

DATE IN <u>5.11.12</u>	SUSPENSE	ENGINEER <u>WVJ</u>	LOGGED IN <u>5.11.12</u>	TYPE <u>SWD</u>	APP NO. <u>1213248112</u>
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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



BOPCO, L.P. 260737

J F Harrison Federal #1

**ADMINISTRATIVE APPLICATION CHECKLIST** 30-015-04749

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,  
will provide once received

[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.**

Sandra J. Belt  
 Print or Type Name

Sandra J. Belt  
 Signature

Dr. Reg. Clerk  
 Title

5-9-12  
 Date

Sjbelt@basspet.com  
 e-mail Address

**BOPCO, L. P.**  
6 DESTA DRIVE, SUITE 3700 (79705)  
P. O. BOX 2760  
MIDLAND, TEXAS 79702

RECEIVED OCD

(432) 683-2277

FAX (432) 687-0329

May 9, 2012

2012 MAY 11 A 10:34

Oil Conservation Division  
Attention: William Jones  
1220 S. St. Francis  
Santa Fe, NM 87505

Re: Notice of Application for  
Authorization to Convert to SWD  
J F Harrison Federal #1  
Eddy County, New Mexico

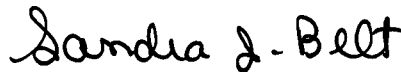
Mr. Jones:

Enclosed please find BOPCO, L.P.'s re-submission of the Application for Authorization to convert for disposal purposes only into the J F Harrison Federal #1, located in Section 12, T25S, R30E, Eddy County, New Mexico. It is our intention to add perforations to the Devonian as shown on the attached well-bore sketch. Order SWD-1259 expired before the well began injection operations began.

The subject well is on Federal land and a complete copy of the application has been sent to the BLM's Carlsbad office, OCD district office, Exxon Mobil and Devon Energy Production as offset operator, via Certified Mail. I will provide a copy of the signed receipt cards when they are returned.

If additional information is required, please contact Sandra J. Belt at the letterhead address, phone number or via email at [sjbelt@basspet.com](mailto:sjbelt@basspet.com)

Sincerely



Sandra J. Belt  
Sr. Regulatory Clerk

sjb

Attachments

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage  
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: BOPCO, L.P.  
ADDRESS: P O Box 2760 Midland Tx 79702  
CONTACT PARTY: Sandra J. Belt ext. 7379 PHONE: (432)683-2277
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? Yes X No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: Sandra J. Belt ext. 7379 TITLE: Sr. Regulatory Clerk  
SIGNATURE: Sandra J. Belt DATE: 05/09/2012  
E-MAIL ADDRESS: sjbelt@basspet.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: \_\_\_\_\_

### III. WELL DATA

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

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

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

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

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

### XIV. PROOF OF NOTICE

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

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

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

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

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

### III. Well Data

A. 1) Lease name: JF Harrison Fed  
Well #: 1  
Section: 12  
Township: 25S  
Range: 30E  
Footage: 660' FNL & 660' FWL

2) Casing Info:

Casing size	Set depth	Sacks cmt	Hole size	TOC	Method
20" 94# H-40	557'	750	24"	Surface	Circulated
13-3/8" 61# & 72# N-80 & J-55	3971'	6,400	17-1/2"	Surface	Circulated
9-5/8" 40# & 47# N-80	10,073'	3,507	12-1/4"	4,560'	TS

3) Tubing to be used (size, lining material, setting depth):  
4-1/2" J-55 Seal Tite IPC tbg set @ 16,575'.

4) Name, model, and depth of packer to be used:  
10K Reliant Mechanical Set Hornet Pkr EXT/INT nickel plated set @ 16,575'.

B. 1) Name of the injection formation and, if applicable, the field or pool name:  
Devonian formation.

2) The injection interval and whether it is perforated or open hole:  
16,626'-17,205' Devonian (open hole).

3) State if the well was drilled for injection or, if not, the original purpose of the well:  
Drill & complete Wildcat (Wolfcamp formation) development well.

4) Give the depths of any other perforated intervals and detail on the sacks of cement or BPs used to seal off such perforations:  
The well currently is plugged with no open perms.

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:  
Higher: None within 1 mile                      Lower: None

### C-108 DATA

- 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 wells type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

Well Name	No.	API	Operator	Type	Location	Construction				Tubing	Spud Date	Comp Date	TD	Perforations	Stimulation
						Surface Casing	Intermediate Casing	Production Casing							
PLU	91	30-015-29509	BOPCO, LP	P&A	360' FNL & 330' FWL, Sec 12, T25S, R30E	11-3/4" @ 1079' CTS, C/625 sx	8-5/8" @ 4,070', C/1550 sx	5-1/2" @ 5019' DVT, 440 sx; 5-1/2" @ 8097', 300 sx		NA	6/1/1997	7/4/1997	6100'	NA	NA
PLU	116	30-015-28030	BOPCO, LP	Never Drilled	1980' FSL & 660' FWL, Sec 1, T25S, R30E	NA	NA	NA		NA	NA	NA	NA	NA	NA
Shugart Fed	1	30-015-10524	Choctaw Prod Co	P&A	1980' FNL & 1980' FWL, Sec 12, T25S, R30E	8-5/8" @ 341', 225 sx	NA	NA		NA	9/16/1965	9/25/1965	4200'	NA	NA

- VII. Attach data on the proposed operation, including:

- Proposed average and maximum daily rate and volume of fluids to be injected: 14,000 average, 15,000 BWPD
- Whether the system is open or closed: closed
- Proposed average and maximum injection pressure: 2,325 psi average, 3,325 psi maximum
- Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water: water will be produced from Delaware formation
- If injection is for disposal purposes into a zone not productive of oil & gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water: n/a

- 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 TDS 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:

Lithologic Detail: Carbonate  
Geological Name: Devonian  
Thickness: 579'  
Depth: 16,626'-17,205'

The Rustler Formation is a known source of fresh water throughout this geographic area. Average depth of Rustler is 580'- 1260'. No sources of fresh water are known to exist below the proposed disposal zone.

- IX. Describe the proposed stimulation program, if any:

The open hole section will be acidized with approximately 28,950 gallons 15% NEFE HCl acid (50 gallons per foot of open hole).

- X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted.) Logs previously submitted.

- 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.  
One stock tank located near PLU #91.

- 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 hydrology connection between the disposal zone and any underground sources of drinking water.  
Applicant hereby affirms that he has examined the available geologic and engineering data and finds no evidence of open faults, or other hydrologic connection between the disposal zone and any underground source of drinking water.

*S. Haller*

DST #23 (16,600-16,705). Used 8200' wb, open 3 hours, tool opened w/good blow air. Increase to strong blow immediately, sli decrease throughout test. No gas to surface. Recovered 12,788' total fluid, being 7850' wb, / 3398' black salty sulfur water w/sour odor, / 350' mud cut wb, / 920' mud cut salt water (sulfur odor & taste 24500 PPM chlor.) / 270' mud cut salt water (83000 PPM chlor.).  
 FP 4120-5920# 30 Min. SIP 7390#.

The total depth of 16,705' was reached in 455 days. Casing record as follows:  
 20" @ 539' w/750 sacks cement, 13 3/8" @ 3954' w/6450 sacks cement, 9 5/8" @ 10,058' w/2540 sacks cement, 7" Liner 9850-16,626 w/1150 sacks cement. Perforated 7" Liner at 10,025', 11,930' and 12,360' and squeezed with 825 sacks cement, total of 1975 sacks cement behind 7" Liner. Plugged and abandoned September 20, 1954.

# CURRENT WELLBORE DIAGRAM

Lease: J F Harrison Federal Well No.: 1  
 Field: Wildcat (Wolfcamp)  
 Location: 660' FNL & 660' FWL SEC 12-T25S-R30E  
 County: EDDY St: NM API: 30-015-04749

## Surface Csg.

Size: 20"  
 Wt: 94#  
 Grd: H-40  
 Set @: 557'  
 Sxs cmt: 750  
 Circ: 7 sks  
 TOC: Surface  
 Hole Size: 24"

## Intermediate Csg.

Size: 13 3/8"  
 Wt: 61/72#  
 Grd: J-55/N80  
 Set @: 3971'  
 Sxs Cmt: 6400  
 Circ: 2000 sks  
 TOC: Surface  
 Hole Size: 17 1/2"

## Intermediate Csg.

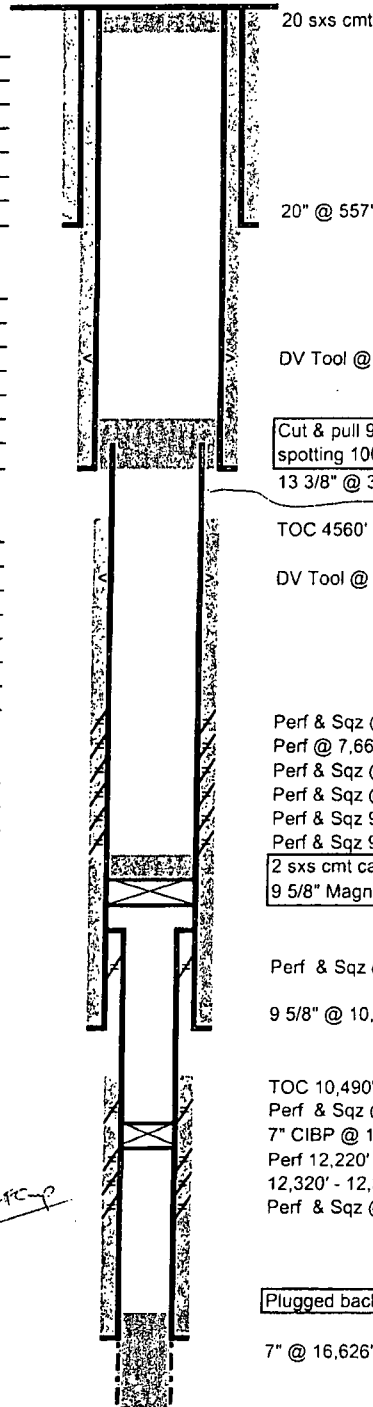
Size: 9 5/8"  
 Wt: 40/47#  
 Grd: N-80  
 Set @: 10,073'  
 Sxs Cmt: 3507  
 Circ: None  
 TOC: 4560' (Temp Log)  
 Hole Size: 12 1/4"

## Production Liner

Size: 7"  
 Wt: 32#  
 Grd: N-80  
 Set @: 9850' - 16,626'  
 Sxs Cmt: 1675  
 Circ: None  
 TOC: 10490'  
 Hole Size: 8 5/8"

## Open Hole

Size: 5 7/8"



Elevation DF: 3356'  
 Spud: 7/22/1952  
 Completed: 10/27/1953

20" @ 557'

DV Tool @ 2792'

Cut & pull 9 5/8" @ 3800'  
 spotting 100 sxs cmt on top  
 13 3/8" @ 3971'

TOC 4560'

DV Tool @ 6008'

Perf & Sqz @ 7,250' - 7,652' - 7,662'  
 Perf @ 7,665' - 7,670'  
 Perf & Sqz @ 7,680'  
 Perf & Sqz @ 8,450'  
 Perf & Sqz 9380' - 9400'  
 Perf & Sqz 9380' - 9460', 9525' - 9527'

2 sxs cmt cap  
 9 5/8" Magnesium bridge plug @ 9560'

Perf & Sqz @ 10,025'

9 5/8" @ 10,073'

TOC 10,490'  
 Perf & Sqz @ 11,930'  
 7" CIBP @ 12,112'  
 Perf 12,220' - 12,240', 12,250' - 12,280', 12,315' - 12,330',  
 12,320' - 12,335', 12,448' - 12,251' (Sqz'd)  
 Perf & Sqz @ 12,360'

Plugged back to 16,282' w/ 75 sxs cmt

7" @ 16,626'

PBTD: 16,282'  
 TD: 16,705'

Updated: 8/23/2010  
 Author: crm  
 Engr: GEG



# PROPOSED WELLBORE DIAGRAM

Lease: J F Harrison Federal Well No.: 1  
 Injection  
 Reservoir: Devonian  
 Location: 660' FNL & 660' FWL, SEC 12-T25S-R30E  
 County: EDDY St: JM API: 30-015-04749

**Surface Csg.**  
 Size: 20"  
 Wt: 94#  
 Grd: H-40  
 Set @: 557'  
 Sxs cmt: 750  
 Circ: 7 sks  
 TOC: Surface  
 Hole Size: 24"

Elevation DF: 3356'  
 Spud: 7/22/1952  
 Completed: 10/27/1953

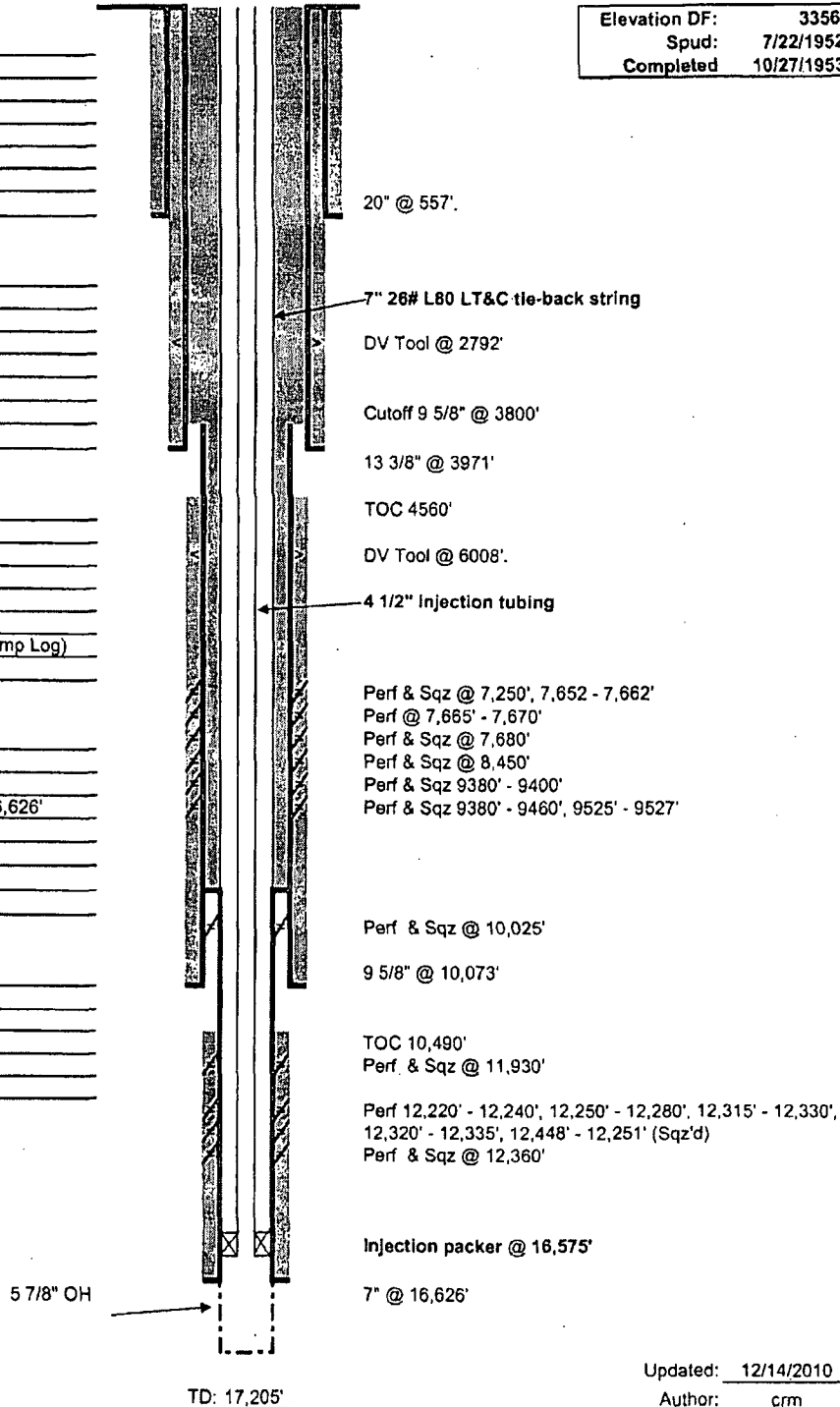
**Intermediate Csg.**  
 Size: 13 3/8"  
 Wt: 61/72#  
 Grd: J-55  
 Set @: 3971'  
 Sxs Cmt: 6400  
 Circ: 2000 sks  
 TOC: Surface  
 Hole Size: 17 1/2"

**Intermediate Csg.**  
 Size: 9 5/8"  
 Wt: 40/42#  
 Grd: N-80  
 Set @: 10,073'  
 Sxs Cmt: 3507  
 Circ: None  
 TOC: 4560' (Temp Log)  
 Hole Size: 12 1/4"

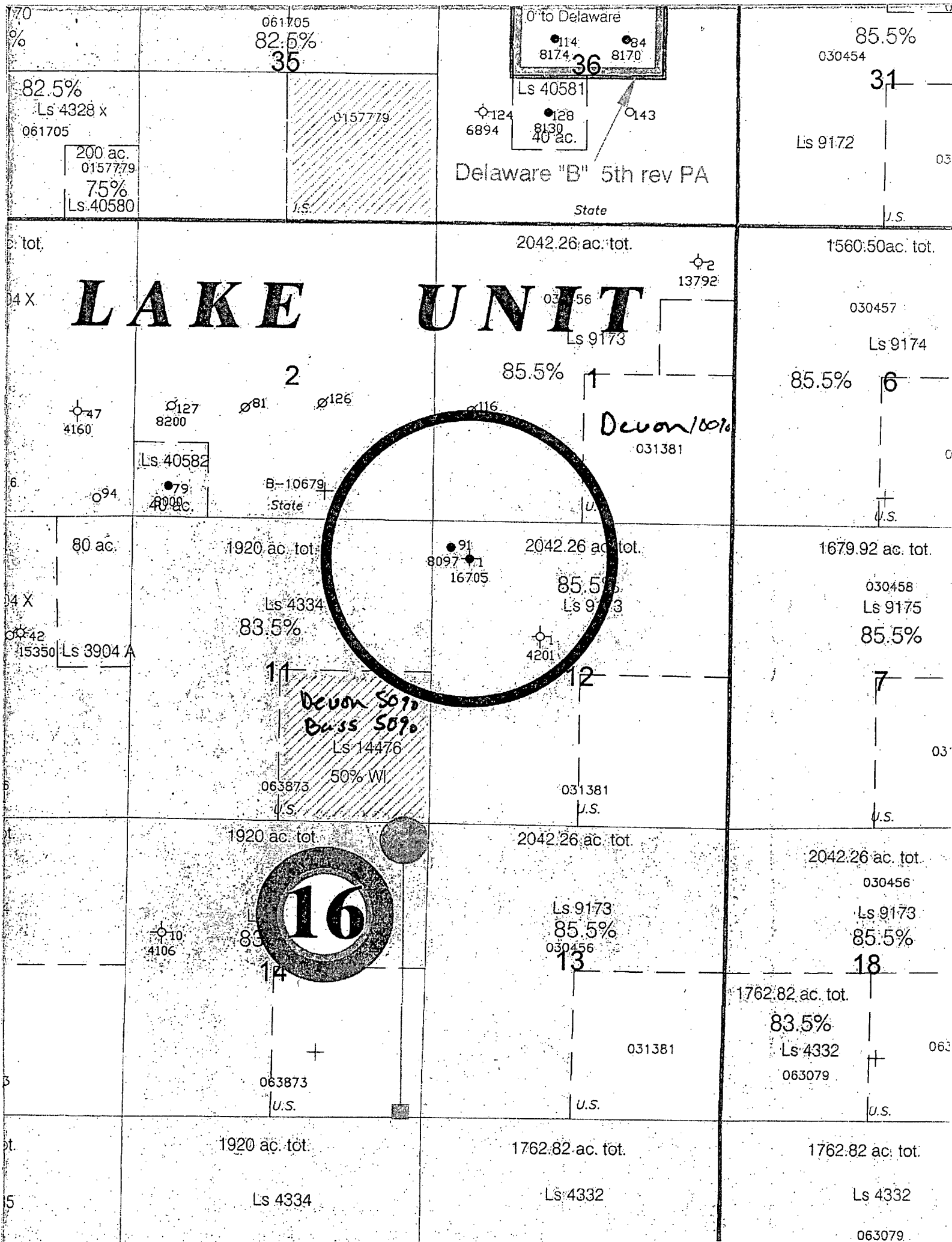
**Production Csg.**  
 Size: 7"  
 Wt: 32#  
 Grd: N-80  
 Set @: 9850' - 16,626'  
 Sxs Cmt: 1675  
 Circ: None  
 TOC: 10490'  
 Hole Size: 8 5/8"

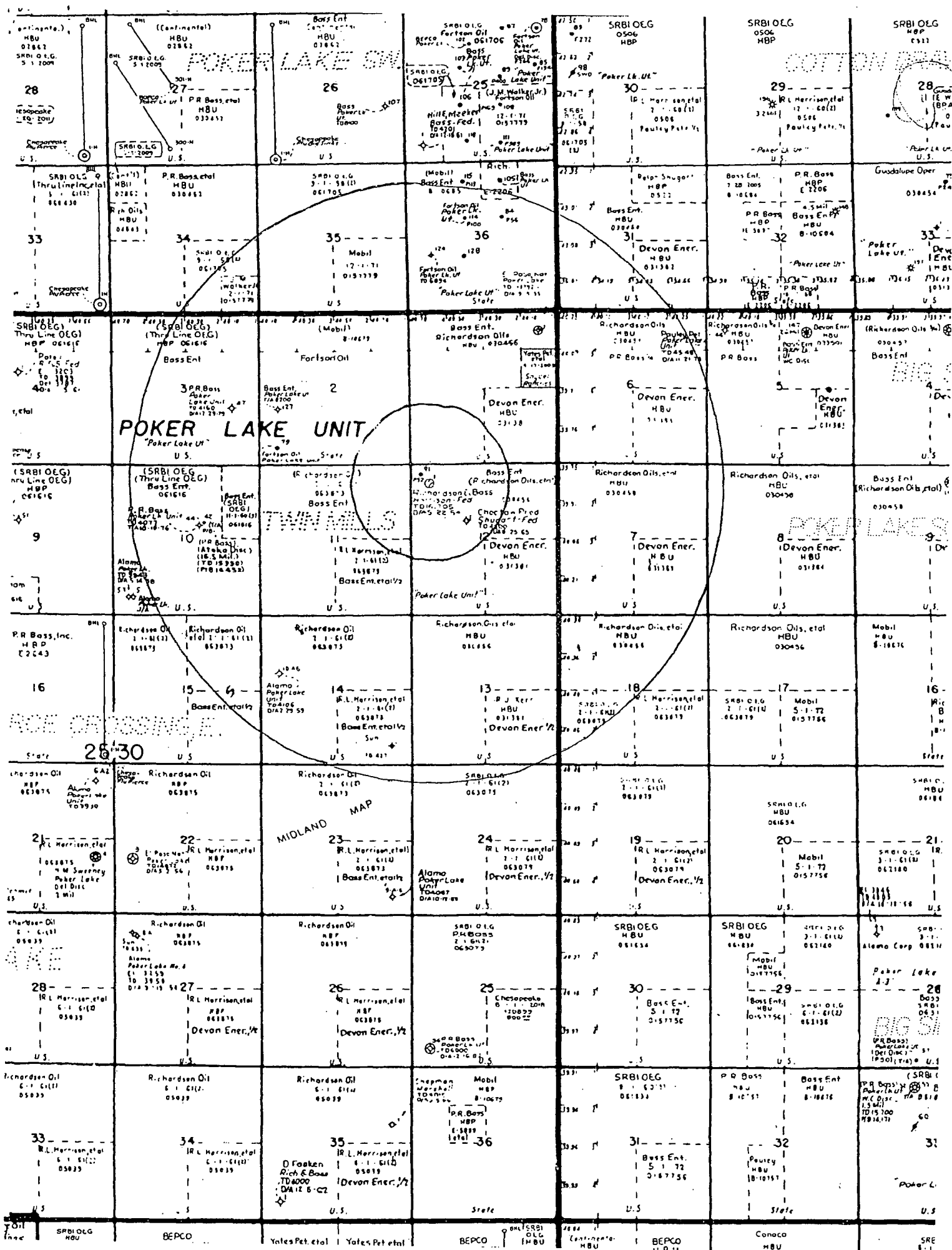
**Liner**  
 Size:             
 Wt:             
 Grd:             
 Set @: 0' - 9850'  
 Sxs Cmt:             
 TOC: Surface

**Open Hole**  
 Size: 5 7/8"



Updated: 12/14/2010  
 Author: crm  
 Engr: CCC





# PLUG AND ABANDON WELLBORE

LEASE: POKER LAKE UNIT WELL #: 91 -- P&A'D (6/13/2007)  
 FIELD: NE CORRAL CANYON (DELAWARE) FIELD  
 LOCATION: 360' FNL & 330' FWL, SEC 12, T25S, R30E  
 COUNTY: EDDY ST: NM API: 30-015-29509

KB:	3372.5'
GL:	3355.7'
SPUD DATE:	6/1/1997
COMP DATE:	7/4/1997

## SURFACE CASING

SIZE:	11-3/4"
WT/GRD:	42# WC-40 STC
CSA:	1079'
SX:	625
CIRC:	Yes 161 SXS
TOC:	SURF
HOLE SIZE:	14-3/4" 1084'

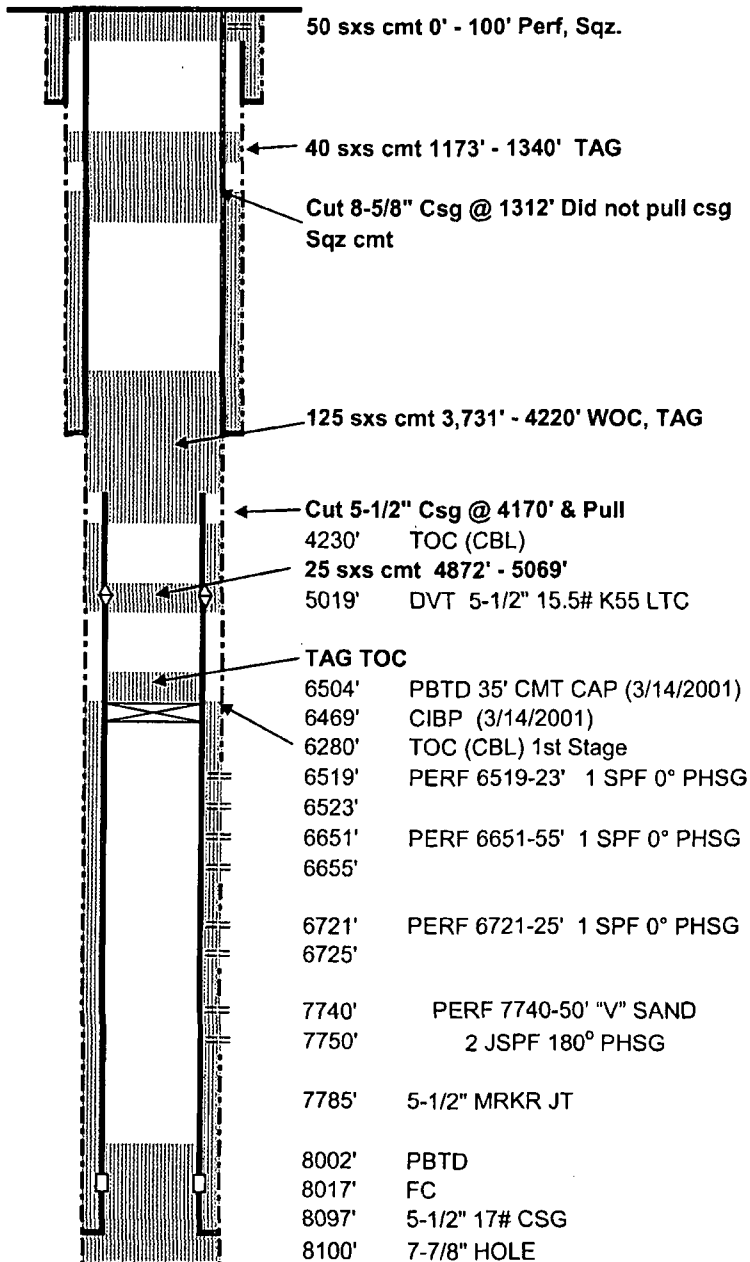
## INTERMEDIATE CASING

SIZE:	8-5/8"
WT/GRD:	32# WC50 LTC
CSA:	4070'
SX:	1550
CIRC:	No
TOC:	1356' TS
HOLE SIZE:	11" 4072'

NOTE: CALIPER INDICATES AVG HOLE SIZE 14-1/4"

## PRODUCTION CASING

SIZE:	5-1/2"
WT/GRD:	15.5# K55 0-5019'
WT/GRD:	17# LS LTC 5019-8097'
CSA:	8097'
SX:	440 CLS "H"
SX:	300 CLS "C"
CIRC:	No 6280' CBL
TOC:	4230' CBL
HOLE SIZE:	7-7/8" 8100'



PBTD: 6504'  
 TD: 8100'  
 LOGGER TD: 8128'

Updated: 3/9/2007  
 Author: WHF  
 Engr: MMM

N. M. O. C. C. COPY

Approved by Bureau of Land Management

**APPROVED**  
SEP 3 1965  
RUDOLPH C. GAIER, JR.  
DISTRICT ENGINEER

(SUBMITTED IN TRIPPLICATE)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Land Office New Mexico  
Lease No. 030456  
Unit Poker Lake

OCT 1 1965

**SUNDRY NOTICES AND REPORTS ON WELLS**

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL	SUBSEQUENT REPORT OF RE-DRILLING
NOTICE OF INTENTION TO SHUT-OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONING WELL
NOTICE OF INTENTION TO PUMP OR ALTER CASING	SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL	

**RECEIVED**  
SEP 29 1965  
U. S. GEOLOGICAL SURVEY  
ARTESIA, NEW MEXICO

INDICATE ABOVE BY CHECK MARK NAME OF REPORT, NOTICE, OR OTHER ACTION

September 26, 1965

CHOCTAW PRODUCTION CO. - Shugart Federal

Well No. 1 is located 1980 ft. from N line and 1980 ft. from E line of sec. 12

NW 1/4 Sec. 12

T-25-S R-30-E

NMPM

Wildcat

Eddy County

New Mexico

The elevation of the derrick floor above sea level is 3370 ft. 3371. Ground Level Elev. is 3363. KDB Elev. (Measurement Datum) is

**DETAILS OF WORK**

State names of and expected depths to which the well is to be drilled; show sizes, weights, and lengths of proposed casing; indicate mudding jobs, cementing jobs, and all other important proposed work.

Well was drilled to a total depth of 4200' as of 6:30 p.m. MST 9-25-65. The interval 4100-4200 was cored, a Lane Wells gamma ray - acoustic log had been run, and a drill stem test had been taken. The drill stem test was run with a straddle tool to test the interval 4123 -4135, recovering 330' of salt water. Verbal application to plug and abandon was made to Mr. Knauf with the USGS at Artesia, and it was agreed that the well would be plugged by spotting sufficient cement to make a 100' plug at each of the following depths; 4150-4050, at the anhydrite between the Castile and Salado (about 2400-2300), at the top of salt 900-800, across the bottom of the surface casing 390-290. The final plug will be 15 sx. in the top of the 8-5/8" OD casing, with the 4 1/2" OD pipe marker stencilled with the name of the operator, name of well, and location.

*No wellbore sketch found on ocd website.*

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

Company, Choctaw Production Company

Address 815 Throckmorton Street

Ft. Worth, Texas 76102

By *Walter D. Powers*  
Walter D. Powers  
Engineer

GPO 9-18-53

Analytical Laboratory Report for:

BOPCO LP



BJ Chemical Services

Account Representative:

Mossman, Willis

## Production Water Analysis

*freshwater stock tank  
near PLU 9.1*

Listed below please find water analysis report from: POKER LAKE UNIT, Fresh Water Well 91

*360' FNL +*

*330' FWL*

*See 12, T25S, R30E*

Lab Test No: 2010120071

Sample Date:

04/22/2010

Specific Gravity: 1.002

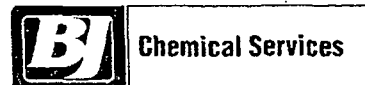
TDS: 730

pH: 7.60

Cations:	mg/L	as:
Calcium	109	(Ca <sup>++</sup> )
Magnesium	29.00	(Mg <sup>++</sup> )
Sodium	78	(Na <sup>+</sup> )
Iron	0.50	(Fe <sup>++</sup> )
Potassium	5.0	(K <sup>+</sup> )
Barium	0.46	(Ba <sup>++</sup> )
Strontium	1.31	(Sr <sup>++</sup> )
Manganese	0.03	(Mn <sup>++</sup> )
Anions:	mg/L	as:
Bicarbonate	146	(HCO <sub>3</sub> <sup>-</sup> )
Sulfate	240	(SO <sub>4</sub> <sup>=</sup> )
Chloride	120	(Cl <sup>-</sup> )
Gases:		
Carbon Dioxide	50	(CO <sub>2</sub> )
Hydrogen Sulfide	17	(H <sub>2</sub> S)

BOPCO LP

Lab Test No: 2010120071

**DownHole SAT™ Scale Prediction**  
**@ 100 deg. F**

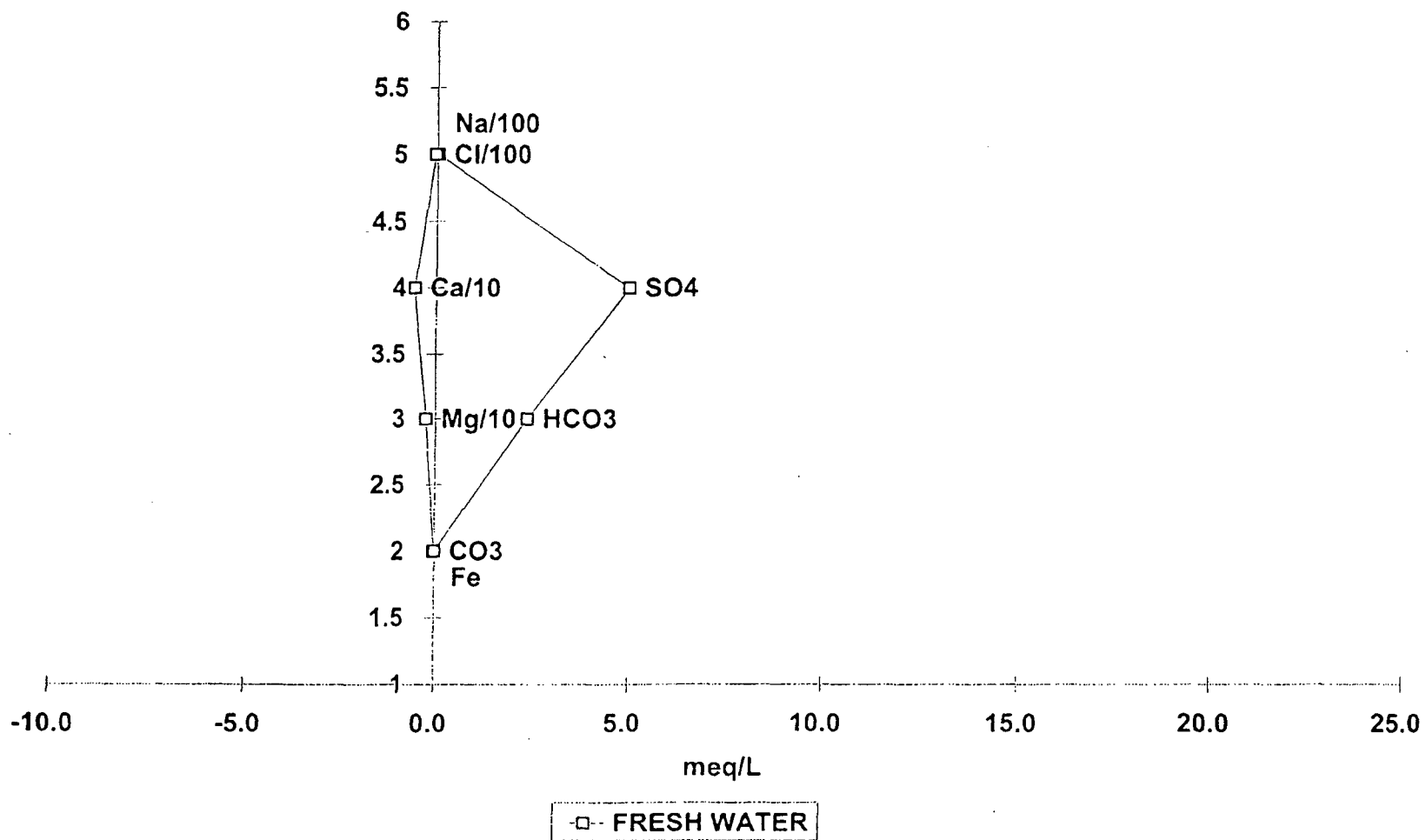
Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	1.50	0.21
Strontianite (SrCO3)	0.05	-4.75
Anhydrite (CaSO4)	0.04	-1079.08
Gypsum (CaSO4*2H2O)	0.06	-967.16
Barite (BaSO4)	9.05	0.70
Celestite (SrSO4)	0.03	-85.60
Siderite (FeCO3)	14.31	0.58
Halite (NaCl)	0.00	-426942.47
Iron sulfide (FeS)	328.85	0.42

**Interpretation of DHSat Results:**

The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) to positive (precipitating) values. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

4/22/2010

# FRESH WATER STOCK TANK NEAR PLU 91





**BOPCO, L. P.**  
6 DESTA DRIVE, SUITE 3700 (79705)  
P. O. BOX 2760  
MIDLAND, TEXAS 79702

(432) 683-2277

FAX (432) 687-0329

May 9, 2012

Re: Application to inject fluid  
J F Harrison Federal #1  
Eddy County, New Mexico

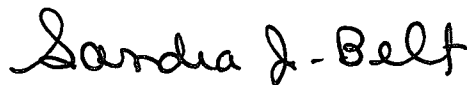
Exxon Mobil Production Corp  
c/o Mr. Bob Mathew  
Corp-WGR-776  
P.O. Box 4610  
Houston, TX 77210-4610

Mr. Mathew:

This letter and attached copy of our injection well application is to notify you, as offset operator, that BOPCO, L.P. is petitioning the Oil Conservation Division to grant permission to inject fluid into a non-productive zone of oil and gas in the subject wellbore.

If you should have any questions or require additional information, please contact Sandra Belt at the above letterhead address, phone number or via email at [sjbelt@basspet.com](mailto:sjbelt@basspet.com). Any objections or requests for hearing must be filed with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days of this letter's date. Please sign and return the enclosed Waiver Request if there are no objections

Sincerely,



Sandra J. Belt  
Sr. Regulatory Clerk

SJB  
Attachments

**BOPCO, L. P.**  
6 DESTA DRIVE, SUITE 3700 (79705)  
P. O. BOX 2760  
MIDLAND, TEXAS 79702

(432) 683-2277

FAX (432) 687-0329

May 9, 2012

Re: Waiver Request  
J F Harrison Federal #1  
Eddy County, New Mexico

Exxon Mobile Production Corp  
c/o Mr. Bob Mathew  
CorpWGR-776  
P.O. Box 4610  
Houston, TX 77210-4610

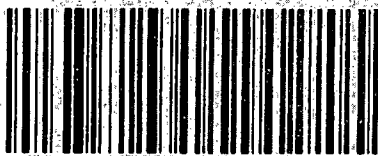
BOPCO, L.P. is requesting a Waiver from Exxon Mobile Corp to dispose of produced water into the J F Harrison Federal #1 (Devonian Formation) with the overall disposal interval being 16,626' – 17,205'. The J F Harrison Federal #1 is located at 660' FNL & 660' FWL, Sec 12, T25S, R30E. The below signed has no objections. Return to BOPCO, L.P., P O Box 2760, Midland Texas 79702, Attn: Sandra J. Belt.

Signature\_\_\_\_\_

Title\_\_\_\_\_

Date\_\_\_\_\_

2. Article Number



7160 3901 9846 4322 4621

3. Service Type **CERTIFIED MAIL**

4. Restricted Delivery? (Extra Fee) ☐ Yes

1. Article Addressed to:

Exxon Mobil Production  
c/o Mr. Bob Mathew  
Corp-WGR-776  
P O Box 4610  
Houston TX 77210-4610

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly)

B. Date of Delivery

C. Signature

X

☐ Agent

☒ Addressee

D. Is delivery address different from item 1?  
If YES, enter delivery address below:

☒ Yes

☐ No

Thank you for using Return Receipt Service

FOLD AND TEAR HERE

7160 3901 9846 4322 4621  
RETURN RECEIPT REQUESTED

PS Form 3811, January 2005

Domestic Return Receipt



**BOPCO, L.P.**  
P.O. Box 2760  
Midland, Texas 79702

Exxon Mobil Production  
c/o Mr. Bob Mathew  
Corp-WGR-776  
P O Box 4610  
Houston TX 77210-4610

**BOPCO, L. P.**  
6 DESTA DRIVE, SUITE 3700 (79705)  
P. O. BOX 2760  
MIDLAND, TEXAS 79702

(432) 683-2277

FAX (432) 687-0329

May 9, 2012

Re: Application to inject fluid  
J F Harrison Federal #1  
Eddy County, New Mexico

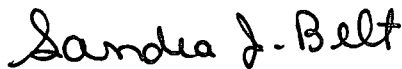
Devon Energy Production Co., L.P.  
c/o Teresa Forgue  
20 N. Broadway Suite 1500  
Oklahoma City, OK 73102

Ms. Forgue:

This letter and attached copy of our injection well application is to notify you, as offset operator, that BOPCO, L.P. is petitioning the Oil Conservation Division to grant permission to inject fluid into a non-productive zone of oil and gas in the subject wellbore.

If you should have any questions or require additional information, please contact Sandra Belt at the above letterhead address, phone number or via email at [sjbelt@basspet.com](mailto:sjbelt@basspet.com). Any objections or requests for hearing must be filed with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days of this letter's date. Please sign and return the enclosed Waiver Request if there are no objections

Sincerely,



Sandra J. Belt  
Sr. Regulatory Clerk

SJB  
Attachments

**BOPCO, L. P.**  
6 DESTA DRIVE, SUITE 3700 (79705)  
P. O. BOX 2760  
MIDLAND, TEXAS 79702

(432) 683-2277

FAX (432) 687-0329

May 9, 2012

Re: Waiver Request  
J F Harrison Federal #1  
Eddy County, New Mexico

Devon Energy Production Co., L.P.  
c/o Teresa Forgue  
20 N. Broadway Suite 1500  
Oklahoma City, OK 73102

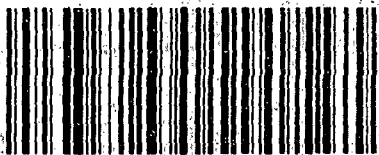
BOPCO, L.P. is requesting a Waiver from Exxon Mobile Corp to dispose of produced water into the J F Harrison Federal #1 (Devonian Formation) with the overall disposal interval being 16,626' – 17,205'. The J F Harrison Federal #1 is located at 660' FNL & 660' FWL, Sec 12, T25S, R30E. The below signed has no objections. Return to BOPCO, L.P., P O Box 2760, Midland Texas 79702, Attn: Sandra J. Belt.

Signature\_\_\_\_\_

Title\_\_\_\_\_

Date\_\_\_\_\_

2. Article Number



7160 3901 9846 4322 4614

3. Service Type **CERTIFIED MAIL**

4. Restricted Delivery? (Extra Fee) ☐ Yes

1. Article Addressed to:

Devon Energy Production  
c/o Teresa Forgue  
20 N. Broadway Ste 1500  
Oklahoma City OK 73102

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by: (Please Print Clearly)

B. Date of Delivery

C. Signature

X

☐ Agent  
☒ Addressee

D. Is delivery address different from item 1?  
If YES, enter delivery address below:

☐ Yes  
☒ No

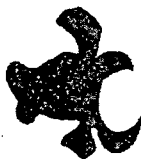
Thank you for using Return Receipt Service

FOLD AND TEAR HERE

7160 3901 9846 4322 4614  
RETURN RECEIPT REQUESTED

PS Form 3811, January 2005

Domestic Return Receipt



**BOPCO, L.P.**  
P.O. Box 2760  
Midland, Texas 79702

Devon Energy Production  
c/o Teresa Forgue  
20 N. Broadway Ste 1500  
Oklahoma City OK 73102

**BOPCO, L. P.**  
6 DESTA DRIVE, SUITE 3700 (79705)  
P. O. BOX 2760  
MIDLAND, TEXAS 79702

(432) 683-2277

FAX (432) 687-0329

May 9, 2012

Re: Notice of Application to Inject Fluid  
J F Harrison Federal #1  
30-015-04749  
Eddy County, New Mexico  
File: 100-WF: JFHFed1 C108 Ad

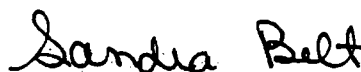
Carlsbad Current Argus  
ATTN: KATHY MCCARROLL  
PO Box 1629  
Carlsbad, New Mexico 88220

Gentlemen:

Enclosed for publication is a legal advertisement, included with payment OF \$60.74. BOPCO, L. P. requests that this be published for one day. BOPCO, L. P. is required by the New Mexico Oil Conservation Division to furnish them with a copy of this advertisement, from your newspaper, giving the dates of publication.

Please send the ad, the affidavit of publication and the invoice to Sandra Belt at the above letterhead address.

Sincerely,



Sandra Belt  
Sr. Regulatory Clerk

sjb  
Attachments

**NOTICE OF APPLICATION FOR SALT WATER DISPOSAL WELL PERMIT**

*BOPCO, L.P. has applied to the New Mexico Oil Conservation Division for a permit to dispose of produced salt water or other oil and gas waste into a porous formation not productive of oil or gas.*

*The applicant proposes to dispose of produced water or other oil and gas waste into the JF Harrison Federal #1 (Devonian Formation). The maximum injection pressure will be 3,325 psi and the maximum rate will be 15,000 bbls produced water/day. The proposed disposal well is located 14 miles southeast of Malaga, New Mexico in Section 12, T25S, R30E, Eddy County, New Mexico. The produced salt water will be disposed at a subsurface depth of 16,626' – 17,205'.*

*Any questions concerning this application should be directed to Sandra J. Belt, Sr. Regulatory Clerk, BOPCO, L. P., P O Box 2760, Midland, Texas 79702-2760, (432) 683-2277.*

*Interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 S. St. Francis Dr., Santa Fe, New Mexico 87505 within 15 days.*



**Affidavit of Publication**

State of New Mexico,  
County of Eddy, ss.

**Kathy McCarroll**, being first duly sworn,  
on oath says:

That she is the Classified Supervisor of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

May 13 \_\_\_\_\_ 2012

That the cost of publication is **\$60.74** and that payment thereof has been made and will be assessed as court costs.

*Kathy McCarroll*

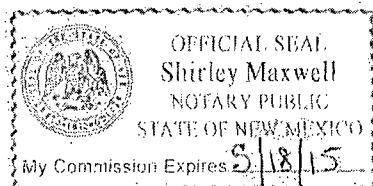
Subscribed and sworn to before me this

16th day of May, 2012

*Shirley Maxwell*

My commission Expires on May 18, 2015

Notary Public



May 13, 2012  
**NOTICE OF APPLICATION  
FOR SALT WATER DIS-  
POSAL WELL PERMIT**

BOPCO, L.P. has applied to the New Mexico Oil Conservation Division for a permit to dispose of produced salt water or other oil and gas waste into a porous formation not productive of oil or gas.

The applicant proposes to dispose of produced water or other oil and gas waste into the J. F. Harrison Federal #1 (Devonian Formation). The maximum injection pressure will be 3,325 psi and the maximum rate will be 15,000 bbls produced water/day. The proposed disposal well is located 14 miles southeast of Malaga, New Mexico in Section 12, T25S, R30E, Eddy County, New Mexico. The produced salt water will be disposed at a subsurface depth of 16,626' - 17,205'.

Any questions concerning this application should be directed to Sandra J. Belt, Sr. Regulatory Clerk, BOPCO, L.P., P.O. Box 2760, Midland, Texas 79702-2760. (432) 683-2277.

Interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 S. St. Francis Dr., Santa Fe, New Mexico 87505 within 15 days.

**RECEIVED**

**MAY 23 2012**

**BOPCO WTD PRODUCTION**