

| | | | | | |
|-----------------|----------|---------------|--------------------|-----------|----------------------------|
| DATE IN: 9/7/10 | SUSPENSE | ENGINEER: WTS | LOGGED IN: 9/13/10 | TYPE: SWD | APPROVAL: PLUNK 1025630566 |
|-----------------|----------|---------------|--------------------|-----------|----------------------------|

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



RECEIVED OGD
 SEP - 7 P 1:10

OK 2/ Ranch LTD

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.

| | | | |
|--------------------|-----------|--------------------|----------|
| Kim Tyson | | Regulatory Analyst | 9-2-2010 |
| Print or Type Name | Signature | Title | Date |
| | | kimt@for1.com | |
| | | e-mail Address | |

30-015-22717
 FASTREN
 STAFF
 Accounts Formwork
 LOT 13
 9/5/215/24E
 NO LOGS

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance Disposal _____ Storage
Application qualifies for administrative approval? Yes _____ No
- II. OPERATOR: Fasken Oil and Ranch, Ltd.
ADDRESS: 303 W. Wall St., Ste. 1800, Midland, TX 79701
CONTACT PARTY: Kim Tyson PHONE: 432-687-1777
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? _____ Yes No
If yes, give the Division order number authorizing the project: _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: Kim Tyson TITLE: Regulatory Analyst
SIGNATURE: *Kim Tyson* DATE: 9-2-2010
E-MAIL ADDRESS: kimt@forl.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.

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.

Sec : 05 Top : 215 Rng : 24E Section Type : NORMAL

| | | | | | | | | | | | |
|---------------|------------|---------------|---------------|---------------|------------|--------------------|------------|---------------|---------------|------------|------------|
| 12 40.00 | 4 31.63 | 5 40.00 | 11 40.00 | 3 31.62 | 6 40.00 | 10 40.00 | 2 31.61 | 7 40.00 | 1 31.60 | 8 40.00 | 9 40.00 |
| Federal owned | | | Federal owned | | | Federal owned A | | | Federal owned | | |
| 13 40.00 | | | 14 40.00 | | | 15 40.00 | | | 16 40.00 | | |
| Federal owned | | Federal owned | | Federal owned | | Federal owned | | Federal owned | | | |

M0002: This is the first page

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06
PF07 BKWD PF08 FWD PF09 PRINT PF10 SDIV PF11 PF12

Handwritten note: Still Federal No. 2

Handwritten number: 30-015-22717

CMD :
OG5SECT

CNCRPD
INQUIRE LAND BY SECTION

10/26/10 10:34:17
OGOWVJ -TQSM
PAGE NO: 2

Sec : 05 Twp : 21S Rng : 24E Section Type : NORMAL

| | | | |
|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------|
| L 40.00 Federal owned | K 40.00 Federal owned A | J 40.00 Federal owned A | I 40.00 Federal owned |
| M 40.00 Federal owned A | N 40.00 Federal owned | O 40.00 Federal owned A | P 40.00 Federal owned |

M0001: This is the last page

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06
PF07 BKWD PF08 FWD PF09 PRINT PF10 SDIV PF11 PF12

INJECTION WELL DATA SHEET

OPERATOR: Fasken Oil and Ranch, Ltd.

WELL NAME & NUMBER: Shell Federal No. 2

WELL LOCATION: 3300' FSL & 660' FWL
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE
LOT 13 5 21S 24E

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA
Surface Casing

Hole Size: 17 1/2" Casing Size: 13 3/8", 54.5# @ 400'
Cemented with: 600 sx. or ft³

Top of Cement: Surface Method Determined: Circulated
Intermediate Casing

Hole Size: 12 1/4" Casing Size: 8 5/8", 24 & 32# @ 3000'
Cemented with: 1125 sx. or ft³

Top of Cement: Surface Method Determined: Circulated
Production Casing

Hole Size: 7 7/8" Casing Size: * 5 1/2", 17# @ 10,250'
Cemented with: 1650 sx. or ft³
DV Tool @ 7000'

Top of Cement: ** Surface Method Determined:
Total Depth: *** 11,000'

Injection Interval
10,250' feet to 11,000'

* The 5 1/2" casing is new casing that will be run in the hole when the well is re-entered.

** Fasken plans to circulate cement to surface.

*** The well will be deepened from it's original TD @ 10,020' to 11,000' when it is re-entered.

(Refractured or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 3 1/2" N-80 IPC Lining Material: Internally Plastic Coated
Type of Packer: Arrowset I 10K Nickel Plated
Packer Setting Depth: 10,000'
Other Type of Tubing/Casing Seal (if applicable): N/A

Additional Data

1. Is this a new well drilled for injection? Yes X No
If no, for what purpose was the well originally drilled? Gas well in the Cemetery; Morrow Pool. Dry and abandoned.
2. Name of the Injection Formation: Devonian
3. Name of Field or Pool (if applicable): SMD; Devonian
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Morrow +/- 9600', Atoka +/- 9200', Strawn +/- 8700', Penn. +/- 7800', Wolfcamp +/- 7000', Yeso +/- 2800', Glorietta +/- 2500', and San Andres +/- 1000'.

**FASKEN OIL AND RANCH, LTD.
APPLICATION FOR AUTHORITY TO INJECT**

III Proposed Salt Water Disposal Well Data:

A.

- 1) Shell Federal No. 2
3300' FSL & 660' FWL
Section 5, T21S, R24E
Eddy County, NM
- 2) Surface Casing: 13-3/8" 54.5#/ft set @ 400', cemented to surface with 400 sx Halliburton Lite "C" w/2% CaCl₂ (13.6 lbs/gal) + 200 sx "C" w/2% CaCl₂ (14.8 lb/gal).
- 3) Intermediate Casing: 8-5/8" 32&24#/ft set at 3000', cemented to surface with 925 sx Halliburton Lite (13.1-13.6 lb/gal) + 200 sx "C" w/2% CaCl₂ (14.8 lb/gal).
- 4) Production Casing: None current. Proposed 5-1/2" 17#/ft N-80 & J-55 casing at +/-10250' w/DV tool at +/-7000'. Cement 1st stage w/+/-300 sx "H" 50:50 Poz (14.2 lb/gal, 1.24 ft³/sk yld)+350 sx Super "H" (13.2 lb/gal, 1.62 ft³/sk yld). 2nd stage +/-750 sx Class "C" (12.4 lb/gal, 2.0 ft³/sk yld)+250 sx Class "H" (15.6 ppg, 1.18 ft³/sk yld).
- 5) Total Depth: 10,020' (proposed 11,000')
- 6) Tubing: 3-1/2" EUE 8rd 9.3 #/ft, N-80 IPC tubing
- 7) Packer: Arrowset I 10K nickel plated w1.875" "F" profile TOSSD @ 10,000'

B.

- 1) Injection Formation: Devonian
Field: SWD Devonian; Pool Code 96101
- 2) Injection interval : Devonian 10250' – 11000'
- 3) Original purpose of well: Drilled for Morrow Gas; D&A
- 4) Other perms: none
- 5) Depths & names of higher or lower oil or gas zones:
Above: Morrow +/- 9600'
Atoka +/- 9200'
Strawn +/- 8700'
Penn +/- 7800'
Wolfcamp +/-7000'
Yeso +/-2800'
Glorietta +/-2500'
San Andres +/-1000'
Below: None

VII Proposed Operation Data:

- 1) Average daily injection rate – 7500 bwpd
Maximum daily injection rate – 15000 bwpd
- 2) Type of injection system – closed system
- 3) Average injection pressure – 500 psi
Maximum injection pressure – 2000 psi
- 4) Injection water will be mostly produced Glorietta-Yeso water with some Morrow, Penn, Wolfcamp from offsetting Fasken operated leases. The San Andres is not currently productive, but is potential in the area. Compatibility with the receiving formation has been demonstrated in nearby Devonian zone SWD operations injecting Morrow, Penn, Wolfcamp, and Glorietta-Yeso waters in various mix concentrations.

Representative Morrow and Wolfcamp water analyses are attached. A represented Eddy County Yeso analysis is as follows:

| | |
|----------------|--------------|
| Sp Gr | 1.122 |
| PH | 6.5 |
| Resistivity | 0.0537 @ 75° |
| Chlorides (Cl) | 107118 |
| Bicarbonate | 244 |
| Sulfates (SO4) | 800 |
| Calcium (Ca) | 10581 |
| Magnesium (Mg) | 1757 |
| Iron (Fe) | 2.8 |
| Sodium (Na) | 54473 |
| Sulfides (H2S) | negl. |

- 5) Disposal zone water analysis attached is from the Marathon Oil Company North Indian Basin Well No. 1 (Sec 9, T21S, R23E, Eddy Co., NM) in 1963, Devonian DST interval 10009'-10100'; an excerpt from the Marathon Oil Company SWD application for the Indian Hills Comm Well No. 7 approved as Administrative Order SWD -570.

VIII Geological Data

Injection Zone:

Geological Name: Devonian

Lithological Detail: Dolomite/Limestone

Formation top: +/-10230'

Thickness: +/-1000'

Drinking water - Overlying:

Alluvial:

Depth to bottom: 50 ft (?)

Lower Queen:

Depth To bottom 900 ft

Above data based on publication: Geology and Ground Water Resources of Eddy County New Mexico.

Drinking water - Underlying:

None

IX Stimulation Program:

The proposed injection interval will be acidized with +/-5000 gal 15% HCL acid.

X Well Logs:

Forms C-103 and C-105, along with an inclination report and well logs were filed on this well.

XI Chemical Analysis of Fresh Water:

XII Affirmative Statement:

Upon examination of the available geologic and engineering data, no evidence of open faults or any other hydraulic connection between the disposal zones and an underground source of drinking water was found.



Stonnie Pollock

Shell Federal Com No. 2

D&A 12-9-78

GL: 3765.70'; KB: 3781.7'

Operator: **Fasken Oil and Ranch, Ltd.**
 Location: 3300' FSL and 660' FWL
 Sec 5, T21S, R24
 Eddy County, NM
 Compl.: 12/10/1978 Rig Released
 API #: 30-015-22717
 TD: 10020'
 PBTD: D&A 12-9-1978; set 10sx surf plug 6-15-79
 Casing: 13-3/8" 54.5# J55 @ 400'

w/400sx Lite w/2%CaCl2, 13.6ppg
 +200 sx "C" w/2%CaCl2, 14.8ppg.
 TOC surf, cir 201sx
8-5/8" 32#&24# K55 @ 3000' KB
 (btm 628.12' 32#)
 w/925sx Lite, 13.1-13.6 ppg
 +200 sx "C" w/2%CaCl2, 14.8ppg.
 TOC surf, cir 137sx

Frmtn Tops

7Rvrs 434'

San Andres 843'

Glorietta 2504'

Bone Spring 3377'

Wifcmp 7018'

Cisco 7835'

Canyon 8237'

Strawn 8765'

Atoka 9230'

Morrow 9622'

Barnett 9888'

Plug 6 10s Surface

13-3/8" 54.5# J55 @ 400'
 TOC surf, cir 201sx

8-5/8" 32#&24# K55 @ 3000' KB
 TOC surf, cir 137sx

Plug 5 65sx @ 3100'-2900' 12-9-78

Plug 4 60sx @ 5100'-4900'

Plug 3 70sx @ 7150'-6950'

Plug 2 80sx @ 8750'-8550'

Plug 1 125sx @ 9850'-9500'

TD: 10020'

Plug 6 10sx Surface 6-15-79
 Delay to evaluate re-entry, deviated hole potential

Plug 5 65sx @ 3100'-2900' 12-9-78

Plug 4 60sx @ 5100'-4900'

Plug 3 70sx @ 7150'-6950'

Plug 2 80sx @ 8750'-8550'

Plug 1 125sx @ 9850'-9500'

Hole Sizes:

17-1/2" 0-400'; 12-14" 400-3000' ; 7/7/8" 3000'-10020'

Shell Federal No. 2 SWD

Proposed SWD

GL: 3765.70'; KB: 3781.7'

Operator: **Fasken Oil and Ranch, Ltd.**
 Location: 3300' FSL and 660' FWL
 Sec 5, T21S, R24
 Eddy County, NM
 Compl.: 12/10/1978 Rig Released
 API #: 30-015-22717
 TD: 10020'
 Casing: **13-3/8" 54.5# J55 @ 400'**

w/400sx Lite w/2%CaCl2, 13.6ppg
 +200 sx "C" w/2%CaCl2, 14.8ppg.
 TOC surf, cir 201sx
8-5/8" 32#&24# K55 @ 3000' KB
 w/925 sx Lite, 13.1-13.6 ppg
 +200 sx "C" w/2%CaCl2, 14.8ppg.
 TOC surf, cir 137sx

Proposed:

5-1/2" 17# N-80 & J-55 @ +/-10250'
1st stg: 300 sx "H" 50:50 Poz with 1% HR-7, 0.5% LAP-1 (s.w. 14.2 ppg, yield 1.24 ft3/sx) plus 350 sx Super H (s.w. 13.2 ppg, 1.62 yield ft3/sx). Open DV tool and circulate for 6 hrs.

2nd stg: 750 sx "C" with 1/8# Poly-E-Flake, 1% salt and 6% gel (s.w. 12.4, yield 2.00 ft3/sx) and 250 sx Class "H" (s.w. 15.6 ppg, yield 1.18 ft3/sx). Second stage cement volume calculated for TOC @ Surface.

Frmtn Tops

(btm 628.12' 32#)

13-3/8" 54.5# J55 @ 400'
 TOC surf, cir 201sx

8-5/8" 32#&24# K55 @ 3000' KB
 TOC surf, cir 137sx

Wifcmp 7018'

DV +/-7000'

Tubing and packer

Arrowet II 10k pkr @10000' w/1.875" "F" PN
 3-1/2" 9.3#/ft EUE 8rd N-80 IPC tubing 10050'

Devonian +/-10200'

5-1/2" 17# N-80 & J-55 @ +/-10250'

Devonian OH +/-10250'-11000'

Hole Sizes:

17-1/2" 0-400'; 12-14" 400-3000'; 7/7/8" 3000'-10020'

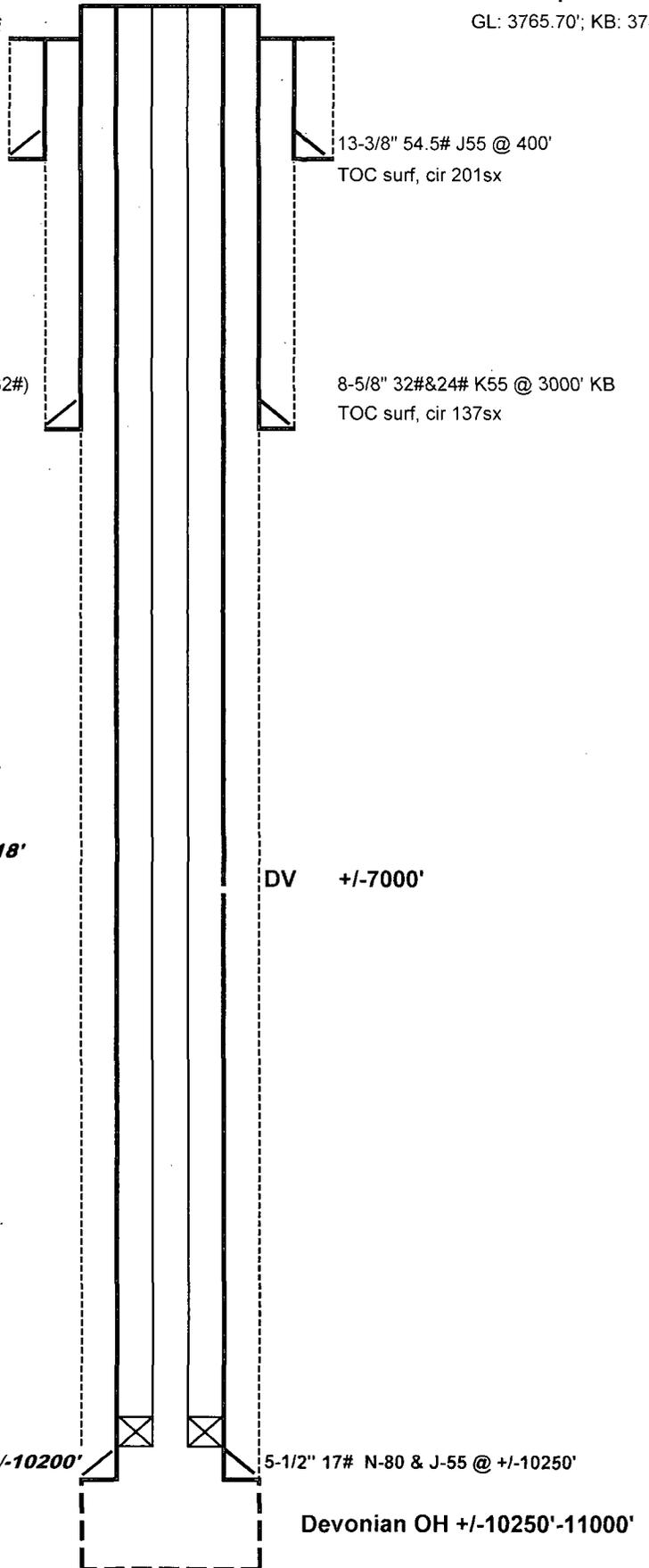
New 7-7/8" 10020'-11000' (OH +/-10250'-11000')

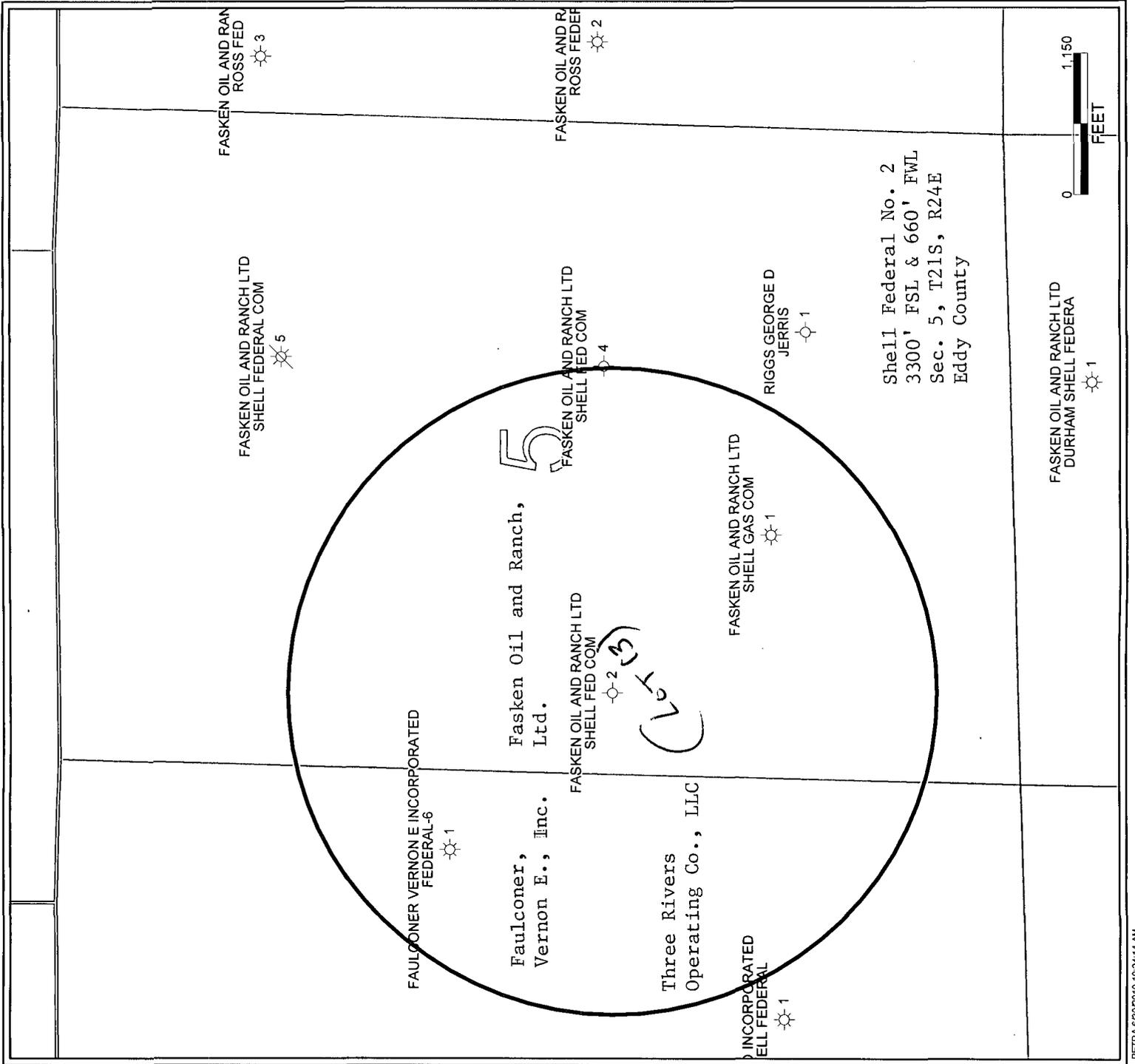
TD **11000' proposed**

cwb

8/20/2010

ShellFed2 wb diagram.xls





FAULKONER VERNON E INCORPORATED
FEDERAL-6
☀-1

Faulconer,
Vernon E., Inc.

Fasken Oil and Ranch,
Ltd.

Three Rivers
Operating Co., LLC

INCORPORATED
SHELL FEDERAL
☀-1

FASKEN OIL AND RANCH LTD
SHELL FEDERAL COM
☀-2

C. L. (S)

FASKEN OIL AND RANCH LTD
SHELL GAS COM
☀-1

FASKEN OIL AND RANCH LTD
SHELL FEDERAL COM
☀-4

5

FASKEN OIL AND RANCH LTD
SHELL FEDERAL COM
☀-5

FASKEN OIL AND RAN
ROSS FED
☀-3

FASKEN OIL AND RAN
ROSS FEDER
☀-2

RIGGS GEORGE D
JERRIS
☀-1

Shell Federal No. 2
3300' FSL & 660' FWL
Sec. 5, T21S, R24E
Eddy County

FASKEN OIL AND RANCH LTD
DURHAM SHELL FEDERA
☀-1



Fasken Oil and Ranch, Ltd.

Shell Federal No. 2

Table of Well Data within 1/2 Mile

| <u>Operator</u> | <u>Well Name and Number</u> | <u>API Number</u> | <u>Oil or Gas</u> | <u>Spud Date</u> | <u>Total Depth</u> | <u>Formation and Perfs</u> |
|----------------------------|---|-------------------|-------------------|------------------|--------------------|---|
| Vernon E. Faulconer, Inc. | Federal 6 No. 1 | 30-015-21915 | Gas | 10/04/1976 | 9869' | Morrow 9535' - 9543' |
| Location: | 3193' FNL 660' FEL Sec. 6, T21S, R24E | | | | | |
| Casing: | Well does not penetrate the proposed disposal interval. | | | | | |
| Fasken Oil and Ranch, Ltd. | Shell Federal Com No. 1 | 30-015-10881 | Gas | 10/30/1966 | 9901' | Morrow 9570' - 9592' 9727' - 9731' 9657' - 9662' |
| Location: | 1980' FSL 1980' FWL Sec. 5, T21S, R24E | | | | | |
| Casing: | Well does not penetrate the proposed disposal interval. | | | | | |

| <u>Operator</u> | <u>Well Name and Number</u> | <u>API Number</u> | <u>Oil or Gas</u> | <u>Spud Date</u> | <u>Total Depth</u> | <u>Formation and Perfs</u> |
|----------------------------|-----------------------------|-------------------|-------------------|------------------|--------------------|----------------------------|
| Fasken Oil and Ranch, Ltd. | Shell Federal Com No. 4 | 30-015-22835 | P&A Dry Hole | 03/11/1979 | 10,000' | Morrow |

Location: 3300' FSL & 1980' FEL
Sec. 5, T21S, R24E

Casing: Well does not penetrate the proposed disposal interval.

**Fasken Oil and Ranch, Ltd.
Shell Federal No. 2
SWD Application
List of Notified Parties**

**Offset Operators
within a ½ mile
radius:**

Fasken Oil and Ranch, Ltd.
303 W. Wall St., Ste. 1800
Midland, TX 79701

Vernon E. Faulconer, Inc.
P.O. Box 7995
Tyler, TX 75711

Three Rivers Operating Co., LLC
1122 S. Capitol of Texas Hwy., Ste. 325
Austin, TX 78746

Surface Owner:

Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220-6292

**Other Notified
Parties:**

New Mexico Oil Conservation Division
1301 W. Grand Avenue
Artesia, NM 88210

CAPROCK LABORATORY, INC.

3312 Bankhead Highway
Midland, Texas 79701
(915) 697-3271

API FORM 45-1

API WATER ANALYSIS REPORT FORM

| | | | | |
|--|-------------------|---|---|------------|
| Company <u>David Fasken</u> | | Sample No. <u>8L25</u> | Date Sampled | |
| Field | Legal Description | County or Parish <u>Eddy</u> | State <u>N. M.</u> | |
| Lease or Unit <u>Shell Fed. Comm.</u> | Well | Depth | Formation <u>9775- 9816 Morrow</u> | Water, B/D |
| Type of Water (Produced, Supply, etc.) | | Sampling Point <u>DST #4 Sampler</u> | | Sampled By |

DISSOLVED SOLIDS

| CATIONS | mg/l | me/l |
|--------------------|---------------|--------------|
| Sodium, Na (calc.) | <u>22,400</u> | <u>973.0</u> |
| Calcium, Ca | <u>17.5</u> | <u>0.9</u> |
| Magnesium, Mg | <u>18.6</u> | <u>1.5</u> |
| Barium, Ba | | |

ANIONS

| | | |
|-------------------------------|---------------|--------------|
| Chloride, Cl | <u>27,700</u> | <u>780.9</u> |
| Sulfate, SO ₄ | <u>4,970</u> | <u>103.5</u> |
| Carbonate, CO ₃ | <u>0</u> | <u>0.0</u> |
| Bicarbonate, HCO ₃ | <u>5,400</u> | <u>88.6</u> |

Total Dissolved Solids (calc.)
60,400

Iron, Fe (total) 3.0
Sulfide, as H₂S 0

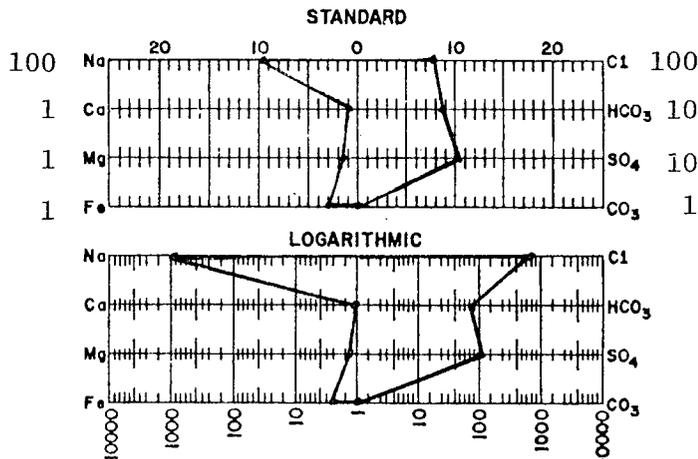
REMARKS & RECOMMENDATIONS:

PO#: E4691

OTHER PROPERTIES

| | |
|--|---------------|
| pH | <u>9.0</u> |
| Specific Gravity, 60/60 F. | <u>1.0447</u> |
| Resistivity (ohm-meters) <u>77° F.</u> | <u>0.1150</u> |
| Total Hardness, CaCO ₃ | <u>120</u> |
| Total Alkalinity, CaCO ₃ | <u>4,430</u> |
| Supersaturation, CaCO ₃ | |

WATER PATTERNS — me/l



DEC 1 '78
Well File

API FORM 45-1

API WATER ANALYSIS REPORT FORM

| | | | | |
|--|-------------------|--------------------|--|---------------|
| Company David Fasken | | Sample No. 8K53 | Date Sampled | |
| Field Shell Federal Comm. | Legal Description | | County or Parish Eddy | State N.M. |
| Lease or Unit | Well #2 | Depth | Formation 7076' - Wulfcamp 7107' | Water, B/D |
| Type of Water (Produced, Supply, etc.) | | Sampling Point | | Sampled By |

DISSOLVED SOLIDS

D.S.T. #2 Cir Sub 90' 125,000 ppm

| CATIONS | mg/l | me/l |
|--------------------|--------|---------|
| Sodium, Na (calc.) | 67,230 | 2,924.5 |
| Calcium, Ca | 10,573 | 527.6 |
| Magnesium, Mg | 1,990 | 163.9 |
| Barium, Ba | 0 | |

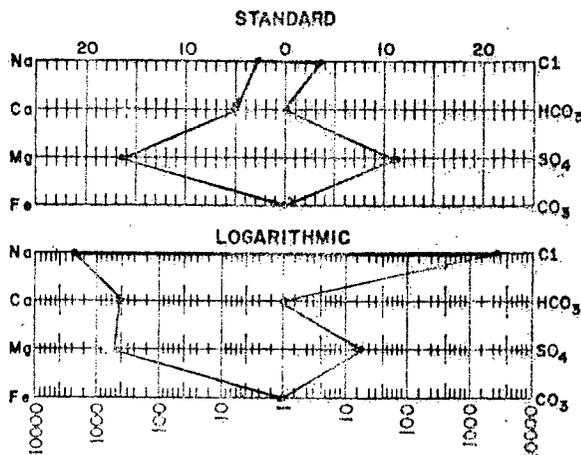
OTHER PROPERTIES

| | |
|-------------------------------------|--------|
| pH | 6.2 |
| Specific Gravity, 60/60 F. | 1.1249 |
| Resistivity (ohm-meters) 77° F. | 0.058 |
| Total Hardness, CaCO ₃ | 34,600 |
| Total Alkalinity, CaCO ₃ | 40 |
| Supersaturation, CaCO ₃ | |

ANIONS

| | | |
|-------------------------------|---------|---------|
| Chloride, Cl | 127,800 | 3,604.0 |
| Sulfate, SO ₄ | 540 | 11.2 |
| Carbonate, CO ₃ | 0 | 0.0 |
| Bicarbonate, HCO ₃ | 48.8 | 0.8 |

WATER PATTERNS — me/l



Total Dissolved Solids (calc.)

208,200

Iron, Fe (total)

31

Sulfide, as H₂S

0

REMARKS & RECOMMENDATIONS:

2 cc: Monsanto - Mr Brown
 Shell Oil Co. - Mr Henning
 12-12-78

JBH _____
 RHA _____
 CES _____
 JEP _____
 SLP _____
 BT _____
 CZ _____
 JS _____
 FILE well

Indian Hills State Comm Well No. 7

Proposed Injection Well

Attachment to C - 108
(Part VII)

Proposed Operations - continued

5. *If injection is for disposal purpose 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.)*

Marathon Oil Company ran a DST test on North Indian Basin Well No. 1 (Section 9, T-21-S, R-23-E, Eddy County New Mexico) in 1963. The DST tested the interval 10,009 ft to 10,100 ft. Based on the DST, the following analysis was reported:

| | | |
|-------------------|--------|-------|
| Specific Gravity | 1.109 | |
| pH | 6.8 | |
| Resistivity | .285 | @ 94F |
| Chlorides (Cl) | 11,000 | |
| Sulfates (SO4) | 1500 | |
| Alkalinity (HCO3) | 610 | |
| Calcium (Ca) | 1080 | |
| Magnesium (Mg) | 775 | |
| Iron (Fe) | 20 | |
| Sodium (Na) | 5359 | |
| Sulfides (H2S) | negl. | |

SWD 570 Application

Affidavit of Publication

NO. 21348

STATE OF NEW MEXICO

County of Eddy:

Walter L. Green

Walter L. Green

being duly sworn, says that he is the Publisher

of the Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and state, and that the hereto attached

Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/days on the same

day as follows:

First Publication August 24, 2010

Second Publication _____

Third Publication _____

Fourth Publication _____

Fifth Publication _____

Subscribed and sworn to before me this

20th day of August 2010



OFFICIAL SEAL
Danny Scott
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 3/18/2014

Danny Scott

Danny Scott
Notary Public, Eddy County, New Mexico

Copy of Publication:

LEGAL NOTICE

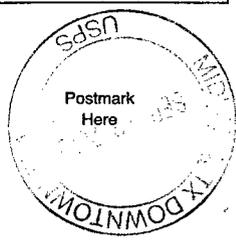
Fasken Oil and Ranch, Ltd. 303 West Wall, suite 1800, Midland Texas 79701 is filing Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a Salt Water Disposal well in the SWD, Devonian pool. The proposed well, Shell Federal No. 2, is located 3300' FSL, 660' FWL, Section 5, T21S, R24E, Eddy County, New Mexico. Disposal water will be sourced from area wells producing from the Glorietta-Yeso, Morrow, Pennsylvanian, Wolfcamp, and San Andres formations. Water will be injected into the Devonian formation at a depth of 10,250' - 11,000' at a maximum surface pressure of 2000 psi and a maximum rate of 15,000 BWPD. Any interested party who has an objection to this application must give notice in writing to the Oil Conservation Division, 1220 South Saint Francis Street, Santa Fe, New Mexico, 87505, within fifteen (15) days of this notice. Any interested party with questions or comments may contact Kim Tyson at Fasken Oil and Ranch, Ltd. 303 West Wall, Suite 1800, Midland, Texas 79701, or call (432) 687-1777. Published in the Artesia Daily Press, Artesia, N.M., August 24, 2010. Legal No. 21348.

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 Tyler, TX 75711

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 Street, Apt. No., or PO Box No. 1301 W. Grand Avenue
 City, State, Artesia, NM 88210

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Sent To Three Rivers Operating Co., LLC
 Street, Apt. No., or PO No. 1122 S. Capitol of Texas Hwy,
 City, State, Ste. 325
 Austin, TX 78746

PS Form 3800, June 2002 See Reverse for Instructions

Jones, William V., EMNRD

From: Kim Tyson [kimt@forl.com]
Sent: Wednesday, October 27, 2010 2:52 PM
To: Jones, William V., EMNRD
Subject: RE: Disposal application from Fasken: Shell Federal No. 2 30-015-22717 Devonian

William,

I have answers to the three questions that you had e-mailed to me concerning the Shell Federal No. 2 SWD Application.

- 1) I have made copies of the logs that were run on the hole that TD'd @ 10,020' and have sent the to the NMOCD in Artesia to the Attention of Jackie Reeves.
- 2) After we re-enter this well we will run a triple combo log that will include a Gamma Ray Neutron Density Log and a Resistivity Log.
- 3) Yes, you can run 3 ½" EUE tubing inside 5 ½" casing. There are special collars that are turn down collars that allow the tubing to fit into the casing.

If you have anymore questions or need any additional information please call me at 432-687-1777 or e-mail me at kimt@forl.com.

Thanks for your help concerning this SWD application.

Kim Tyson

From: Jones, William V., EMNRD [<mailto:William.V.Jones@state.nm.us>]
Sent: Tuesday, October 26, 2010 11:28 AM
To: kimt@forl.com
Subject: Disposal application from Fasken: Shell Federal No. 2 30-015-22717 Devonian

Hello Kim:

- a. The well file on this shows that several logs were run on the hole that TDed at 10020 feet deep. Let me know if your well file has these logs? IF so, please send copies to the Hobbs office for scanning.
- b. After re-entry and deepening this well to 11,000 feet, what logs do you intend to run?
- c. Can you really run 3-1/2 inch EUE tubing inside 5-1/2 inch casing?

Thank You,

Will Jones
New Mexico
Oil Conservation Division
Images Contacts

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Injection Permit Checklist (08/27/2010)

WFX PMX SWD 1252 Permit Date 10/26/10 UIC Qtr 0(N/D)

Wells 1 Well Name(s): SHELL FEDERAL No. 2

API Num: 30-0 15-22717 Spud Date 11/19/1978 New/Old: 0 (UIC primacy March 7, 1982)

Footages 3300 FSL/660 FWL Unit 5 Sec 21S Rge 24E County EDDY

General Location: N.W. of Reef, NW of Carlsbad

Operator: Foster Oil & Ranch, Ltd. Contact KIM TYSON

OGRID: 151416 RULE 5.9 Compliance (Wells) OK (Finan Assur) OK IS 5.9 OK? OK

Well File Reviewed Current Status:

Planned Work to Well: will drill 5 1/2" DRILL OUT TO 15000' w/ 7 7/8" BIT

Diagrams: Before Conversion After Conversion Elogs in Imaging File: None (They were Run)

| Well Details: | Sizes | | Setting Depths | Stage Tool | Cement Sx or Cf | Determination Method |
|---|------------|--------|-------------------|------------|-----------------|----------------------|
| | Hole..... | Pipe | | | | |
| New <input type="checkbox"/> Existing <input checked="" type="checkbox"/> Surface | 17 1/2 | 13 3/8 | 400 | | 60058 | CIRC |
| New <input type="checkbox"/> Existing <input checked="" type="checkbox"/> Interm | 12 1/4 | 8 5/8 | 3,000 | | 1125 | CIRC |
| New <input checked="" type="checkbox"/> Existing <input type="checkbox"/> LongSt | 7 7/8 | 5 1/2 | 10,250 | 7800' | 1650 | |
| New <input type="checkbox"/> Existing <input type="checkbox"/> Liner | <u>now</u> | | 11,000 TO | will be | 650/750/850 | |
| New <input type="checkbox"/> Existing <input type="checkbox"/> OpenHole | | | (OLD TD = 10,020) | | | |

| Depths/Formations: | Depths, Ft. | Formation | Tops? |
|--------------------|-------------|-----------|-------------------------------------|
| Formation(s) Above | 9 888 | Bernette | <input checked="" type="checkbox"/> |
| | 10 230 | Devonin | <input checked="" type="checkbox"/> |

| | | | | | |
|--------------------|--------|-----|--------------------|--|-------|
| Injection TOP: | 10,250 | par | Max. PSI 2050 | OpenHole <input checked="" type="checkbox"/> | Perfs |
| Injection BOTTOM: | 11,000 | par | Tubing Size 7 3/8" | Packer Depth | |
| Formation(s) Below | | | | | |

2050
2050

Capitan Reef? (Potash? Noticed?) (WIPP? Noticed?) Salado Top/Bot None Cliff House?

Fresh Water: Depths: 0-900 Formation Alvarado/Queen Wells? Analysis? Affirmative Statement

Disposal Fluid Analysis? Sources: Moriah / WC / ELABETS -> 1000 / Perm / S.A.

Disposal Interval: Analysis? Production Potential/Testing: DST 10,000 - 10,100

Notice: Newspaper Date 8/24/10 Surface Owner BLM Mineral Owner(s) BLM

RULE 26.7(A) Affected Persons: 3 Rivers / Foster / Faulconer Sent 9/2/10

AOR: Maps? Well List? Producing in Interval? Wellbore Diagrams?

.....Active Wells 0 Repairs? Which Wells?

.....P&A Wells 0 Repairs? Which Wells?

Run LOG

Questions: _____ Request Sent _____ Reply: _____