfide:		0 PPM	Chromium:		
Oxygen:		pH at time of sampling:		6.7	Copper:		
Comments:		pH at time of analysis:			Lead:		
		pH used in Calculation:		6.7	Manganese:	4.500	0.16
					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
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.10	0.29	-1.55	0.00	-1.52	0.00	-1.02	0.00	0.80	14.27	0.04
100	0	0.15	0.57	-1.62	0.00	-1.53	0.00	-1.04	0.00	0.60	11.99	0.06
120	0	0.21	0.86	-1.68	0.00	-1.51	0.00	-1.05	0.00	0.43	9.42	0.07
140	0	0.26	1.14	-1.73	0.00	-1.46	0.00	-1.05	0.00	0.28	6.57	0.08

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

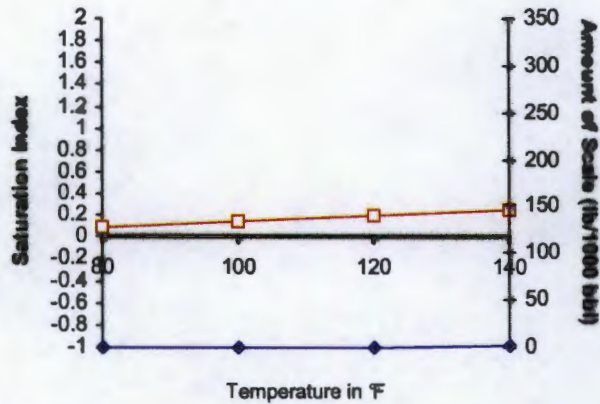
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

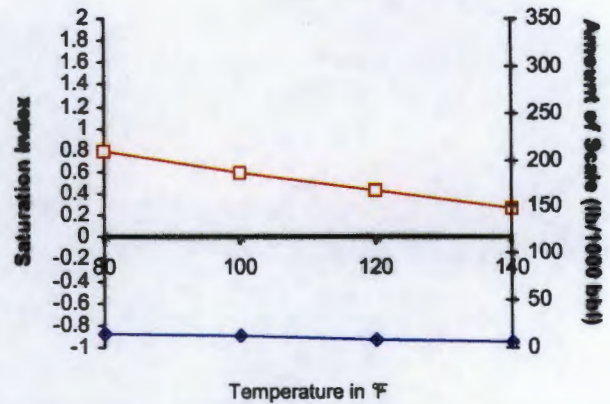
## Scale Predictions from Baker Petrolite

Analysis of Sample 578318 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13

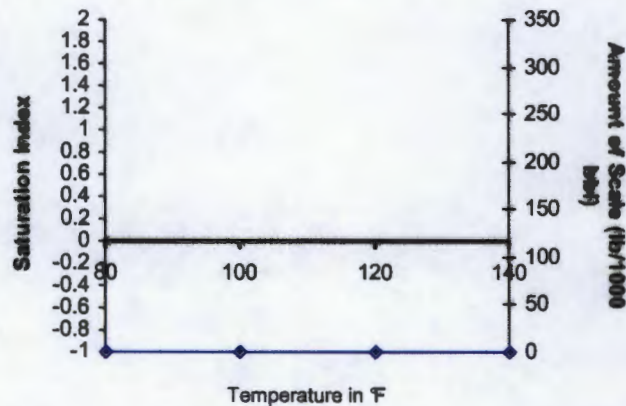
**Calcite -  $\text{CaCO}_3$**



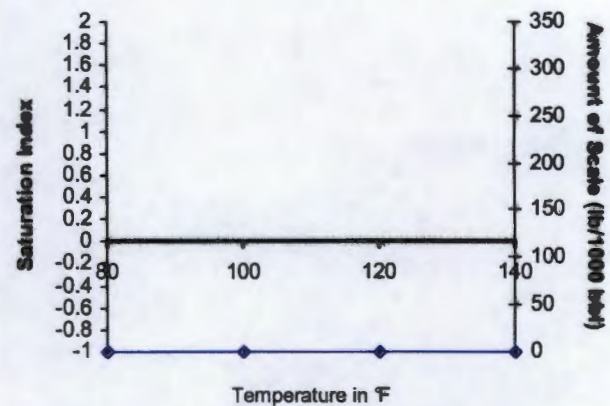
**Barite -  $\text{BaSO}_4$**



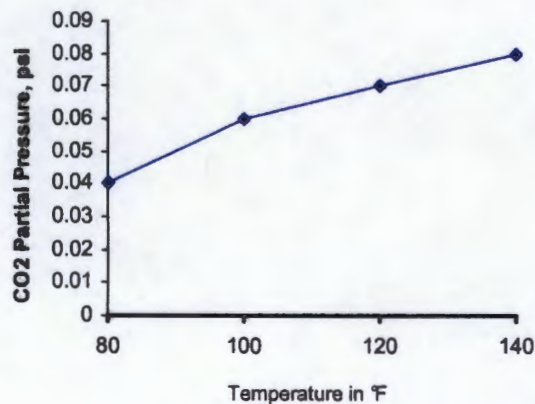
**Gypsum -  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$**



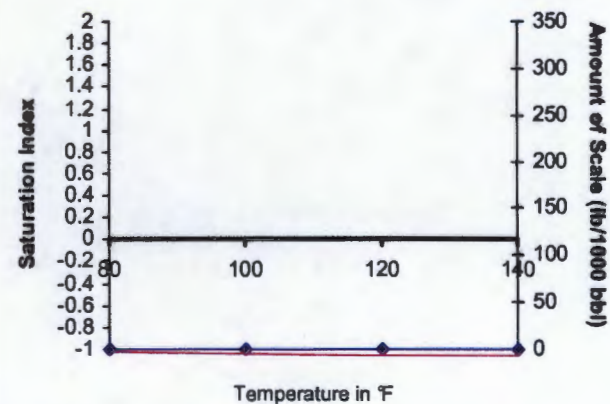
**Anhydrite -  $\text{CaSO}_4$**



**Carbon Dioxide Partial Pressure**



**Celestite -  $\text{SrSO}_4$**



**Todd 27P Federal 16 SWD  
C-108 Application for Injection  
Injection Water Analysis for  
Todd 27 Federal 15  
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:	CARLSBAD, NM	Sample #:	578332
Lease/Platform:	TODD 27 FEDERAL	Analysis ID #:	135098
Entity (or well #):	15	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 578332 @ 75 F							
Sampling Date:	07/22/13	Anions		mg/l	meq/l	Cations		mg/l	meq/l
Analysis Date:	08/08/13	Chloride:	186000.0		5246.38	Sodium:	72639.0		3159.62
Analyst:	SANDRA SANCHEZ	Bicarbonate:	36.6		0.6	Magnesium:	4048.0		333.
		Carbonate:	0.0		0.	Calcium:	23385.0		1166.92
TDS (mg/l or g/m3):	289562.6	Sulfate:	131.0		2.73	Strontium:	1578.0		36.02
Density (g/cm3, tonne/m3):	1.198	Phosphate:				Barium:	3.5		0.05
Anion/Cation Ratio:	0.9030033	Borate:				Iron:	28.0		1.01
		Silicate:				Potassium:	1707.0		43.66
						Aluminum:			
Carbon Dioxide:	20 PPM	Hydrogen Sulfide:			0 PPM	Chromium:			
Oxygen:		pH at time of sampling:			6.8	Copper:			
Comments:		pH at time of analysis:				Lead:			
		pH used in Calculation:			6.8	Manganese:	6.500		0.24
						Nickel:			

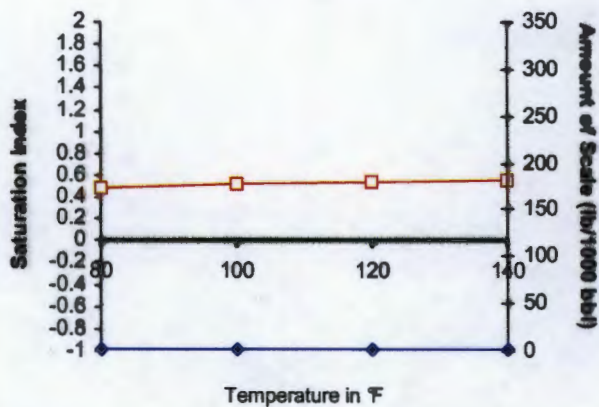
Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.49	1.06	-0.66	0.00	-0.60	0.00	-0.32	0.00	0.12	0.53	0.03
100	0	0.52	1.33	-0.74	0.00	-0.62	0.00	-0.35	0.00	-0.08	0.00	0.04
120	0	0.54	1.59	-0.82	0.00	-0.61	0.00	-0.35	0.00	-0.25	0.00	0.05
140	0	0.56	1.86	-0.88	0.00	-0.58	0.00	-0.35	0.00	-0.40	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 CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

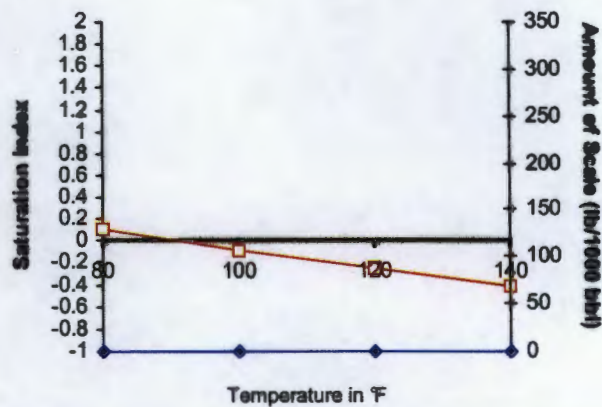
# Scale Predictions from Baker Petrolite

Analysis of Sample 578332 @ 75 °F for DEVON ENERGY CORPORATION, 08/08/13

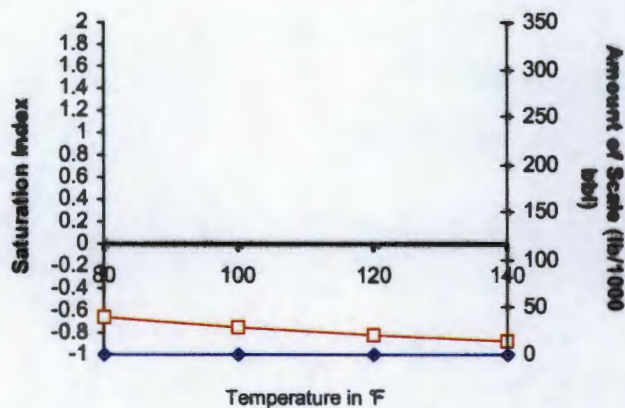
## Calcite - $\text{CaCO}_3$



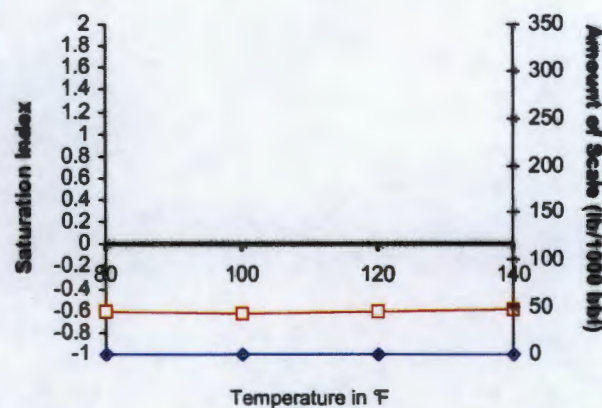
## Barite - $\text{BaSO}_4$



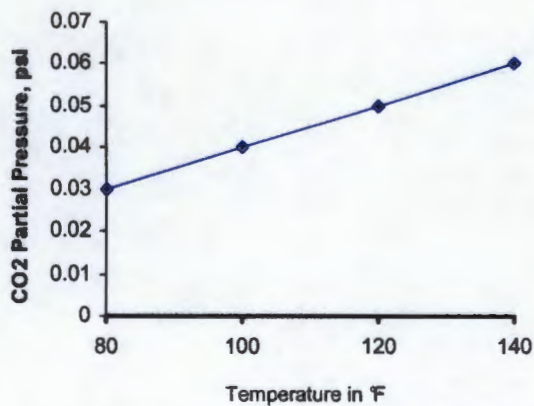
## Gypsum - $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$



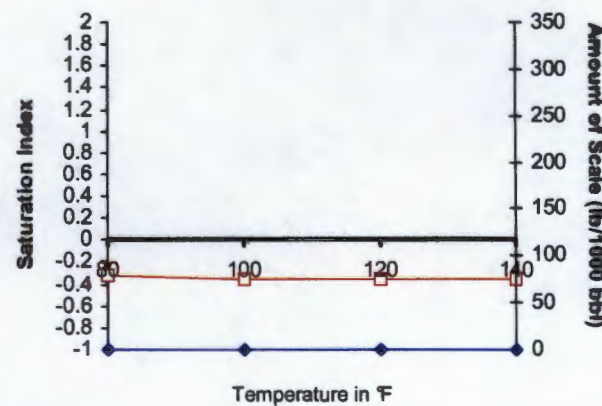
## Anhydrite - $\text{CaSO}_4$



## Carbon Dioxide Partial Pressure



## Celestite - $\text{SrSO}_4$





# Affidavit of Publication

State of New Mexico,  
County of Eddy, ss.

Kathy McCarroll, being first duly sworn,  
on oath says:

That she is the Classified Supervisor 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:

July 18 2013

That the cost of publication is \$57.41 and that payment thereof has been made and will be assessed as court costs.

*Kathy McCarroll*

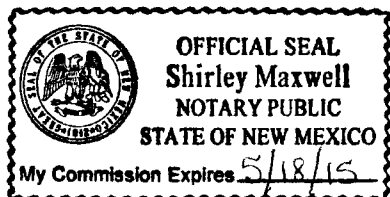
Subscribed and sworn to before me this

18th day of July, 2013

*Shirley Maxwell*

My commission Expires on May 18, 2015

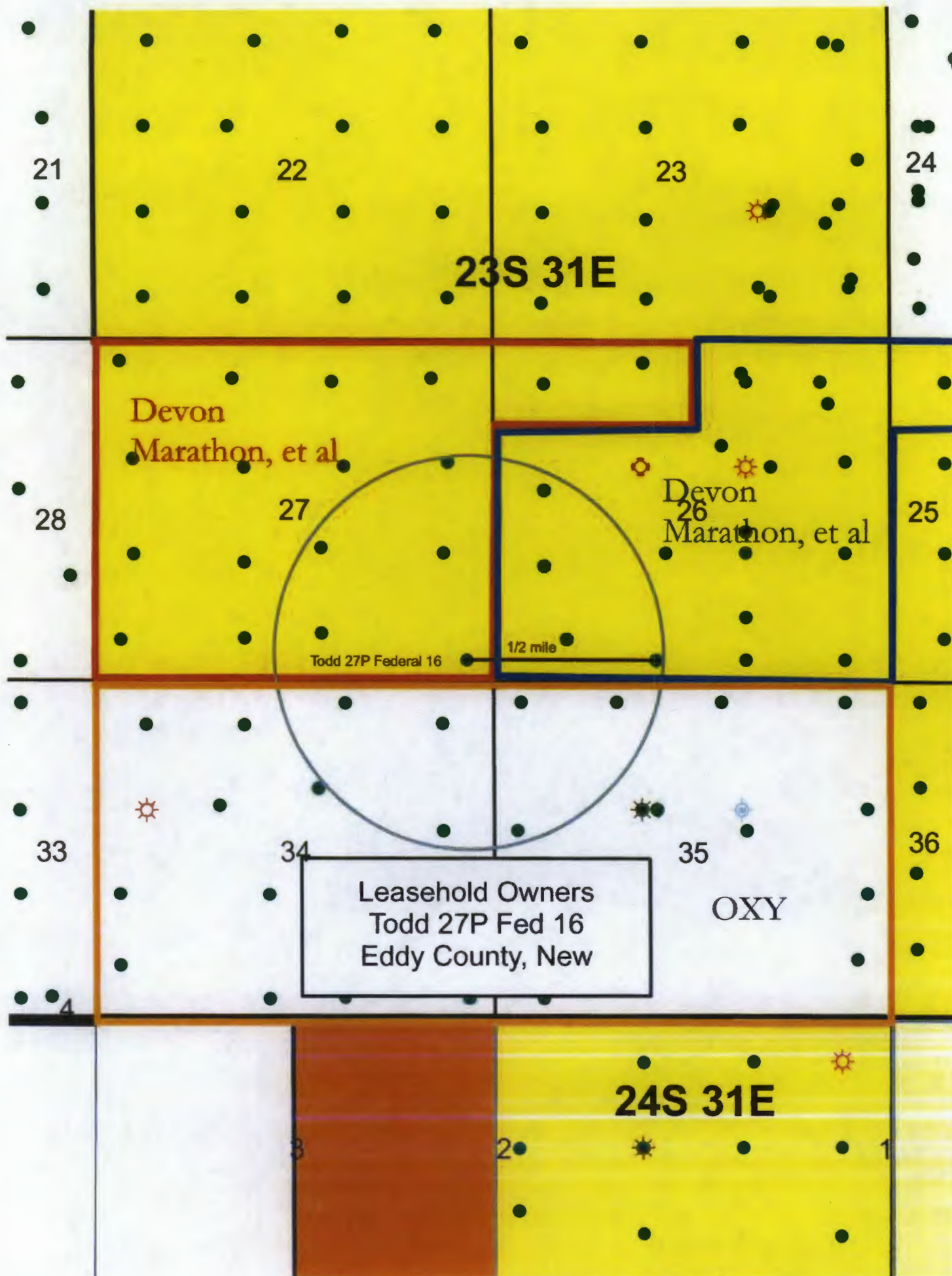
Notary Public

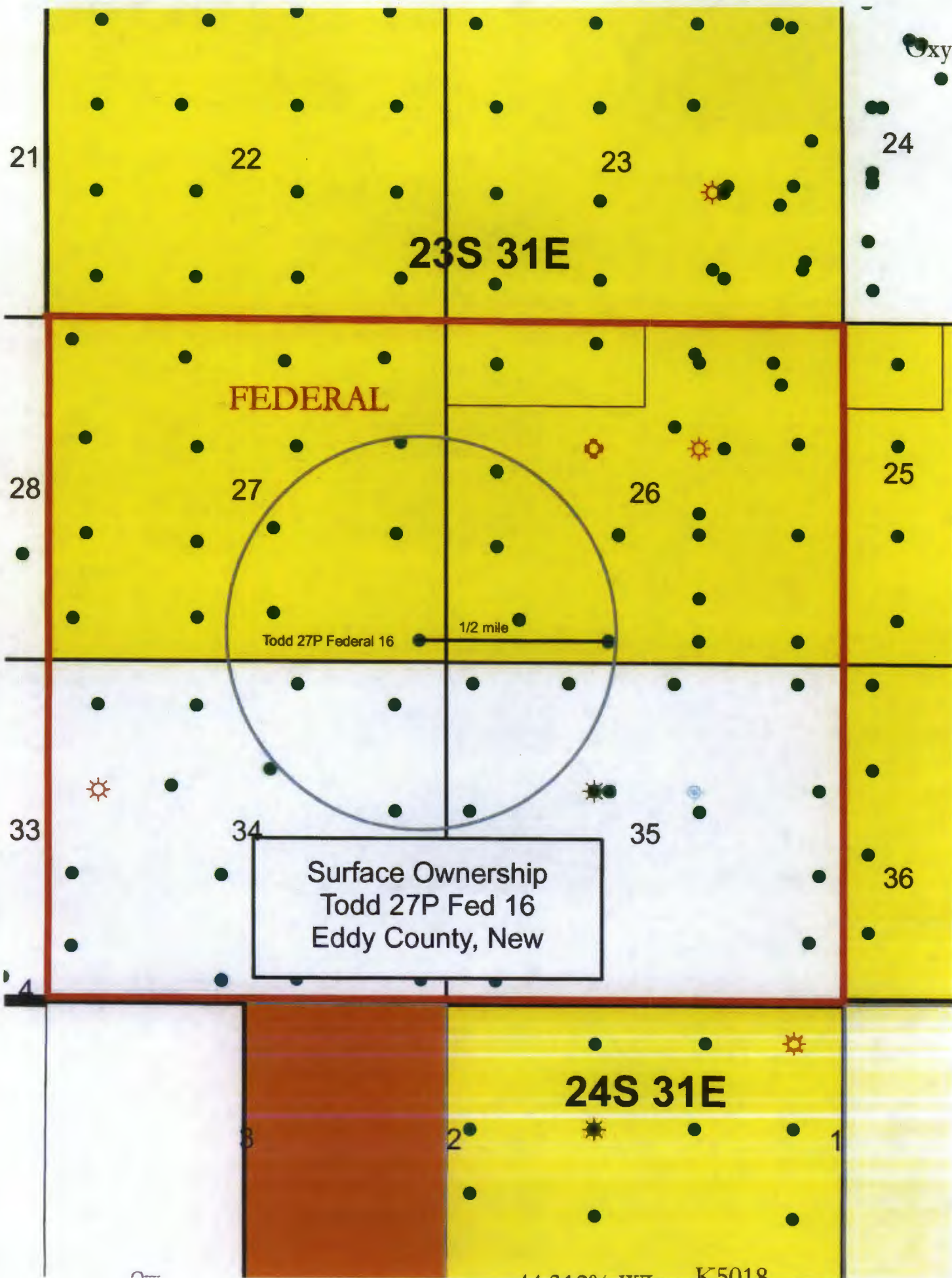


July 18, 2013

## 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 well, the Todd 27P Federal Well, is located 330' FSL & 320' BBL, Section 27, Township 23 South, Range 3 East, in Eddy County, New Mexico. Disposal water will be sourced from area wells producing from the Delaware formation. The disposal water will be injected into the Delaware Bell and Cherry Canyon formations at a depth of 4450' to 5720', at a maximum surface pressure of 890 psi and a maximum rate of 5000 BWPD. 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 Klaassen at Devon Energy Corporation, 333 West Sheridan Avenue, Oklahoma City, OK 73102-8260, or call (405) 552-5069.





**Leasehold Ownership**  
**½ mile Todd 27P Federal 16 SWD**

**23S-31E Section 26: S2, S2N2, N2NE4**

Devon Energy Production Company, L.P. 333 W. Sheridan Ave.	Oklahoma City OK	73102-5010
Bascom Mitchell Family Partnership, L.P. No. 1 Live Oak	Midland, TX	79705
Joe N. Gifford P. O. Box 51187	Midland, TX	79710-1187
Mary Patricia Dougherty Trust c/o Northern Bank of Texas Attn: David J. Parker 2701 Kirby Drive	Houston, TX	77098
Obie & Company c/o JPMorgan Chase Bank Attn: H. L. Thompkins 2200 Ross Avenue, 7th Floor	Dallas, TX	75201
Thomas E. Kelly TEK Properties, Ltd. 4705 Miramont Circle	Bryan, TX	77802
Otto E. Schroeder, Jr. 915 Fielder Road	Arlington, TX	76012-3147
Catherine M. Grace c/o Dan Serna & Company 6031 W. I-20, Suite 251	Arlington, TX	76017
Mary Margaret Olson Trust c/o Dan Serna & Company 6031 W. I-20, Suite 251	Arlington, TX	76017
L. Edward Innerarity, Jr. P.O. Box 2113	Midland, TX	79702

Miranda Energy Corp. 24 Smith Road, Suite 601	Midland, TX	79705
Marathon Oil Company Attn: Paul Tauscher P.O. Box 3128	Houston, TX	77253-3128
Mabee Flynt Lease Trust 11010 Crestmore St.	Houston, TX	77096
Nortex Corporation 1415 Louisiana, Ste. 3100	Houston, TX	77002

**23S-31E Section 27: All**

Devon Energy Production Company, L.P. 333 W. Sheridan Ave.	Oklahoma City OK	73102-5010
Bascom Mitchell Family Partnership, L.P. No. 1 Live Oak	Midland, TX	79705
Joe N. Gifford P. O. Box 51187	Midland, TX	79710-1187
Mary Patricia Dougherty Trust c/o Northern Bank of Texas Attn: David J. Parker 2701 Kirby Drive	Houston, TX	77098
Obie & Company c/o JPMorgan Chase Bank Attn: H. L. Thompkins 2200 Ross Avenue, 7th Floor	Dallas, TX	75201
Thomas E. Kelly TEK Properties, Ltd. 4705 Miramont Circle	Bryan, TX	77802
Otto E. Schroeder, Jr. 915 Fielder Road	Arlington, TX	76012-3147

Catherine M. Grace  
c/o Dan Serna & Company  
6031 W. I-20, Suite 251

Arlington, TX

76017

Mary Margaret Olson Trust  
c/o Dan Serna & Company  
6031 W. I-20, Suite 251

Arlington, TX

76017

Marathon Oil Company  
Attn: Paul Tauscher  
P.O. Box 3128

Houston, TX

77253-3128

L. E. Oppermann  
500 W. Texas Ave. Ste. 830

Midland, TX

79701-4276

OXY U.S.A., Inc.  
P.O. Box 27570

Houston, TX

77227-7570

Southwest Petroleum Corp.  
P.O. Box 25623

Overland Park, KS

66225-5623

**23S-31E Section 34: All**

OXY U.S.A., Inc.  
P.O. Box 27570

Houston, TX

77227-7570

**23S-31E Section 35: All**

OXY U.S.A., Inc.  
P.O. Box 27570

Houston, TX

77227-7570



**Todd 27P Fed 16 SWD Working Interest**

Devon Energy Production Company, L.P.	67.489307%
Bascom Mitchell Family Partnership, L.P.	0.195312%
Joe N. Gifford	0.195313%
Mary Patricia Dougherty Trust	0.133300%
Obie & Company	0.195927%
Thomas E. Kelly	0.200000%
Otto E. Schroeder, Jr.	0.001391%
Catherine M. Grace	0.001391%
Mary Margaret Olson Trust	0.001391%
Marathon Oil Company	22.785676%
L. E. Oppermann	0.326925%
OXY U.S.A., Inc.	5.531742%
Southwest Petroleum Corp.	<u>2.942325%</u>

Total-100%

Section XIV--Proof of Notice to Surface Land Owner  
Devon Energy Prod Co LP  
C108 Application For Injection  
Proposed Well: Todd 27P Federal 16

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

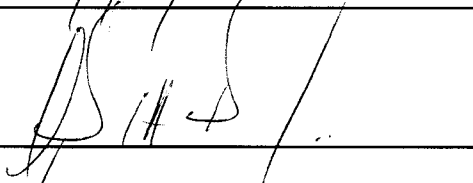
Certified receipt No.  
7008 1830 0002 7421 5040

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 Todd 27P Federal #16.

Date Mailed: \_\_\_\_\_

9/04/2013

Signature: \_\_\_\_\_



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

Date: \_\_\_\_\_

9/24/2013

Section XIV--Proof of Notice to Leasehold Operators  
Devon Energy Prod Co LP  
C108 Application For Injection  
Proposed Well: Todd 27P Federal #16

Proof of Notice to Leasehold Operators within 1/2 mile of Todd 27P Federal #16

Bascom Mitchell Family Partnership No. 1 Live Oak Midland, TX 79705	Certified receipt No. 7008 1830 0003 1986 6435	L. Edward Innerarity, Jr. P.O. Box 2113 Midland, TX 79702	Certified receipt No. 7008-1830-0002-7421-5125
Joe N. Gifford P.O. Box 51187 Midland, TX 79710-1187	Certified receipt No. 7006-2760-0003-6282-6432	Miranda Energy Corp. 24 Smith Road, Suite 601 Midland, TX 79705	Certified receipt No. 7008-1830-0002-7421-5118
Mary Patricia Dougherty Trust c/o Northern Bank of Texas Attn: David J. Parker 2701 Kirby Drive Houston, TX 77098	Certified receipt No. 7008-1830-0003-1986-6428	Marathon Oil Company Attn: Paul Tausher P.O. Box 3128 Houston, TX 77253-3128	Certified receipt No. 7008-1830-0002-7421-5101
Obie & Company c/o JP Morgan Chase Bank Attn: H.L. Thompkins 2200 Ross Avenue, 7th Floor Dallas, Texas 75201	Certified receipt No. 7006-2760-0003-6282-6395	Mabee Flynt Lease Trust 11010 Crestmore St. Houston, TX 77096	Certified receipt No. 7008-1830-0002-7421-5095
Thomas E. Kelly - TEK Properties, Ltd 4705 Miramont Circle Bryan, TX 77802	Certified receipt No. 7008-1830-0003-1986-6381	Nortex Corporation 1415 Louisiana, STE 3100 Houston, TX 77002	Certified receipt No. 7008-1830-0002-7421-5088
Otto E. Schroeder, Jr. 915 Fielder Road Arlington, TX 76012-3147	Certified receipt No. 7008-1830-0002-7421-5149	L.E. Opperman 500 W. Texas Ave. Ste. 830 Midland, TX 79701-4276	Certified receipt No. 7008-1830-0002-7421-5071
Catherine M. Grace c/o Dan Serna & Company 6031 W. I-20, Suite 251 Arlington, TX 76017	Certified receipt No. 7008-1830-0003-1986-6442	Oxy U.S.A., Inc. P.O. Box 27570 Houston, TX 77227-7570	Certified receipt No. 7008-1830-0002-7421-5064
Mary Margaret Olson Trust c/o Dan Serna & Company 6031 W. I-20, Suite 251 Arlington, TX 76017	Certified receipt No. 7008-1830-0002-7421-5132	Southwest Petroleum Corp. P.O. Box 25623 Overland Parks, KS 66225-5623	Certified receipt No. 7008-1830-0002-7421-5057

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 Todd 27P Federal #16.

Date Mailed:

Signature:

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

Date:

6/9/04



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

405 235 3611 Phone  
www.devonenergy.com

September 4<sup>th</sup>, 2013

Bascom Mitchell Family Partnership  
No. 1 Live Oak  
Midland, Texas 79705

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Bascom Mitchell Family Partnership:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "S. Porter", with a stylized flourish 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](http://www.devonenergy.com)

September 4th, 2013

Catherine M. Grace  
c/o Dan Serna & Company  
6031 W. I-20, Suite 251  
Arlington, Texas 76017

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Catherine M. Grace:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "S. Porter", with a long horizontal stroke extending to the right.

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](http://www.devonenergy.com)

September 4th, 2013

Joe N. Gifford  
P.O. Box 51187  
Midland, Texas 79710-1187

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Joe N. Gifford:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "S. Porter", with a long horizontal stroke extending to the right.

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](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

L. Edward Innerarity, Jr.  
P.O. Box 2113  
Midland, Texas 79702

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear L. Edward Innerarity, Jr.:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "S. A. Porter", written in a cursive style.

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](http://www.devonenergy.com)

September 4th, 2013

L.E. Opperman  
500 W. Texas Ave., STE 830  
Midland, Texas 79701-4276

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear L.E. Opperman:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "S. Porter", with a large, stylized flourish 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](http://www.devonenergy.com)

September 4th, 2013

Marathon Oil Company  
Attn: Paul Tausher  
P.O. Box 3128  
Houston, Texas 77253-3128

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Marathon Oil Company:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "S. A. Porter".

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

September 4th, 2013

Mary Margaret Olson Trust  
c/o Dan Serna & Company  
6031 W. I-20, Suite 251  
Arlington, Texas 76017

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Mary Margaret Olson Trust:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "Stephanie A. Porter".

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](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

Mary Patricia Dougherty Trust  
c/o Northern Bank of Texas  
Attn: David J. Parker  
2701 Kirby Drive  
Houston, Texas 77098

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Mary Patricia Dougherty Trust:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "S. Porter", with a long horizontal stroke extending to the right.

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](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

Mabee Flynt Lease Trust  
11010 Crestmore St.  
Houston, Texas 77096

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Mabee Flynt Lease Trust:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "SAP", followed by a period.

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](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

Miranda Energy Corp.  
24 Smith Road, Suite 601  
Midland, Texas 79705

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Miranda Energy Corp.:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "S. Porter", with a stylized flourish 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](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

Nortex Corporation  
1415 Louisiana, STE 3100  
Houston, Texas 77002

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Nortex Corporation:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "Stephanie A. Porter".

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](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

Obie & Company  
c/o JP Morgan Chase Bank  
Attn: H.L. Thompkins  
2200 Ross Avenue, 7<sup>th</sup> Floor  
Dallas, Texas 75201

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Obie & Company:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "SAP", with a long horizontal stroke extending to the right.

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](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

Otto E. Schroeder, Jr.  
915 Fielder Road  
Arlington, Texas 76012-3147

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Otto E. Schroeder, Jr.:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "SAP", followed by a long horizontal line.

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](http://www.devonenergy.com)

September 4th, 2013

Oxy U.S.A., Inc.  
P.O. Box 27570  
Houston, Texas 77227-7570

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Oxy U.S.A., Inc.:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "Stephanie A. Porter".

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](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

Southwest Petroleum Corp.  
P.O. Box 25623  
Overland Parks, Kansas 66225-5623

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Southwest Petroleum Corp.:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "Stephanie A. Porter". The signature is stylized with a large, looped "S" and a long, sweeping horizontal stroke 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](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

Thomas E. Kelly  
TEK Properties, Ltd.  
4705 Miramont Circle  
Bryan, Texas 77802

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

Dear Thomas E. Kelly:

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

Devon's application proposes to convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 Todd 27P Federal #16 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,

A handwritten signature in black ink, appearing to read "S.A.P.", with a long horizontal stroke extending to the right.

Stephanie A. Porter  
Operations Technician

SP/sp  
Enclosure



Devon Energy Corporation  
333 West Sheridan  
Oklahoma City, OK 73102-8260

405 235 3611 Phone  
[www.devonenergy.com](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

Bureau of Land Management  
620 East Greene Street  
Carlsbad, New Mexico 88210-6292

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API# 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E; 330' FSL & 330' FEL

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 convert the Todd 27P Federal #16 to salt water disposal. Produced waters will be injected into the Bell & Cherry Canyon formation from 4450-5720'.

As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as the well site surface land owner. 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,

A handwritten signature in black ink, appearing to read "S. Porter", with a long horizontal stroke extending to the right.

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

September 4th, 2013

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

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

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 convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 (405)-552-5069 or myself at (405)-552-7802.

Sincerely,

A handwritten signature in black ink, appearing to read "SAP", with a long horizontal stroke extending to the right.

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](http://www.devonenergy.com)

September 4<sup>th</sup>, 2013

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

RE: Form C-108, Application for Authorization to Inject  
Todd 27P Federal #16; API 30-015-27106  
Eddy County, NM  
Section 27, T23S, R31E

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 convert the Todd 27P Federal #16 to salt water disposal in the Bell & Cherry Canyon 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 (405)-552-5069 or myself at (405)-552-7802.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Porter", with a long horizontal stroke extending to the right.

Stephanie A. Porter  
Operations Technician

SP/sp  
Enclosure

## Goetze, Phillip, EMNRD

---

**From:** Christopher\_Canon@oxy.com  
**Sent:** Thursday, November 21, 2013 2:30 PM  
**To:** Goetze, Phillip, EMNRD  
**Cc:** Samuel.Walker@dmn.com  
**Subject:** RE: Todd 27P Federal #16 Well C-108 Application Notice - Sec. 27, T23S-R31E, Eddy County, NM

Dear Phillip,

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Therefore, OXY withdraws its protest to the Todd 27P Federal #16 Well C-108 Application since the application will be amended to reflect this revised injection interval.

If you need anything further, please feel free to contact me at my information below. Thank you.

Regards,  
Chris Canon  
Senior Land Negotiator  
OXY USA, Inc.  
5 Greenway Plaza, Suite 110, Houston, Texas, 77046-0521 Direct 713.366.5226 [Christopher\\_canon@oxy.com](mailto:Christopher_canon@oxy.com)

THIS MESSAGE CONTAINS CONFIDENTIAL INFORMATION AND TRADE SECRETS OF OCCIDENTAL. UNAUTHORIZED USE OR DISCLOSURE IS PROHIBITED.

---

From: Canon, Christopher J  
Sent: Friday, October 25, 2013 10:16 AM  
To: 'Goetze, Phillip, EMNRD'  
Subject: Todd 27P Federal #16 Well C-108 Application Notice - Sec. 27, T23S-R31E, Eddy County, NM  
Importance: High

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**Sent:** Monday, November 11, 2013 9:43 AM  
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**Subject:** FW: Todd 27P Fed #16 SWD

**Samuel Walker**  
Landman - Midcontinent

**Devon Energy Corporation**  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010  
405 228 4342 Office  
405 234 2634 Fax

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## Goetze, Phillip, EMNRD

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**From:** Goetze, Phillip, EMNRD  
**Sent:** Monday, October 28, 2013 8:28 AM  
**To:** Porter, Stephanie (Stephanie.Porter@dvn.com)  
**Cc:** Ezeanyim, Richard, EMNRD; Shapard, Craig, EMNRD; Ingram, Wesley (wingram@blm.gov); 'Christopher\_Canon@oxy.com'  
**Subject:** Protest of C-108 Application for the Todd 27P Federal No. 16

RE: Todd 27P Federal #16 (API 30-015-27106) Sec 27, T. 23 S., R. 31 E., NMPM, Eddy County.

Stephanie:

To answer your question: OCD was notified by Mr. Christopher Canon, OXY USA Inc. [Senior Land Negotiator, Houston], that they are protesting this application. OXY USA Inc. states that approval of this application will interfere specifically with their production of the Cal-Mon #6 (API 30-015-26885) and the overall production of additional wells completed in the Bell Canyon/Cherry Canyon formations. Therefore, you are being notified that if Devon wishes for this application to be considered, it must either go to hearing or may be reviewed administratively if the protest is withdrawn as a result of a negotiated resolution with OXY USA. The application will be retained, but suspended from further administrative review. Please contact OCD once you have made a decision regarding the application. Please me call with any questions regarding this matter. PRG

**Phillip R. Goetze, P.G.**

Engineering Bureau, Oil Conservation Division  
1220 South St. Francis Dr., Santa Fe, NM 87505  
O: 505.476.3466 F: 505.476.3462



## Goetze, Phillip, EMNRD

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**NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

*ADMINISTRATIVE ORDER SWD-676*

***APPLICATION OF DEVON ENERGY CORPORATION FOR SALT WATER DISPOSAL,  
EDDY COUNTY, NEW MEXICO.***

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Rule 701(B), Devon Energy Corporation made application to the New Mexico Oil Conservation Division on July 24, 1997, for permission to complete for salt water disposal its Todd '27P' Federal Well No.16 located 330 feet from the South line and 330 feet from the East line (Unit P) of Section 27, Township 23 South, Range 31 East, NMPM, Eddy County, New Mexico.

**THE DIVISION DIRECTOR FINDS THAT:**

- (1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations;
- (2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified;
- (3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met;
- (4) The well is located in or near an area that has presented some concern that it may be considered a potentially sensitive area and might therefore warrant additional monitoring efforts, and;
- (5) No objections have been received within the waiting period prescribed by said rule.

**IT IS THEREFORE ORDERED THAT:**

The applicant herein, is hereby authorized to complete its Todd '27P' Federal Well No.16 located 330 feet from the South line and 330 feet from the East line (Unit P) of Section 27, Township 23 South, Range 31 East, NMPM, Eddy County, New Mexico, in such manner as to permit the injection of salt water for disposal purposes into the Bell Canyon formation at approximately 4694 feet to 5284 feet through 2 7/8-inch plastic-lined tubing set in a packer located at approximately 4594 feet.

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

In the event the well is hydraulically fracture stimulated, either before or after initial injection operations have commenced, all individual proppant stages should be tagged with a radioactive isotope to allow for post-frac reconnaissance to attempt to determine the vertical fracture height.

Additional monitoring shall consist of annual temperature and radioactive tracer injection profile logs run in accordance with the guidelines as specified in Exhibit "A" attached hereto.

The operator shall notify the supervisor of the Artesia district office of the Division of the date and time of any and all logs conducted pursuant to the preceding two paragraphs.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 939 psi.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Bell Canyon formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity test so that the same may be inspected and witnessed.

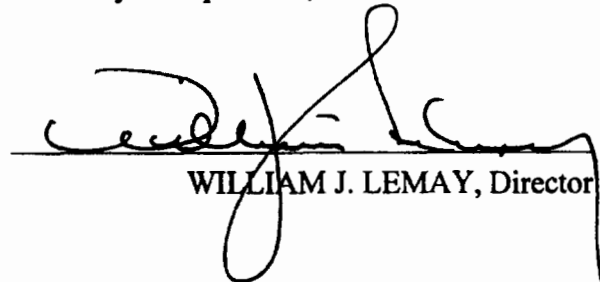
The operator shall immediately notify the supervisor of the Artesia district office of the Division of the failure of the tubing, casing, or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations in accordance with Rule Nos. 706 and 1120 of the Division Rules and Regulations.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

Approved at Santa Fe, New Mexico, on this 24th day of September, 1997.



WILLIAM J. LEMAY, Director

WJL/BES

cc: Oil Conservation Division - Artesia  
Bureau of Land Management - Carlsbad



**C-108 Review Checklist:** Received 9/6/13 Add. Request: 11/11/13 - Oxy withdrawn Reply Date: \_\_\_\_\_ Suspended: 9/20/13 [Ver 11]

**PERMIT TYPE:** WFX / PMX / SWD Number: 1455 Permit Date: 01/07/14 Legacy Permits/Orders: SWD-676

Well No. 16 Well Name(s): Todd 27P Federal supersede

API: 30-0 15-27106 Spud Date: 11/5/1992 New or Old: N (UIC Class II Primacy 03/07/1982)

Footages 330 FSL / 330 FEL Lot --- Unit P Sec 27 Tsp 23S Rge 31E County Eddy

General Location: South of WIPP - Pool: Former Ingle Wells; Delaware Pool No.: 33745  
(Bore Spring in area)

Operator: Devon Energy Production Co. OGRID: 16137 Contact: Stephanie Porter

COMPLIANCE RULE 5.9: Inactive Wells: 3 Total Wells: 1829 Fincl Assur: Yes Compl. Order? No IS 5.9 OK? Yes

Well File Reviewed ☒ Current Status: Suspended operation - one month/year injection to hold  
& SWD application for SWD-676

Well Diagrams: NEW: Proposed ☐ RE-ENTER: Before Conv. ☐ After Conv. ☒ Are Elogs in Imaging?: Yes

Planned Rehab Work to Well: Additional perfs (well maint & CIBP required after review)  
SWD-676

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 checked="" type="checkbox"/> Conductor	---	---	---	---
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Surface	<u>17 1/2 / 13 3/8</u>	<u>0 to 849</u>	<u>650</u>	<u>Cir. to surf</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Interm/Prod	<u>8 5/8 /</u>	<u>0 to 4350</u>	<u>2200</u>	<u>Str. to surf</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Prod/Interm	<u>7 7/8 / 5 1/2</u>	<u>0 to 8328</u>	<u>1150</u>	<u>WIP in 1117 / ext</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Liner/Prod	---	---	---	---
Planned <input checked="" type="checkbox"/> or Existing <input checked="" type="checkbox"/> OH / PERF	<u>7 7/8 / 5 1/2</u>	<u>4750 - 5720</u>	<u>970</u>	---

Injection Stratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops?
Adjacent Unit: Litho. Struc. Por.	---	<u>Top of Salt</u>	---
Confining Unit: <input checked="" type="checkbox"/> Litho <input checked="" type="checkbox"/> Struc <input checked="" type="checkbox"/> Por	<u>± 400' ± Salt</u>	<u>Base of Salt</u>	<u>4154</u>
Proposed Inj Interval TOP:	<u>4750</u>	<u>Bell Canyon</u>	<u>4354</u>
Proposed Inj Interval BOTTOM:	<u>5720</u>	<u>Chama Canyon</u>	<u>5507</u>
Confining Unit: <input checked="" type="checkbox"/> Litho <input checked="" type="checkbox"/> Struc <input checked="" type="checkbox"/> Por	<u>- 2210</u>	<u>Brushy Canyon</u>	<u>6930</u>
Adjacent Unit: Litho. Struc. Por.	---	<u>Bore Spring</u>	<u>8214</u>

Completion/Operation Details:	
Drilled TD <u>8328</u>	PBTD <u>7940 CIBP</u>
NEW TD <u>---</u>	NEW PBTD <u>5305</u>
NEW Open Hole <input type="checkbox"/> or NEW Perfs <input checked="" type="checkbox"/>	
Tubing Size <u>2 3/8</u> in. Inter Coated? <u>Yes</u>	
Proposed Packer Depth <u>&lt; 100' min</u>	
Min. Packer Depth <u>4650</u> (100-ft limit)	
Proposed Max. Surface Press. <u>890</u> psi	
Admin. Inj. Press. <u>950</u> (0.2 psi per ft)	

#### AOR: Hydrologic and Geologic Information

POTASH: R-111-P ☒ Noticed? Yes BLM Sec Ord WIPP ☒ Noticed? Yes SALADO: T: 4816 B: 4154 CLIFF HOUSE NA  
FRESH WATER: Formation under SWD-676 Max Depth Wells? FW Analysis plus contacted for SWD-676 HYDROLOGIC AFFIRM By Qualified Person ☒

Disposal Fluid: Formation Source(s) Delaware / BS Analysis? Yes On Lease ☐ Operator Only ☒ or Commercial ☐

Disposal Interval: Injection Rate (Avg/Max BWPP): 5000/10000 Protectable Waters: No CAPITAN REEF: thru ☐ adj ☐ NA ☒

HC Potential: Producing Interval? No - not for well Formerly Producing? No - not for well Method: Log/DST/P&A/Other NA producing well  
for BSC & CC at location

AOR Wells: 1/2-M Radius Map? Yes Well List? Yes Total No. Wells Penetrating Interval: 11 Horizontals? Yes

Penetrating Wells: No. Active Wells 10 Num Repairs? 0 on which well(s)? (Standard R-111-P const) Diagrams? No

Penetrating Wells: No. P&A Wells 1 Num Repairs? 0 on which well(s)? --- Diagrams? Yes

NOTICE: Newspaper Date July 18, 2013 Mineral Owner BLM Surface Owner BLM N. Date 01/04/13

RULE 26.7(A): Identified Tracts? Yes Affected Persons: Devon / Marathon / OXY USA N. Date 09/04/13

Permit Conditions: Issues: Revised injection interval per agreement with OXY\*

Add Permit Cond: Squeez upper perfs 4450 to 4750; CIBP to be placed within  
2854 to 5720; 12mm screen listed 5720

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405 228 4342 Office  
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405 234 2634 Fax

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## Goetze, Phillip, EMNRD

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**From:** Porter, Stephanie <Stephanie.Porter@dvn.com>  
**Sent:** Thursday, November 07, 2013 2:58 PM  
**To:** Goetze, Phillip, EMNRD  
**Subject:** Todd 27P Federal 16 SWD: Agreed Shortened Interval - Application Revisions Necessary?

Phillip,

Below our proposal to Oxy to revise the injection interval to 4,570' – 5,720', so that our SWD C-108 can be approved administratively. Oxy approves of the shortened interval. Do I need to revise the application contents (C-108, wellbore schematics, etc), or will you line through and denote the shortened interval within the original submitted application? If you tell me that revisions are not necessary to the original application, I will forward your comments to Christopher Cannon at OXY, so OXY can still formally withdraw their objection to you directly (NMOCD).

Just let me know, thanks. ☺

*Stephanie A. Porter*

Permian New Mexico Technician

Phone: (405)-552-7802

Cell: (405)-721-7689

Fax: (405)-552-8113

DEC 31.326

[Stephanie.Porter@dvn.com](mailto:Stephanie.Porter@dvn.com)

*Courage is being scared to death but saddling up anyway ~ John Wayne*

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**From:** Walker, Samuel  
**Sent:** Thursday, November 07, 2013 3:02 PM  
**To:** Klaassen, Trevor; Porter, Stephanie; Harran, Craig  
**Subject:** FW: Todd 27P Fed #16 SWD

**Samuel Walker**  
Landman - Midcontinent

**Devon Energy Corporation**  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010  
405 228 4342 Office  
405 234 2634 Fax

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**From:** [Christopher Canon@oxy.com](mailto:Christopher_Canon@oxy.com) [mailto:[Christopher\\_Canon@oxy.com](mailto:Christopher_Canon@oxy.com)]  
**Sent:** Thursday, November 07, 2013 2:51 PM  
**To:** Walker, Samuel  
**Subject:** RE: Todd 27P Fed #16 SWD

Samuel,

Oxy has reviewed Devon's offer to set the perforations for the Todd 27P Fed #16H SWD from 4570' – 5720'. Oxy approves this proposal. Once Devon has revised the existing application to reflect the above changes and provided

proof to Oxy, Oxy will withdraw its objection currently on file with the NMOCD. If you agree with this plan, Oxy and Devon can proceed accordingly. Again, thank you for working with Oxy on this matter.

Regards,

Chris Canon  
Senior Land Negotiator  
OXY USA, Inc.  
5 Greenway Plaza, Suite 110, Houston, Texas, 77046-0521  
Direct 713.366.5226  
[Christopher\\_canon@oxy.com](mailto:Christopher_canon@oxy.com)

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**From:** Walker, Samuel [<mailto:Samuel.Walker@dvn.com>]  
**Sent:** Wednesday, October 30, 2013 4:45 PM  
**To:** Canon, Christopher J  
**Subject:** Todd 27P Fed #16 SWD

Chris,

I spoke with my team and they decided that they would be okay with setting the perms on the subject SWD well from 4,570' – 5,720', moving out of the area you requested. Please discuss this with your team and let me know if it sounds agreeable. I appreciate your help on this matter.

Regards,

**Samuel Walker**  
Landman - Midcontinent

**Devon Energy Corporation**  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010  
405 228 4342 Office  
405 234 2634 Fax

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Sent: Friday, October 25, 2013 10:16 AM

To: 'Goetze, Phillip, EMNRD'

Subject: Todd 27P Federal #16 Well C-108 Application Notice - Sec. 27, T23S-R31E, Eddy County, NM

Importance: High

Dear Phillip,

OXY USA Inc. (hereinafter "OXY"), submits this protest of the Todd 27P Federal #16 Well C-108 application offered by Devon Energy Corporation and lying in the above described lands.

OXY is the owner/operator of the Cal-Mon #6 Well (API #30-015-26885) lying in Section 35, T23S-R31E, Eddy County, NM, and located within a one-half mile radius from the Todd 27P Federal #16 Well. OXY produces the Cal-Mon #6 Well from the Ingle Wells interval within the Delaware formation. Similarly, the Todd 27P Federal #16 Well will be injecting into the Bell and Cherry Canyon intervals in the Delaware formation. Our internal review of the application leads to the conclusion that proposed perforations in the Todd 27P Federal #16 will both communicate and interfere with production from the Cal-Mon #6 Well. Additionally, OXY is the owner/operator of 7 other wells within a one-half mile radius from the Todd 27P Federal #16 Well that could be impacted by injection if this C-108 is approved.

Please note our protest of the subject application. If you need anything additional, please contact me either by email or my information below. Thank you.

Sincerely,

Christopher J. Canon

Senior Land Negotiator

OXY USA, Inc.

5 Greenway Plaza, Suite 110, Houston, Texas, 77046-0521 Direct 713.366.5226

Christopher\_canon@oxy.com<mailto:Christopher\_canon@oxy.com>

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