

DATE IN 5-27-10	SUSPENSE 7/7/10	ENGINEER WJ	LOGGED IN 5-27-10	TYPE SWD	APP NO. 1014758222
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ABOVE THIS LINE FOR DIVISION USE ONLY

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



Devon (6137)

Chicago 16 State #3

**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]

Eddy

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

Lost notes Sat 6/21/10  
 Rejected  
 Cancelled 7/7/10

2010 MAY 27 AM 11:25  
 RECEIVED OCS

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

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

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

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

Ronnie Slack	<i>Ronnie Slack</i>	Operations Technician	5/25/10
Print or Type Name	Signature	Title	Date

Ronnie.Slack@dvn.com  
 e-mail Address



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

405 235 3611 Phone  
www.devonenergy.com

May 24, 2010

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

RE: Form C-108, Application for Authorization to Inject  
Chimayo 16 State #3; (proposed drill well for SWD)  
Eddy County, NM  
Section 16, T25S, R29E

Ladies and Gentlemen:

Please find attached Devon Energy Production Company, LP's Form C-108, Application for Authorization to Inject. Devon's application proposes to drill the Chimayo 16 State #3 for SWD purposes. Produced waters from the Bone Spring formation will be injected into the Delaware Bell and Cherry Canyon formations in an open hole interval from 3000' to 4200'.

A copy of this application is being filed with the OCD-Artesia office.

If you have any questions, please contact Jim Cromer at (405)-228-4464 or myself at (405)-552-4615.  
Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in cursive script that reads "Ronnie Slack".

Ronnie Slack  
Operations Technician

RS/rs  
Enclosure

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance \_\_\_\_\_ X \_\_\_\_\_ Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? \_\_\_\_\_ X \_\_\_\_\_ Yes \_\_\_\_\_ No
- II. OPERATOR: \_\_\_\_\_ Devon Energy Production Company, LP \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ 20 North Broadway, Suite 1500, Oklahoma City, Oklahoma 73102 \_\_\_\_\_  
CONTACT PARTY: \_\_\_\_\_ Ronnie Slack \_\_\_\_\_ PHONE: \_\_\_\_\_ 405-552-4615
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? \_\_\_\_\_ Yes \_\_\_\_\_ X \_\_\_\_\_ No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: \_\_\_\_\_ Ronnie Slack \_\_\_\_\_ TITLE: \_\_\_\_\_ Engineering Technician  
SIGNATURE: \_\_\_\_\_ *Ronnie Slack* \_\_\_\_\_ DATE: \_\_\_\_\_ 5/25/10 \_\_\_\_\_  
E-MAIL ADDRESS: \_\_\_\_\_ Ronnie.Slack@DVN.com \_\_\_\_\_
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

### III. WELL DATA

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

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

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

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

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

### XIV. PROOF OF NOTICE

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

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

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

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

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

INJECTION WELL DATA SHEET

OPERATOR: Devon Energy Production Company, LP

WELL NAME & NUMBER: CHIMAYO 16 STATE #3

WELL LOCATION: 1610' FNL & 1455' FWL  
FOOTAGE LOCATION

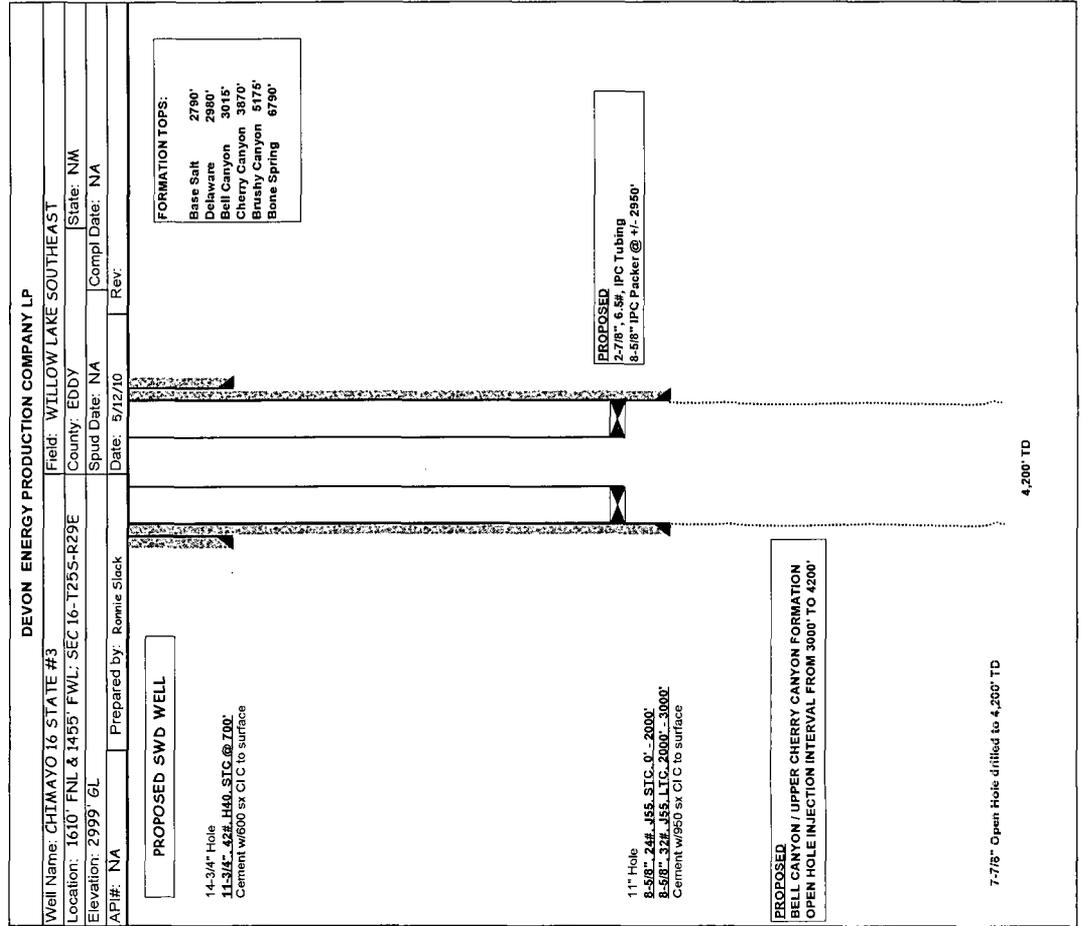
UNIT LETTER F SECTION T25S TOWNSHIP R29E  
RANGE

30-0

WELBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing



Hole Size: 14-3/4" Casing Size: 11-3/4", 42#, @ 700'

Cemented with: 600 sx. or          ft<sup>3</sup>

Top of Cement:          Surface          Method Determined: Circ. cement  
Intermediate Casing

Hole Size: 11" Casing Size: 8-5/8", 24/32#, @ 3000'

Cemented with: 950 sx. or          ft<sup>3</sup>

Top of Cement:          Surface          Method Determined: Circ. cement  
Production Casing

Hole Size: 7-7/8" Casing Size: NA—Open Hole Cmpl

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

Top of Cement:          Method Determined:

Total Depth: 4200'

Injection Interval (Open Hole)

3000' feet to 4200'

(Perforated or Open Hole: Indicate which)

**INJECTION WELL DATA SHEET**

Tubing Size: 2-7/8" Lining Material: IPC

Type of Packer: 8-5/8" IPC

Packer Setting Depth: +/- 2950'

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

Additional Data

1. Is this a new well drilled for injection? Yes  
If no, for what purpose was the well originally drilled? \_\_\_\_\_

2. Name of the Injection Formation: Delaware Bell & Upper Cherry Canyon from 3000' to 4200'

3. Name of Field or Pool (if applicable): Willow Lake Southeast

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.

NA

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

Formation tops: Base Salt @ 2790'; Delaware @ 2980'; Bell Canyon @ 3015'; Cherry Canyon @ 3870'. Oil & Gas zones: Brushy Canyon @ 5175'; Bone Spring @ 6790'.

**DEVON ENERGY PRODUCTION COMPANY LP**

Well Name: CHIMAYO 16 STATE #3		Field: WILLOW LAKE SOUTHEAST	
Location: 1610' FNL & 1455' FWL; SEC 16-T25S-R29E		County: EDDY	State: NM
Elevation: 2999' GL		Spud Date: NA	Compl Date: NA
API#: NA	Prepared by: Ronnie Slack	Date: 5/12/10	Rev:

**PROPOSED SWD WELL**

14-3/4" Hole  
11-3/4", 42#, H40, STC @ 700'  
 Cement w/600 sx CI C to surface

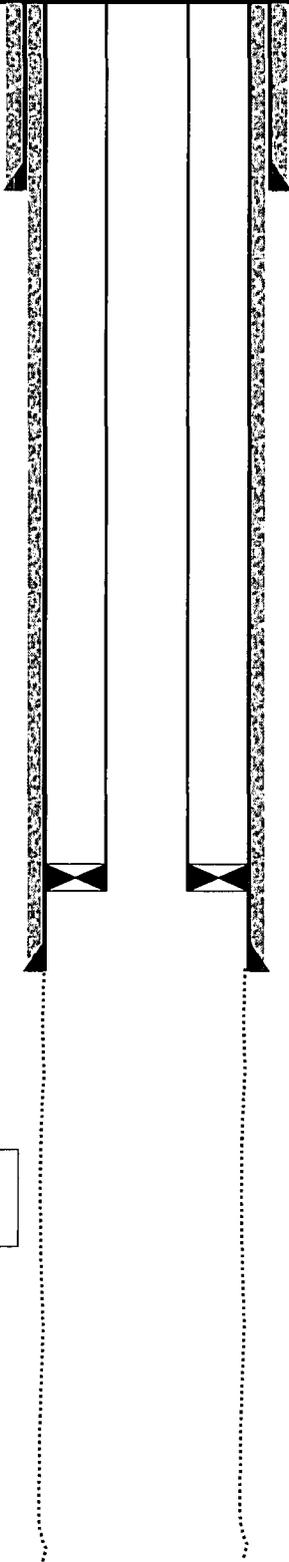
**FORMATION TOPS:**

Base Salt	2790'
Delaware	2980'
Bell Canyon	3015'
Cherry Canyon	3870'
Brushy Canyon	5175'
Bone Spring	6790'

11" Hole  
8-5/8", 24#, J55, STC, 0' - 2000'  
8-5/8", 32#, J55, LTC, 2000' - 3000'  
 Cement w/950 sx CI C to surface

**PROPOSED**  
 2-7/8", 6.5#, IPC Tubing  
 8-5/8" IPC Packer @ +/- 2950'

**PROPOSED**  
 BELL CANYON / UPPER CHERRY CANYON FORMATION  
 OPEN HOLE INJECTION INTERVAL FROM 3000' TO 4200'



7-7/8" Open Hole drilled to 4,200' TD

4,200' TD

**Proposed Injection Well: Chimayo 16 State #3**

API: NA

APPLICATION FOR INJECTION

Form C-108 Section III

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

**A. Injection Well Information**

- (1) Lease Chimayo 16 State  
Well No #3  
Location 1610' FNL & 1455' FWL  
Sec.Twn,Rnge Sec 16-T25S-R29E  
Cnty, State Eddy County, NM
  
- (2) Casing Proposed: 11-3/4", 42#, H40, STC, in 17-1/2" hole. Cmt'd w/ ~600 sxs.  
Cement will be circulated to surface  
  
Proposed: 8-5/8", 24#, J55, from 0' to 2000'.  
Proposed: 8-5/8", 32#, J55, from 2000' to 3000'. Cmt'd w/ ~950 sxs.  
Cement will be circulated to surface  
  
Proposed: 7-7/8" Open hole completion from 3000' to 4200' TD.
  
- (3) Injection Tubing 2-7/8", 6.5#, IPC Injection tubing
  
- (4) Packer 8-5/8" IPC Packer @ +/- 2950'

**B. Other Well Information**

- (1) Injection Formation: Open Hole Bell Canyon / Upper Cherry Canyon from 3000' to 4200'.  
Field Name: Willow Lake Southeast
  
- (2) Injection Interval: From 3000' to 4200'
  
- (3) Original Purpose of Wellbore:

Salt Water Disposal

- (4) Other perforated intervals:

None

- (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.

Formation tops: Base Salt @ 2790'; Delaware @ 2980'; Bell Canyon @ 3015'; Cherry Canyon @ 3870'. Oil & Gas zones: Brushy Canyon @ 5175'; Bone Spring @ 6790'.

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-102  
Revised October 15, 2009  
Submit one copy to appropriate  
District Office  
 AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number		<sup>2</sup> Pool Code		<sup>3</sup> Pool Name	
<sup>4</sup> Property Code		<sup>5</sup> Property Name <b>CHIMAYO "16" STATE</b>			<sup>6</sup> Well Number <b>3</b>
<sup>7</sup> OGRID No. <b>6137</b>		<sup>8</sup> Operator Name <b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>			<sup>9</sup> Elevation <b>2999.0</b>

<sup>10</sup> Surface Location

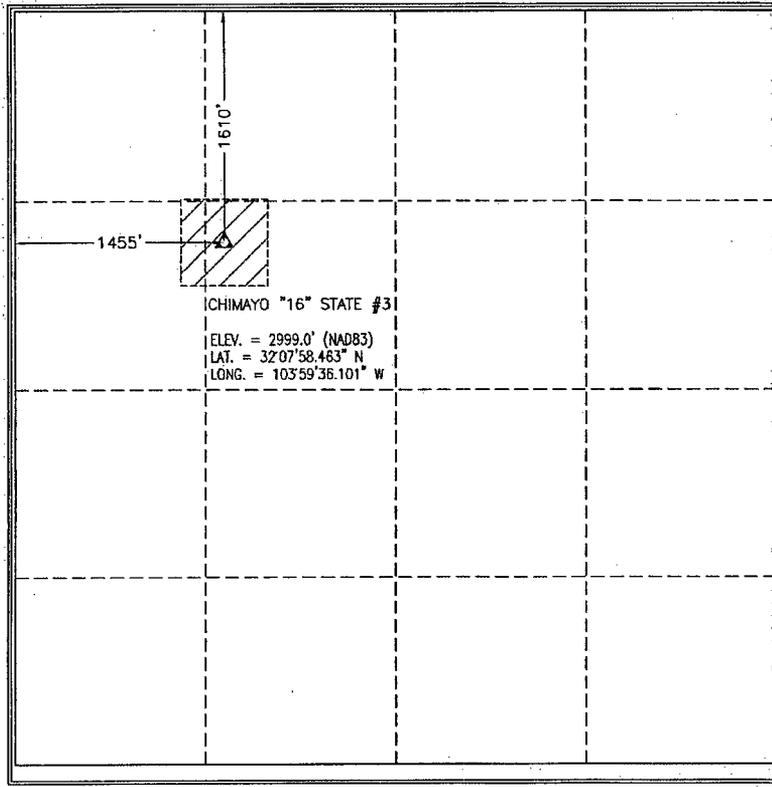
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	16	25 S	29 E		1610	NORTH	1455	WEST	EDDY

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

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.

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



<sup>17</sup> **OPERATOR CERTIFICATION**  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_  
Printed Name \_\_\_\_\_

<sup>18</sup> **SURVEYOR CERTIFICATION**  
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

APRIL 19, 2010  
Date of Survey

*Felimon E. Jaramillo*  
Signature and Seal of Professional Surveyor

Certificate Number: FELIMON E. JARAMILLO, PLS 12797  
SURVEY NO. 107

District II  
 1301 W. Grand Ave., Artesia, NM 88210  
 Phone:(505) 748-1283 Fax:(505) 748-9720

Form C-101  
 Permit 113972

**State of New Mexico**  
**Energy, Minerals and Natural Resources**

**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

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

1. Operator Name and Address DEVON ENERGY PRODUCTION COMPANY, LP 20 N Broadway Oklahoma City, OK 73102		2. OGRID Number 6137
		3. API Number
4. Property Code 28753	5. Property Name CHIMAYO 16 STATE	6. Well No. 003

**7. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
F	16	25S	29E	F	1610	N	1455	W	EDDY

**8. Pool Information**

**Additional Well Information**

9. Work Type New Well	10. Well Type	11. Cable/Rotary	12. Lease Type State	13. Ground Level Elevation 2999
14. Multiple N	15. Proposed Depth 4200	16. Formation Brushy Canyon	17. Contractor	18. Spud Date
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water
Pit: Liner: Synthetic <input type="checkbox"/> mils thick Clay <input type="checkbox"/> Pit Volume: bbls Drilling Method: Closed Loop System <input checked="" type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

**19. Proposed Casing and Cement Program**

Type	Hole Size	Casing Type	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	11.75	42	700	600	0
Intl	11	8.625	24	2000		0
Intl	11	8.625	32	3000	950	0
	7.875	0	0	4200	0	0

**Casing/Cement Program: Additional Comments**

This well is drilled for an SWD and there will be no casing set in the last hole interval. 0-700 MW 8.4-9.0; Visc 30-34; 700-3000 MW 9.8-10.0; Visc 28-32; 3000-4200 MW 8.6-9.0; Visc 28-32.

**Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	5000	
DoubleRam	5000	5000	

I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines <input type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> .	<b>OIL CONSERVATION DIVISION</b>	
	Approved By:	
	Printed Name: Judy A. Barnett	Title:
	Title: Regulatory Analyst	Approved Date:   Expiration Date:
	Email Address: Judith.Barnett@dvn.com	
Date: 5/25/10	Phone: 405-228-8699	

CHIMAYO 16 STATE 3  
SEC 16 T25S R293  
EDDY, COUNTY NM  
Page 2

The BOP system used to drill the intermediate hole will consist of an **11" 5M Double Ram and Annular preventer**. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 3M system prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of an **11" 5M Double Ram and Annular preventer**. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 5M system prior to drilling out the intermediate casing shoe.

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

**Proposed Injection Well: Chimayo 16 State #3**  
**APPLICATION FOR INJECTION**  
**Form C-108 Section VII to XII**

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

- (1) Proposed average injection rate: 3000 BWPD  
Proposed maximum injection rate: 5000 BWPD
- (2) The system will be a closed system.
- (3) Proposed average injection pressure: 500 psi  
Proposed max injection pressure: 720 psi
- (4) The injection fluid will be produced water from the Bone Spring formation that will be injected into the Delaware Bell Canyon and Upper Cherry Canyon formations.
- (5) Water analysis have been submitted for sourced water from the Bone Spring formation and injection formation water from the Delaware.

**VIII Geologic Injection Zone Data**

The injection zone is the Bell Canyon and Upper Cherry Canyon formations an open hole interval from 3000' to 4200' (1200' thick). The Bell Canyon and Cherry Canyon formations are a Permian aged sandstone. The average depth of water report notes aquifers at an average depth of 60'.

**IX Proposed Stimulation**

Based on injectivity results this interval could be stimulated with ~3000 gals 15% HCl and 160,000# of sand.

**X Log Data**

Open hole logs for the Chimayo 16 State #1 (30-015-31781), an offset to the proposed Chimayo 16 State #3, have been submitted to the OCD Atresia office for scanning.

**XI Fresh Water Analysis**

No fresh water wells were indicated within one mile of proposed injection well per New Mexico office of the State Engineer web site. State Engineer web site reports are attached.

**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.

**XIII Proof of Notice**

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



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Sub basin	Use	County	Q Q Q				X	Y	Depth			
				64	16	4	Sec			Tws	Rng	Well	Water
C 02371	STK	ED		2	3	15	25S	29E	596741	3555106*	200	60	140
C 02680	STK	ED		2	3	15	25S	29E	596741	3555106*	200		
											Average Depth to Water:		60 feet
											Minimum Depth:		60 feet
											Maximum Depth:		60 feet

**Record Count:** 2

**Basin/County Search:**

County: Eddy

**PLSS Search:**

Section 8, 9, 10, 15, Township: 25S Range: 29E  
 (s): 16, 17, 20, 21

**Usage Filter:**

Use: STK (72-12-1 LIVESTOCK WATERING)

\*UTM location was derived from PLSS - see Help

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

5/10/10 3:11 PM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Sub basin	Use	County	Q Q Q			Sec	Tws	Rng	X	Y	Depth	Depth	Water
				64	16	4						Well	Water	Column
RA 07162 EXP2	DOM	ED	ED	1	3	1	10	25S	29E	596214	3557222*	55	40	15
												Average Depth to Water:		40 feet
												Minimum Depth:		40 feet
												Maximum Depth:		40 feet

Record Count: 1

**Basin/County Search:**

County: Eddy

**PLSS Search:**

Section 8, 9, 10, 15, Township: 25S Range: 29E  
 (s): 16, 17, 20, 21

**Usage Filter:**

Use: DOM (72-12-1 DOMESTIC ONE HOUSEHOLD)

\*UTM location was derived from PLSS - see Help

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

5/10/10 3:13 PM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

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

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

## Water Analysis Report by Baker Petrolite

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

Summary		Analysis of Sample 492168 @ 75 F					
Sampling Date:	05/12/10	<b>Anions</b>	mg/l	meq/l	<b>Cations</b>	mg/l	meq/l
Analysis Date:	05/18/10	Chloride:	142827.0	4028.63	Sodium:	76546.4	3329.58
Analyst:	STACEY SMITH	Bicarbonate:	73.0	1.2	Magnesium:	1589.0	130.72
TDS (mg/l or g/m3):	235300.4	Carbonate:	0.0	0.	Calcium:	10332.0	515.57
Density (g/cm3, tonne/m3):	1.157	Sulfate:	1021.0	21.26	Strontium:	1192.0	27.21
Anion/Cation Ratio:	1	Phosphate:			Barium:	2.5	0.04
Carbon Dioxide:	1400 PPM	Borate:			Iron:	379.0	13.7
Oxygen:		Silicate:			Potassium:	1334.0	34.12
Comments:		Hydrogen Sulfide:		17 PPM	Aluminum:		
		pH at time of sampling:		6.5	Chromium:		
		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.5	Lead:		
					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
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
F	psi											psi
80	0	0.18	1.40	-0.08	0.00	-0.03	0.00	0.58	321.11	1.00	1.12	0.14
100	0	0.24	1.95	-0.16	0.00	-0.05	0.00	0.55	310.50	0.80	1.12	0.18
120	0	0.30	2.51	-0.23	0.00	-0.04	0.00	0.54	304.91	0.62	1.12	0.21
140	0	0.35	3.35	-0.29	0.00	-0.01	0.00	0.53	303.52	0.47	0.84	0.25

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

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



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

**Water Analysis**

<b>COMPANY</b>	Devon Energy	
<b>SAMPLE</b>	Apache 25-6	
<b>SAMPLED BY</b>		
<b>DATE TAKEN</b>		
<b>REMARKS</b>		
Barium as Ba	0	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	80	
pH at Lab	6.05	
Specific Gravity @ 60°F	1.195	
Magnesium as Mg	59,566	
Total Hardness as CaCO3	102,700	
Chlorides as Cl	192,032	
Sulfate as SO4	200	
Iron as Fe	33	
Potassium	85	
Hydrogen Sulfide	0	
Rw	0.046	6 23' C
Total Dissolved Solids	295,500	
Calcium as Ca	43,134	
Nitrate	35	

Results reported as Parts per Million unless stated

Langeller Saturation Index 0.65

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



July 20, 2010

RECEIVED OCD

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

2010 JUL 22 P 1:31

RE: Form C-108, Application for Authorization to Inject  
Chimayo 16 State #3; (30-015-NA) (proposed drill well for SWD)  
Eddy County, NM  
Section 16, T25S, R29E

Will,

Enclosed are logs for the following wells regarding Devon's application for disposal. A copy of the bond logs will be sent to the OCD, Artesia office as well.

Cooter 16 ST 1H (30-015-37625); mud log with type log  
Chimayo ST #1 (30-015-31781); Radial analysis log  
Cooter 16 ST 3H (30-015-37627) CBL

Let me know if you need further information or have any questions.

Sincerely,

Ronnie Slack  
Operations Technician

RS/rs  
Enclosure



# Baker Atlas

## RADIAL ANALYSIS LOG

30-015-31781

FILING NUMBER:  1210-1285	COMPANY : CONCHO RESOURCES, INC.	OTHER SERVICES: TEMPERATUR
	WELL : CHIMAYO 16 STATE #1	
	FIELD : WILLOW LAKE - BONE SPRING	
	COUNTY : EDDY	STATE : NEW MEXICO
	LOCATION : 660' FNL & 1980' FWL	
	SEC. : 16      TWP : 25-S      RGE. : 29-E	

PERMANENT DATUM : GROUND LEVEL	ELEV. : 2988'	ELEV. : K.B. : 3000'
LOG MEASURED FROM : K. B.      12.0      FT. ABOVE PERM. DAT.		D.F. : 2999'
DRILLING MEASURED FROM : KELLY BUSHING		G.L. : 2988'

DATE	28-JUNE-2001	CORRELATED TO SLS
RUN NUMBER	ONE	DENSITY / NEUTRON
TYPE LOG	RAL	DATED 18-JUNE-2001.
DEPTH - DRILLER	9254'	
DEPTH - LOGGER	9244'	
LOGGED INTERVAL	7400'      TO 9244'	TO
OPERATING RIG TIME	CRANE	*****
TYPE FLUID IN HOLE	WATER	MAIN PASS RAN WITH
SALINITY, PPM CL.	N/A	1000-PSI ON CASING.
DENSITY-VISCOSITY	N/A	*****
LEVEL	FULL	
MAX REC TEMP., DEG. F	156.8	
EQUIPMENT-LOCATION	5042      Hobbs, NM	6429      Hobbs, NM
RECORDED BY	B. BOGGS	B. KAYS
WITNESSED BY	J. LINSLEY	

RUN NO.	BORE - HOLE RECORD			CASING RECORD			
	BIT	FROM	TO	SIZE	WEIGHT	FROM	TO
				13.35	48.0	0	600'
				8.625	32.0	0	2980'
				5.50	17.0	0	9300'

THIS HEADING CONFORMS TO API STANDARD PRACTICE RP - 33

NOTES

5.50 CASING CEMENTED WITH: 650 SX35: 65 POZ: H  
+5% SALT, 6% GEL, +3% GILSONITE. TAILED WITH  
355 SX 50: 50 POZ H +2% GEL, +5% SALT. +3%



COMPANY **Concho Resources, Inc.**

WELL **Chimayo 16 State #1**

FIELD **Willow Lake - Bone Spring**

COUNTY **Eddy** STATE **New Mexico**

**Schlumberger**

**PLATFORM EXPRESS  
Azimuthal Laterolog**

**MicroCFL-GR**

RECEIVED  
MAY 20 2010

LOCATION

660' FNL, 1980' FWL

Section 16, Township 25S, Range 29E

Elev.: K.B. 3000 ft

G.L. 2988 ft

D.F. 2999 ft

Permanent Datum:

Ground Level

Elev.: 2988 ft

Log Measured From:

Kelly Bushing

12.0 ft above Perm. Datum

Drilling Measured From:

Kelly Bushing

API Serial No.

30-015-31781 N/A

SECTION

16

TOWNSHIP

25S

RANGE

29E

COUNTY: Eddy  
Field: Willow Lake - Bone Spring  
Location: 660' FNL, 1980' FWL  
Well: Chimayo 16 State #1  
Company: Concho Resources, Inc.

Logging Date	18-JUN-2001		
Run Number	One		
Depth Driller	9300 ft		
Schlumberger Depth	9301 ft		
Bottom Log Interval	9293.5 ft		
Top Log Interval	2978 ft		
Casing Driller Size @ Depth	8.625 in	@	2980 ft
Casing Schlumberger	2978 ft		
Bit Size	7.875 in		
Type Fluid In Hole	Brine		
Density	Viscosity	9.1 lbm/gal	28 s
Fluid Loss	PH	14 cm3	8.5
Source Of Sample	Circulation Pit		
RM @ Measured Temperature	0.070 ohm.m	@	90 degF
RMF @ Measured Temperature	0.053 ohm.m	@	90 degF
RMC @ Measured Temperature		@	
Source RMF	RMC	Calculated	
RM @ MRT	RMF @ MRT	0.043 @ 150	0.032 @ 150
Maximum Recorded Temperatures	150 degF	150	150
Circulation Stopped	Time	18-JUN-2001	1:00
Logger On Bottom	Time	18-JUN-2001	10:52
Unit Number	Location	3076	Hobbs, NM
Recorded By	M. Lopez, P. Garcia		
Witnessed By	Mr. Dale Lubinski		

MUD

Time Mark Every 80 S

Env. Corr. Thermal Neutron Porosity (TNEP) (V/V)		0.3	-0.1
Std. Res. Formation P <sub>e</sub> (PEFZ) (—)		0	10
Env. Corr. Thermal Neutron Porosity (TNEP) (V/V)		0.3	-0.1
Density Correction (HDRA) (G/C3)		-0.05	0.45
Std. Res. Density Porosity (DPHZ) (V/V)		0.3	-0.1

Tension (TENS) (LBF)	0
Calliper (HCAL) (IN)	16
Gamma Ray (GR) (GAPI)	100

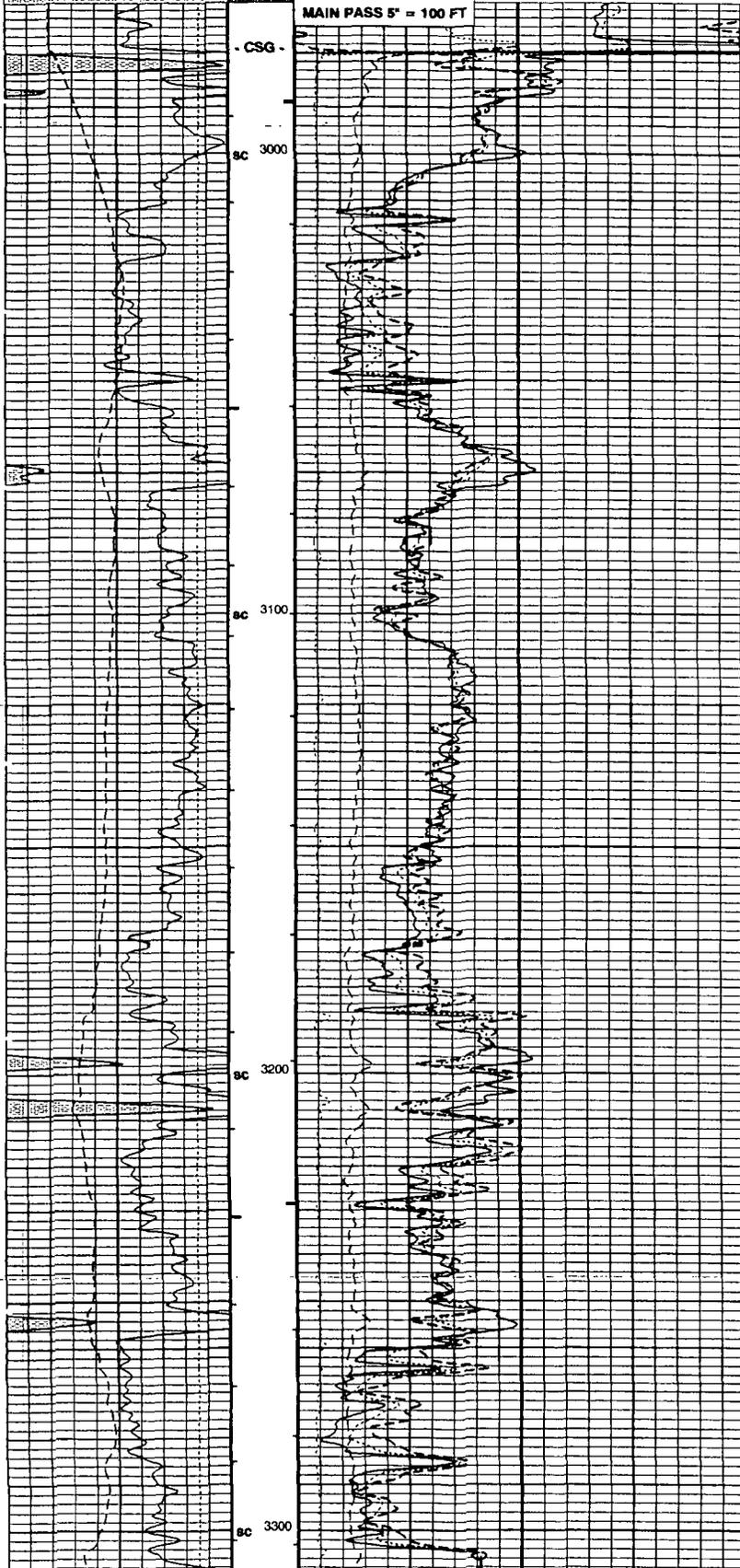
Stuck  
Stretch  
(STIT)  
(F)

2000

5000

Tool/Tot.  
Drag  
From DST  
to STIA

Not Used  
Cable  
Drag  
From STIA  
to STIT



Output DLIS Files

DEFAULT HILTD.016 FN:15 PRODUCER 18-Jun-2001 11:12

Speed Corrected - Depth Matched LOG

OP System Version: 9C1-303

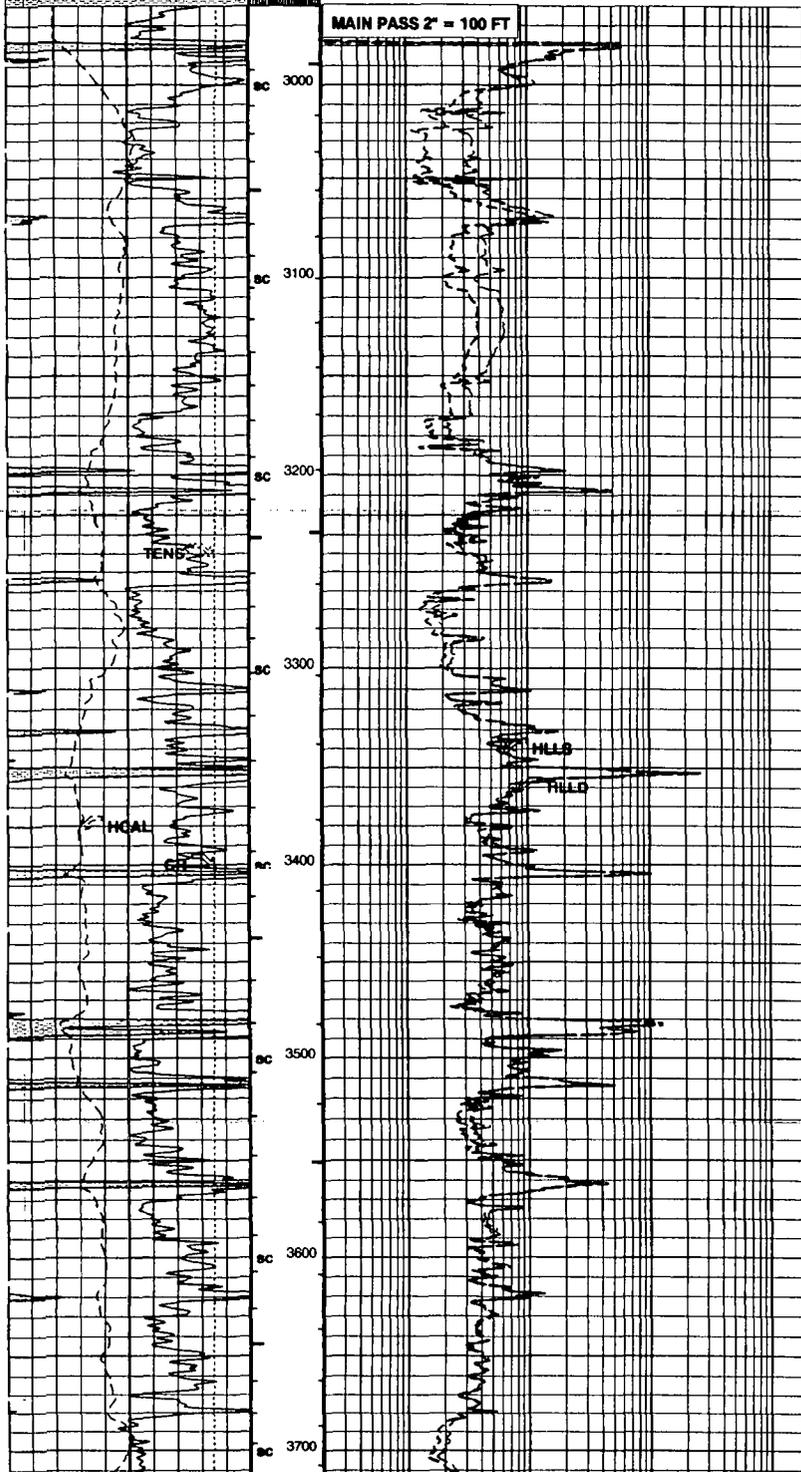
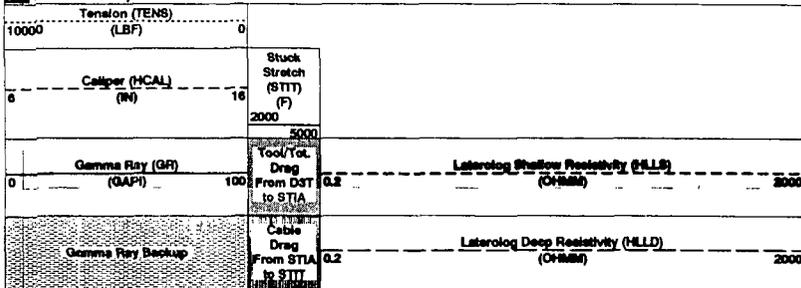
MCM

HILTB-FTB OP91-4p2 DTC-H OP91-4p2  
BSP OP91-4p2

PIP SUMMARY

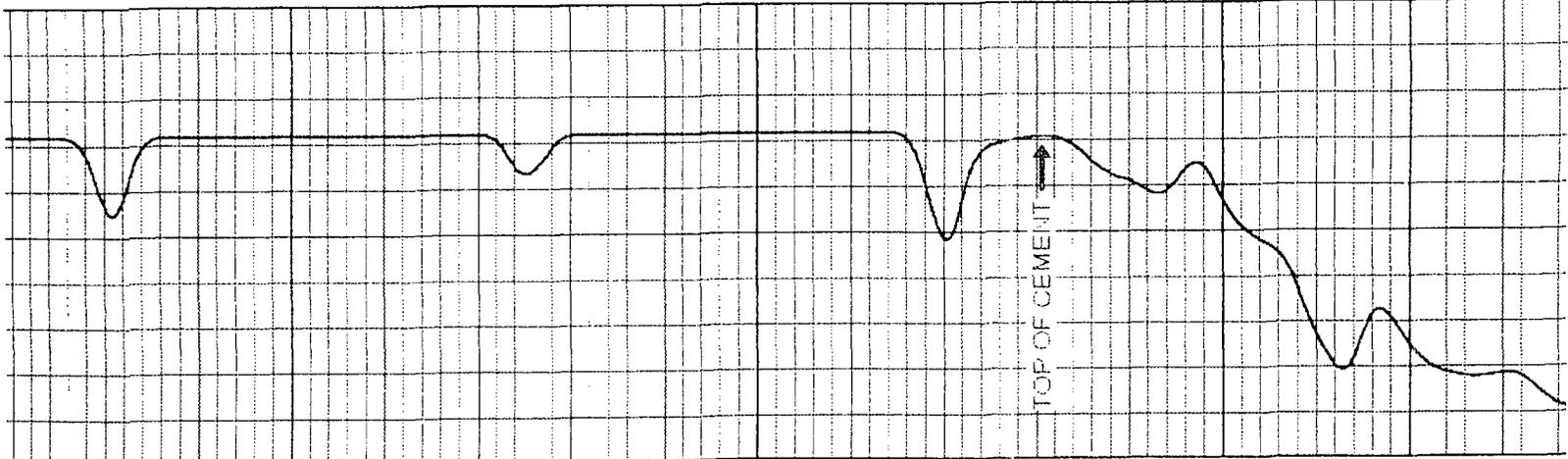
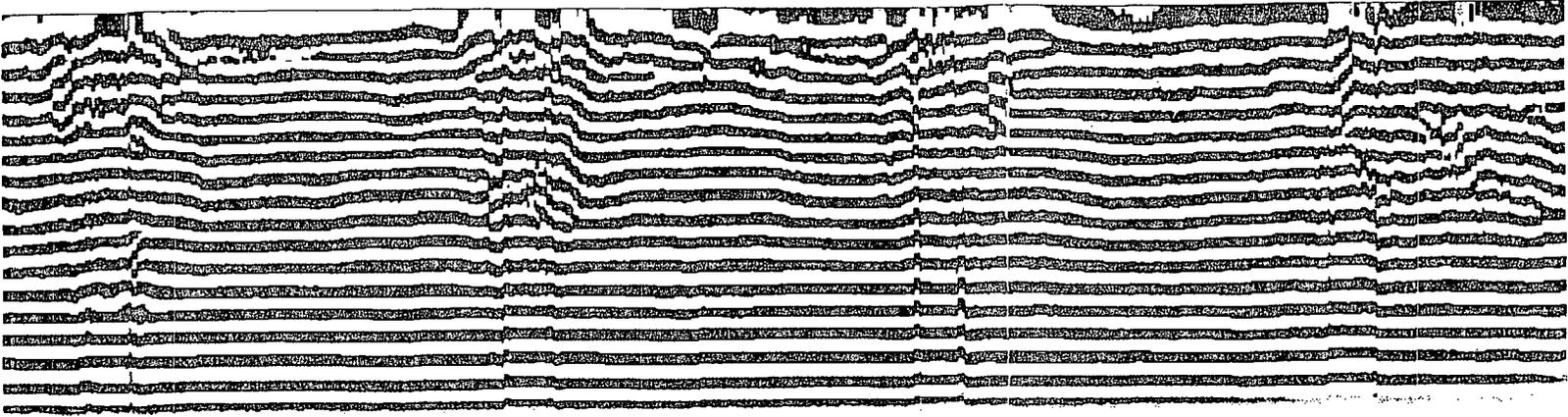
- Integrated Hole Volume Minor Pip Every 10 F3
- Integrated Hole Volume Major Pip Every 100 F3
- Integrated Cement Volume Minor Pip Every 10 F3
- Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S





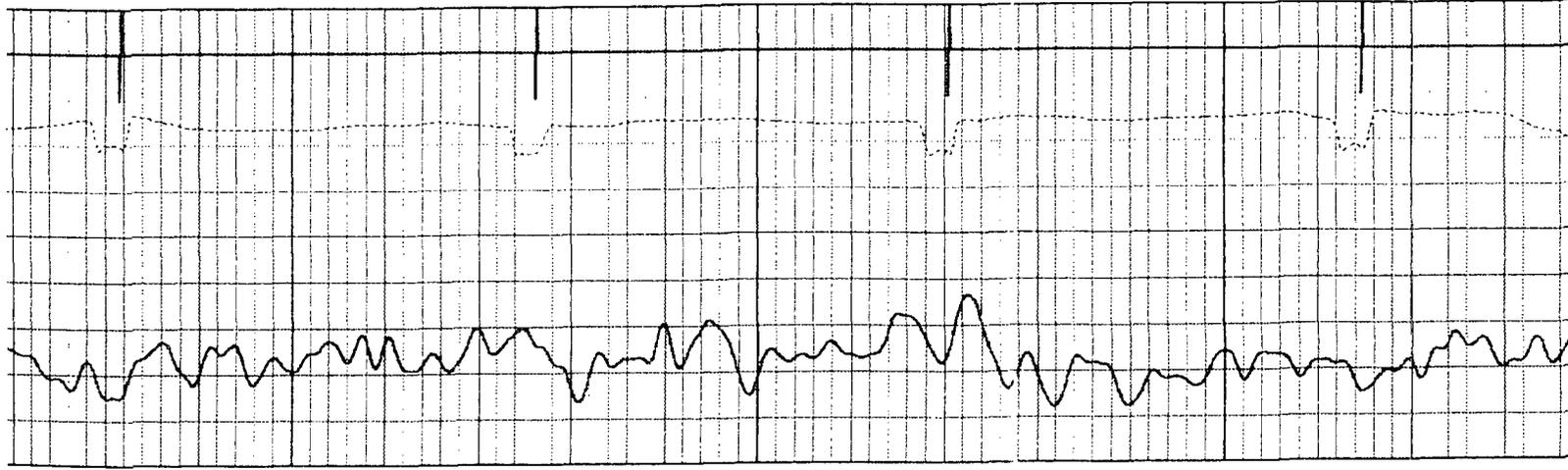
30-015-37627  
Center 18 SE #3



1500

1950

2000



Chimayo 16 State #3 30-015-NA  
Devon Energy C108; Delaware Open Hole Disposal Interval 3000 to 4200 feet  
Additional information request from William Jones per Email dated 7/7/10

Hi Will,

Attached in this document is additional information requested from your email dated 7/7/10. Let me know if you have any questions or need additional information.

Thanks,  
Ronnie  
7/20/10  
[Ronnie.Slack@dvn.com](mailto:Ronnie.Slack@dvn.com)

- a. What is the top and bottom depths of the Salado in this area?
- a. **Top of Salado ~150' to 1480'.**
- b. What formation and lithology is between the Salado and the top of the Delaware? Is it high stress or impermeable?
- b. **Castile-comprised of salt, anhydrite and limestone. Should be high stress and impermeable.**
- c. If there are any windmills within 1 mile of this location, please send a fresh water analysis for our file in this application.
- c. **Per visual from field folks, no windmills in area of disposal well. No fresh water wells reported within one mile of injection well per New Mexico office of State Engineer web site.**
- d. Over the Delaware disposal interval, please predict:
  - a. Productivity of hydrocarbons (send copy of mudlog or copy of a quick log analysis or results of offset production testing)
  - b. Insitu Water Salinity of the upper Bell Canyon Sands (from Rwa calculation and NaCl charts or other method)
- d. **(a. & b.) I will mail a mud log that includes a type log for the Cooter 16 ST 1H. The geologist has marked the log with the information you requested above.**
- e. For the Area of Review, it appears the Bone Spring or deeper horizontal wells were not included. Please look within the ½ mile Area of Review for any wells penetrating the Delaware and send well bore diagrams for all wells showing the cement placement and cement tops.
- e. **Area of Review Update**

**Cooter 16 ST 3H—(30-015-37627) This well has been added to the AOR well tabulation sheet (revised AOR tabulation attached). It was spud (6/8/10) after the C108 application was submitted. This well has now been drilled but waiting on completion to the Avalon Shale. A CBL was re-ran (7/17/10) and TOC noted on 5-1/2" production casing at 1980' per drilling report. A schemat is attached. The CBL will be submitted to the OCD.**

~~Chimayo 16 ST 2~~—(30-015-31782) Clarification on location in AOR map. This well was proposed years ago as offset to Chimayo 16 ST 1 Bone Spring, but never drilled.

Wells below have surface locations outside of AOR, but directional tracks under AOR

~~Cooter 16 ST 1H~~—(30-015-37625) The surface location is outside AOR. It was spud 4/2/10. A vertical hole was drilled to ~ 6360' and then directionally drilled from south to north. The Delaware formation was not penetrated within the AOR. TOC @ 2550' on 5-1/2" production casing. A schematic is attached.

~~Cooter 16 ST 2H~~—(30-015-37626) The surface location is outside AOR. It was spud 5/10/10. A vertical hole was drilled to ~6400' and then directionally drilled from south to north. It has just been perforated & fraced in the Avalon Shale. TOC @ 2324' on 5-1/2" production casing. The Delaware formation was not penetrated within the AOR. A schematic is attached.

~~Cooter 16 ST 4H~~—(30-015-37628) The surface location is outside of AOR. It was spud 7/5/10. A vertical hole is currently being drilled. Plans are to drill to ~6450, then directional drill horizontal to Avalon Shale. Proposed TOC on 5-1/2" casing is at 2450'. The Delaware formation will not be penetrated within the AOR.

~~Cooter 16 ST 5H~~—(30-015-37875) Planned surface location only, outside AOR. Plans are to drill & complete as other Cooter wells above.

~~Cooter 16 ST 6H~~—(30-015-37876) Planned surface location only, outside AOR. Plans are to drill & complete as other Cooter wells above.

f. Send a copy of the CBL for the Chimayo 16 State #1 – it is referred to in the application but not available on the Division's web site.

f. Chimayo 16 State #1 CBL—The TOC was reported at 3290', per radial analysis log dated 6/29/01. I will forward a copy to the OGD. Plans are to raise TOC in this well above the 8-5/8" intermediate shoe @ 2980'.

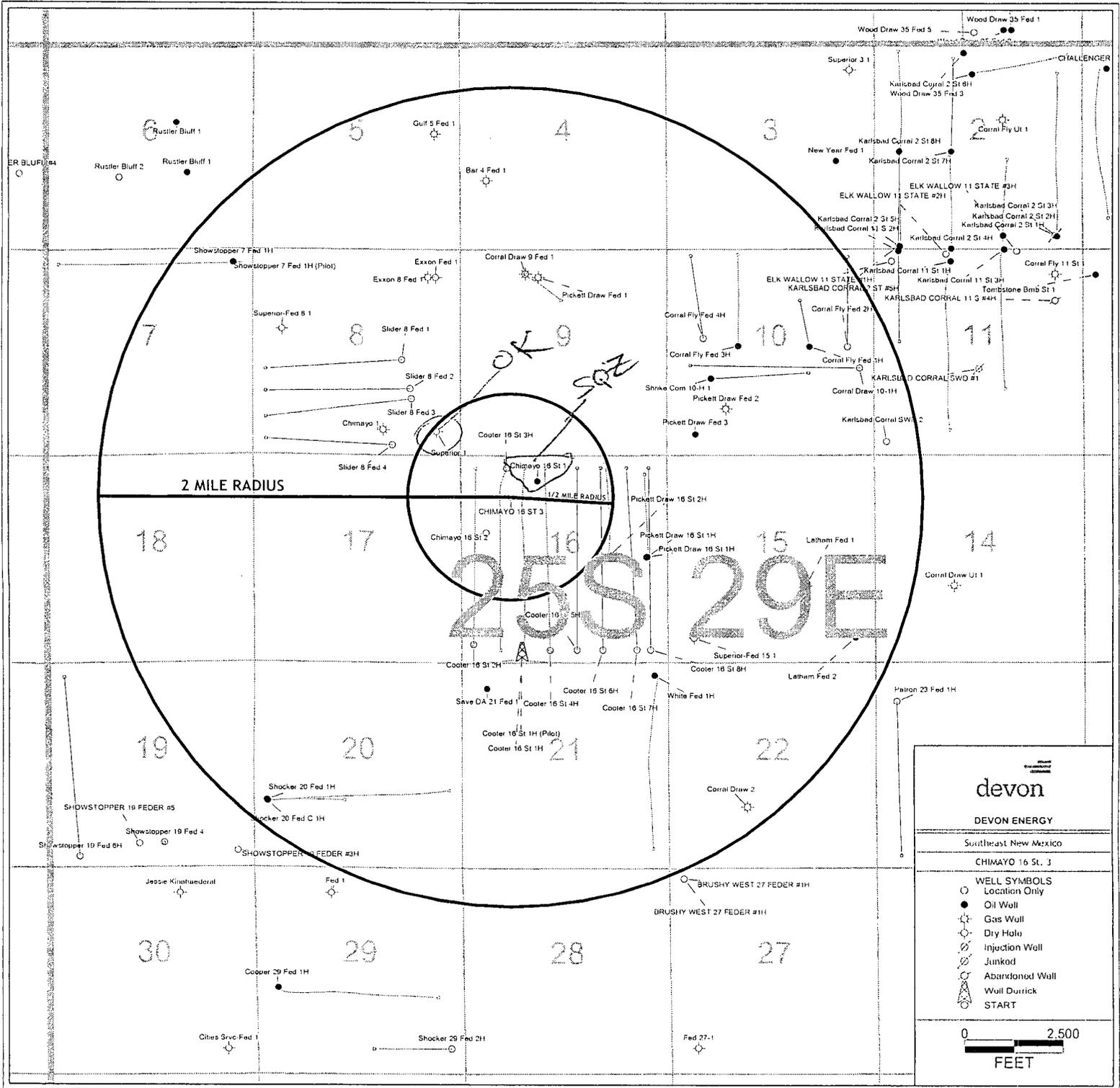
g. For the Notices:

a. The Surface owner is listed as the Oil Conservation Division. Please send proof of notice to the State Land Office if the State owns the surface of the proposed well site.

g(a). A copy of this application was certified mailed to The New Mexico State Land office on 7/12/10.

b. Many affected parties were noticed – our attorney/Landman here asks us to request that the applicant let us know (within the AOR) which tracts of land are identically owned and the owners of each tract. You could draw the Area of Review map and draw in these "tracts" on it and then list owners of each tract on another sheet of paper if convenient.

g(b). Per our Land department, attached is an AOR ownership map and ownership tabulation.



C108 ITEM VI--Well Tabulation in 1/2 Mile Review Area																	
Devon Energy Production Company, LP																	
Proposed Disposal Well: Chimayo 16 State #3																	
Updated: 7/16/10																	
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	Chimayo-16 State #3 (proposed drill well for (swd))	NA	Eddy	1610' FNL 1455' FWL	16	25S	29E	SWD	proposed	NA	NA	4200	4200	Bell & Cherry Canyon	Open Hole (3000-4200')	11-3/4" .42# @ 700' 8-5/8" .24# & 32# @ 3000'	600 sx / surface 950 sx / surface
Devon Energy Prod Co LP	Chimayo 16 ST #1	30-015-31781	Eddy	660' FNL 1980' FWL	16	25S	29E	Oil	Prod	5/27/01	7/19/01	9300	9254	Bone Spring	9118' - 9134'	13-3/8" .48# @ 600' 8-5/8" .32# @ 2980' 5-1/2" .17# @ 9300'	460 sx / surface 1000 sx / surface 1005 sx / 3290-cbl
Superior Oil Company	Superior Federal #1	30-015-03722	Eddy	660' FSL 660' FEL	8	25S	29E	Dry Hole	P&A	12/18/59	NA	2968	NA	NA	NA	8-5/8" .24# @ 251'	50 sx / surface
Devon Energy Prod Co LP	Cooler 16 ST 3H	30-015-37627	Eddy	330' FNL 1180' FWL	16	25S	29E	Oil	In Progress	6/8/10	NA	11589	11564	Avalon Shale	Not Perforated Well on completion	13-3/8" .48# @ 719' 9-5/8" .36# @ 2954' 5-1/2" .17# @ 11567'	690 sx / surface 1000 sx / surface 2350 sx / 1990-cbl

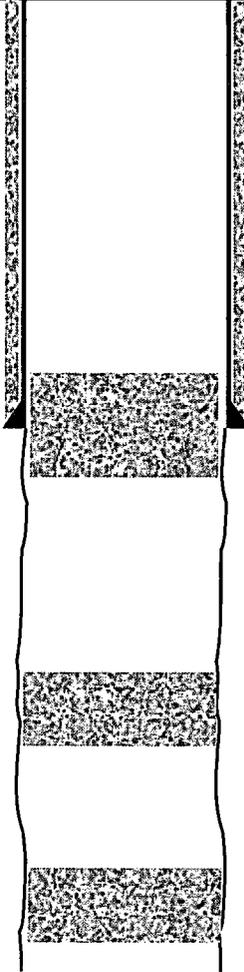
SOE

SUPERIOR OIL COMPANY

Well Name: SUPERIOR FEDERAL #1		Field: WILDCAT	
Location: 660' FSL & 660' FEL; SEC 8-T25S-R29E		County: EDDY	State: NM
Elevation: 2923'		Spud Date: 12/18/59	P&A Date: 12/06/60
API#: 30-015-03722	Prepared by: Ronnie Slack	Date: 5/7/10	Rev:

PLUGGED WELL IN REVIEW AREA  
PLUGGED & ABANDONED 12/6/60

8-5/8", 24#, @ 251'  
Cmt'd w/50 sx



25 SX CMT @ 300' - 225'

25 SX CMT @ 2050' - 1975'

25 SX CMT @ 2900' - 2825'

2,968' TD

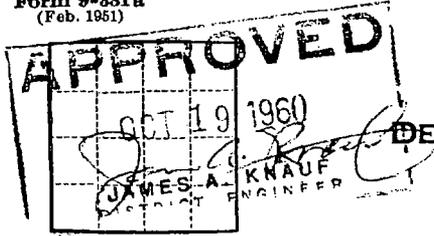


**SUPERIOR FED 1 P&A REPORT**

C O P Y

Budget Bureau No. 42-R358.4  
Approval expires 12-31-60.

Form 9-231a  
(Feb. 1951)



N. M. O. C. C. COPY  
(SUBMIT IN TRIPPLICATE)

Land Office \_\_\_\_\_  
Lease No. LC 070362  
Unit \_\_\_\_\_

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**RECEIVED**

OCT 27 1960

D. C. C.

**SUNDRY NOTICES AND REPORTS ON WELLS**

NOTICE OF INTENTION TO DRILL.....	SUBSEQUENT REPORT OF WATER SHUT-OFF.....	ARTESIA, OFFICE
NOTICE OF INTENTION TO CHANGE PLANS.....	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF.....	SUBSEQUENT REPORT OF ALTERING CASING.....	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL.....	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR.....	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....	SUBSEQUENT REPORT OF ABANDONMENT.....	X
NOTICE OF INTENTION TO PULL OR ALTER CASING.....	SUPPLEMENTARY WELL HISTORY.....	
NOTICE OF INTENTION TO ABANDON WELL.....		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Superior-Fed #1

Well No. \_\_\_\_\_ is located 660 ft. from SW line and 660 ft. from EW line of sec. \_\_\_\_\_

SESE of 8                      25S                      29E                      NMPM  
(1/4 Sec. and Sec. No.)      (Twp.)                      (Range)                      (Meridian)

Wildcat                      Eddy                      \_\_\_\_\_  
(Field)                      (County or Subdivision)                      (State or Territory)

The elevation of the derrick floor above sea level is 2923 ft.

**DETAILS OF WORK**

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

12-6-60 Total depth 2968. Plugged and abandoned as follows:

- 25 sacks neat cement from 2900 - 2825
- 25 sacks neat cement from 2050 - 1975
- 25 sacks neat cement from 300 - 225

**RECEIVED**

JAN 15 1960

U. S. GEOLOGICAL SURVEY

ARTESIA, NEW MEXICO

Will set proper marker and level site at later date and will notify the USGS office of same.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Neil H. Wills

Address Box 529

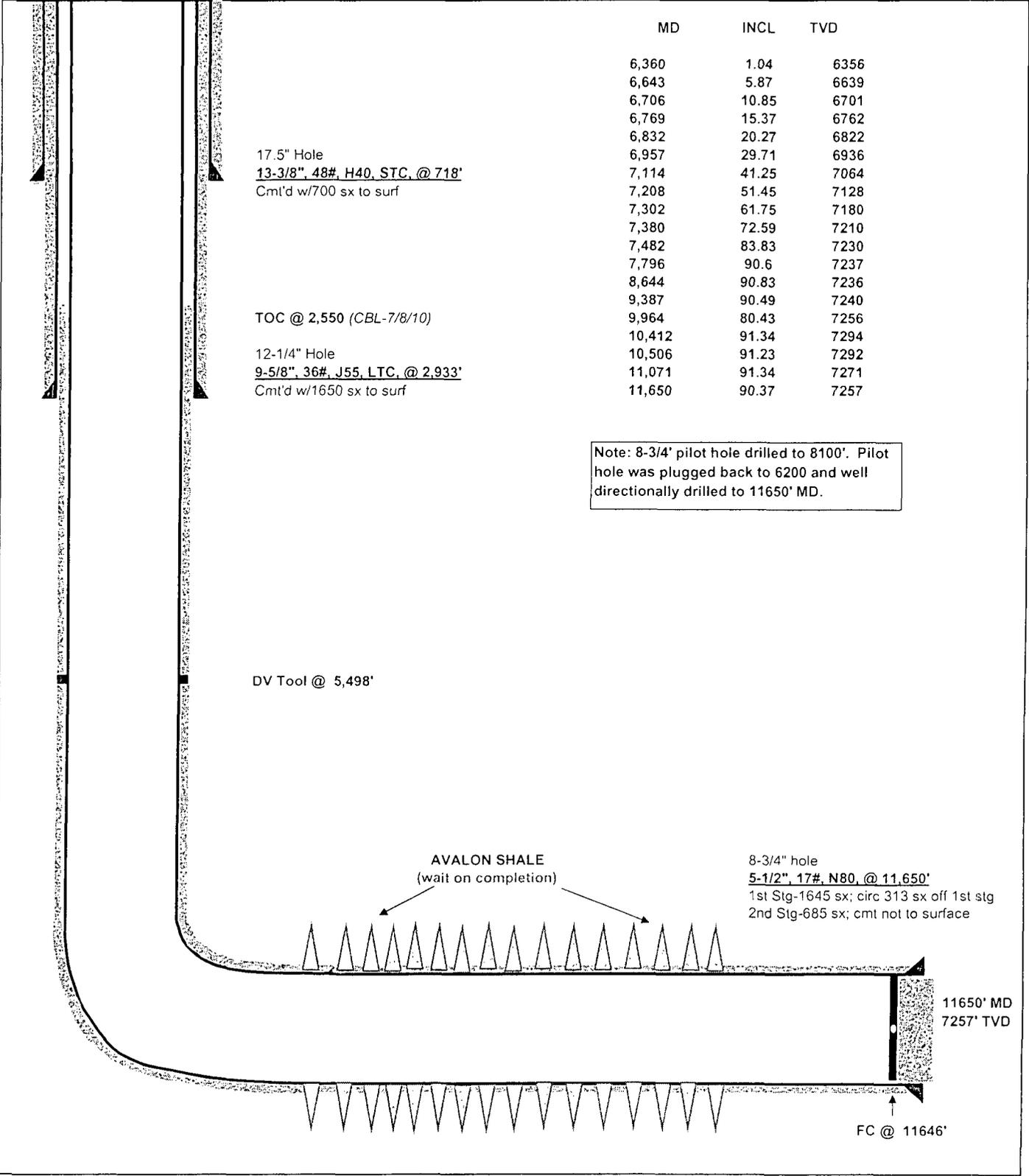
Carlsbad, New Mexico

By /s/ Robert Light

Title Agent

**DEVON ENERGY PRODUCTION COMPANY LP**

Well Name: COOTER 16 STATE 1H		Field: AVALON SHALE	
Location: 330' FSL & 1580' FWL; SEC 16-25S-29E		County: EDDY	State: NM
Elevation: 3025' KB; 3000' GL; 25' KB to GL		Spud Date: 4/2/10	Compl Date:
API#: 30-015-37625	Prepared by: Ronnie Slack	Date: 7/14/10	Rev:



MD	INCL	TVD
6,360	1.04	6356
6,643	5.87	6639
6,706	10.85	6701
6,769	15.37	6762
6,832	20.27	6822
6,957	29.71	6936
7,114	41.25	7064
7,208	51.45	7128
7,302	61.75	7180
7,380	72.59	7210
7,482	83.83	7230
7,796	90.6	7237
8,644	90.83	7236
9,387	90.49	7240
9,964	80.43	7256
10,412	91.34	7294
10,506	91.23	7292
11,071	91.34	7271
11,650	90.37	7257

17.5" Hole  
13-3/8", 48#, H40, STC, @ 718'  
 Cmt'd w/700 sx to surf

TOC @ 2,550 (CBL-7/8/10)

12-1/4" Hole  
9-5/8", 36#, J55, LTC, @ 2,933'  
 Cmt'd w/1650 sx to surf

Note: 8-3/4" pilot hole drilled to 8100'. Pilot hole was plugged back to 6200 and well directionally drilled to 11650' MD.

DV Tool @ 5,498'

AVALON SHALE  
 (wait on completion)

8-3/4" hole  
5-1/2", 17#, N80, @ 11,650'  
 1st Stg-1645 sx; circ 313 sx off 1st stg  
 2nd Stg-685 sx; cmt not to surface

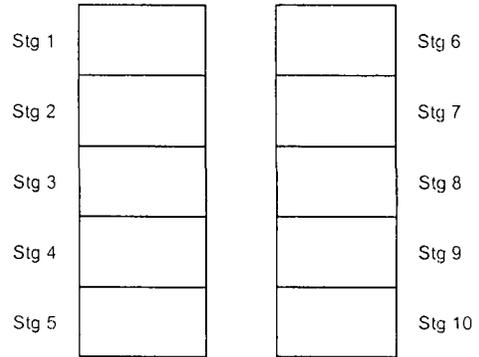
11650' MD  
 7257' TVD

FC @ 11646'

DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COOTER 16 STATE 3H		Field: AVALON SHALE	
Location: 330' FNL & 1190' FWL; SEC 16-T25S-R29E		County: EDDY	State: NM
Elevation: 3032' KB; 3007' GL; 25' KB to GL		Spud Date: 6/8/10	Compl Date:
API#: 30-015-37627	Prepared by: Ronnie Slack	Date: 7/14/10	Rev:

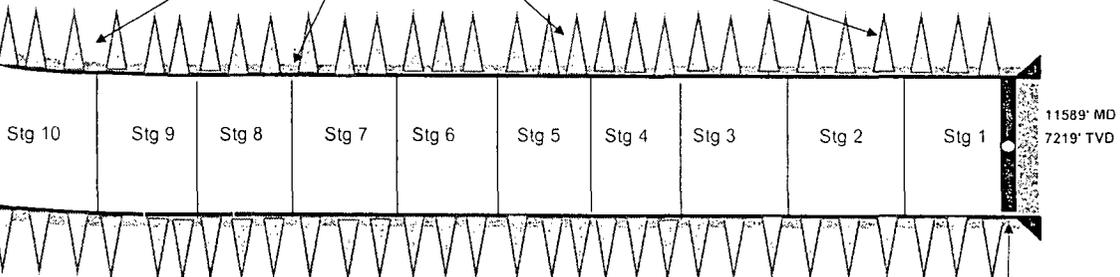
	MD	INCL	TVD
	6,509	0.78	6508
	6,637	10	6635
	6,731	20	6726
	6,856	30	6839
	7,045	40	6994
	7,170	52	7082
17.5" Hole	7,296	64	7149
<u>13-3/8", 48#, H40, STC, @ 719'</u>	7,389	74	7182
Cmt'd w/690 sx to surf	7,577	84	7215
	8,017	90	7229
	8,487	89	7223
	8,895	91	7225
	9,555	90	7230
	10,057	91	7225
TOC @ 1980' (CBL-7/17/10)	10,591	90	7225
	11,061	91	7223
12-1/4" Hole	11,589	92	7219
<u>9-5/8", 36#, J55, LTC, @ 2,954'</u>			
Cmt'd w/1000 sx to surf			



DV Tool @ 5,464'

AVALON SHALE  
(wait on completion)

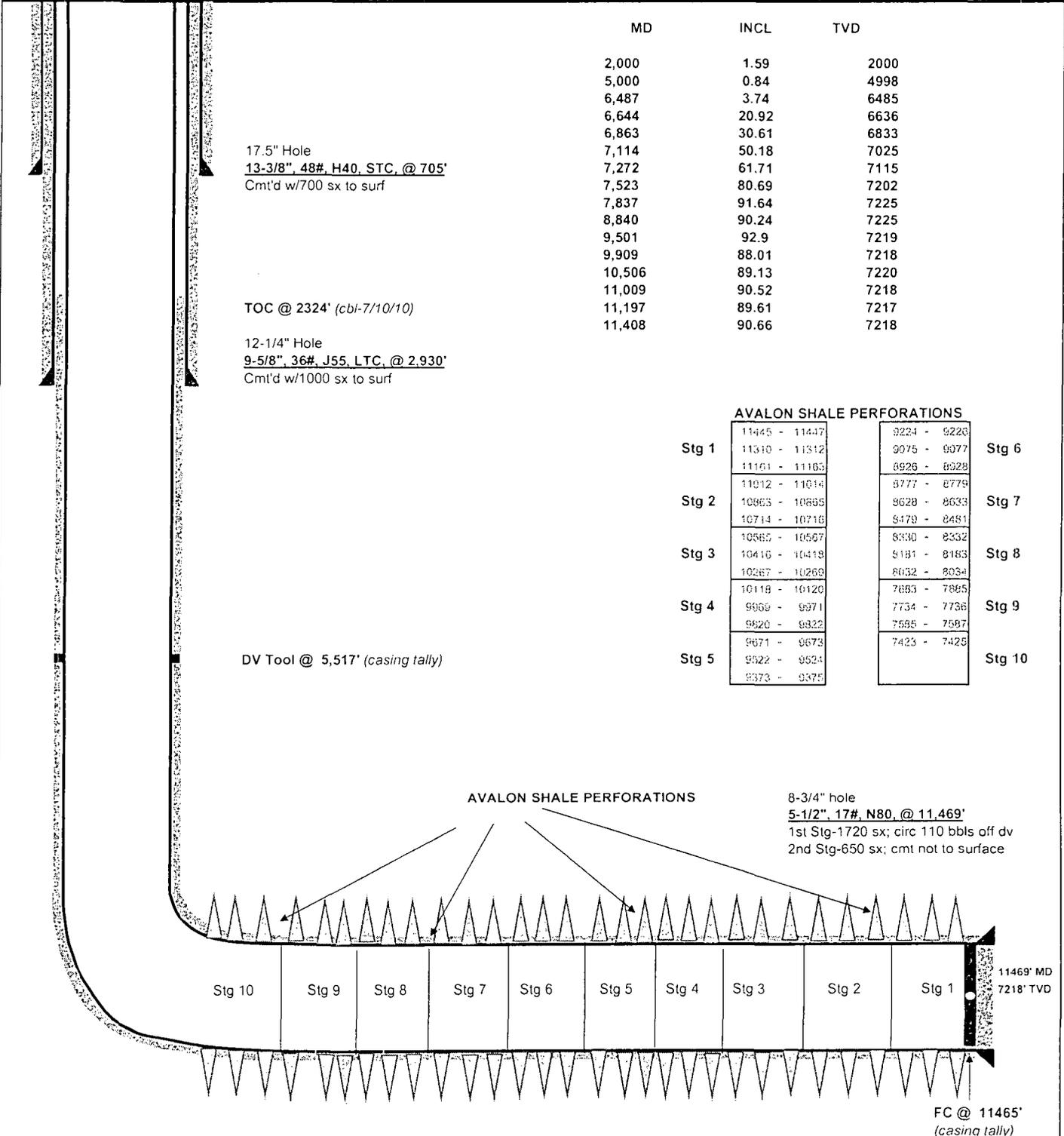
8-3/4" hole  
5-1/2", 17#, N80, BTC & LTC @ 11,567'  
1st Stg proposed cmt 1650 sx  
2nd Stg proposed cmt 700 sx



FC @ 11564'

**DEVON ENERGY PRODUCTION COMPANY LP**

Well Name: COOTER 16 STATE 2H		Field: AVALON SHALE	
Location: 480' FSL & 330' FWL; SEC 16-T255-R29E		County: EDDY	State: NM
Elevation: 3024' KB; 2999' GL; 25' KB-GL		Spud Date: 5/10/10	Compl Date:
API#: 30-015-37626	Prepared by: Ronnie Slack	Date: 7/16/10	Rev:



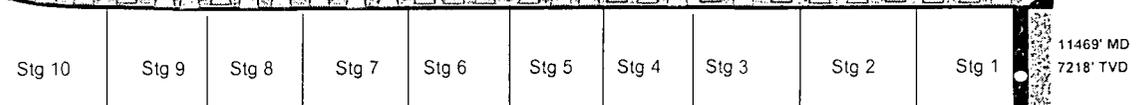
MD	INCL	TVD
2,000	1.59	2000
5,000	0.84	4998
6,487	3.74	6485
6,644	20.92	6636
6,863	30.61	6833
7,114	50.18	7025
7,272	61.71	7115
7,523	80.69	7202
7,837	91.64	7225
8,840	90.24	7225
9,501	92.9	7219
9,909	88.01	7218
10,506	89.13	7220
11,009	90.52	7218
11,197	89.61	7217
11,408	90.66	7218

**AVALON SHALE PERFORATIONS**

Stg	MD Range	TVD Range	Stg
Stg 1	11445 - 11447	9224 - 9223	Stg 6
	11310 - 11312	9075 - 9077	
	11161 - 11163	8926 - 8928	
Stg 2	11012 - 11014	8777 - 8779	Stg 7
	10863 - 10865	8628 - 8633	
Stg 3	10714 - 10716	8479 - 8481	Stg 8
	10565 - 10567	8330 - 8332	
	10416 - 10418	8181 - 8183	
Stg 4	10267 - 10269	8032 - 8034	Stg 9
	10118 - 10120	7883 - 7885	
	9969 - 9971	7734 - 7736	
Stg 5	9820 - 9822	7585 - 7587	Stg 10
	9671 - 9673	7436 - 7438	
	9522 - 9524	7287 - 7289	

**AVALON SHALE PERFORATIONS**

8-3/4" hole  
 5-1/2" 17# N80 @ 11,469'  
 1st Stg-1720 sx; circ 110 bbls off dv  
 2nd Stg-650 sx; cmt not to surface



FC @ 11465'  
 (casing tally)

**CHIMAYO 16 STATE #3**  
16-25S-29E; 1610 FNL & 1455' FWL  
C108 Application For Injection  
Operator Ownership within AOR  
Devon Energy Prod Co LP

6 5 4 3

Operator Ownership within AOR

7 8 9 10

NM 99147  
Devon Energy  
J. Richard Doty

NM-15303  
Oxy USA, Inc.  
EOG Resources

25S 29E

18 17 16 15

NM-99147  
Marbob Energy  
Chesapeake Energy

VB-1065  
Devon Energy  
Lime Rock Resources A.,L P

NM-96848  
Devon Energy  
Marbob Energy

V-4902  
Devon Energy  
J Richard Doty

19 20 21 22

**CHIMAYO 16 STATE #3**

16-25S-29E, 1610 FNL & 1455' FWL

C108 Application For Injection

Operator Ownership within AOR

Devon Energy Prod Co LP

Location	Lease No.	Ownership
8-T25S-R29E	NM 99147	Devon Energy ✓
8-T25S-R29E	NM 99147	J. Richard Doty ✓
9-T25S-R29E	NM 15303	Oxy USA, Inc. ✓
9-T25S-R29E	NM 15303	EOG Resources ✓
17-T25S-R29E	NM 99147	Marbob Energy ✓
17-T25S-R29E	NM 99147	Chesapeake Energy ✓
17-T25S-R29E	NM 96848	Devon Energy ✓
17-T25S-R29E	NM 96848	Marbob Energy ✓
16-T25S-R29E	V 4902	Devon Energy ✓
16-T25S-R29E	V 4902	J. Richard Doty ✓
16-T25S-R29E	VB 1065	Devon Energy ✓
16-T25S-R29E	VB 1065	Lime Rock Resources A, L.P. ✓ <i>Betty Bricker</i>

*need ~~DEVON~~  
OXY  
EOG  
S.L.O. — Surface owner*

May 12, 2010

Legal Notice

Devon Energy Production Company, LP, 20 North Broadway, Oklahoma City, OK 73102-8260 has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well, the Chimayo 16 State #3, is located 1610' FNL & 1455' FWL, Section 16, Township 25 South, Range 29 East, in Eddy County, New Mexico. Disposal water will be sourced from area wells producing from the Bone Spring formation. The disposal water will be injected into the Bell Canyon and Upper Cherry Canyon formations at a depth of 3000' to 4200' at a maximum surface pressure of 720 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 Jim Cromer of Devon Energy Corporation, 20 North Broadway, Oklahoma City, OK 73102-8260, or call (405) 228-4464.

**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:

May 12 2010

That the cost of publication is **\$54.69** and that payment thereof has been made and will be assessed as court costs.

*Kathy McCarroll*

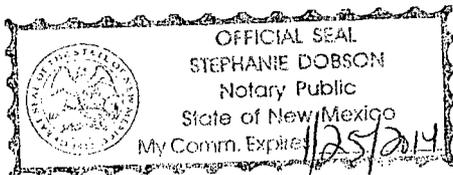
Subscribed and sworn to before me this

13<sup>th</sup> day of May, 2010

*Stephanie Dobson*

My commission Expires on 1/25/2014

Notary Public





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

405 235 3611 Phone  
www.devonenergy.com

May 24, 2010

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

RE: Form C-108, Application for Authorization to Inject  
Chimayo 16 State #3; (proposed drill well for SWD)  
Eddy County, NM  
Section 16, T25S, R29E

Ladies and Gentlemen:

Please find attached Devon Energy Production Company, LP's Form C-108, Application for Authorization to Inject. Devon's application proposes to drill the Chimayo 16 State #3 for SWD purposes. Produced waters from the Bone Spring formation will be injected into the Delaware Bell and Cherry Canyon formations in an open hole interval from 3000' to 4200'.

A copy of this application is being filed with the OCD-Artesia office.

If you have any questions, please contact Jim Cromer at (405)-228-4464 or myself at (405)-552-4615. Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in cursive script that reads "Ronnie Slack".

Ronnie Slack  
Operations Technician

RS/rs  
Enclosure

Section XIV--Proof of Notice to Leasehold Operators  
Devon Energy Prod Co LP  
C108 Application For Injection  
Proposed Well: CHIMAYO 16 STATE #3

Proof of Notice to Leasehold Operators within 1/2 mile of Chimayo 16 State #3

Bettis Brothers, Inc.  
500 W. Texas, Suite 830  
Midland, TX 79701  
S/2 Section 9

Certified receipt No.  
7009-3410-0000-3533-4938

J. Richard Doty  
803 University Avenue  
Oxford, MS 38655  
E/2 & SW/4 Section 16 & S/2 Section 8

Certified receipt No.  
7009-3410-0000-3533-4921

Lime Rock Resources  
1111 Bagby Street, Suite 4600  
Houston, TX 77002  
NE/4 Section 16

Certified receipt No.  
7009-3410-0000-3533-4914

Marbob Energy Corporation  
P.O. Box 227  
Artesia, NM 88211  
NE/4 Section 17

Certified receipt No.  
7009-3410-0000-3533-4907

Chesapeake Exploration Limited Parntership  
6100 North Western  
Oklahoma City, OK 73118  
NE/4 Section 17

Certified receipt No.  
7009-3410-0000-3533-4891

A copy of this application has been mailed to the above leasehold operator by certified mail, pertaining to Devon Energy's application for salt water disposal in the Chimayo 16 State #3.

Date Mailed: 5/25/10

Signature: Ronnie Slack

Date: 5/25/10

Ronnie Slack, Operations Technician  
Devon Energy Production Co., L.P.  
20 N. Broadway, Suite 1500  
Oklahoma City, OK 73102

Section XIV--Proof of Notice to Surface Land Owner  
Devon Energy Prod Co LP  
C108 Application For Injection  
Proposed Well: CHIMAYO 16 STATE #3

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

Oil Conservation Division  
1301 W. Grand Avenue  
Artesia, NM 88210

Certified receipt No.  
7009-3410-0000-3533-4884

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 Chimayo 16 State #3.

Date Mailed: 5/25/10

Signature: Ronnie Slack

Date: 5/25/10

Ronnie Slack, Operations Technician  
Devon Energy Production Co., L.P.  
20 N. Broadway, Suite 1500  
Oklahoma City, OK 73102

## **Jones, William V., EMNRD**

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**From:** Jones, William V., EMNRD  
**Sent:** Wednesday, August 18, 2010 12:11 PM  
**To:** 'Slack, Ronnie'  
**Cc:** Ezeanyim, Richard, EMNRD  
**Subject:** Disposal application from Devon: Chimayo 16 State #3 30-015-NA Delaware Open Hole Disposal Interval 3000 to 4200 feet

Ronnie:

Thank you for sending the previous requested information,

Today, I reviewed again this application and the material you sent

From your Landman's takeoff...it appears the following proofs of notice (or signed Waivers) are still needed:

Oxy  
EOG  
NM State Land Office.

You have sent already proofs of notice to the following "affected persons":

Bettis Brothers  
J. Richard Doty  
Lime Rock Res.  
Marbob  
Chesapeake

The permit will also have the requirement to raise the cement top in the Chimayo 16 State #1 (unless you have already squeezed this well?)

Take Care,

Will Jones  
New Mexico  
Oil Conservation Division  
[Images Contacts](#)

---

**From:** Jones, William V., EMNRD  
**Sent:** Wednesday, July 07, 2010 8:42 AM  
**To:** 'Slack, Ronnie'  
**Cc:** Ezeanyim, Richard, EMNRD; Dade, Randy, EMNRD; Gray, Darold, EMNRD; Reeves, Jacqueta, EMNRD  
**Subject:** Disposal application from Devon Energy Production Company, LP: Chimayo 16 State #3 30-015-NA Delaware Open Hole Disposal Interval 3000 to 4200 feet

Hello Ronnie:

Except for the wellbore diagrams, your Land department and Geologist or Log analysis expert could answer most of these questions.

- a. What is the top and bottom depths of the Salado in this area?
- o b. What formation and lithology is between the Salado and the top of the Delaware? Is it high stress or impermeable?
- c. If there are any windmills within 1 mile of this location, please send a fresh water analysis for our file in this application.

## Jones, William V., EMNRD

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**From:** Slack, Ronnie [Ronnie.Slack@dvn.com]  
**Sent:** Wednesday, August 18, 2010 1:16 PM  
**To:** Jones, William V., EMNRD  
**Cc:** Crowdis, Brad; Cromer, James  
**Subject:** RE: Disposal application from Devon: Chimayo 16 State #3 30-015-NA Delaware Open Hole Disposal Interval 3000 to 4200 feet  
**Attachments:** Leasehold notification.pdf

Hi Will:

I sent notification out a while back to Oxy USA, New Mexico State Land Office, and EOG, but forgot to mention it to you. Please see attached pdf file of notification. On the Chimayo 16 State #1 we will be raising TOC +/- 500' above the 8-5/8" casing shoe @ 2980'. We were planning on doing this work pending C108 and APD approval of our proposed Chimayo 16 State #3 if that is acceptable.

Let me know if you need anything else.

Thank you,

*Ronnie Slack*

Operations Technician  
Devon Energy Corporation  
CT 3.033  
(405) 552-4615 (office)  
(405) 552-1415 (fax)  
Email: Ronnie.Slack@dvn.com

---

**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Wednesday, August 18, 2010 1:11 PM  
**To:** Slack, Ronnie  
**Cc:** Ezeanyim, Richard, EMNRD  
**Subject:** Disposal application from Devon: Chimayo 16 State #3 30-015-NA Delaware Open Hole Disposal Interval 3000 to 4200 feet

Ronnie:

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NM State Land Office.

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J. Richard Doty  
Lime Rock Res.  
Marbob  
Chesapeake

The permit will also have the requirement to raise the cement top in the Chimayo 16 State #1 (unless you have already squeezed this well?)

Take Care,

Will Jones  
New Mexico  
Oil Conservation Division  
[Images](#) [Contacts](#)

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**From:** Jones, William V., EMNRD  
**Sent:** Wednesday, July 07, 2010 8:42 AM  
**To:** 'Slack, Ronnie'  
**Cc:** Ezeanyim, Richard, EMNRD; Dade, Randy, EMNRD; Gray, Darold, EMNRD; Reeves, Jacqueta, EMNRD  
**Subject:** Disposal application from Devon Energy Production Company, LP: Chimayo 16 State #3 30-015-NA Delaware Open Hole Disposal Interval 3000 to 4200 feet

Hello Ronnie:

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- a. What is the top and bottom depths of the Salado in this area?
- b. What formation and lithology is between the Salado and the top of the Delaware? Is it high stress or impermeable?
- c. If there are any windmills within 1 mile of this location, please send a fresh water analysis for our file in this application.
- d. Over the Delaware disposal interval, please predict:
  - a. Productivity of hydrocarbons (send copy of mudlog or copy of a quick log analysis or results of offset production testing)
  - b. Insitu Water Salinity of the upper Bell Canyon Sands (from Rwa calculation and NaCl charts or other method)
- e. For the Area of Review, it appears the Bone Spring or deeper horizontal wells were not included. Please look within the ½ mile Area of Review for any wells penetrating the Delaware and send well bore diagrams for all wells showing the cement placement and cement tops.
- f. Send a copy of the CBL for the Chimayo 16 State #1 – it is referred to in the application but not available on the Division's web site.
- g. For the Notices:
  - a. The Surface owner is listed as the Oil Conservation Division. Please send proof of notice to the State Land Office if the State owns the surface of the proposed well site.
  - b. Many affected parties were noticed – our attorney/Landman here asks us to request that the applicant let us know (within the AOR) which tracts of land are identically owned and the owners of each tract. You could draw the Area of Review map and draw in these "tracts" on it and then list owners of each tract on another sheet of paper if convenient.

Thank You in advance for this,

William V. Jones, P.E.  
Engineering, Oil Conservation Division  
1220 South St. Francis Drive, Santa Fe, NM 87505  
Tel 505.476.3448 ~ Fax 505.476.3462



SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p><i>James Barnett</i></p> <p>B. Received by (Printed Name) C. Date of Delivery</p> <p><i>James Barnett</i></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If YES, enter delivery address below:</p>
<p>1. Article Addressed to:</p> <p>OXY USA, Inc. Attn: Colin Barnett P.O. Box 4294 Houston, TX 77210</p>	<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>
<p>2. Article Number (Transfer from service label) <b>7009 3410 0000 3533 4860</b></p>	<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540</p>	

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p><i>[Signature]</i></p> <p>B. Received by (Printed Name) C. Date of Delivery</p> <p><i>[Signature]</i></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If YES, enter delivery address below:</p> <p><b>JUL 15 2010</b></p>
<p>1. Article Addressed to:</p> <p>New Mexico State Land Office 310 Old Santa Fe Trail Santa Fe, NM 87504</p>	<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>
<p>2. Article Number (Transfer from service label) <b>7009 3410 0000 3533 4853</b></p>	<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-15</p>	

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p><i>B. Bell</i></p> <p>B. Received by (Printed Name) C. Date of Delivery</p> <p><i>B. Bell</i> <i>6/24/10</i></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If YES, enter delivery address below:</p>
<p>1. Article Addressed to:</p> <p>EOG Resources Attn. Pat Tower P.O. Box 2267 Midland, TX 79702</p>	<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>
<p>2. Article Number (Transfer from service label) <b>7009 3410 0000 3533 4877</b></p>	<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540</p>	

## Jones, William V., EMNRD

---

**From:** Jones, William V., EMNRD  
**Sent:** Wednesday, July 07, 2010 8:42 AM  
**To:** 'Slack, Ronnie'  
**Cc:** Ezeanyim, Richard, EMNRD; Dade, Randy, EMNRD; Gray, Darold, EMNRD; Reeves, Jacqueta, EMNRD  
**Subject:** Disposal application from Devon Energy Production Company, LP: Chimayo 16 State #3 30-015-NA Delaware Open Hole Disposal Interval 3000 to 4200 feet

Hello Ronnie:

Except for the wellbore diagrams, your Land department and Geologist or Log analysis expert could answer most of these questions.

- a. What is the top and bottom depths of the Salado in this area?
- b. What formation and lithology is between the Salado and the top of the Delaware? Is it high stress or impermeable?
- c. If there are any windmills within 1 mile of this location, please send a fresh water analysis for our file in this application.
- d. Over the Delaware disposal interval, please predict:
  - a. Productivity of hydrocarbons (send copy of mudlog or copy of a quick log analysis or results of offset production testing)
  - b. Insitu Water Salinity of the upper Bell Canyon Sands (from Rwa calculation and NaCl charts or other method)
- e. For the Area of Review, it appears the Bone Spring or deeper horizontal wells were not included. Please look within the ½ mile Area of Review for any wells penetrating the Delaware and send well bore diagrams for all wells showing the cement placement and cement tops.
- f. Send a copy of the CBL for the Chimayo 16 State #1 – it is referred to in the application but not available on the Division's web site.
- g. For the Notices:
  - a. The Surface owner is listed as the Oil Conservation Division. Please send proof of notice to the State Land Office if the State owns the surface of the proposed well site.
  - b. Many affected parties were noticed – our attorney/Landman here asks us to request that the applicant let us know (within the AOR) which tracts of land are identically owned and the owners of each tract. You could draw the Area of Review map and draw in these "tracts" on it and then list owners of each tract on another sheet of paper if convenient.

Thank You in advance for this,

William V. Jones, P.E.  
Engineering, Oil Conservation Division  
1220 South St. Francis Drive, Santa Fe, NM 87505  
Tel 505.476.3448 ~ Fax 505.476.3462



## Jones, William V., EMNRD

---

**From:** Slack, Ronnie [Ronnie.Slack@dvn.com]  
**Sent:** Monday, August 09, 2010 7:48 AM  
**To:** Jones, William V., EMNRD  
**Cc:** Crowdis, Brad  
**Subject:** RE: Disposal application from Devon Energy Production Company, LP: Chimayo 16 State #3 30-015-NA Delaware Open Hole Disposal Interval 3000 to 4200 feet

Good morning, Will.

I know you're hooked up, but I wanted to check and see how the Chimayo 16 State #3 C108 is coming. Let us know if you have questions.

Thanks,

*Ronnie Slack*

Operations Technician  
Devon Energy Corporation  
CT 3.033  
(405) 552-4615 (office)  
(405) 552-1415 (fax)  
Email: Ronnie.Slack@dvn.com

---

**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Tuesday, July 20, 2010 11:41 AM  
**To:** Slack, Ronnie  
**Cc:** Crowdis, Brad; Cromer, James  
**Subject:** RE: Disposal application from Devon Energy Production Company, LP: Chimayo 16 State #3 30-015-NA Delaware Open Hole Disposal Interval 3000 to 4200 feet

Ronnie:  
Thank you for this, very professional exhibits.

I have a big hearing this week - where some of your competitors are fighting over horizontal well tracts - but hopefully will get this permit to you folks soon thereafter.

Will Jones  
New Mexico  
Oil Conservation Division  
[Images](#) [Contacts](#)

---

**From:** Slack, Ronnie [mailto:Ronnie.Slack@dvn.com]  
**Sent:** Tuesday, July 20, 2010 8:50 AM  
**To:** Jones, William V., EMNRD  
**Cc:** Crowdis, Brad; Cromer, James; Slack, Ronnie  
**Subject:** RE: Disposal application from Devon Energy Production Company, LP: Chimayo 16 State #3 30-015-NA Delaware Open Hole Disposal Interval 3000 to 4200 feet

Hello Will,

I've attached a pdf file with information that hopefully will help with your questions below from your email dated 7/7/10.

I am sending out in the mail today to you the following and copying the OCD with the bond logs mentioned here.

Cooter 16 ST 1H (30-015-37625); mud log with type log  
Chimayo ST #1 (30-015-31781); Radial analysis log

Cooter 16 ST 3H (30-015-37627) CBL

Let me know if you have further questions or need additional information.

Have a good day,

*Ronnie Slack*

Operations Technician  
Devon Energy Corporation  
CT 3.033  
(405) 552-4615 (office)  
(405) 552-1415 (fax)  
Email: [Ronnie.Slack@dvn.com](mailto:Ronnie.Slack@dvn.com)

---

**From:** Jones, William V., EMNRD [<mailto:William.V.Jones@state.nm.us>]  
**Sent:** Wednesday, July 07, 2010 9:42 AM  
**To:** Slack, Ronnie  
**Cc:** Ezeanyim, Richard, EMNRD; Dade, Randy, EMNRD; Gray, Darold, EMNRD; Reeves, Jacqueta, EMNRD  
**Subject:** Disposal application from Devon Energy Production Company, LP: Chimayo 16 State #3 30-015-NA Delaware Open Hole Disposal Interval 3000 to 4200 feet

Hello Ronnie:

Except for the wellbore diagrams, your Land department and Geologist or Log analysis expert could answer most of these questions.

- a. What is the top and bottom depths of the Salado in this area?
- b. What formation and lithology is between the Salado and the top of the Delaware? Is it high stress or impermeable?
- c. If there are any windmills within 1 mile of this location, please send a fresh water analysis for our file in this application.
- d. Over the Delaware disposal interval, please predict:
  - a. Productivity of hydrocarbons (send copy of mudlog or copy of a quick log analysis or results of offset production testing)
  - b. Insitu Water Salinity of the upper Bell Canyon Sands (from Rwa calculation and NaCl charts or other method)
- e. For the Area of Review, it appears the Bone Spring or deeper horizontal wells were not included. Please look within the ½ mile Area of Review for any wells penetrating the Delaware and send well bore diagrams for all wells showing the cement placement and cement tops.
- f. Send a copy of the CBL for the Chimayo 16 State #1 – it is referred to in the application but not available on the Division's web site.
- g. For the Notices:
  - a. The Surface owner is listed as the Oil Conservation Division. Please send proof of notice to the State Land Office if the State owns the surface of the proposed well site.
  - b. Many affected parties were noticed – our attorney/Landman here asks us to request that the applicant let us know (within the AOR) which tracts of land are identically owned and the owners of each tract. You could draw the Area of Review map and draw in these "tracts" on it and then list owners of each tract on another sheet of paper if convenient.

Thank You in advance for this,

William V Jones, P.E.  
Engineering, Oil Conservation Division  
1220 South St. Francis Drive, Santa Fe, NM 87505  
Tel 505.476.3448 ~ Fax 505.476.3462

Injection Permit Checklist (06/24/2010)

Case \_\_\_\_\_ R- \_\_\_\_\_ SWD 1235 WFX \_\_\_\_\_ PMX \_\_\_\_\_ IPI \_\_\_\_\_ Permit Date \_\_\_\_\_ UIC Otr (A/B/O)

# Wells 1 Well Name: CHIMAYO 16 ST #3

API Num: (30-) NA Spud Date: NA New/Old: N (UIC primacy March 7, 1982)

Footages 1610 FNL/1455 FWL Unit F Sec 16 Tsp 255 Rge 29E County EDDY

Operator: DEVON Energy Production Corp, LP Contact: Ronnie Slack / Jim Gomez

Operator Address: 20 N. BWAY, SUITE 1500 OKC, OK 73102

OGRID: 6137 RULE 5.9 Compliance (Wells) 5/1792 (Finan Assur) OK IS 5.9 OK? OK

Well File Reviewed  Current Status: New Well Planned

General Location: Numerous ARIZ wells in THIS section (12 miles. of Corvina)

Diagrams: Before Conversion  After Conversion  Elogs in Imaging File: New well

Planned Work to Well: Drill / inject

	Existing	Surface	Sizes		Setting Depths	Cement Sx or Cf	Cement Top and Determination Method
			Hole	Pipe			
<u>New</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>14 3/4</u>	<u>10 1/4</u>	<u>700</u>	<u>600</u>	<u>CIRC Planned</u>
<u>New</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>11</u>	<u>8 5/8</u>	<u>300'</u>	<u>950</u>	<u>CIRC Planned</u>
<u>New</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>7 7/8</u>	<u>5 1/2</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>

DV Tool \_\_\_\_\_ Liner \_\_\_\_\_ Open Hole 300-4200 Total Depth 4200 Deviated Hole? NO

Intervals: Depths, Ft. Formation Producing?

Formation Above			
Formation Above	<u>2980</u>	<u>Del Top.</u>	
Injection TOP:	<u>3000</u>	<u>bell C.</u>	Max. PSI <u>600</u> Open Hole? <input checked="" type="checkbox"/> Perfs? <input type="checkbox"/>
Injection BOTTOM:	<u>4200</u>	<u>Cherry C.</u>	Tubing Size <u>2 7/8</u> Packer Depth
Formation Below	<u>5175</u>	<u>Arroyo Top.</u>	
Formation Below			

Sensitive Areas: Capitan Reef Chimayo Salt Depths 150 - 2710

Potash Area (R-111-P) \_\_\_\_\_ Potash Lessee \_\_\_\_\_ Noticed? \_\_\_\_\_ (WIPP)? \_\_\_\_\_ Noticed? \_\_\_\_\_

Fresh Water: Depths: \_\_\_\_\_ Formation \_\_\_\_\_ Wells? NO Analysis? \_\_\_\_\_ Affirmative Statement

Disposal Fluid Sources: B.S. ARIZ wells Analysis?

Disposal Interval Production Potential/Testing: See MUD LOG Analysis

Notice: Newspaper (Y/N)  Surface Owner SDO Mineral Owner(s) \_\_\_\_\_

RULE 26.7(A) Affected Parties: See Reply BY Landman

Area of Review: Adequate Map (Y/N)  and Well List (Y/N)

Active Wells 2 Num Repairs 1 Producing in Injection Interval in AOR ?

P&A Wells 1 Num Repairs 0 All Wellbore Diagrams Included? ST #1

Questions/Required Work: REPAIRS ON 3722 OR GIVE STRONG RELATIONSHIP

How's well path? Sand Blower PLAT  
(SOUTH TO NORTH)

Send EVIDENCE of Last NOTICE

Request Sent \_\_\_\_\_ Reply: \_\_\_\_\_