

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance XX Disposal Storage  
Application qualifies for administrative approval? XX Yes No
- II. OPERATOR: Pogo Producing Company **API # 30-015-29676**  
ADDRESS: P. O. Box 10340, Midland, Texas 79702  
CONTACT PARTY: Richard Wright PHONE: 432/685-8100
- 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 XX 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: Bill F. Halepeska TITLE: Agent  
SIGNATURE: Bill Halepeska DATE: 10-23-2006  
E-MAIL ADDRESS: \_\_\_\_\_
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

### III. WELL DATA

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

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

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

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

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

### XIV. PROOF OF NOTICE

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

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

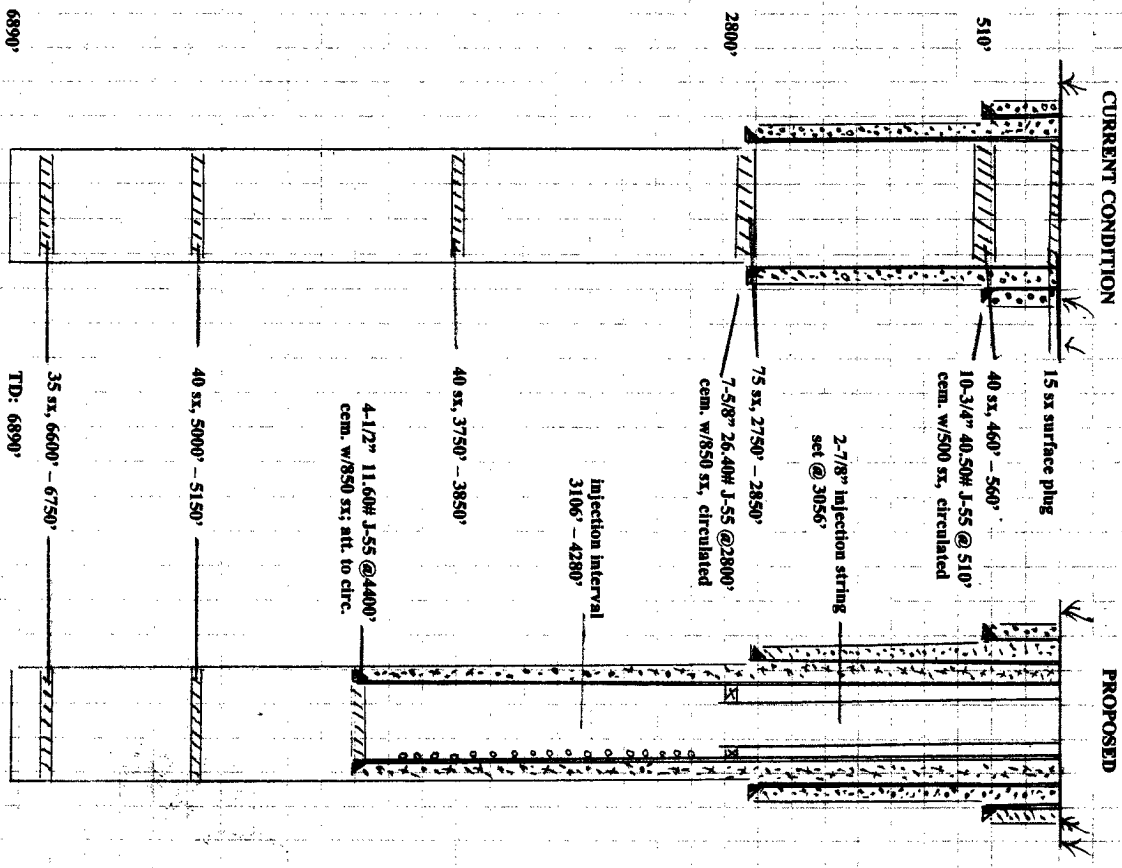
- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates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

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

---

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.

**SCHEMATIC**



**INJECTION WELL DATA SHEET**

**TABULAR DATA**

- (1). LEASE: Cedar Canyon "21" Federal WELL NO. 3  
LOCATION: Sec. 21 TWP 24S RANGE 29E  
County Eddy API # 30 015 29676  
Footage 1650' FNL & 1300' FWL  
TD: 6890' PBSD: 4400'
- (2). CASING STRINGS:

**Surface Casing**

Size 10-3/4 Depth 510' Cemented w/ 500 sx  
TOC surf. Determined by circulated  
Hole Size 14-3/4"

**Intermediate Casing**

Size 7-5/8 Depth 2800' Cemented w/ 850 sx  
TOC surface Determined by circulated  
Hole Size 9-7/8"

**Long String**

Size 4-1/2" Depth 4400' Cemented w/ 850 sx  
TOC surf. Determined by calc.; att. circ.  
Hole Size 6-3/4"

(3). INJECTION INTERVAL

3106' to 4280'

(4). INJECTION TUBING STRING

Size 2-7/8 in., Coated/Lined with IPC  
Setting Depth 3056'

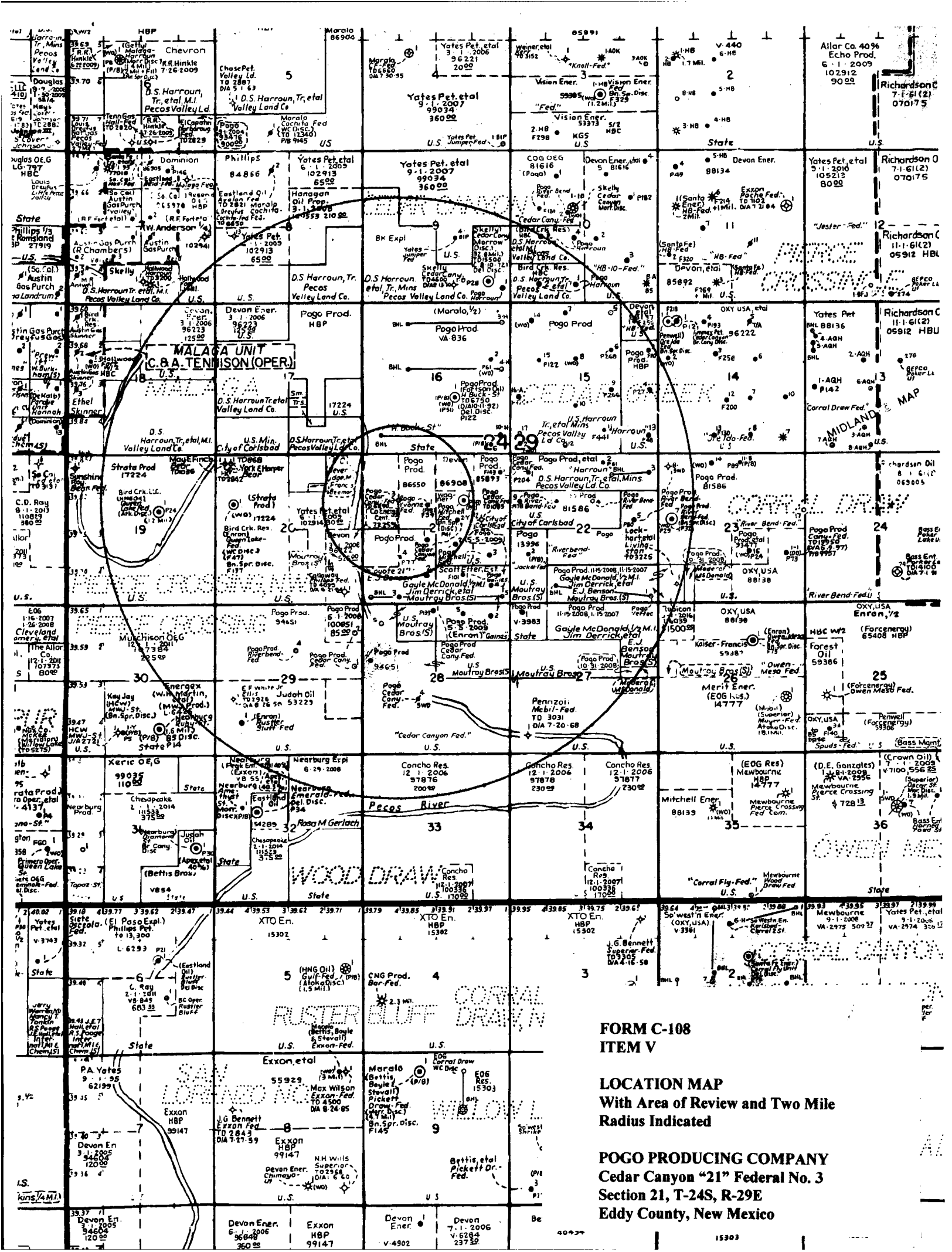
(5). INJECTION PACKER

Size 4-1/2 in. Make/Model Lock-Set  
Setting Depth 3056'

FORM C-108  
ITEM III-B

INJECTION WELL DATA

- (1). Injection Formation: Delaware/Bell Cn. & Cherry Cn.  
Field/Pool: Corral Draw (Bone Spring)
- (2). Injection Interval : from 3106 ft. to 4280 ft.  
Perforated XX Open Hole \_\_\_\_\_
- (3). Original Purpose for Drilling Well Bone Spring test
- (4). Other Perforated Intervals: \_\_\_\_\_ Yes XX No  
Squeezed with \_\_\_\_\_ sx., or Isolated by \_\_\_\_\_  
not applicable
- (5). Oil or Gas Productive Zone(s):  
Next Higher Bell Canyon; 2980'  
Next Lower Cherry Canyon; 5000'



FORM C-108  
ITEM VI Page 1

WELL - AREA OF REVIEW

( 1 ). Location : 2310' FS & EL Sect. 21, T-24S, R-29E  
Operator : Pogo Producing Company API #30 015 29930  
Lease : Coyote "21" Well No. 1  
Well Type - Oil XX Gas TD: 5372'  
Date Drilled/Completed: 04/25/98 06/03/98  
Completion Data: 10-3/4" @ 567' w/750 sx, circ.; 7-5/8"  
@ 2810' w/765 sx, circ.; 4-1/2" @ 5372' w/580 sx,  
TOC 2050'; pf 5220'-45'; A/1000 gal; F/80,000# 16-30  
sd; IPP 154 BO & 72 BW + 86 MCFG; 03-2004, pf &  
test 5006'-16' & 4876'-98; CIBP @ 5197'; 10-2004,  
RBP @ 3200', pf 2970'-80'; A/1000 gal; F/27,500#  
16-30 sd; POP

Plugged \_\_\_\_\_ Date \_\_\_\_\_ (diagram attached)

( 2 ). Location : 990' FSL & 2310' FWL, Sect 21, T-24S, R-29E  
Operator : Pogo Producing Company API #30 015 29864  
Lease : Coyote "21" Well No. 2  
Well Type - Oil XX Gas TD: 6800'  
Date Drilled/Completed: 11-23-97 / 12-27-97  
Completion Data: 10-3/4" @ 515' w/525 sx, circ; 7-5/8" @  
2810' w/650 sx, circ; 4-1/2" @ 6800' w/1064 sx,  
TOC 2900'; pf 5216'-42' & 6262'-72'; A/2000 gal;  
Frac 5216'-42' w/59,000 # sd; IPP 200 BO + 208 BW  
& 50 MCFG; 9-2004; CIBP @ 5150'; pf 4991'-98' A/  
1000 gal; test; RBP @ 4930'; pf 4861'-68'; A/1000  
gal; Frac 4991'-30' w/15,000#; POP; 7-2005 KO CIBP

Plugged \_\_\_\_\_ Date \_\_\_\_\_ (diagram attached)

( 3 ). Location: 1650' FSL & 1300' FWL, Sect 21, T-24S, R-29E  
Operator : Pogo Producing Company API #30 015 31439  
Lease : Coyote "21" Well No. 4  
Well Type - Oil XX Gas TD: 5420'  
Date Drilled/Completed: 12-02-00 / 01-26-01  
Completion Data: 8-5/8" @ 584' w/405 sx, circ; 5-1/2"  
@ 5420' w/1245 sx, TOC 2940'; pf 5224'-44'; A/  
1000 gal; F/38,500# sd; IPP 77 BO, 139 BW & 50  
mCFG

Plugged \_\_\_\_\_ Date \_\_\_\_\_ (diagram attached)

FORM C-108  
ITEM VI Page 2

WELL - AREA OF REVIEW

- (4 ). Location : 1800' FNL & 2310' FWL, Sect 21, T-24S, R-29E  
Operator : Pogo Producing Company API #30 015 28850  
Lease : Yvonne "21" Federal Well No. 1  
Well Type - Oil XX Gas \_\_\_\_\_ TD: 7820'  
Date Drilled/Completed: 05-31-96 / 11-12-96  
Completion Data; 10-3/4" @ 500' w/510 sx, circ.; 7-5/8"  
@ 2823' w/830 sx, circ.; 4-1/2" @ 7820' w/1050 sx,  
TOC surf. pf 7640'-60'; A/1000 gal; F/200,000# sd;  
POP 25 BOPD + 22 BW & 64 MCFG; 11-96, set CIBP @  
7000'; pf 6480'-6538'; A/1400 gal.; F/75,400# sd;  
Pot 39 BO +168 BW & 97 MCFG; 12-96, set CIBP @  
6450'; pf 6206'-66'; A/1500 gal; F/81,800# sd.  
Plugged \_\_\_\_\_ Date \_\_\_\_\_ (diagram attached) cont. Pg 4
- (5 ). Location : 1650' FN & EL, Sect 21, T-24S, R-29E  
Operator : Pogo Producing Company API #30 015 28559  
Lease : Mitchell "21" Federal Well No. 1  
Well Type - Oil XX Gas \_\_\_\_\_ TD: 8900'  
Date Drilled/Completed: 8-15-95 / 9-20-95  
Completion Data; 13-3/8" @ 580' w/650 sx, circ; 8-5/8"  
@ 2840' w/1300 sx, circ 220 sx; 5-1/2" @ 8900' w/  
1705 sx, TOC 700', CBL; pf 8670'-8700'; A/1000 gal;  
F/47,500# sd; IPP 68 BOPD + 138 BW & 104 MCFG;  
10-95, RBP @ 7900'; pf 7634'-76'; A/1000 gal;  
F/68,420# sd; POT 92 BOPD + 44 BW & 327 MCFG 06-96,  
POOH w/RBP; set CIBP @ 7550'; pf 6246'-80'; A/  
Plugged \_\_\_\_\_ Date \_\_\_\_\_ (diagram attached) cont. pg 4
- ( 6 ). Location: 2110' FSL & 1980' FEL, Sect. 21, T-24S, R-29E  
Operator : Pogo Producing Company API #30 015 28710  
Lease : Mitchell "21" Federal Well No. 2  
Well Type - Oil XX Gas \_\_\_\_\_ TD: 7900'  
Date Drilled/Completed: 01-12-96 / 03-16-96  
Completion Data; 10-3/4" @ 533' w/510 sx, circ; 7-5/8"  
@ 2810' w/760 sx, circ 125 sx; 4-1/2" @ 7900' w/  
1165 sx, TOC 1000, CBL; pf 7628'-75'; A/1200 gal;  
F/82,000# sd; CIBP @ 7000'; pf 6214'-6302'; A/  
2200 gal; F/115,500# sd; test 22 BOPD + 159 BW  
& 25 MCFG; set RBP @ 6000'; pf 5219'-35'; A/1000  
gal; F/38,000# sd; P 75 BOPD + 136 BW & 34 MCFG  
Plugged \_\_\_\_\_ Date \_\_\_\_\_ (diagram attached) cont. Pg 4

FORM C-108  
ITEM VI Page 3

WELL - AREA OF REVIEW

( 7 ). Location : 2310' FNL & 890' FEL, Sect. 21, T-24S, R-29E, API #30 015 29491  
Operator : Pogo Producing Company  
Lease : Cedar Canyon "21" Federal Well No. 2-Y  
Well Type - Oil XX Gas \_\_\_\_\_ TD: 5392'  
Date Drilled/Completed: 02-22-97 / 03-19-97  
Completion Data; 10-3/4" @ 515' w/550 sx, circ.; 8-5/8"  
@ 1500' w/300 sx, circ.; 5-1/2" @ 5392' w/710 sx,  
TOC 2656', CBL; pf 5236'-60'; A/1000 gal; F/91,250#  
sd; Pot 149 BOPD +173 BW & 84 MCFG; 06-20-06; set  
CIBP @ 5110'; pf 5059'-64'; A/750 gal; pf 4890'-  
4910'; set RBP @ 4950'; A/1000 gal; F/12,900#  
prop; testing

Plugged \_\_\_\_\_ Date \_\_\_\_\_ (diagram attached)

( 8 ). Location : 660' FSL & 330' FEL, Sect. 16, T-24S, R-29E  
Operator : Pogo Producing Company API #30 015 34695  
Lease : H. Buck State Well No. 10-H  
Well Type - Oil XX Gas \_\_\_\_\_ TD: 10,865' MD  
Date Drilled/Completed: 03-18-06 / 05-21-06  
Completion Data; 13-3/8" @ 288' w/1030 sx, circ.; 9-5/8"  
@ 2910' w/1300 sx, circ.; 5-1/2" @ 10,865' w/2150  
sx, TOC 4870', CBL; pf 8396'-10,710'; A/15,000 gal;  
F/425,000# 20-40 sd; Pot. 425 BOPD + 191 BW & 1140  
MCFG

Plugged \_\_\_\_\_ Date \_\_\_\_\_ (diagram attached)

( ). Location: \_\_\_\_\_  
Operator : \_\_\_\_\_  
Lease : \_\_\_\_\_ Well No. \_\_\_\_\_  
Well Type - Oil \_\_\_\_\_ Gas \_\_\_\_\_ TD: \_\_\_\_\_  
Date Drilled/Completed: \_\_\_\_\_  
Completion Data; \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Plugged \_\_\_\_\_ Date \_\_\_\_\_ (diagram attached)



FORM C-108  
ITEM VI Page 4

Continued from page 2

- #4 01-97; RBP @ 6110'; pf 5214'-50'; A/1000 gal; F/100,000#  
sd; Test 89 BOPD + 98 BW & 51 MCFG; 03-99; POOH w/RBP  
@ 6110'; POP
- #5 1200 gal; F/71,060# sd; Test 41 BOPD + 229 BW & 40 MCFG;  
11-96; RBP @ 6000'; pf 5624'-42; A/1000 gal; RBP to 5550';  
pf 5211'-36'; A/1000 gal; F/79,000# sdPot. 81 BOPD + 54 BW  
& 73 MCFG; 10-04; CIBP @ 5150'; pf 4886'-4908'; A/1000;  
F/18,500# ; test 47 BOPD + 192 BW & 24 MCFG; 06-06; DO  
CIBP @ 5150'; produce zones 4886'-6280'
- #6 11-01; POOH w/RBP @ 6000'; combine zones 5249'-6302'

## FORM C-108

## ITEM VII

OPERATIONAL DATA

- (1) . Average expected Injection Rate: 3000 BWPD; Maximum Anticipated Rate: 5000 BWPD
- (2) . Closed System
- (3) . Estimated Average Injection Pressure 500 psi  
Estimated Maximum Injection Pressure 775 psi
- (4) . Source of Injection Water(s) : nearby Pogo operated leases  
Analysis of water(s) attached
- (5) . Analysis of Injection Zone Water Attached  
Data Source : Coyote "21" No. 1, Sec. 21-24-29;  
produces from upper Delaware/Bell  
Canyon

## ITEM VIII

GEOLOGICAL DATA

## INJECTION ZONE

Lithological Description : sandstone, vf gr; lt tan -  
gray; poorly consolidated - friable;  
calc. cmtg

Geological Name : Delaware/Lwr. Bell Canyon & Up. Ch. Cn.

Zone Thickness : 1174 ft ; Depth : 3106' - 4280'

## FRESH WATER SOURCE(S)

Geological Name of Aquifer : Recent Alluvium

Depth to Bottom 200'

FORM C-108  
ITEM IX

STIMULATION PROGRAM

ACIDIZE

Volume: 2000 Type Acid: 7-1/2% HCl  
Injection Rate: 5 BPM; Miscellaneous: ball sealers

FRACTURE TREATMENT

Fluid Volume: 40,000 Type: GW  
Prop Type: 16/30 sand Volume (lb): 60,000  
Rate: 20 - 25 BPM; Conductor: 4-1/2"  
Miscellaneous: \_\_\_\_\_

ITEM X

LOGGING PROGRAM

Logs Included: CND/GR, Ind/GR/SP  
Copy of CND/GR Log(s) Included with Attachments

ITEM XI

FRESH WATER DATA

Fresh Water Wells Within One (1) Mile Radius: \_\_\_\_\_ Yes XX No  
Chemical Analysis from Well Located: SEc 8-24-30  
Date Sampled: 9-13-06  
Chemical Analysis from Well Located: 7-24-29  
Date Sampled: 03-92  
Analyses Attached

ITEM XII

HYDROLOGY

Various Engineering data and Logs reveal no evidence that there might exist hydrologic connection between the intended injection zone at 3106 and possible fresh water zone(s) above 200'.

# Endura Produ

P.O. Box 3394 M  
Phone (915) 684-4233

FORM C-108  
ITEM VII(4)

ANALYSIS - Lower Delaware  
Produced Water

POGO PRODUCING COMPANY  
Cedar Canyon "21" Federal No. 3  
Section 21, T-24S, R-29E  
Eddy County, New Mexico

## WATER ANAL

Date 12/11/95 Endura Rep TERRY  
Sampling Point/Date WELL HEAD - 12/9/95  
Company POGO PRODUCING  
Field

State NEW MEXICO  
County EDDY

Lease MITCHELL "21" FEDERAL

Well #1

## DISSOLVED SOLIDS

### CATIONS

|                                    | mg/l   | me/l  |
|------------------------------------|--------|-------|
| Sodium, Na <sup>+</sup> (Calc.)    | 85,491 | 3,717 |
| Total Hardness as Ca <sup>++</sup> | 7,040  | 0     |
| Calcium, Ca <sup>++</sup>          | 5,640  | 282   |
| Magnesium, Mg <sup>++</sup>        | 854    | 71    |
| Barium, Ba <sup>++</sup>           | 0      | 0     |
| Iron (Total) Fe <sup>+++</sup>     | 74     | 4     |

### ANIONS

|  |         |       |
|--|---------|-------|
| Chlorides, Cl <sup>-</sup>                 | 144,000 | 4,056 |
| Sulfate, SO <sub>4</sub> <sup>-</sup>      | 245     | 5     |
| Carbonate, CO <sub>3</sub> <sup>-</sup>    | 0       | 0     |
| Bicarbonate, HCO <sub>3</sub> <sup>-</sup> | 781     | 13    |
| Sulfide, S <sup>-</sup>                    | 0       | 0     |
| Total Dissolved Solids (Calc.)             | 237,085 |       |

## OTHER PROPERTIES

|                            |       |
|----------------------------|-------|
| pH <sup>-</sup>            | 6.340 |
| Specific Gravity, 60-/60 F | 1.125 |
| TURBIDITY                  | 300   |

## SCALING INDICIES

| <u>TEMP, F</u> | <u>CA CO<sub>3</sub></u> | <u>CASO<sub>4</sub>*2H<sub>2</sub>O</u> | <u>CA SO<sub>4</sub></u> | <u>BA SO<sub>4</sub></u> |
|----------------|--------------------------|---|--------------------------|--------------------------|
| 80             | 1.1263                   | -0.8477                                 | -1.1544                  | -29.4143                 |
| 120            | 1.5812                   | -0.8612                                 | -0.9874                  | -29.5802                 |
| 160            | 2.2747                   | -0.8857                                 | -0.8393                  | -29.7997                 |

FORM C-108  
ITEM VII(4)

**Endura Pr**

P.O. Box 3  
Phone (915)

ANALYSIS - Bone Spring  
Produced Water

POGO PRODUCING COMPANY  
Cedar Canyon "21" Federal No. 3  
Section 21, T-24S, R-29E  
Eddy County, New Mexico

WAT

Date 12/11/95      Endura Rep TERRY SOLAN  
Sampling Point/Date WELL HEAD - 12/9/95  
Company POGO PRODUCING  
Field

County EDDY  
Lease RIVERBEND FEDERAL Well #7  
H. BUCK STATE Well #1

DISSOLVED SOLIDS

| <u>CATIONS</u>                     | mg/l   | mg/l   |
|------------------------------------|--------|--------|
| Sodium, Na <sup>+</sup> (Calc.)    | 81,949 | 85,169 |
| Total Hardness as Ca <sup>++</sup> | 5,120  | 3,960  |
| Calcium, Ca <sup>++</sup>          | 4,600  | 3,040  |
| Magnesium, Mg <sup>++</sup>        | 317    | 561    |
| Barium, Ba <sup>++</sup>           | 0      | 0      |
| Iron (Total) Fe <sup>+++</sup>     | 16     | 114    |

ANIONS

|  |         |         |
|--|---------|---------|
| Chlorides, Cl <sup>-</sup>                 | 135,000 | 138,000 |
| Sulfate, SO <sub>4</sub> <sup>-</sup>      | 280     | 325     |
| Carbonate, CO <sub>3</sub> <sup>-</sup>    | 0       | 0       |
| Bicarbonate, HCO <sub>3</sub> <sup>-</sup> | 659     | 854     |
| Sulfide, S <sup>-</sup>                    | 0       | 0       |
| Total Dissolved Solids (Calc.)             | 222,821 | 228,063 |

OTHER PROPERTIES

|                            |       |       |
|----------------------------|-------|-------|
| pH <sup>-</sup>            | 6.360 | 6.440 |
| Specific Gravity, 60°/60 F | 1.123 | 1.123 |
| TURBIDITY                  | 300   | 175   |

SCALING INDICIES

| <u>TEMP, F</u> | <u>CA CO<sub>3</sub></u> | <u>CASO<sub>4</sub>*2H<sub>2</sub>O</u> | <u>CA SO<sub>4</sub></u> | <u>BA SO<sub>4</sub></u> |
|----------------|--------------------------|---|--------------------------|--------------------------|
| 80             | 0.8303                   | -0.8962                                 | -1.1875                  | -29.3893                 |
| 120            | 1.2618                   | -0.9091                                 | -1.0200                  | -29.5634                 |
| 160            | 1.9214                   | -0.9331                                 | -0.8713                  | -29.7858                 |

## Endura Products C

P.O. Box 3394, Midland,  
Phone (432) 684-4233 Fax

WATER ANAL

Date 10/10/2006 Endura Rep Norman Smil  
Sampling Point/Date Wellhead 10/4/2006  
Company Pogo Producing Co.  
Formation *up. Delaware* Lease COYOTE 21

FORM C-108  
ITEM VII(5)

ANALYSIS - Injection Zone  
Produced Water

POGO PRODUCING COMPANY  
Cedar Canyon "21" Federal No. 3  
Section 21, T-24S, R-29E  
Eddy County, New Mexico

State New Mexico  
County Eddy  
Well #1

DISSOLVED SOLIDSCATIONS

|                        | mg/l   | me/l  |
|------------------------|--------|-------|
| Sodium, Na+ (Calc.)    | 45,011 | 1,957 |
| Total Hardness as Ca++ | 12,992 | 0     |
| Calcium Ca++           | 10,856 | 543   |
| Magnesium, Mg+         | 1,302  | 109   |
| Barium, Ba++           | 0      | 0     |
| Iron (Total) Fe+++*    | 0      | 0     |

ANIONS

|                       | mg/l    | me/l  |
|-----------------------|---------|-------|
| Chlorides, Cl-        | 92,500  | 2,606 |
| Sulfate, SO4-         | 100     | 2     |
| Carbonate, CO3-       | 0       | 0     |
| Bicarbonates, HCO3-   | 73      | 1     |
| Sulfide, S-*          | 0       | 0     |
| Total Dissolved Solid | 149,842 |       |

OTHER PROPERTIES

|                            |       |
|----------------------------|-------|
| pH*                        | 6.490 |
| Specific Gravity, 60/60 F. | 1.109 |
| Turbidity                  | 35    |

SCALING INDICIES

| <u>TEMP. F</u> | <u>CA CO3</u> | <u>CASO4*2H2O</u> | <u>CA SO4</u> | <u>BA SO4</u> |
|----------------|---------------|-------------------|---------------|---------------|
| 80             | -0.0677       | -1.0097           | -1.2523       | -29.2957      |
| 120            | 0.2990        | -1.0209           | -1.0831       | -29.4961      |
| 160            | 0.8653        | -1.0396           | -0.9292       | -29.7255      |

PERFORATIONS

Oct 11 06 02:22p

POGO FIELD

ATTN: BARRET

FORM C-108

ITEM XI

## Endura Products C

P.O. Box 3394, Midland,  
Phone (432) 684-4233 Fax

ANALYSIS - Fresh Water

POGO PRODUCING COMPANY  
Cedar Canyon "21" Federal no. 3  
Section 21, T-24S, R-29E  
Eddy County, new MexicoWATER ANAL

Date 9/19/2006 Endura Rep Norman Smiley

Sampling Point/Date 9/13/2006

Company Pogo Producing Co.

Formation Alluvium  
Sec. 8-24-30

Lease Fresh Water Well

Code 101028779

State New Mexico

County Eddy

Well

DISSOLVED SOLIDSCATIONS

|                        | mg/l | me/l |
|------------------------|------|------|
| Sodium, Na+ (Calc.)    | 0    | 0    |
| Total Hardness as Ca++ | 145  | 0    |
| Calcium Ca++           | 122  | 6    |
| Magnesium, Mg+         | 14   | 1    |
| Barium, Ba++           | 0    | 0    |
| Iron (Total) Fe+++*    | 0    | 0    |

ANIONS

|                       |     |   |
|-----------------------|-----|---|
| Chlorides, Cl-        | 120 | 3 |
| Sulfate, SO4-         | 24  | 1 |
| Carbonate, CO3-       | 0   | 0 |
| Bicarbonates, HCO3-   | 171 | 3 |
| Sulfide, S-*          | 0   | 0 |
| Total Dissolved Solid | 451 |   |

OTHER PROPERTIES

|                            |       |
|----------------------------|-------|
| pH*                        | 8.140 |
| Specific Gravity, 60/60 F. | 1.001 |
| Turbidity                  | 0     |

## SCALING INDICIES

| TEMP. F | CA CO3 | CASO4*2H2O | CA SO4  | BA SO4   |
|---------|--------|------------|---------|----------|
| 80      | 0.8729 | -2.0701    | -2.2117 | -27.5748 |
| 120     | 1.0957 | -2.0862    | -2.0474 | -27.7806 |
| 160     | 1.3152 | -2.0431    | -1.8316 | -27.8876 |

PERFORATIONS

**FORM C-108  
ITEM VII(4)**

**ANALYSIS - Fresh Water**

**POGO PRODUCING COMPANY  
Cedar Canyon "21" Federal No. 3  
Section 21, T-24S, R-29E  
Eddy County, New Mexico**

**FRESH WATER SOURCES  
WATER QUALITY INFORMATION**

Supplied by State Engineers Office, State of New Mexico

| <u>USE</u> | <u>LOCATION</u> | <u>CHLORIDES</u> | <u>CONDUCTIVITY</u> | <u>DEPTH</u> | <u>DATE</u> |
|------------|-----------------|------------------|---------------------|--------------|-------------|
| stk        | 26.23S.31E      | 122              | 3455                |              | 12/79       |
| stk        | 26.23S.31E      | 150              |                     |              | 12/70       |
| stk        | 26.23S.31E      | 134              | 3503                |              | 10/76       |
| stk        | 04.24S.31E      | 246              | 3690                |              | 07/87       |
| stk        | 04.24S.31E      | 310              | 3680                |              | 04/92       |
| irr        | 11.24S.28E      | 1180             | 6240                | 200          | 03/92       |
| irr        | 16.24S.28E      | 1039             | 7449                | 161          | 05/81       |
| stk        | 30.24S.28E      | 490              | 3830                | 201          | 04/92       |
| irr        | 07.24S.29E      | 2330             | 8540                | 160          | 03/92       |
| irr        | 07.24S.29E      | 2150             | 8860                | 160          | 04/85       |



## Affidavit of Publication

State of New Mexico,  
County of Eddy, ss.

**April Hernandez**, being first duly sworn, on oath says:

That she is HR/Administrative Assistant 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:

|            |      |
|------------|------|
| October 31 | 2006 |
|            | 2006 |
|            | 2006 |
|            | 2006 |

That the cost of publication is \$52.69 and that payment Thereof has been made and will be assessed as court costs.

*April Hernandez*

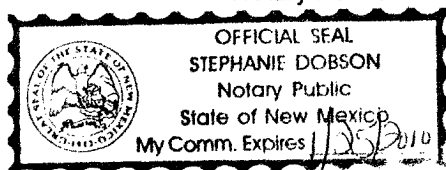
Subscribed and sworn to before me this

31 day of October, 2006

*Stephanie Dobson*

My commission Expires on 1/25/2010

Notary Public



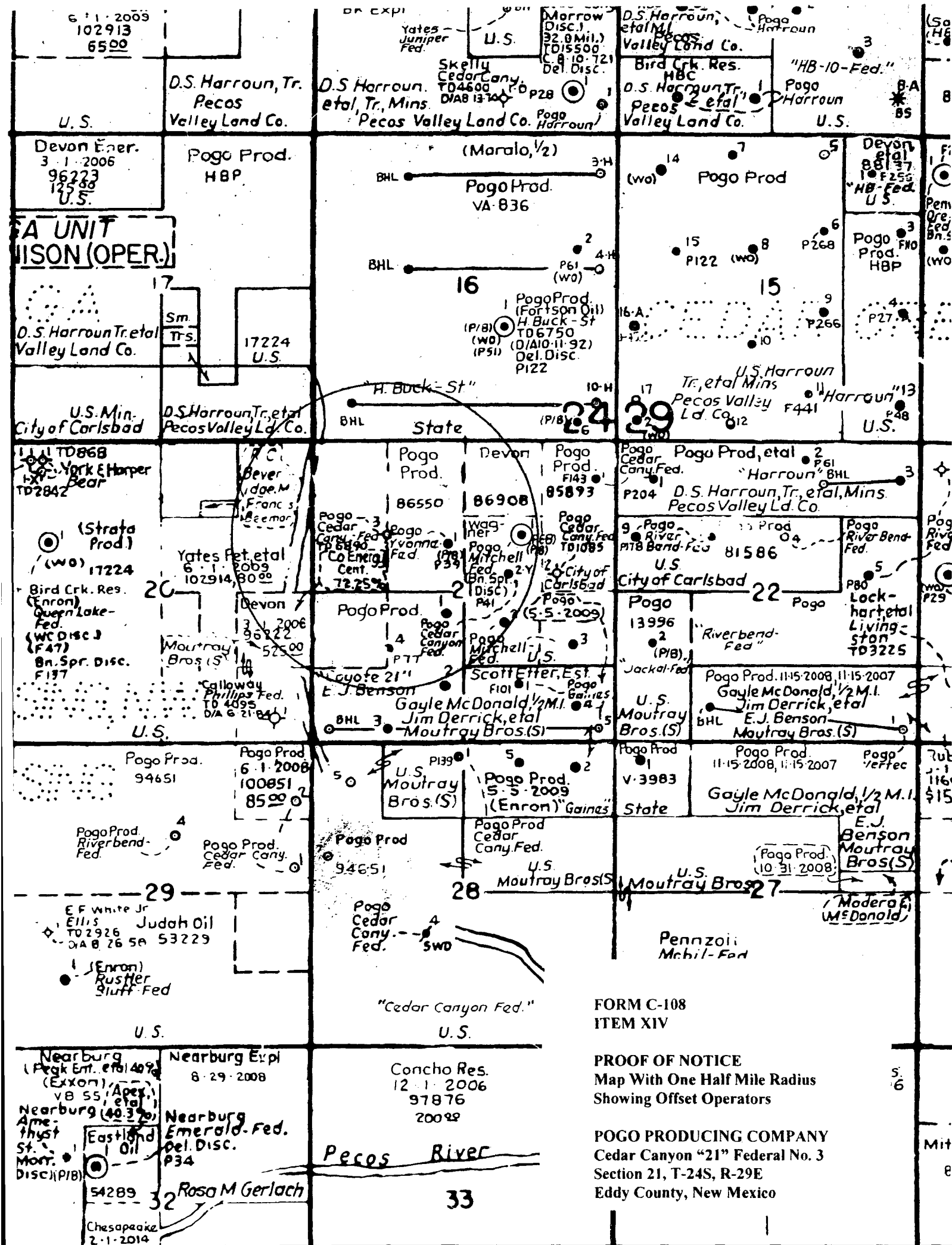
October 31, 2006

### PUBLIC NOTICE

#### APPLICATION FOR AUTHORIZATION TO INJECT SALTWATER

Pogo Producing Company, P.O. Box 10340, Midland, Texas 79702 (contact: Richard L. Wright at 432/685-8100) has applied to the New Mexico Oil Conservation Division for Administrative Approval for Authorization to inject saltwater into its Cedar Canyon "21" Federal No. 3 well, located 1650' FNL & 1300' FWL of Section 21, T-24S, R-29E, Eddy County, New Mexico. The purpose of such well will be for injection/disposal of saltwater produced from Pogo's wells nearby. The injection interval will be in the Delaware (Bell Canyon and Cherry Canyon) Formation between 3106' and 4280' beneath the surface, with an expected maximum injection rate of 5000 BWPD and an expected maximum injection pressure of 775 psi.

Any interested parties must file objections or request for a hearing with the New Mexico Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within (15) days from the date of Pogo's Application.



FORM C-108  
ITEM XIV

**PROOF OF NOTICE**  
**Map With One Half Mile Radius**  
**Showing Offset Operators**

**POGO PRODUCING COMPANY**  
**Cedar Canyon "21" Federal No. 3**  
**Section 21, T-24S, R-29E**  
**Eddy County, New Mexico**

**BILL F. HALEPESKA**

**Petroleum Engineer  
Texas # 58852  
P. O. Box 80064**

**Geologist  
Cert. #2941  
Midland, TX 79708**

---

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

October 23, 2006

To: Surface Owner(s) and Offset Leasehold Operators  
(See attached list)

Re: Water Disposal Project, US MI: Eddy County, New Mexico; Application for Administrative Approval to Inject Saltwater into the Cedar Canyon "21" No. 3 Well, Located 1650' FNL & 1300' FWL, Section 21, T-24S, R-29E

Gentlemen:

Pogo Producing Company has applied to the New Mexico Oil Conservation Division for Administrative Approval to inject saltwater into the referenced well.

A copy of the Form C-108 submitted by Pogo to the Division is enclosed.

If you object to and/or request that a hearing be held pertaining to this Application, you must notify the Division within fifteen (15) days from the date of Pogo's Application.

If you have any questions, please contact the undersigned (432/694-5945) or Mr. Richard Wright (432/685-8100).

Very truly yours,

  
Bill F. Halepeska, P.E.

Attachment(s)

**FORM C-108**

**Ownership list attached to Notification Letter dated October 23, 2006**

**Regarding Pogo Producing Company's Application for Administrative Approval to Inject Saltwater into the Cedar Canyon "21" Federal No. 3 Well**

United States Department of Interior  
Bureau of Land Management  
Roswell Resource Area Office  
2909 W. 2<sup>nd</sup> Street  
Roswell, New Mexico 88201-1287

Devon Energy Production Company  
20 North Broadway, Ste. 1500  
Oklahoma City, OK 73102-8260  
Att: Ken Gray

Yates Petroleum Company  
105 S. 4<sup>th</sup> Street  
Artesia, NM 88210

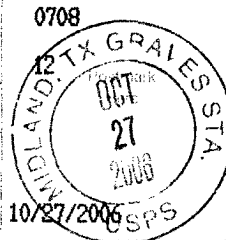
Notice forwarded by Certified Mail, Return Receipt requested, on October 27, 2007

A handwritten signature in black ink, appearing to be "A.H.", is located below the notice text.

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

MIDLAND TX 79701

|   |   |
|---|---|
| Postage   | \$ <del>1.11</del><br><del>\$0.39</del> |
| Certified Fee                                     | \$2.40                                  |
| Return Receipt Fee<br>(Endorsement Required)      | \$1.85                                  |
| Restricted Delivery Fee<br>(Endorsement Required) | \$0.00                                  |
| Total Postage & Fees                              | \$ <del>5.26</del><br><del>\$4.64</del> |



Sent to **BLM**  
Street Apt. No.  
or PO Box No.  
City State ZIP+4  
**Roswell, N.M. 88201-1287**

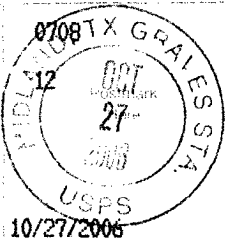
PS Form 3800, January 2001

See Reverse for Instructions

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

OKLAHOMA CITY OK 73102

|   |   |
|---|---|
| Postage   | \$1.11                                  |
| Certified Fee                                     | \$2.40                                  |
| Return Receipt Fee<br>(Endorsement Required)      | \$1.85                                  |
| Restricted Delivery Fee<br>(Endorsement Required) | \$0.00                                  |
| Total Postage & Fees                              | \$ <del>5.36</del><br><del>\$4.74</del> |



Sent to **Devon Energy**  
Street Apt. No.  
or PO Box No.  
City State ZIP+4  
**Oklahoma City, OK 73102-8260**

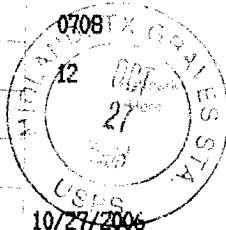
PS Form 3800, January 2001

See Reverse for Instructions

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

ARTESIA NM 88210

|   |   |
|---|---|
| Postage   | \$1.11                                  |
| Certified Fee                                     | \$2.40                                  |
| Return Receipt Fee<br>(Endorsement Required)      | \$1.85                                  |
| Restricted Delivery Fee<br>(Endorsement Required) | \$0.00                                  |
| Total Postage & Fees                              | \$ <del>5.36</del><br><del>\$4.74</del> |



Sent to **Yates Petr**  
Street Apt. No.  
or PO Box No.  
City State ZIP+4  
**Artesia, NM 88210**

PS Form 3800, January 2001

See Reverse for Instructions