

30-015-30113
COCHITI 28 # 1

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: _____ 2/9/05 _____
- 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: _____

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MAR 07 2005

OOD-ARTESIA

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.

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: Cochiti 28 Federal #1

WELL LOCATION: 1980' FNL & 660' FWL E Sec 28 T23S 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"
Cemented with: 440 sx. or ft³
Top of Cement: Surface Method Determined: Circ. cement
Intermediate Casing

Hole Size: 11" Casing Size: 8-5/8"
Cemented with: 875 sx. or ft³
Top of Cement: Surface Method Determined: Circ. cement
Production Casing

Hole Size: 7-7/8" Casing Size: 5-1/2"
Cemented with: 1650 sx. or ft³
Top of Cement: 2250' Method Determined: CBL Log
Total Depth: 10,180'

Injection Interval (Perforated)
3428' feet to 3658'
(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2-7/8", 6.5# Lining Material: Internal Plastic Coated

Type of Packer: 5-1/2" Lok Set

Packer Setting Depth: 3,378'

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

Additional Data

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

If no, for what purpose was the well originally drilled? Producing Oil Well

2. Name of the Injection Formation: Delaware Bell Canyon

3. Name of Field or Pool (if applicable): Current Pool Designation: Laguna Salado Bone Spring/Harroun Ranch Delaware NE.

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.

Perforated Intervals for the Cochiti 28 Federal #1 are as follows:

Wolfcamp: 10126' – 10132' (Isolated, May-1999 with cement from 7977' to 7995')

Bone Spring: 7816' – 7875' (Open perms. Proposed isolation w/ balanced cement plug from 6350' to 6450'). Note,
parted casing indicated at 6402'-6404'.

Brushy Canyon: 6210' – 6230' (Open perms. Proposed isolation w/ CIBP @ 6100' + 35' cement., Note, possible casing
hole indicated at 6118'.

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

There are no productive oil / gas zones in the area of review above the proposed injection interval at 3428' - 3467' and 3628' - 3658'. The next lower productive oil zone in the area of review is the Brushy Canyon Formation (top at 5230'). The Brushy Canyon is perforated in the Cochiti 28 Federal #1 at 6210' - 6230'.

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Dawn Higgins, being first duly sworn, on oath says:

That she is Business Manager 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:

January 25	2005
	2005
	2005
	2005

That the cost of publication is \$ 42.92

and that payment thereof has been made and will be assessed as court costs.

Dawn Higgins

Subscribed and sworn to before me this

25 day of January, 2005
Elizabeth Dorian

My commission expires 12-13-05

Notary Public

January 25, 2005

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 is the Cochiti 28 Federal #1, located 1980' FNL & 660' FWL, Section 28, Township 23 South, Range 29 East, in Eddy County, New Mexico. The Cochiti 28 Federal #1 will be used for salt water disposal. Disposal waters from the Delaware will be injected into the Delaware Bell Canyon formation at a depth of 3428' to 3467' and 3628' to 3658', with a maximum pressure of 1150 psi and a maximum rate of 2000 BWPD.

All interested parties opposing the aforementioned must file objections or requests for a hearing with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505-5472, within 15 days. Additional information can be obtained by contacting Jim Blount at (405) 228-4301.

02/08/2005 11:33AM

Cochiti 28 Federal #1
APPLICATION FOR INJECTION
Form C-108 Section III

III. Well Data--On Injection Well

A. Injection Well Information

- (1) Lease Cochiti 28 Federal, Lease Serial#: NMNM 86024
Well No #1
Location 1980' FNL & 660' FWL
Sec.Twn,Rnge Sec 28, T23S-R29E, Unit E
Cnty, State Eddy County, New Mexico
- (2) Casing 13-3/8", 48#, H40, STC, @ 403' in 17-1/2" hole. Cmt'd w/ 440 sxs.
TOC @ surface. Cement circulated.
8-5/8", 32#, J55, STC, @ 2916' in 11" hole. Cmt'd w/ 875 sxs.
TOC @ surface. Cement circulated.
5-1/2", 17#, N80, LTC, @ 10180'. Cmt'd w/ 1650 sxs.
TOC @ 2250', determined by Cement Bond Log

- (3) Injection Tubing 2-7/8" , 6.5#, IPC tubing run to 3378'

- (4) Packer 5-1/2" Lok Set @ 3378'

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B. Other Well Information

- (1) Injection Formation: Delaware Bell Canyon (proposed)
Field Name: Laguna Salado Bone Spring / Harroun Ranch Delaware NE
- (2) Injection Interval: 3428' - 3467'; 3628'-3658' (cased hole, perforated)
- (3) Original Purpose of Wellbore:

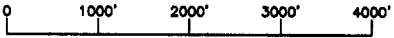
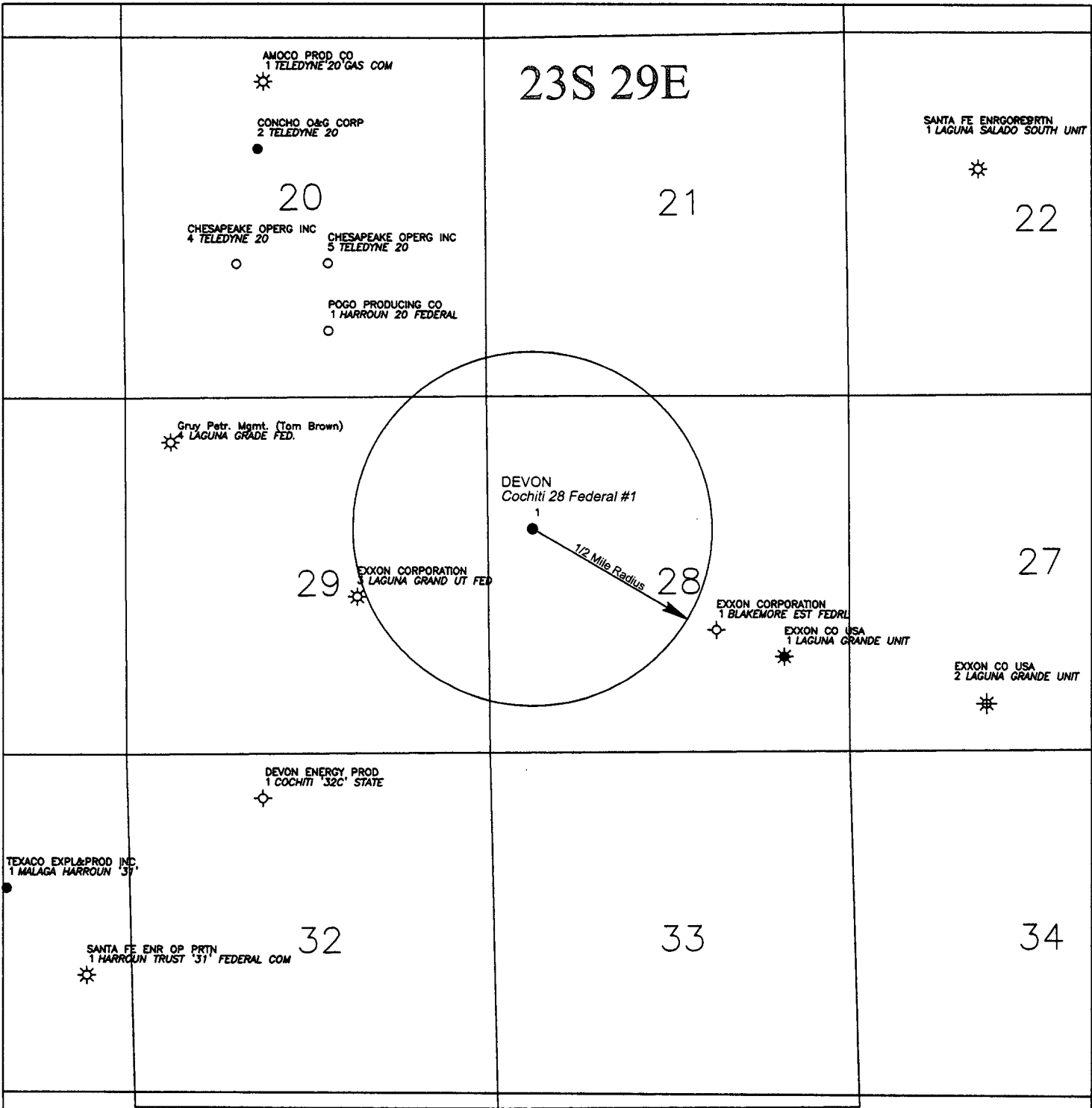
The Cochiti 28 Federal #1 was spud on May 3, 1998 and was drilled for the purpose of oil and gas production. The well was originally completed in the Wolfcamp at 10126' - 10132' in July 1998. The Wolfcamp was abandoned in May 1999. Commingling approval was received on July 6, 1999. This well is currently commingled from the Brushy Canyon (6210'-6230') and the Bone Spring (7816'-7875') producing approximately 6 BOPD, 14 MCFD, & 3 BWPD. It is proposed to abandon these zones and convert this well to salt water disposal in the Delaware Bell Canyon at 3428' - 3467' and 3628' - 3658'.

- (4) Other perforated intervals:

Brushy Canyon: 6210' - 6230' (Perfs are open)
Bone Spring: 7816' - 7875' (Perfs are open)
Wolfcamp: 10126' - 10132' (abandoned with cement plug from 7977' to 7995')

- (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.

There are no productive oil / gas zones in the area of review above the proposed injection interval at 3428' - 3467' and 3628' - 3658'. The next lower productive oil zone in the area of review is the Brushy Canyon Formation (top at 5230'). The Brushy Canyon is perforated in the Cochiti 28 Federal #1 at 6210' - 6230'.



devon.

LAGUNA SALADO S

Eddy County, New Mexico

Cochiti 28 Federal #1

Sec 28, T23S R29E

1980' FNL & 660'FWL

Scale: 1" = 2000'

Date: 01-07-05

loc-Cochiti 28 Fed-1.dwg

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other _____

2. Name of Operator
DEVON ENERGY PRODUCTION COMPANY, LP.

3. Address and Telephone No.
20 NORTH BROADWAY, SUITE 1500, OKLAHOMA CITY, OKLAHOMA 73102 (405-552-4615)

4. Location of Well (Footage. Sec., T., R., M., or Survey Description)
1980 FNL & 660 FWL, Sec 28-T23S-R29E

5. Lease Designation and Serial No.
NMNM 86024

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.
Cochiti 28 Federal #1

9. API Well No.
30-015-30113

10. Field and Pool, or Exploratory Area
Laguna Salado Bone Spring
Harroun Ranch Delaware NE

11. County or Parish, State
Eddy County, NM

CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input checked="" type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Other _____	<input checked="" type="checkbox"/> Dispose Water
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)		

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

DEPCO has made application with the Oil Conservation Division (Santa Fe, New Mexico) to convert the Cochiti 28 Federal #1 to salt water disposal. A copy of Form C108 is attached.

Basic Procedure:

1. RU and POOH with existing rod string and 2-7/8" production tubing.
2. Pump a 100' balanced cement plug from 6350' to 6450' to abandon the Bone Spring that is perforated from 7816'-7875'. (Note, casing is parted at 6402'-6404'.)
3. Set a CIBP at 6100' and cap with 35' cement to abandon the Brushy Canyon at 6210'-6230'. (Note, casing hole indicated at 6118', but tested ok at 1000 psi on 5/29/99).
4. Perforate the Delaware Bell Canyon at 3428'-3467' and 3628'-3658'.
5. Acidize perms with 5000 gallons of 7.5%, NeFe.
6. Run 2-7/8", IPC tubing and 5-1/2" packer. Set packer at 3378'.
7. Turn well over to water injection.

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

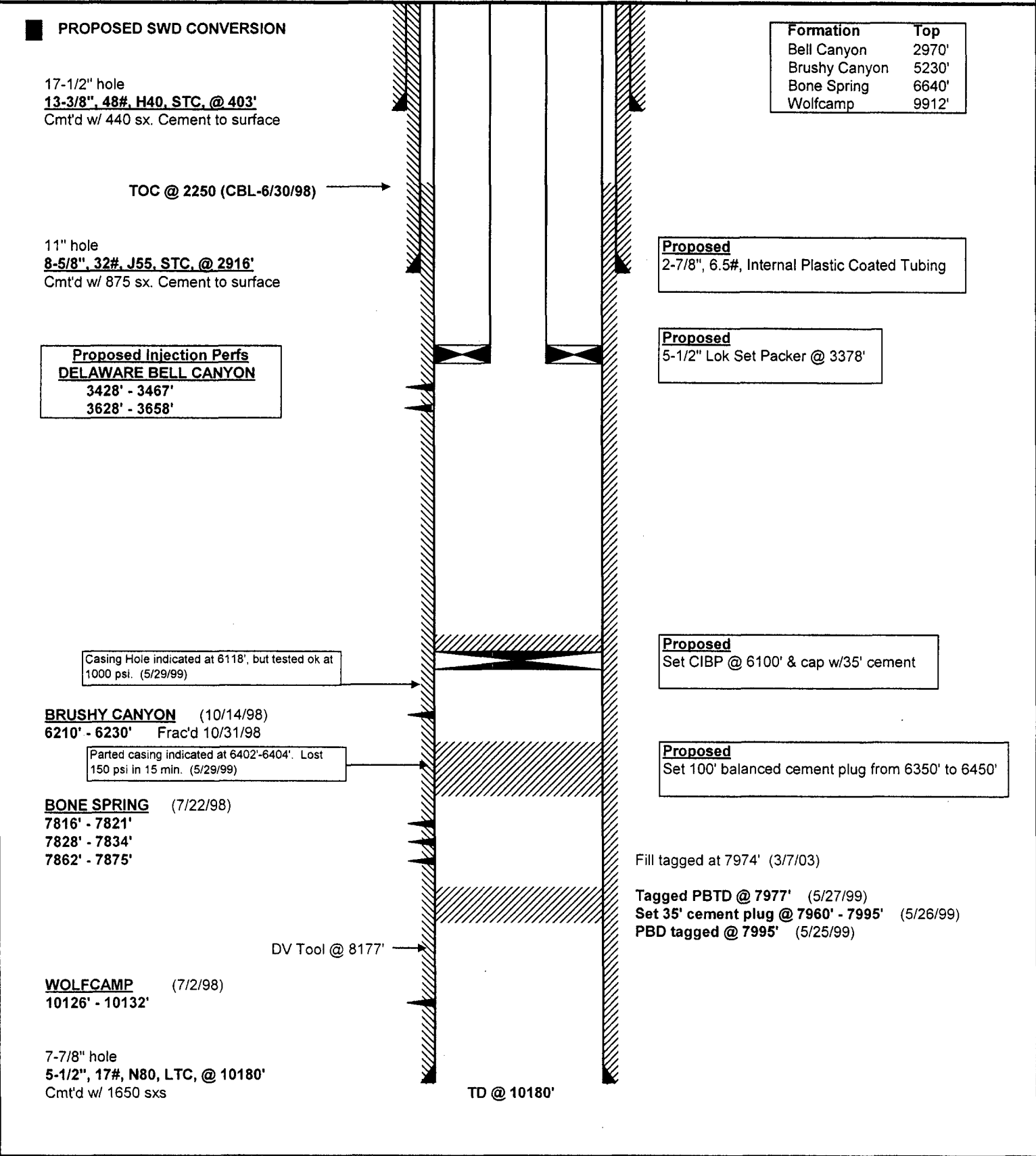
Signed Ronnie Slack Title Engineering Technician Date 2/9/05
(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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

DEVON ENERGY PRODUCTION COMPANY LP

Well Name: Cochiti 28 Fed #1		Field: Laguna Salado Bone Spring/Harroun Ranch Delaware NE	
Location: 1980' FNL & 660' FWL, Sec 28-T23S-R29E		County: EDDY	State: NM
Elevation: 2995' GR		Spud Date: 5/3/1998	Compl Date: 10/29/1998
API#: 30-015-30113	Prepared by: Ronnie Slack	Date: 01/17/05	Rev:



DEVON ENERGY PRODUCTION COMPANY LP			
Well Name: Cochiti 28 Fed #1		Field: Laguna Salado Bone Spring/Harroun Ranch Delaware NE	
Location: 1980' FNL & 660' FWL, Sec 28-T23S-R29E		County: EDDY	State: NM
Elevation: 2995' GR		Spud Date: 5/3/1998	Compl Date: 10/29/1998
API#: 30-015-30113	Prepared by: Ronnie Slack	Date: 01/10/05	Rev:

Field: Laguna Salado Bone Spring/Harroun Ranch Delaware NE

County: EDDY

Spud Date: 5/3/1998

Elevation: 2995' GR

Date: 01/10/05

CURRENT

Formation	Top
Bell Canyon	2970'
Brushy Canyon	5230'
Bone Spring	6640'
Wolfcamp	9912'

Tubing Detail: 3/10/03
246 Jts-2-7/8" Prod Tubing
 Tubing anchor @ 7818'
 2 Jts 2-7/8"
 Blast Jt
 SN
 Perf Sub
 2-7/8" Mud Jt. w/ bull plug
 EOT @ 7925'

Rod Detail: 3/10/03
POLISH ROD
 4', 2', 2' 7/8 subs
 96-7/8" steel rods
 214-3/4" steel rods
 Sub
 2 1/2 X 1 1/4 X 20' Pump

Parted casing indicated at 6402'-6404'. Lost 150 psi in 15 min. (5/29/99)

BONE SPRING (7/22/98)
7816' - 7821'
7828' - 7834'
7862' - 7875'

Reported Casing Problems:

5/26/99--Ran 4-3/4" B&S. Set down at 6405'. Ran csg inspection log. Showed hole at 6118' & parted casg @ 6402'-6404'.

5/27/99--Ran 4-1/2" swage & tagged @ 6405'. 40 pts drag coming up. Had RBP slips on top of swage. Ran swage back down to 7977'. no problems.

5/29/99--Csg tested between 6107'-6141' to 1000 psi. Ok.
Csg tested between 6393'-6427' to 1500 psi. Lost 150 psi
in 15 min.

Fill tagged at 7974' (3/7/03)

Tagged PBDT @ 7977' (5/27/99)
Set 35' cement plug @ 7960' - 7995' (5/26/99)
PBD tagged @ 7995' (5/25/99)

DV Tool @ 8177'

WOLFCAMP (7/2/98)
10126' - 10132'

7-7/8" hole
5-1/2", 17#, N80, LTC, @ 10180'
Cmt'd w/ 1650 sxs

TD @ 10180'



Water Analysis

Date: 11-Jan-05

2708 West County Road, Hobbs NM 88240
Phone (505) 392-5556 Fax (505) 392-7307

Analyzed For

Company	Well Name	County	State
Devon	Spud 16 State #1	Lea	New Mexico

Sample Source **Sample** **Sample #** **1**

Formation **Depth**

Specific Gravity	1.195	SG @ 60 °F	1.196
pH	5.96	Sulfides	Absent
Temperature (°F)	65	Reducing Agents	

Cations

Sodium (Calc)	in Mg/L	73,985	in PPM	61,860
Calcium	in Mg/L	34,000	in PPM	28,428
Magnesium	in Mg/L	5,040	in PPM	4,214
Soluble Iron (FE2)	in Mg/L	50.0	in PPM	42

Anions

Chlorides	in Mg/L	188,000	in PPM	157,191
Sulfates	in Mg/L	550	in PPM	460
Bicarbonates	in Mg/L	78	in PPM	65
Total Hardness (as CaCO3)	in Mg/L	106,000	in PPM	88,629
Total Dissolved Solids (Calc)	in Mg/L	301,703	in PPM	252,260
Equivalent NaCl Concentration	in Mg/L	254,733	in PPM	212,988

Scaling Tendencies

*Calcium Carbonate Index 2,654,720

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

*Calcium Sulfate (Gyp) Index 18,700,000

Below 500,000 Remote / 500,000 - 10,000,000 Possible / Above 10,000,000 Probable

*This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.

Remarks rw=.040@63f

Report # 1774

Application For Injection
Devon Energy Prod Co LP
Cochiti 28 Federal #1
Sec 28, T23S-R29E, Eddy County, NM
Form C-108 Section XIV--Proof of Notice

Proof of Notice to Surface Owner

United States Department of Interior
Bureau of Land Management
620 East Greene Street
Carlsbad, NM 88220

Certified Mail Receipt No. 7004-1160-0000-3716-7984

Records indicate that the Bureau of Land Management is the owner of surface acreage for the Cochiti 28 Federal #1. A copy of Devon Energy Production Co., LP's application for salt water injection in the Cochiti 28 Federal #1 has been sent by certified mail to the Bureau of Land Management in Carlsbad, NM.

Date Mailed: 2/9/05

Signature: Ronnie Slack

Date: 2/9/05

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

Application For Injection
Devon Energy Prod Co LP
Cochiti 28 Federal #1
Form C-108 Section XIV

Proof of Notice to Leasehold Operators

Pogo Producing Company
300 North Marienfeld, Suite 600
Midland, Texas 79701

Certified Mail Receipt No. 7004-1160-0000-3716-7922

Rubicon Oil & Gas, L.P.
400 West Illinois, Suite 500
Midland, Texas 79701

Certified Mail Receipt No. 7004-1160-0000-3716-7939

Chesapeake Exploration Limited Partnership
P.O. Box 18496
Oklahoma City, Oklahoma 73154

Certified Mail Receipt No. 7004-1160-0000-3716-7946

Liberty Energy Corporation
175 Berkeley, 8th Floor
Boston, MA 02116

Certified Mail Receipt No. 7004-1160-0000-3716-7953

Nadel & Gussman Permian, L.L.C.
601 North Marienfeld, Suite 508
Midland, Texas 79701

Certified Mail Receipt No. 7004-1160-0000-3716-7960

ExxonMobil Corporation
P.O. Box 4358
Houston, Texas 77210

Certified Mail Receipt No. 7004-1160-0000-3716-7977

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 Cochiti 28 Federal #1.

Date Mailed: 2/9/05

Signature: Ronnie Slack

Date: 2/9/05

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