| Intens5/11/12 SUSPENSE ENGINEER W/J LOGGED NJ TYPE, SUD APPIND 1213249811 AROVE THIS LIVE FOR DUNSION USE ONLY NEW MEXICO OIL CONSERVATION DIVISION - Engineering Bureau - 1220 South St. Francis Drive, Santa Fe, NM 87505 ADMINISTRATIVE APPLICATION CHECKLIST 30-015 - 02 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-Sait 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] | |
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| NEW MEXICO OIL CONSERVATION DIVISION - Engineering Bureau - 1220 South St. Francis Drive, Santa Fe, NM 87505 DEVICE ADMINISTRATIVE APPLICATION CHECKLIST 30-015-0 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 [B] Commingling_Storage - Measurement | |
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| [A] Location - Spacing Unit - Simultaneous Dedication [A] NSL NSP SD Check One Only for [B] or [C] [B] Commingling - Storage - Measurement | |
| [B] Commingling - Storage - Measurement | |
| DHC CTB PLC PC OLS OLM | |
| [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery | |
| [D] Other: Specify | |
| 2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply [A] Uvrking, 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 | • |

x

[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 | Sandia J. Belt | Sr. Reg. Clarke | 5-9-12 |
|--------------------|--------------------|-----------------|--------|
| Print or Type Name | Signature V | Title 0 | Date |
| | | Sibelt ebassp | et.com |
| | | e-mail Address | |

FAX (432) 687-0329

(432) 683-2277

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BOPCO; L. P. 6 DESTA DRIVE, SUITE 3700 (79705) P. O. BOX 2760

May 9, 2012

MIDLAND, TEXAS 79702 FCEIVED OCD

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

2012 MAY 11 A 10: 34

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 <u>sjbelt@basspet.com</u>

Sincerely

Sandia J. Belt

Sandra J. Belt Sr. Regulatory Clerk

sjb

Attachments

• STATE*OF NEW MEXICO , ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

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: <u>Sandra J. Belt</u> 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: |
| *VIII. | Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, 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.). 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 |
| IV | 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). |
| | 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: <u>Sandia J-Belt</u> DATE: <u>05/09/2012</u> |
| * | E-MAIL ADDRESS: <u>sjbelt@basspet.com</u> If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. |

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:

Side 2

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.

III. Well Data

A. 1) Lease name: JF Harrison Fed Well #: 1 Section: 12 Township: 25S Range: 30E Footage: 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 |

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

| | | | | | | | Construction | | | Spud | Сотр | <i>.</i> | | |
|-------------|-----|--------------|-----------------|---------------|--|-------------------------------|----------------------------|---|--------|-----------|-----------|----------|--------------|-------------|
| Well Name | No. | API | Operator | Туре | Location | . Surface Casing | Intermediate Casing | Production Casing | Tubing | Date | Date | TÌ | Perforations | Stimulation |
| 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 | 8100 | 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:

1. Proposed average and maximum daily rate and volume of fluids to be injected: 14,000 average, 15,000 BWPD

2. Whether the system is open or closed: closed

3. Proposed average and maximum injection pressure: 2,325 psi average, 3,325 psi maximum

4. 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

5. 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: 16,526'-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 HCI 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 affimative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydology connection between the disposal zone and any underground sources of drinking water.

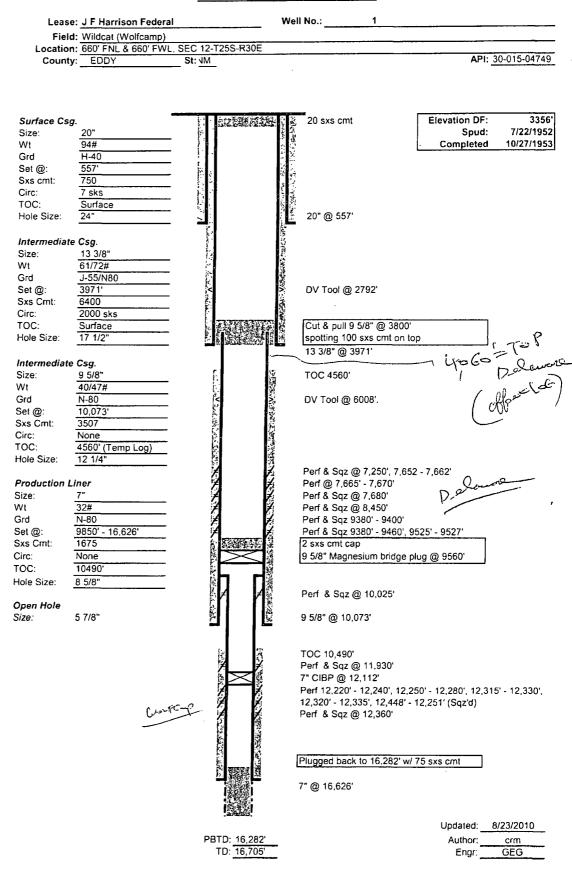
Applicant hereby affirms that he has examined the available geologic and engineering data and finds no evidence of open faults, or other hydrologic connection between the disposal zone and any underground source of drinking water.

DST #23 (16,600-16,705). Used 82CO' 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 PFM chlor.) / 270' mud cut salt water (83000 PFM chlor.). FP 4120-5920# 30 Min. SIP 7390#.

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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

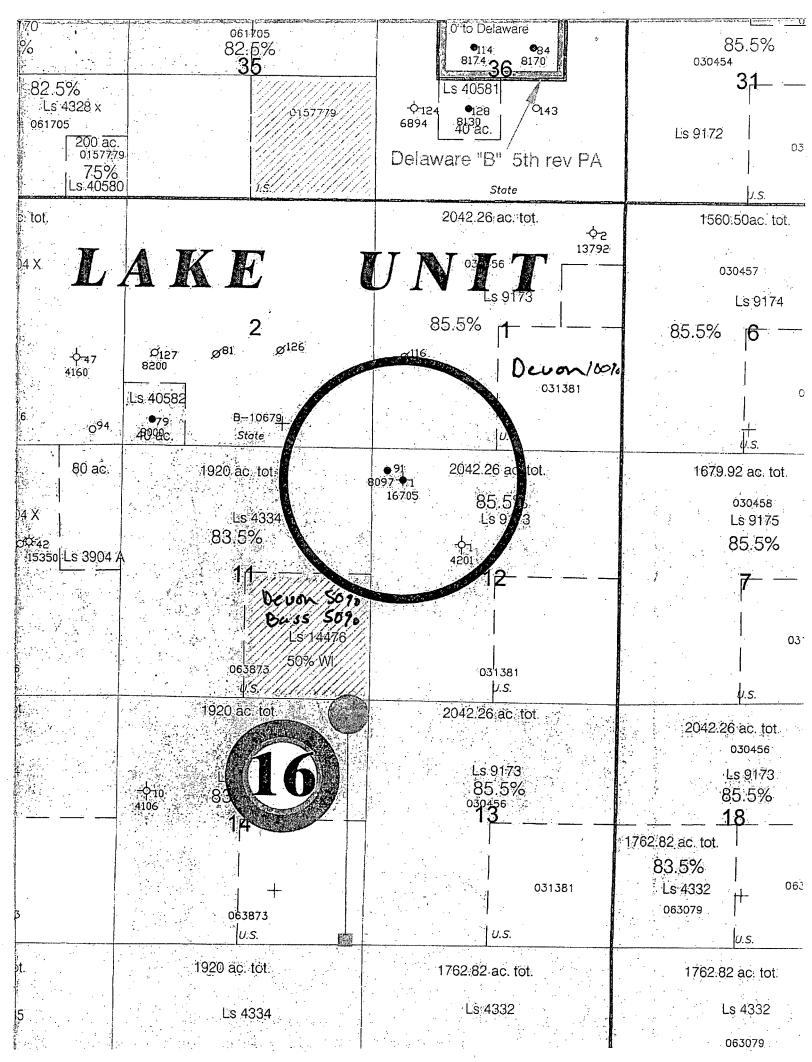


PROPOSED WELLBORE DIAGRAM

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| Lease | e: J F Harrison Federal | | Well No.:1 | |
|-------------|---|--|--|------------------------------------|
| Injectio | | | ······································ | |
| Reservio | r: Devonian | × | | |
| Location | n: 660' FNL & 660' FWL, S | EC 12-T25S-R30E | | |
| | : EDDY | St: JM | | API: 30-015-0474 |
| | | | | |
| | | | | |
| | | | | |
| urface Csg | g. 🗕 | | | Elevation DF: 335 |
| ize: | 20" | | | Spud: 7/22/195 |
| Vt | 94# | | | Completed 10/27/195 |
| | | | | Completed Internet |
| ird | <u>H-40</u> | | | |
| et @: | 557' | | | |
| xs cmt: | 750 | | | |
| irc: | 7 sks | | | |
| | water and the second | | 1997 | |
| OC: | Surface | | | |
| lole Size: | 24" | | 純 20" @ 557'. | |
| | | | | |
| | | | | |
| ntermediat | le Csg. | | S | |
| ize: | 13 3/8" | | | |
| /i | 61/72# | | 7" 26# 1 80 1 78 C the ba | ck string |
| | | | 7" 26# L80 LT&C tie-ba | ion attitig |
| rd | J-55 | | ¥ | |
| et @: | 3971' | | DV Tool @ 2792 | |
| xs Cmt: | 6400 | | 3 | |
| | 2000 sks | | | |
| rC: | | | | |
| DC: | Surface | | Cutoff 9 5/8" @ 3800' | • |
| le Size: | 17 1/2" | | Cutoff 9 5/8" @ 3800' | |
| - | | | | |
| ۰ | _ | | 13 3/8" @ 3971' | |
| termediat | e Csg. | | | |
| ze: | 9 5/8" | | TOC 4560' | |
| 1 | 40/42# | | | |
| | | 「「「「「「「「」」 「「「」」 「「「」」 「「」 「「」 「」 「」 「」 | . | |
| rd | N-80 | | DV Tool @ 6008'. | |
| ət @: | 10,073 | 「「「「「」「「」「「」」 「「」 「「」 「」 「」 「」 「」 「」 「」 | | |
| ks Örnt: | 3507 | | 4 1/2" injection tubing | |
| | | | | |
| irC: | None | | | |
| 00: | 4560' (Temp Log) | | | |
| ole Size: | 12 1/4" | | | |
| | | | Perf & Sqz @ 7,250', 7,6 | 362 7 662' |
| | 0 | | | 102 - 1,002 |
| roduction | | | Perf @ 7,665' - 7,670' | |
| ze: | 7" | | Perf & Sqz @ 7,680' | |
| /1 | 32# | | Perf & Sqz @ 8,450 | |
| rd | N-80 | | | |
| | | - 初間 間の | Perf & Sqz 9380' - 9400' | |
| et @: | 9850' - 16,626' | 法的 822 | Perf & Sqz 9380' - 9460' | ', 9525' - 9527' |
| ks Cmt: | 1675 | いち い | | |
| rC: | None | お いち あ お | | |
| | | 観報 | | |
| DC: | 10490' | <u> 第121 </u> 213 | | |
| ole Size: | 8 5/8" | | | |
| | | | Dorf & Sam @ 10 005' | |
| | | <u> </u> | Perf & Sqz @ 10,025' | |
| ner | | 9 I I I II | | |
| ZO: | | ———————————————————————————————————— | 9 5/8" @ 10,073' | |
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| 0 | | | | |
| ət @: | 0' - 98 <u>50'</u> | | TOC 10,490' | |
| s Cmt: | | XII X | Perf & Sqz @ 11,930' | |
| C: | Surface | | | |
| | | 図 閉 | D. 440.000 | |
| | | 21 22 | | 2,250' - 12,280', 12,315' - 12,330 |
| sen Hole | | | 12,320' - 12,335', 12,448 | 3' - 12,251' (Sqz'd) |
| 28 : | 5 7/8" | | Perf & Sqz @ 12,360' | · · · · |
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| | | | Injection packar @ 484 | 575' |
| | | | Injection packer @ 16,5 | |
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| | | | | Updated: <u>12/14/2010</u> |
| | | TD: <u>17,205'</u> | | Author: crm |
| | | | | |

Engr: <u>CCC</u>



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PLUG AND ABANDON WELLBORE

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| LEASE | | OKER LAKE UN | | WELL #: | 91 - | - P&A'D | (6/13/200 | 7) |
|--------------------|---------------------|--------------------|--------|-----------------|----------------|-------------|--------------|---------------|
| | | L CANYON (DE | | | | | | _ |
| | | 330' FWL, SEC | | | | | | |
| COUNTY | : EDDY | | ST: NM | API | | 30-01 | 5-29509 | |
| | | | | | | | | -1 |
| | | | | | | | KB: | 3372.5' |
| | | | | | | | GL: | 3355.7' |
| | | | | | | SPUD | DATE: | 6/1/1997 |
| | | | | | · · · | COMP | DATE: | 7/4/1997 |
| | | | | | _ | | | |
| SU | IRFACE CASI | NG | | | - 50 sxs ci | mt 0' - 100 |)' Perf, Sqz | |
| SIZE: | 11-3/4" | | | | | | | |
| WT/GRD: | 42# | WC-40 STC | | | | | | |
| CSA: | 1079' | | 71 | | | | | |
| SX: | 625 | | | · · · · · | - 40 sxs cı | nt 1173' - | 1340' TAC | . |
| CIRC: | Yes | 161 SXS | | | | | | |
| TOC: | SURF | | | | Cut 8-5/8 | " Csg @ | 1312' Did r | not pull csg |
| HOLE SIZE: | 14-3/4" | 1084' | | | Sqz cmt | | | |
| | | | | | | | | |
| | RMEDIATE CA | SING | | | | | | |
| SIZE: | 8-5/8" | | | | | | | |
| WT/GRD: | 32# | WC50 LTC | | | | | | |
| CSA: | 4070' | | i. | | | | | |
| SX: | 1550 | · | Ш. | | _125 sxs (| cmt 3,731 | ' - 4220' W | OC, TAG |
| CIRC: | No | | | | | | | |
| TOC: | 1356' | TS | | | | | | |
| HOLE SIZE: | 11" | 4072' | | | | | 4170' & Pu | 11 |
| | | GHOLE SIZE 14-1/4" | | | 4230' | TOC (CE | | |
| | DUCTION CA | SING | | | | nt 4872' | | |
| SIZE: | 5-1/2" | | | Ψ. | 5019' | DVT 5-1 | /2" 15.5# K | 55 LTC |
| WT/GRD: | 15.5# K55 | 0-5019' | | 1! | | - | | |
| WT/GRD: | 17# LS LTC | 5019-8097' | | | - TAG TOO | | | |
| CSA: | <u>8097'</u> 440 | CLS "H" | | | 6504' | | | 9 (3/14/2001) |
| SX: | 300 | CLS "C" | | | 6469' | | (14/2001) | - |
| SX: CIRC: | | | | | 6280' | | BL) 1st Stag | |
| | <u>No</u> 4230' | 6280' CBL CBL | | | 6519' | PERF 05 | 19-23 1 5 | SPF 0° PHSG |
| TOC: HOLE SIZE: | 7-7/8" | 8100' | | | 6523' | | E4 EEL 4 0 | |
| HULE SIZE. | | 8100 | | | 6651' 6655' | PERF 00 | 51-55 15 | PF 0° PHSG |
| | | | | | 0000 | | | |
| | | | | | 6721' | PERF 67 | 21-25' 1 S | PF 0° PHSG |
| | | | | | 6725' | | 2120 10 | |
| | | | | | 0.20 | | | |
| | | | | | 7740' | PERF | 7740-50' "\ | /" SAND |
| | | | | | 7750' | 2 J | SPF 180° P | HSG |
| | | | | | | | | |
| | | | | | 7785' | 5-1/2" MF | RKR JT | |
| | ` | | | | | | | |
| | | | | | 8002' | PBTD | | |
| | | | | . | 8017' | FC | | |
| | | | | | 8097' | 5-1/2" 17 | # CSG | |
| | | | | | 8100' | 7-7/8" HC | DLE | |
| | | | | | | | | |
| | | | | D: <u>6504'</u> | | | | |
| | | | T | D: 8100' | | | | |

TD: <u>8100'</u> LOGGER TD: 8128'

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

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, t 5 *****, Analytical Laboratory Report for:

BOPCO LP

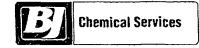
·. .

BJ Chemical Services Account Representative: Mossman, Willis

Production Water Analysis Feshwater Stock tank Listed below please find water analysis report from: POKER LAKE UNIT, Fresh Water Well 91 360' FNZ+ 330'FWZ

| Lab Test No: Specific Gravity: | 2010120071 1.002 | Sample | Date: | 04/22/2010 | Jel2, T258, R30E |
|-----------------------------------|---------------------|--------|---------------------|------------|------------------|
| TDS: | 730 | | | | |
| pH: | 7.60 | | | | |
| Cations: | | mg/L | as: | | |
| Calcium | | 109 | (Ca ^{⁺⁺}) | | |
| Magnesium | | 29.00 | (Mg [*] | | · |
| Sodium | | 78 | (Na [•]) | | |
| Iron | | 0.50 | (Fe ^{**}) | | |
| Potassium | | 5.0 | (K [*]) | | |
| Barium | | 0.46 | (Ba ^{⁺⁺}) | | |
| Strontium | | 1.31 | (Sr ^{⁺⁺}) | | |
| Manganese | | 0.03 | (Mn ^{⁺+}) | | |
| Anions: | | mg/L | as: | | |
| Bicarbonate | | 146 | (HCO,) | | |
| Sulfate | | 240 | (SO,) | | |
| Chloride | | 120 | (CI) | | |
| Gases: | | | () | | |
| Carbon Dioxide | | 50 | (CO ₂) | | |
| Hydrogen Sulfide | e | 17 | (H ₂ S) | | |

BOPCO LP Lab Test No: 2010120071 DownHole SAT[™] Scale Prediction @ 100 deg. F

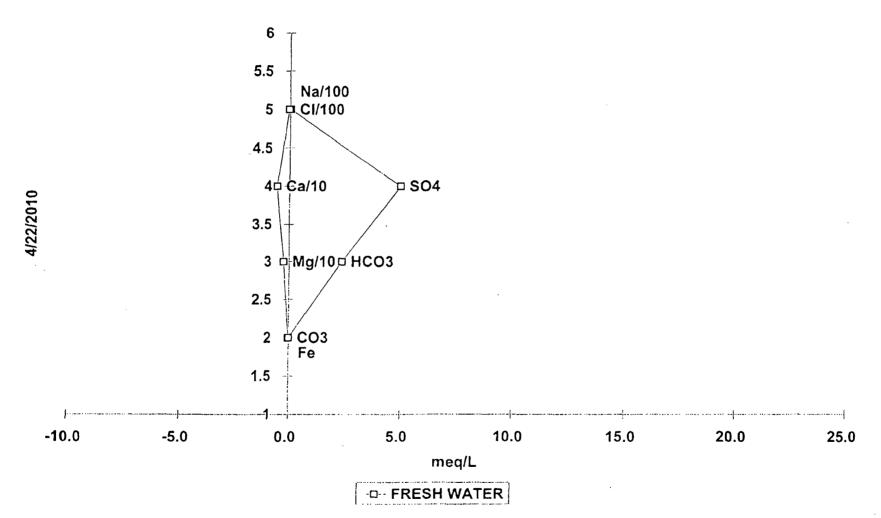


| Mineral Scale | Saturation Index | Momentary Excess (Ibs/1000 bbls) |
|----------------------|------------------|-------------------------------------|
| Calcite (CaCO3) | 1.50 | 0.21 |
| Strontianite (SrCO3) | 0.05 | -4.75 |
| Anhydrite (CaSO4) | 0.04 | -1079.08 |
| Gypsum (CaSO4*2H2O) | 0.06 | -967.16 |
| Barite (BaSO4) | 9.05 | 0.70 |
| Celestite (SrSÓ4) | 0.03 | -85.60 |
| Siderite (FeCO3) | 14.31 | 0.58 |
| Halite (NaCI) | 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.

FRESH WATER STOCK TANK NEAR PLU 91



(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 <u>sjbelt@basspet.com</u>. 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,

Sandia J-Belt

Sandra J. Belt Sr. Regulatory Clerk

SJB Attachments

(432) 683-2277

{

FAX (432) 687-0329

May 9, 2012

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

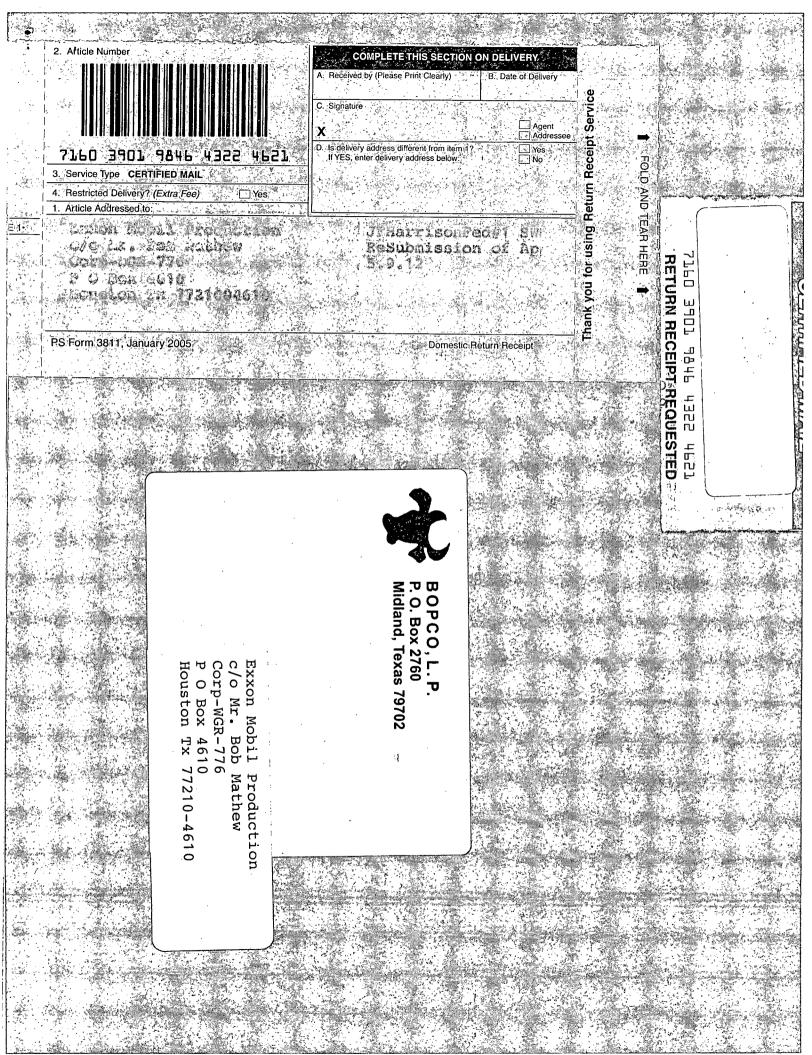
Exxon Mobile Production Corp c/o Mr. Bob Mathew CorpWGR-776 P.O. Box 4610 Houston, TX 77210-4610

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_____



(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 <u>sjbelt@basspet.com</u>. 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,

Sandia J. Belt

Sandra J. Belt Sr. Regulatory Clerk

SJB Attachments

(432) 683-2277

FAX (432) 687-0329

May 9, 2012

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

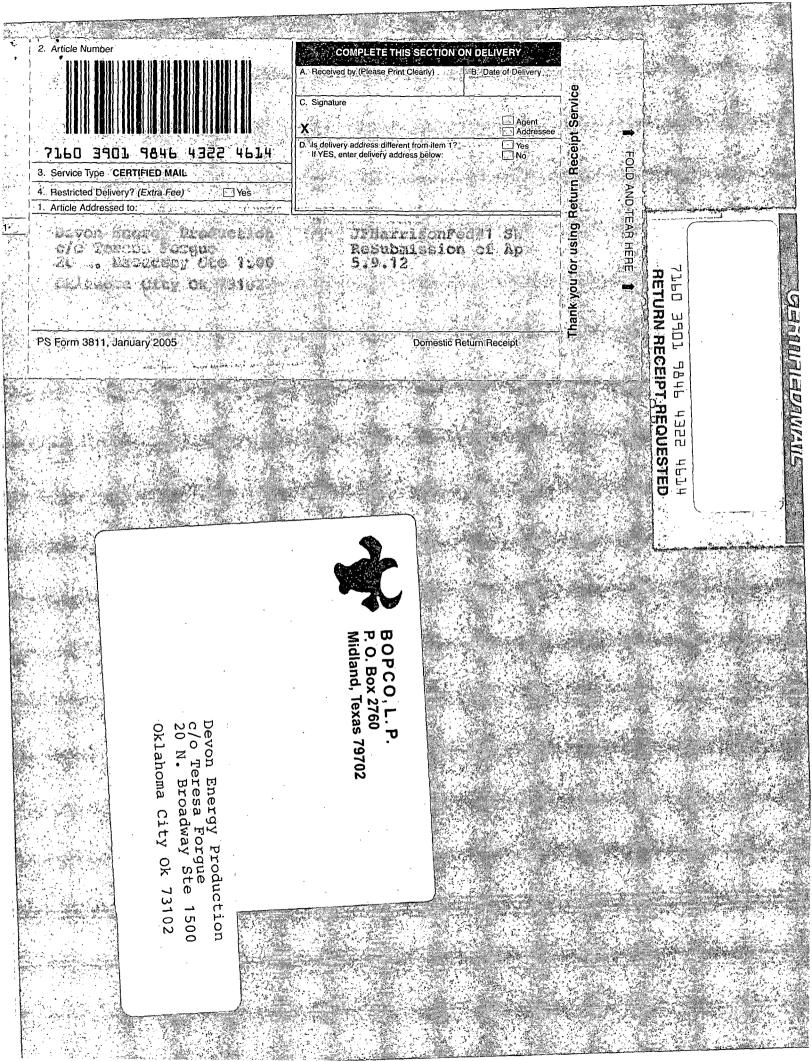
Devon Energy Production Co., L.P. c/o Teresa Forgue 20 N. Broadway Suite 1500 Oklahoma City, OK 73102

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Signature

Title_____

| Date | | |
|------|--|--|
| | | |



(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,

Belt

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 advertisements may be and notices 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.

Ceine il

Subscribed and sworn to before me this

Meth day of Man Shirley mapurel 18,201

My commission Expires on May

Notary Public

OFFICIAL SEAL Shirley Maxwell NOTARY PUBLIC STATE OF NEW MEXICO. My Commission Expires 5.118.15



RECEIVED

MAY 2 3 2012

BOPCO WID PRODUCTION