

DATE IN 6.9.11	SUSPENSE	ENGINEER W.V.J.	LOGGED IN 6.9.11	TYPE SWD	APP NO 1116052871
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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

Chimayo 16 State #1

**ADMINISTRATIVE APPLICATION CHECKLIST**

30-015-31781

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

**Application Acronyms:**

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

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
- [A] Location - Spacing Unit - Simultaneous Dedication  
 NSL  NSP  SD
- Check One Only for [B] or [C]
- [B] Commingling - Storage - Measurement  
 DHC  CTB  PLC  PC  OLS  OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX  PMX  SWD  IPI  EOR  PPR
- [D] Other: Specify \_\_\_\_\_

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

[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                      Ronnie Slack                      Operations Technician                      6-6-11  
 Print or Type Name                      Signature                      Title                      Date

\_\_\_\_\_  
 e-mail Address

2011 JUN - 8 P 2:56  
 RECEIVED OOD



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

405 235 3611 Phone  
www.devonenergy.com

June 6, 2011

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 #1; API 30-015-31781  
Eddy County, NM  
Section 16, T25S, R29E

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 Chimayo 16 State #1 over to SWD. Produced waters from the Bone Spring formation will be injected into the Delaware formation from a gross interval of 3024' to 4472'.

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  Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval?  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  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: 6-6-11

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

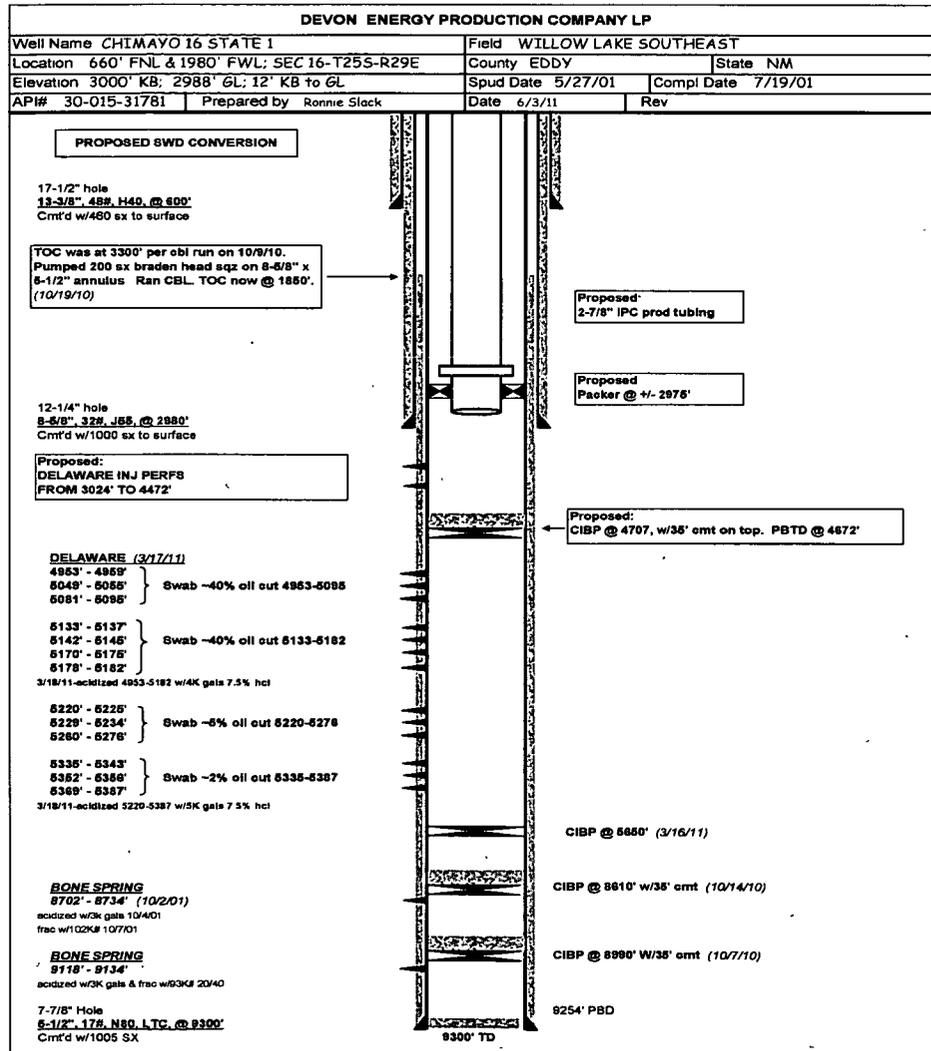
WELL NAME & NUMBER: CHIMAYO 16 STATE #1

WELL LOCATION: 660' FNL & 1980' FWL C 16 Sec 16 T25S T25S R29E R29E  
 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#, @ 600'

Cemented with: 460 sx. or \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: Surface Method Determined: Circ. cement

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 8-5/8, 32#, @ 2980'

Cemented with: 1000 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", 17#, @ 9300'

Cemented with: 1005 + 200(sqz) sx. or \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: 1850 Method Determined: CBL

Total Depth: 9300'

Injection Interval (Perforated)

3024' feet to 4472'

(Perforated or Open Hole; indicate which)

**INJECTION WELL DATA SHEET**

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

Type of Packer: 5-1/2" IPC

Packer Setting Depth: +/- 2975' \_\_\_\_\_

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? Completed as Bone Spring producer.

2. Name of the Injection Formation: DELAWARE

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.

Bone Spring 9134-9118; 8734-8702'. CIBP @ 8900 W/35' cement. CIBP @ 8610' W/35' cement. Delaware 4953'-5387'. Swab tested, but not produced. Proposed CIBP @ 4707' w/35' cement

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'. Brushy Canyon @ 5175'; Bone Spring @ 6790'.

**DEVON ENERGY PRODUCTION COMPANY LP**

Well Name: CHIMAYO 16 STATE 1		Field: WILLOW LAKE SOUTHEAST	
Location: 660' FNL & 1980' FWL; SEC 16-T25S-R29E		County: EDDY	State: NM
Elevation: 3000' KB; 2988' GL; 12' KB to GL		Spud Date: 5/27/01	Compl Date: 7/19/01
API#: 30-015-31781	Prepared by: Ronnie Slack	Date: 6/3/11	Rev:

**PROPOSED SWD CONVERSION**

17-1/2" hole  
13-3/8", 48#, H40, @ 600'  
 Cmt'd w/460 sx to surface.

TOC was at 3300' per cbl run on 10/9/10.  
 Pumped 200 sx braden head sqz on 8-5/8" x  
 5-1/2" annulus. Ran CBL. TOC now @ 1850'.  
 (10/19/10)

12-1/4" hole  
8-5/8", 32#, J55, @ 2980'  
 Cmt'd w/1000 sx to surface

**Proposed:**  
**DELAWARE INJ PERFS**  
**FROM 3024' TO 4472'**

**DELAWARE (3/17/11)**

4953' - 4959' }  
 5049' - 5055' } Swab ~40% oil cut 4953-5095  
 5081' - 5095' }

5133' - 5137' }  
 5142' - 5145' } Swab ~40% oil cut 5133-5182  
 5170' - 5175' }  
 5178' - 5182' }

3/18/11-acidized 4953-5182 w/4K gals 7.5% hcl

5220' - 5225' }  
 5229' - 5234' } Swab ~5% oil cut 5220-5276  
 5260' - 5276' }

5335' - 5343' }  
 5352' - 5356' } Swab ~2% oil cut 5335-5387  
 5369' - 5387' }

3/18/11-acidized 5220-5387 w/5K gals 7.5% hcl

**BONE SPRING**

8702' - 8734' (10/2/01)

acidized w/3k gals 10/4/01  
 frac w/102K# 10/7/01

**BONE SPRING**

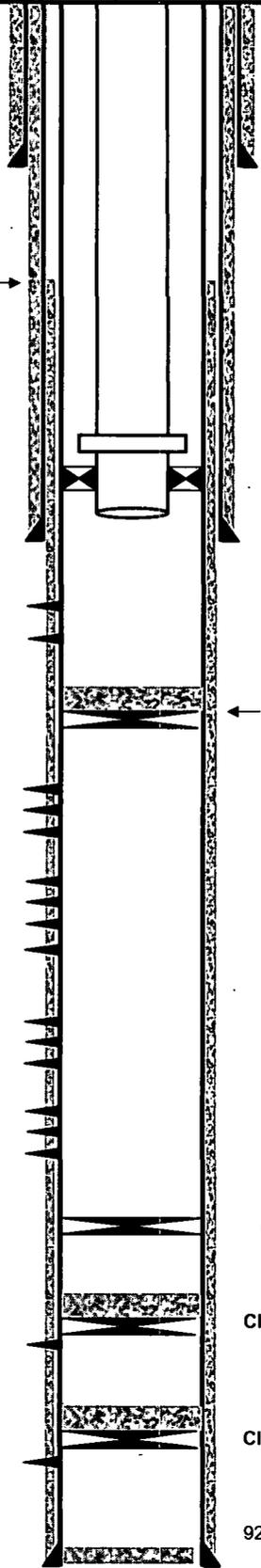
9118' - 9134'

acidized w/3K gals & frac w/93K# 20/40

7-7/8" Hole

5-1/2", 17#, N80, LTC, @ 9300'

Cmt'd w/1005 SX



**Proposed:**  
**2-7/8" IPC prod tubing**

**Proposed:**  
**Packer @ +/- 2975'**

**Proposed:**  
**CIBP @ 4707, w/35' cmt on top. PBTD @ 4672'**

CIBP @ 5650' (3/16/11)

CIBP @ 8610' w/35' cmt (10/14/10)

CIBP @ 8990' W/35' cmt (10/7/10)

9254' PBD

9300' TD

**DEVON ENERGY PRODUCTION COMPANY LP**

Well Name: CHIMAYO 16 STATE 1		Field: WILLOW LAKE SOUTHEAST	
Location: 660' FNL & 1980' FWL; SEC 16-T25S-R29E		County: EDDY	State: NM
Elevation: 3000' KB; 2988' GL; 12' KB to GL		Spud Date: 5/27/01	Compl Date: 7/19/01
API#: 30-015-31781	Prepared by: Ronnie Slack	Date: 3/31/11	Rev:

**CURRENT WELLBORE**

17-1/2" hole  
13-3/8", 48#, H40, @ 600'  
 Cmt'd w/460 sx to surface.

TOC was at 3300' per cbl run on 10/9/10.  
 Pumped 200 sx braden head sqz on 8-5/8" x  
 5-1/2" annulus. Ran CBL. TOC now @ 1850'.  
 (10/19/10)

12-1/4" hole  
8-5/8", 32#, J55, @ 2980'  
 Cmt'd w/1000 sx to surface

120 Jts of 2-7/8" tubing (3/24/11)

**DELAWARE (3/17/11)**

4953' - 4959' }  
 5049' - 5055' } Swab ~40% oil cut 4953-5095  
 5081' - 5095' }

5133' - 5137' }  
 5142' - 5145' } Swab ~40% oil cut 5133-5182  
 5170' - 5175' }  
 5178' - 5182' }

3/18/11-acidized 4953-5182 w/4K gals 7.5% hcl

5220' - 5225' }  
 5229' - 5234' } Swab ~5% oil cut 5220-5276  
 5260' - 5276' }

5335' - 5343' }  
 5352' - 5356' } Swab ~2% oil cut 5335-5387  
 5369' - 5387' }

3/18/11-acidized 5220-5387 w/5K gals 7.5% hcl

CIBP @ 5650' (3/16/11)

**BONE SPRING**

8702' - 8734' (10/2/01)  
 acidized w/3k gals 10/4/01  
 frac w/102K# 10/7/01

CIBP @ 8610' w/35' cmt (10/14/10)

**BONE SPRING**

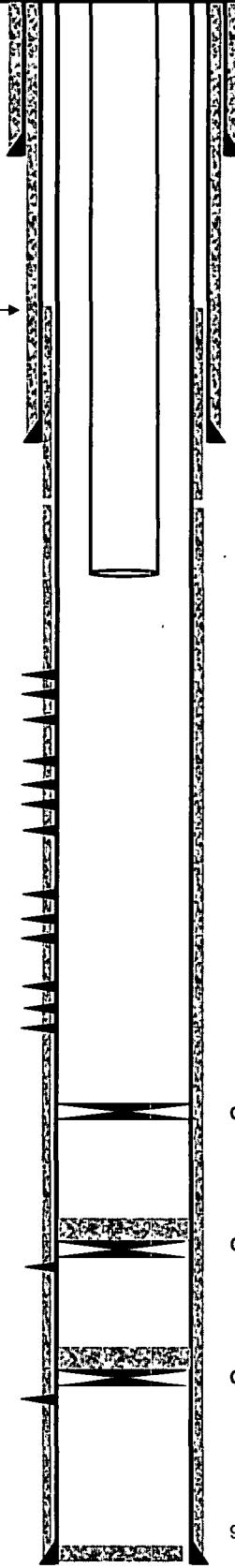
9118' - 9134'  
 acidized w/3K gals & frac w/93K# 20/40

CIBP @ 8990' W/35' cmt (10/7/10)

7-7/8" Hole  
5-1/2", 17#, N80, LTC, @ 9300'  
 Cmt'd w/1005 SX

9254' PBD

9300' TD



**Proposed Injection Well: Chimayo 16 State #1**

API: 30-015-31781

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** #1  
**Location** 660' FNL & 1980' FWL  
**Sec,Twn,Rnge** Sec 16-T25S-R29E  
**Cnty, State** Eddy County, NM
  
- (2) **Casing** 13-3/8", 48#, H40, @ 600'.  
Cmt'd w/ 460 sxs to surface.  
  
8-5/8", 32#, J55, @ 2980'.  
Cmt'd w/ 1000 sxs to surface  
  
5-1/2", 17#, N80, @ 9300'  
Original cmt'd w/1005 sx. TOC @ 3300' by CBL, dated 10/9/10  
Pumped 200 sx braden head sqz. TOC @ 1850' by CBL, dated 10/19/10
  
- (3) **Injection Tubing** 2-7/8", 6.5#, IPC Injection tubing
  
- (4) **Packer** 5-1/2" IPC Packer @ +/-2975'

**B. Other Well Information**

- (1) **Injection Formation:** Delaware  
**Field Name:** Willow Lake Southeast
  
- (2) **Injection Interval:** 3024' - 4472'
  
- (3) **Original Purpose of Wellbore:**

Bone Spring producer 8702'-8734' and 9118'-9134'.

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

Bone Spring 9134-9118; 8734-8702'. CIBP @ 8900 W/35' cement. CIBP @ 8610' W/35' cement. Delaware 4953'-5387'. Swab tested, but not produced. Proposed CIBP @ 4707' w/35' cement

- (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'. Brushy Canyon @ 5175'; Bone Spring @ 6790'.



C108 ITEM VI--Well Tabulation in 1/2 Mile Review Area																	
Devon Energy Production Company, LP																	
Proposed Disposal Well: Chimayo 16 State #1																	
Updated:																	
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 ST #1 (proposed for SWD)	30-015-31781	Eddy	660' FNL 1980' FWL	16	25S	29E	Oil	TA	5/27/01	7/19/01	9300	8575	Bone Spring	8702 - 8734 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 / 1850'-cbl
Devon Energy Prod Co LP	Chimayo 16 State #3 SWD	30-015-38105	Eddy	1610' FNL 1455' FWL	16	25S	29E	SWD	Injection	9/25/2010	1/10/2011	4202	4200	Bell & Cherry Canyon	Open Hole (2957'-4202')	11-3/4", 42#, @ 700' 8-5/8", 24# & 32# @ 2957'	600 sx / surface 825 sx / surface ✓
Devon Energy Prod Co LP	Cooter 16 ST 3H	30-015-37627	Eddy	330' FNL 1190' FWL	16	25S	29E	Oil	Prod	6/8/10	9/2/10	11589	11567	Avalon Shale	7250-11509	13-3/8", 48#, @ 719' 9-5/8", 36#, @ 2954' 5-1/2", 17#, @ 11567'	690 sx / surface 1000 sx / surface 2350 sx / 1980'-cbl ✓
Lime Rock Resources	Picket Draw 16 State 2H	30-015-35681	Eddy	2600' FNL 1530' FEL	16	25S	29E	Oil	Prod	10/30/07	12/17/07	7420	7335	Cherry Canyon	5527-7300	9-5/8", 36#, @ 771' 5-1/2", 17#, @ 7421'	550 sx / surface 2160 sx / surface ✓

**Proposed Injection Well: Chimayo 16 State #1**  
**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: 750 psi
- (4) The injection fluid will be produced water from the Bone Spring formation that will be injected into the Delaware from 3024' to 4472'.
- (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 planned injection zone is in the Delaware formation. The gross interval for perforations is from 3024' to 4472'. (1448' thick) The Delaware formation is a Permian aged sandstone. The average depth of water report notes aquifers at an average depth of 50'.

**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**

Well Logs have been previously submitted to the OCD Atresia office.

**XI Fresh Water Analysis**

No fresh water wells were indicated within one mile of proposed injection well.

**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	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02371	C	STK	ED	2 3 15	25S	29E		596741	3555106*	200	60	140
C 02518	C	PRO	ED	3 4 08	25S	29E		593895	3556300*	462		
C 02680	C	STK	ED	2 3 15	25S	29E		596741	3555106*	200		
RA 07162 EXP2		DOM	ED	1 3 1 10	25S	29E		596214	3557222*	55	40	15
Average Depth to Water:										<b>50 feet</b>		
Minimum Depth:										<b>40 feet</b>		
Maximum Depth:										<b>60 feet</b>		

**Record Count: 4**

**Basin/County Search:**

County: Eddy

**PLSS Search:**

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

**Usage Filter:**

Use: All Domestic Usages

\*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

**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	0.0	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 CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

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

ML  
S

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	
FW	0.046	@ 23° C
Total Dissolved Solids	295,500	
Calcium as Ca	43,134	
Nitrate	35	

Results reported as Parts per Million unless stated

Langelier Saturation Index 0.65

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

**CHIMAYO 16 STATE #1**  
16-25S-29E; 660 FNL & 1980' FWL  
C108 Application For Injection  
Operator Ownership within AOR  
Devon Energy Prod Co LP

Operator Ownership within AOR

NM 99147  
Devon Energy ✓  
J. Richard Doty ✓

NM-15303  
Oxy USA, Inc. ✓  
EOG Resources ✓

**25S 29E**

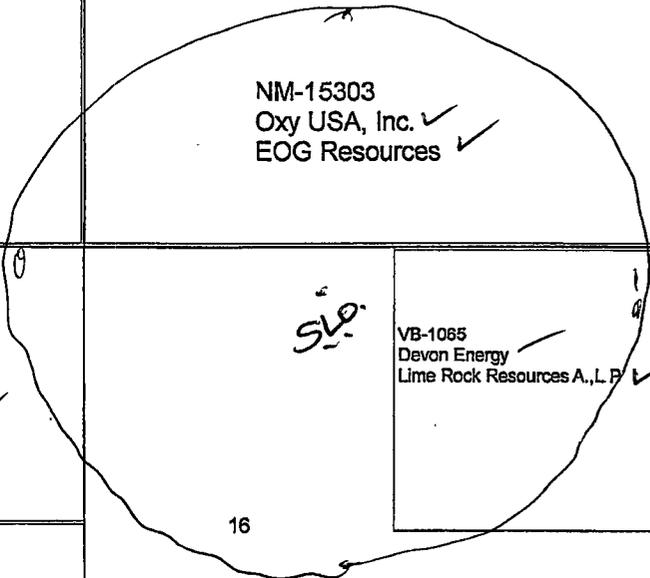
NM-99147  
COG Operating LLC ✓  
Chesapeake Energy ✓

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

NM-96848  
Devon Energy ✓  
COG Operating LLC ✓

V-4902  
Devon Energy ✓  
J Richard Doty ✓

*SLO*



# CHIMAYO 16 STATE #1

16-25S-29E; 660 FNL & 1980' FWL

C108 Application For Injection

Operator Ownership within AOR

Devon Energy Prod Co LP

<b>Location</b>	<b>Lease No.</b>	<b>Ownership</b>
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	COG Operating LLC
17-T25S-R29E	NM 99147	Chesapeake Energy
17-T25S-R29E	NM 96848	Devon Energy
17-T25S-R29E	NM 96848	COG Operating LLC
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.

Section XIV--Proof of Notice to Leasehold Operators  
Devon Energy Prod Co LP  
C108 Application For Injection  
Proposed Well: CHIMAYO 16 STATE #1

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

J. Richard Doty  
803 University Avenue  
Oxford, MS 38655

Certified receipt No.  
7010 1060 0000 0917 5360

Lime Rock Resources  
1111 Bagby Street, Suite 4600  
Houston, TX 77002

Certified receipt No.  
7010 1060 0000 0917 5377

COG Operating LLC  
550 West Texas Suite 100  
Midland, TX 79701

Certified receipt No.  
7010 1060 0000 0917 5384

Chesapeake Exploration Limited Parntership  
6100 North Western  
Oklahoma City, OK 73118

Certified receipt No.  
7010 1060 0000 0917 5391

EOG Resources Inc  
P.O. Box 4362  
Houston, TX 77210

Certified receipt No.  
7010 1060 0000 0917 5414

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

Certified receipt No.  
7010 1060 0000 0917 5421

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 Chimayo 16 State #1.

Date Mailed: 6-6-11

Signature: Ronnie Slack

Date: 6-6-11

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 #1

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

New Mexico State Land Office  
310 Old Santa Fe Trail  
Santa Fe, NM 87504

Certified receipt No.  
7010 1060 0000 0917 5445

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 #1.

Date Mailed: 6-6-11

Signature: Ronnie Slack

Date: 6-6-11

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

**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 5 2011

That the cost of publication is **\$54.74** and that payment thereof has been made and will be assessed as court costs.

Kathy McCarroll

Subscribed and sworn to before me this

11<sup>th</sup> day of May, 2011

Jim Marie Ammons

My commission Expires on 7-3-2013

Notary Public

May 5, 2011  
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 #1, is located 660' FNL & 1980' 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 Delaware formation at a gross interval depth from 3024' to 4472' at a maximum surface pressure of 750 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 at Devon Energy Corporation, 20 North Broadway, Oklahoma City, OK 73102-8260, or call (405) 228-4464.

**Injection Permit Checklist** (11/13/2010)

WFX \_\_\_\_\_ PMX \_\_\_\_\_ SWD 1289 Permit Date 6/24/11 UIC Qtr A (m/j)

# Wells 1 Well Name(s): CHINAYO 16 STAGE #1

API Num: 30-0 15-31781 Spud Date: 5/27/01 New/Old: N (UIC primacy March 7, 1982)

Footages 660 FNL/1880 FWL Unit C Sec 16 Tsp 25S Rge 29E County EDDY

General Location: 10 mi N. of Rd BLUFF

Operator: Dacon Energy Production Company LP. Contact Ronnie SLACK / Jim Gomez

OGRID: \_\_\_\_\_ RULE 5.9 Compliance (Wells) \_\_\_\_\_ (Finan Assur) \_\_\_\_\_ IS 5.9 OK? OK

Well File Reviewed  Current Status: \_\_\_\_\_

Planned Work to Well: SET CIEP Perf, inject

Diagrams: Before Conversion  After Conversion  Elogs in Imaging File:

Well Details:	Sizes		Setting Depths	Stage Tool	Cement Sx or Cf	Determination Method
	Hole.....	Pipe				
New ___ Existing ___ Surface	<u>11 1/2</u>	<u>13 3/8</u>	<u>600</u>	<u>-</u>	<u>460</u>	<u>CRC</u>
New ___ Existing ___ Intern	<u>12 1/4</u>	<u>8 5/8</u>	<u>2980</u>	<u>-</u>	<u>1000</u>	<u>CRC</u>
New ___ Existing ___ LongSt	<u>7 1/8</u>	<u>5 1/2</u>	<u>9300 TD</u>		<u>1005 + 2000 SQR</u>	<u>1850 CBL</u>
New ___ Existing ___ Liner						
New <input checked="" type="checkbox"/> Existing ___ OpenHole	<u>NEW BTD = 4707'</u>					

Depths/Formations:	Depths, Ft.	Formation	Tops?
Formation(s) Above	<u>3015</u>	<u>Bell C.</u>	<input checked="" type="checkbox"/>
Injection TOP:	<u>3024</u>	<u>Bell C.</u>	Max. PSI <u>604</u> OpenHole _____ Perfs _____
Injection BOTTOM:	<u>4472</u>	<u>Charay C.</u>	Tubing Size <u>2 1/8</u> Packer Depth <u>2975</u>
Formation(s) Below	<u>3870</u>	<u>Charay C.</u>	<input checked="" type="checkbox"/>

*Willow Lake, SE BS. See SWD 1235*

Capitan Proof? (Retest? Noticed?) [WIPP? Noticed?] Salado Top/Bot (2790) Cliff House? \_\_\_\_\_

Fresh Water: Depths: 250' Formation \_\_\_\_\_ Wells? None Analysis? \_\_\_\_\_ Affirmative Statement

Disposal Fluid Analysis?  Sources: Bone Springs

Disposal Interval: Analysis? \_\_\_\_\_ Production Potential/Testing: \_\_\_\_\_

Notice: Newspaper Date 5/27/11 Surface Owner SLO Mineral Owner(s) \_\_\_\_\_

RULE 26.7(A) Affected Persons: DOTY / LIME ROCK / COE / Charay / EOG / OXF — 6/6/11

AOR: Maps?  Well List?  Producing in Interval? No Wellbore Diagrams?

.....Active Wells 3 Repairs? \_\_\_\_\_ Which Wells? \_\_\_\_\_

.....P&A Wells 0 Repairs? \_\_\_\_\_ Which Wells? \_\_\_\_\_

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