

DATE IN 11/09/06	SUSPENSE 11/25/06	ENGINEER W. Jones	LOGGED IN 11/14/06	TYPE SWD	APP NO. PTDSC631848558
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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



ADMINISTRATIVE APPLICATION CHECKLIST

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

Application Acronyms:

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

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

Print or Type Name

Signature

Title

Date

e-mail Address

BILL F. HALEPESKA

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

2006 NOV 9 PM 12 44

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

November 06, 2006

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

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

Gentlemen:

Pogo Producing Company hereby respectfully submits two (2) copies of Application for Authorization to Inject Saltwater (Form C-108) pertaining to referenced well and requests that same be given Administrative Approval.

Please find enclosed the following:

Form C-108 with attachments, including copy of Notification Letter sent to all Leasehold Operators within ½ mile of subject well and to Surface Owner upon which well is located along with copies of Proof of Mailing; and

Proof of Publication

If you have any questions, please contact the undersigned at 432/694-5945 or Barrett Smith at 432/685-8100.

Very truly yours,

POGO PRODUCING COMPANY

Bill F. Halepeska, P.E., Agent

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery XX Pressure Maintenance XX Disposal Storage
Application qualifies for administrative approval? XX Yes No
- II. OPERATOR: Pogo Producing Company
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? XX 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: 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: _____

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.

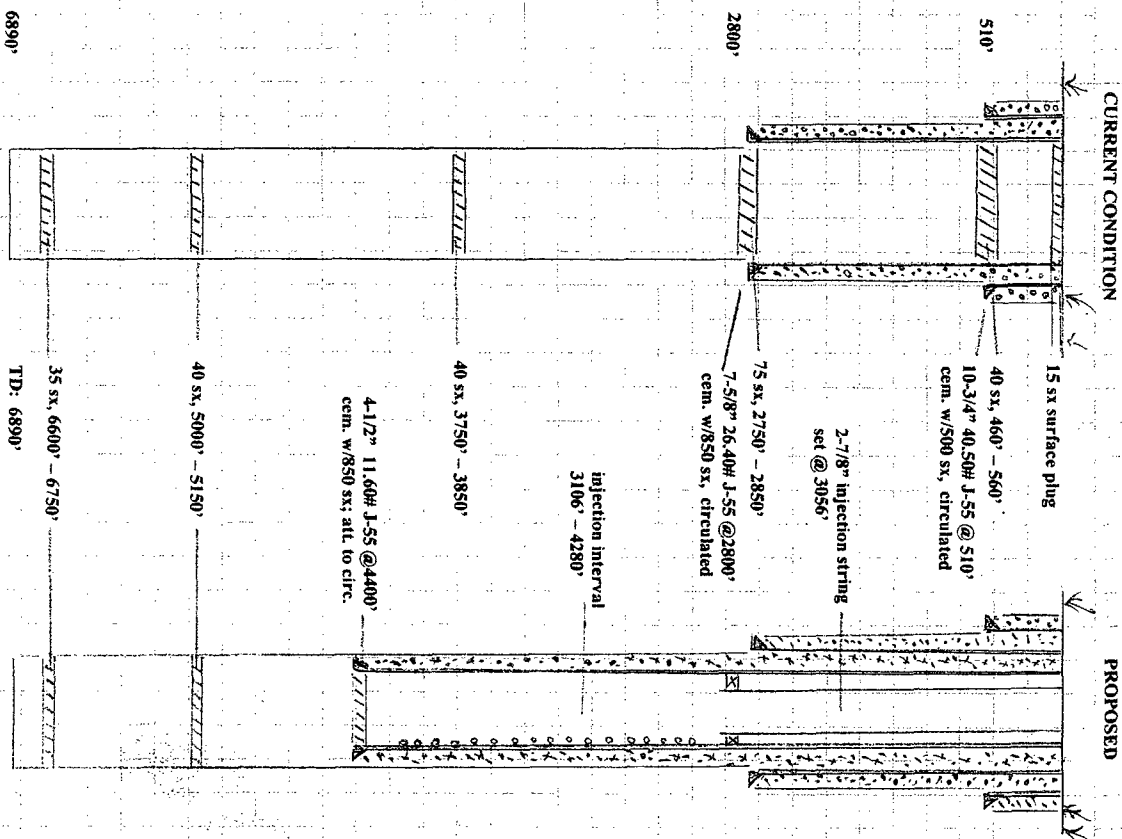
Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (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.

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' PBTD: 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'

6/9/2006

Wellbore Diagram

r263

30-015-34695-00-00

H BUCK STATE No. 010

Company Name: POGO PRODUCING CO

Location: Sec: 16 T: 24S R: 29E Spot:

Lat: Long:

Property Name: H BUCK STATE

County Name: Eddy

String Information

Cement Information

Perforation Information

Top (ft sub)	Bottom (ft sub)	Shts/Ft	No Shts	Dt Sqz
0	0			

Formation Information

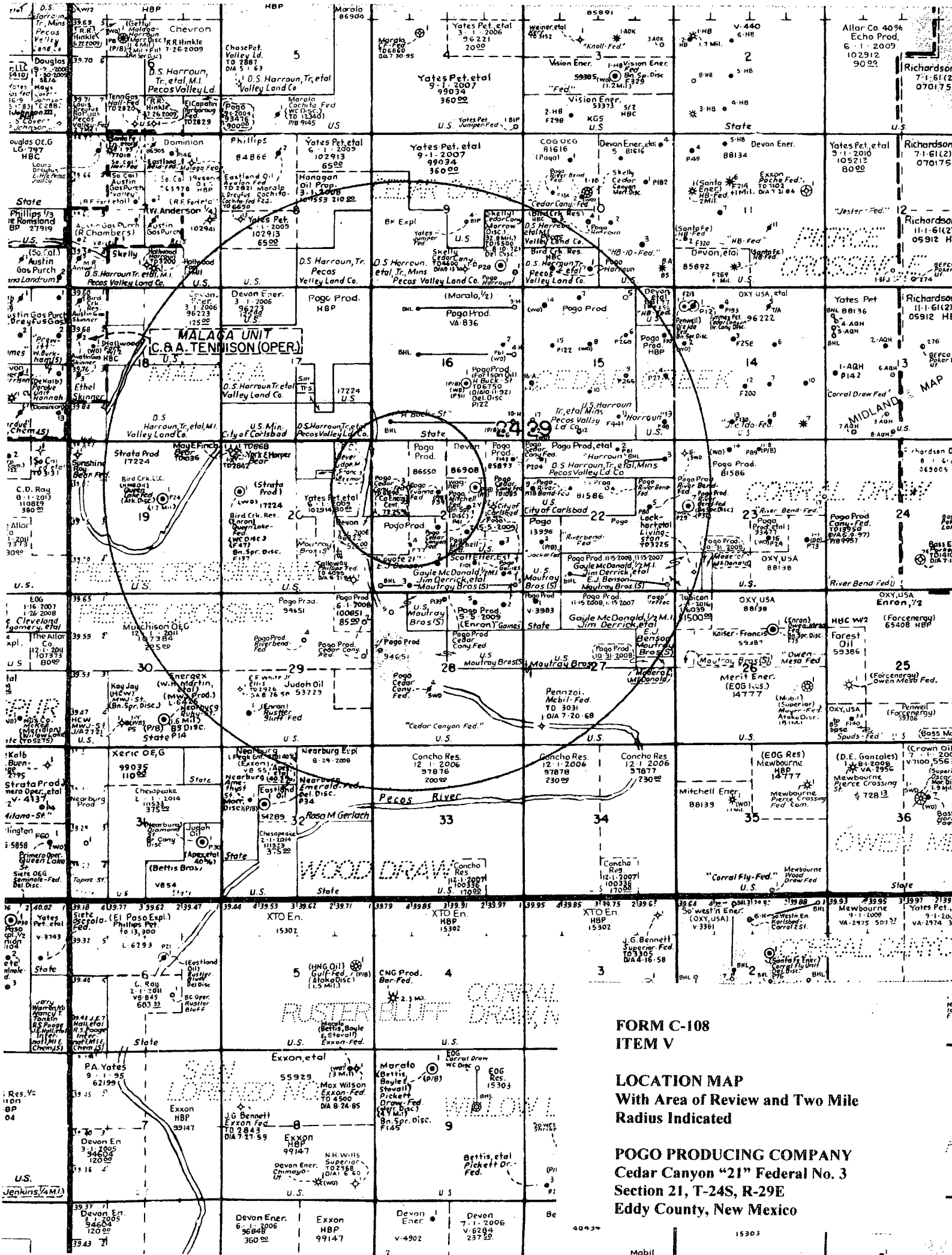
St Code	Formation	Depth
Pbslt	Base of Salt	2722
Plals	Lamar Limestone	2936
Pbc	Bell Canyon	2966
Pcc	Cherry Canyon	3823
Pbrc	Brushy Canyon	5045
Pbs	Bone Spring	6658

Hole: Unknown

TD:

TVD: 0

PBTD:



FORM C-108
ITEM V

LOCATION MAP
With Area of Review and Two Mile
Radius Indicated

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

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, APT #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

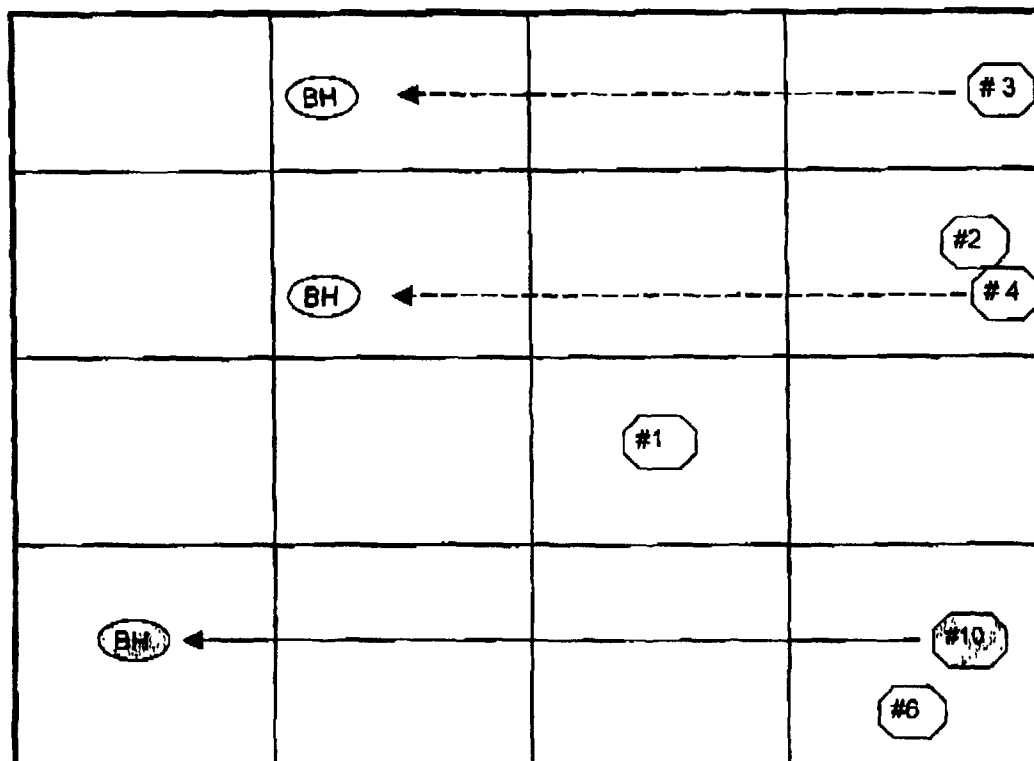
Plugged _____ Date _____ (diagram attached)

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

Plugged _____ Date _____ (diagram attached)

H. Buck State Well Groupings

Sec 16, T-24-S, R-29-E, Eddy County, New Mexico



Well Name	Legal Location in 15	Depth and Strata	Current Prod Zone
H. Buck State # 1 =	1982 FSL & 1961 FEL	TD = 7850 1st Bone Sand	Delaware Production
H. Buck State # 2 =	330 FNL & 1980 FEL	TD = 7950 1st Bone Sand	Delaware Production
H. Buck State # 6 =	330 FSL & 660 FEL	TD 7815' = 1st Bone Sand	Delaware Production
H. Buck State # 3 =	660 FNL & 330 FEL	TVD 7608 1st Bone Sand	Bone Springs Prod
H. Buck State # 4 =	2310 FNL & 330 FEL	TVD 7608 1st Bone Sand	Bone Springs Prod

APE H. Buck State # 10H.xls

MITCHELL ENGINEERING PROGRAMS

H. Buck #10

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LONG'S METHOD OF SURVEY COMPUTATION**OBLIQUE CIRCULAR ARC INTERPOLATION**

0	MD OF INTERPOLATION DEPTH (feet)
#N/A	TVD COORDINATE OF THE DEPTH (feet)
#N/A	N/S COORDINATE OF DEPTH (feet)
#N/A	E/W COORDINATE OF DEPTH (feet)

3 D DISTANCE BETWEEN STATION A AND STATION B

DISTANCE TABLE

STATION A	STATION B
0.00	ft

TABLE OF SURVEY STATIONS

Calculator =

STA #	ΔMD ft	INCL deg	AZIM deg	MD ft	TVD ft	N/S- ft	E/W- ft	DLS deg/100FT
1	TIE POINT →	0	0	7225.00	7225.00	0.00	0.00	-
2	100	12	270	7325.00	7324.27	0.00	-10.43	12.00
3	100	24	270	7425.00	7419.20	0.00	-41.28	12.00
4	100	36	270	7525.00	7506.65	0.00	-91.19	12.00
5	100	48	270	7625.00	7579.83	0.00	-157.98	12.00
6	100	60	270	7725.00	7638.50	0.00	-238.73	12.00
7	100	72	270	7825.00	7679.10	0.00	-329.92	12.00
8	100	84	270	7925.00	7698.85	0.00	-427.58	12.00
9	50	91	270	7975.00	7702.03	0.00	-477.48	14.00
10	100	91	270	8075.00	7700.28	0.00	-577.45	0.00
11	100	91	270	8175.00	7698.54	0.00	-677.45	0.00
12	100	91	270	8275.00	7696.79	0.00	-777.43	0.00
13	100	91	270	8375.00	7695.05	0.00	-877.42	0.00
14	100	91	270	8475.00	7693.30	0.00	-977.40	0.00
15	100	91	270	8575.00	7691.58	0.00	-1077.39	0.00
16	100	91	270	8675.00	7689.81	0.00	-1177.37	0.00
17	100	91	270	8775.00	7688.07	0.00	-1277.36	0.00
18	100	91	270	8875.00	7686.32	0.00	-1377.34	0.00
19	100	91	270	8975.00	7684.58	0.00	-1477.33	0.00
20	100	91	270	9075.00	7682.83	0.00	-1577.31	0.00
21	100	91	270	9175.00	7681.08	0.00	-1677.29	0.00
22	100	91	270	9275.00	7679.34	0.00	-1777.28	0.00
23	100	91	270	9375.00	7677.60	0.00	-1877.26	0.00
24	100	91	270	9475.00	7676.85	0.00	-1977.25	0.00
25	100	91	270	9575.00	7674.10	0.00	-2077.23	0.00
26	100	91	270	9675.00	7672.36	0.00	-2177.22	0.00
27	100	91	270	9775.00	7670.61	0.00	-2277.20	0.00
28	100	91	270	9875.00	7668.87	0.00	-2377.19	0.00
29	100	91	270	9975.00	7667.12	0.00	-2477.17	0.00
30	100	91	270	10075.00	7665.38	0.00	-2577.16	0.00
31	100	91	270	10175.00	7663.63	0.00	-2677.14	0.00
32	100	91	270	10275.00	7661.88	0.00	-2777.13	0.00
33	100	91	270	10375.00	7660.14	0.00	-2877.11	0.00
34	100	91	270	10475.00	7658.40	0.00	-2977.10	0.00
35	100	91	270	10575.00	7656.65	0.00	-3077.08	0.00
36	100	91	270	10675.00	7654.91	0.00	-3177.07	0.00
37	100	91	270	10775.00	7653.16	0.00	-3277.05	0.00

PATHFINDER

ENERGY SERVICES

Site: H Buck State #10

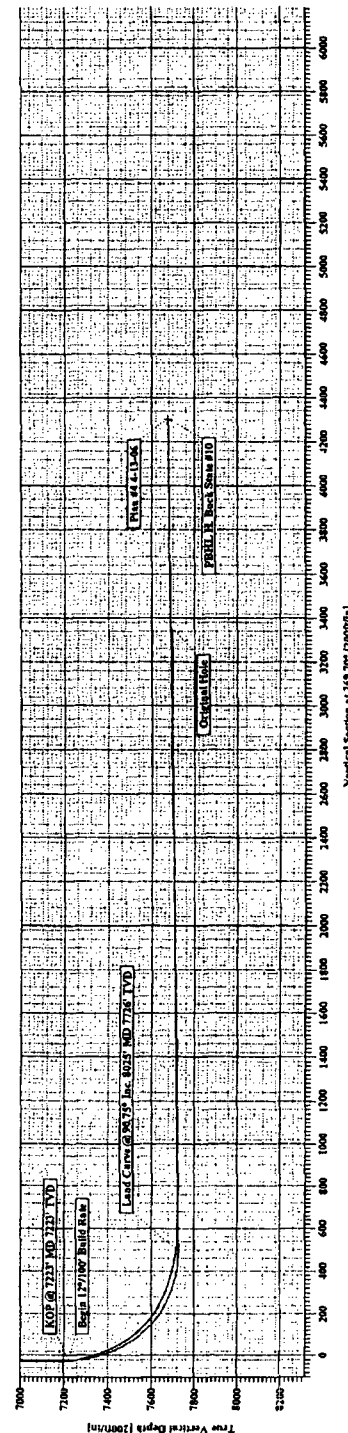
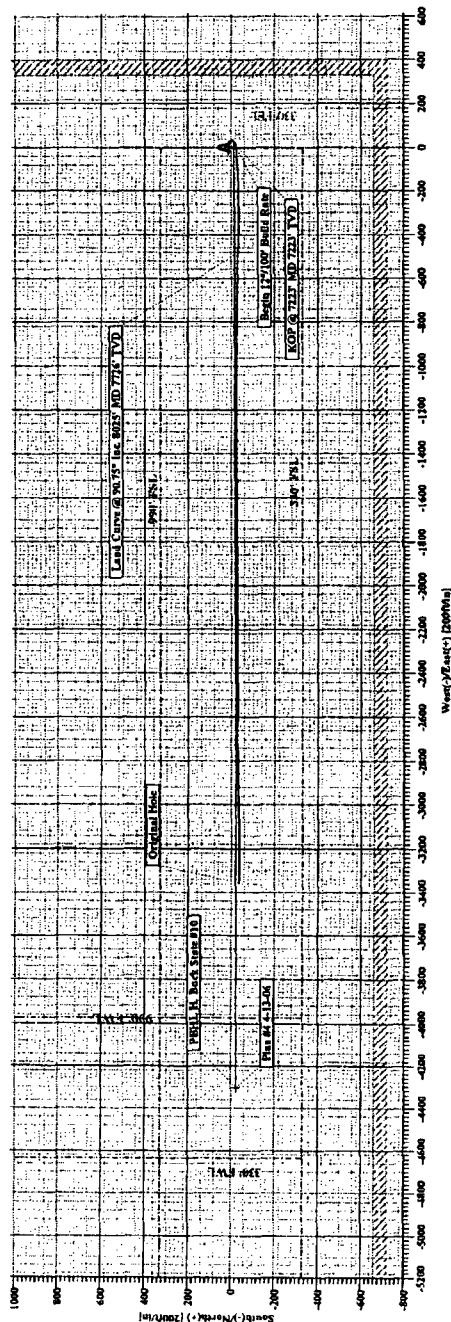
Well: H-Buck State #10

Wellpath: Original Hole

Plan: Plan #4 4-13-06

Pathfinder MWD Surveys

WELL DETAILS							
Name	+N/S	+E/W	Northing	Eastng	Latitude	Longitude	Sheet
H-Buck State #10	0.00	0.00	441014.30	608279.60	32°1743.113N	101°58'53.231W	N/A



Azimuths to Grid North
True North: -0.19°
Magnetic North: 8.19°

Magnetic Field
Strength: 49123nT
Dip Angle: 60.23°
Date: 4/4/2006
Model: jerr2005

FILED OCT 11 1965

Forma Cracking-Rene Spring East
Eddy County, New Mexico

506 DETAILS

14 Bush Street #10
Edly Center, New Mexico
Section 16, T-24-S, R-29-E

Site Costs: Marking: 441018.30
Easting: 608429.60

Ground Level: 2927.00
Political Uncertainty: 0.00
Contaminant: 0.19

WELL PATH DETAILS

Reg.:	Original Note		
Surf. Data:	Mean Sea Level	Origin	Starting From IVD
V System Angle	Origin +N.5 -E.10	0.00	0.00
249.70°			

Form 1041-1 (3-7-85) PREPARED BY: 11-10-85 (10-1)

CONFIDENTIAL

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 VIIOPERATIONAL 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'.

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. 2nd 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. 4th Street
Artesia, NM 88210

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

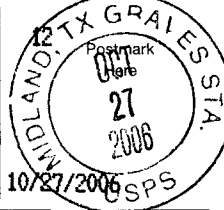
A handwritten signature in black ink, appearing to be "R.H.", is located below the notice text.

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

MIDLAND TX 79701

Postage	\$ 1.11 \$0.39
Certified Fee	\$2.40
Return Receipt Fee (Endorsement Required)	\$1.85
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$ 5.26 \$4.04

0708



Sent To *BLM*

Street, Apt. No.,
or PO Box No.

City, State, ZIP+4
Roswell, N.M. 88201-1287

PS Form 3800, January 2001

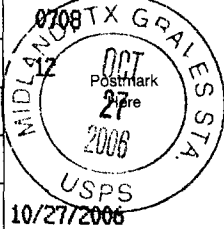
See Reverse for Instructions

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 (Endorsement Required)	\$1.85
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$ 5.36

0708



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

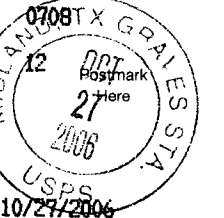
See Reverse for Instructions

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 (Endorsement Required)	\$1.85
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$ 5.36

0708



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

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'

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 ⁺ (Calc.)	85,491	3,717
Total Hardness as Ca ⁺⁺	7,040	0
Calcium, Ca ⁺⁺	5,640	282
Magnesium, Mg ⁺⁺	854	71
Barium, Ba ⁺⁺	0	0
Iron (Total) Fe ⁺⁺⁺	74	4

ANIONS

Chlorides, Cl ⁻	144,000	4,056
Sulfate, SO ₄ ⁻	245	5
Carbonate, CO ₃ ⁻	0	0
Bicarbonate, HCO ₃ ⁻	781	13
Sulfide, S ⁻	0	0
Total Dissolved Solids (Calc.)	237,085	

OTHER PROPERTIES

pH ⁻	6.340
Specific Gravity, 60°/60 F	1.125
TURBIDITY	300

SCALING INDICIES

TEMP, F	CA CO ₃	CASO ₄ *2H ₂ O	CA SO ₄	BA SO ₄
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

Endura Pr

P.O. Box 3

Phone (915)

ANALYSIS - Bone Spring
Produced WaterPOGO PRODUCING COMPANY
Cedar Canyon "21" Federal No. 3
Section 21, T-24S, R-29E
Eddy County, New MexicoWAT

Date 12/11/95 Endura Rep TERRY SOLAN

Sampling Point/Date WELL HEAD - 12/9/95

Company POGO PRODUCING

County EDDY

Field

Lease RIVERBEND FEDERAL Well #7

H. BUCK STATE Well #1

DISSOLVED SOLIDSCATIONS

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

ANIONS

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

OTHER PROPERTIES

pH ⁻	6.360	6.440
Specific Gravity, 60°/60 F	1.123	1.123
TURBIDITY	300	175

SCALING INDICIES

TEMP, F	CA CO ₃	CASO ₄ *2H ₂ O	CA SO ₄	BA SO ₄
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

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

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

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

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 Mexico

WATER 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.

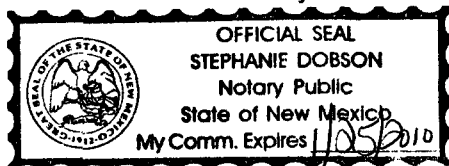
April Hernandez

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.

Injection Permit Checklist

SWD Order Number 1057 Dates: Division Approved _____ District Approved _____
 Information Request Letter or Email sent _____
 Well Name/Num: CEAR CANYON 21" FOL #3 Date Spudded: Recent (1997)
 API Num: (30-) 05-29676 County: EDDY
 Footages 1650 FNL/1300 FWL Sec 21 Tsp 24S Rge 29E
 Operator Name: POGO PRODUCING COMPANY Contact BILL HALEPESKA RICHARD WRIGHT
 Operator Address: PO BOX 10340 MIDLAND TX 79702

	Hole/Pipe Sizes	Depths	Cement	Top/Method
Surface	14 3/4" 10 3/4"	510	500	Surf
Intermediate	9 7/8" 7 5/8"	2800	850	Surf
Production	6 3/4" 4 1/2"	4400	850	Surf
Last DV Tool				
Open Hole/Liner				
Plug Back Depth				

Diagrams Included (Y/N): Before Conversion ☒ After Conversion ☒
 Checks (Y/N): Well File Reviewed ☒ ELogs in Imaging ☒

re-enter plugged well
2 7/8" TRS

Intervals:	Depths	Formation	Producing (Yes/No)
Salt/Potash	10 2722'	Salado	
Capitan Reef			
Cliff House, Etc.			
Formation Above	2980	Bell Crg.	Yes
Top Inj Interval	3106	Bell Crg.	
Bottom Inj Interval	4280	Cherry St.	
Formation Below	5046	Cherry St.	

NSE-3781
4/1/97

621 PSI Max. WHIP
 No Open Hole (Y/N)
 No Deviated Hole (Y/N)

Fresh Water Site Exists (Y/N) ☒ Analysis Included (Y/N) ☒
 Salt Water Analysis: Injection Zone (Y/N/NA) ☒ Disposal Waters (Y/N/NA) ☒ Types: Del
 Affirmative Statement Included (Y/N): ☒ Newspaper Notice Adequate (Y/N) ☒ Well Table Adequate (Y/N) ☒
 Surface Owner BLM Noticed (Y/N) ☒ Mineral Owner(s) _____
 AOR Owners: Yates/Oxon Noticed (Y/N) ☒
 CID/Potash/Etc Owners: _____ Noticed (Y/N) _____
 AOR Num Active Wells 8 Repairs? no Producing in Injection Interval in AOR NO
 AOR Num of P&A Wells 0 Repairs? — Diagrams Included? —

Data to Generate New AOR Table

New Table Generated? (Y/N)

	STR	E-W Footages	N-S Footages
Wellsite	21/24/29		
Northeast			
North	16		
Northwest	17		
West	20		
Southwest			
South			
Southeast			
East			

Conditions of Approval:
 1. PB to 200' of Perfo
 2. _____
 3. _____
 4. _____
 RBDMS Updated (Y/N) _____
 UIC Form Completed (Y/N) ☒
 This Form completed 11/29/06