Form 3160-5 (August 2007)

FORM APPROVED OMB No. 1004-0137 Expires July 31, 2010

LC-032450-B

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS BOOK of If Indian, Allottee or Tribe Name of use this form for proposals to drill or to re-enter an

| | Use Form 3160-3 (APD) | | | | | | | |
|---|--|--|--|--|--|--------------------------|--|--|
| SUBMI | T IN TRIPLICATE Other instr | 7 If Unit of CA/Agreement, Name and/or No. | | | | | | |
| I. Type of Well Oil Well Gas W | /ell | | 8. Well Name and No. Courtland Myers B Federal #3 | | | | | |
| 2. Name of Operator EnerVest Opera | ating I I C | | | 9. API Well No. | 30-025-35062 | 3 B Tederal #3 | | |
| 3a. Address 1001 Fannin, Suite 8(Houston, TX 77002 | [3b.] | Phone No. <i>(include area code</i> 713-495-6537 |) | 10 Field and Pool or | | | | |
| 4. Location of Well (Footage, Sec., T.,. | R,M., or Survey Description) | Sec 15 - Twp 24S - Rge 37E 990' FNL and 840' FWL (Unit D) | $\sqrt{}$ | 11. Country or Parisl | n, State Lea County, NM | | | |
| 12. CHEC | K THE APPROPRIATE BOX(ES |) TO INDICATE NATURE | OF NOTIC | CE, REPORT OR OTH | HER DATA | | | |
| TYPE OF SUBMISSION | | TYPI | E OF ACT | ION | | | | |
| Notice of Intent | Acidize Alter Casing | Deepen Fracture Treat | == | uction (Start/Resume) | tart/Resume) Water Shut-Off Wel! Integrity | | | |
| Subsequent Report | Casing Repair | New Construction | | mplete | Other | | | |
| Final Abandonment Notice | Change Plans Convert to Injection | Plug and Abandon Plug Back | | emporanly Abandonater Disposal | | | | |
| testing has been completed. Final Adetermined that the site is ready for 1. This well produces water out of th 2. This well produces an average of 3. Please see attached Water Analy 4. Water is stored on this lease in a 5. Water is moved to the disposal fal 6. See Attachment for well list and v 14. I hereby certify that the foregoing is the | final inspection.) The Penrose Queen formation. The BWPD. The sis, dated 9-20-09. The sis, dated 9-20-09. The sis, dated 9-20-09. The sis, dated 9-20-09. The sister of the siste | or Lobo Trucking. | | | | • | | |
| Shirley Galik | | Title Regulatory | Tech. | , | | | | |
| Signature Shirley | Halik | 9 | KZI | TROLEUM E DEC 02 | | | | |
| | THIS SPACE FOR | FEDERAL OR STA | TE OFF | ICE USE | | | | |
| Approved by | · · | PETROLEUM ENG | N#GC | EPTED FOR | RECORD | DEC, 0 2 2009 | | |
| Conditions of approval, if any, are attached nat the applicant holds legal or equitable ut nittle the applicant to conduct operations the | tle to those rights in the subject lease nereon | which would Office | | NOV 24 2 | 2009 | - | | |
| Title 18 U.S.C. Section 1001 and Title 43 Unictitious or fraudulent statements or repres | J S.C Section 1212, make it a crime entations as to any matter within its | for any person knowingly and jurisdiction | | or o | igipæen the | United States any false. | | |
| Instructions on page 2) | | | BU | REAU OF LAND MA CARLSBAD FIELD | NAGEMENT OFFICE | | | |

713-659-5036

T-773 P 009/011 F-385

Date: 9/21/2009 4:28.36 PM From: unknown Page: 1/6

Weatherford Engineered Chemistry

2263 West Bell St Odessa, TX 79766 Phone. (433) 368-8410 Fax (450) 335-0518

WATER ANALYSIS REPORT

| - | and the second second |
|-----------------|--|
| STATE TO COLUMN | EnerVest Operating Courtland Myers Fad B #3 |
| Garanta Gointi | |

Lab ID Number: 9-20-03 Date Sampled: Date Analyzed: 9-21-09

| sample Point: | - 14 | Cate Ayaya | | | | | | |
|--|--|---|--|---|--|--|--|--|
| Production Data: BOPD: | | BWPD: | ммсга: | | | | | |
| pH: Dissolved Hg5: Dissolved COg: Resistivity @ 75°F (Ohm-Meters): | 7.50 ND 45.0 0.09250 | Total Dissi Tutal lonic Specific G Density, (I | rayity: | 72,142 1,442 1,058 8.83 | | | | |
| | mg/L | Meq/L | Anions | mg/LMeq/L | | | | |
| Cations Calcium: Magnesium: Sodium: Barium: Strontium: Ferrous Iron: Total Dissolved Iron: | 1,200 3,183 21,941 55 0 0.0 | 60 261 954 | Carbonate: Bicarbonate: Chioride: Sulfate: Total Hardness: | 760 13 942 15 44,400 1,251 420 9 16,100 | | | | |

PROBABLE MINERAL COMPOSITION

| | mg/L | Meq/L |
|------------------------|-----------|----------------|
| | 1,251 | 4.5 |
| Calcium Bicarbonate: | 596 | 9 |
| Çalçium Sulfate: | 1,987 | 36 |
| Calcium Chloride: | • • | Ö |
| Magnesium Bicarbonate: | Q | ñ |
| Magnesium Sulfate: | Ω | \ J |
| Magnesium Chioride: | 12,425 | 261 |
| Sodium Bicarbonate: | D | 1,) |
| | Q | Ú |
| Sodium Sulfate: | 55,760 | 954 |
| Sodium Chloride: | Galia G-3 | |

Remarks

| *. | • | |
|----|---|---------|
| | | 277,25% |

Total Dissolved Iron:

Hydro D Par

Analyst: _

Pape 1 of 3

ENERVEST OPERATING LLC BLM Well List for Eumont-Jal et al Area Water Hauling

| | Well BLM No Lease# | BLM | Legal Desc. | | | | | | | API | Bbls | |
|-----------------------|-----------------------|-------------|-------------|-----|-------------|------|--------|----------------|-------------|-----------------------|--------------|---------|
| Lease Name | | Lease # | UL. | Sec | Twns | Rge | County | Field | Formation | Footage | Number | Wtr/Day |
| | | | | | | | | | | | | |
| * | | | | | | | | | | | | |
| | | | | | · · · · · · | | | | | | 00 005 05710 | |
| Courtland Myers B Fed | 1 | LC 032450-B | K | 15 | 24 S | 37 E | Lea | Langlie Mattix | 7Riv-Queens | 1980' FSL & 1830' FWL | 30-025-25746 | 0 25 |
| Courtland Myers B Fed | 3 | LC 032450-B | D | 15 | 24 S | 37 E | Lea | Langlie Mattix | 7Riv-Queens | 980' FNL & 840' FWL | 30-025-35062 | 1 |
| Courtland Myers C | 1 | LC 032450-B | F | 15 | 24 S | 37 E | Lea | Langlie Mattix | 7Riv-Queens | 1650' FNL & 1650' FWL | 30-025-26353 | 4 |
| - | | | | | | | | | | | | |

If hauled by Fulco (Primary) or Phoenix Trucking (Secondary):

DISPOSAL SITE:
Fulfer Oil & Cattle LLC
Brown #5 SWD, Order R-5196
UL E, Sec 25, T 25 S, R 36 E
1650' FNL & 990' FWL
API 30-025-09807

If hauled by Lobo Trucking (Backup):

DISPOSAL SITE:
J. Cooper Enterprises Inc.
Anderson #1 SWD, Order R-12375
UL O, Sec 8, T 20 S, R 37 E
330' FSL & 1980' FEL
API 30-025-29962

Order R-5196 - inject into lower Yates-Seven Rivers formation

Order R-12375 - inject into lower San Andres and Glorieta Formation

STATE OF NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 13511 ORDER NO. R-12375

APPLICATION OF SMITH & MARRS, INC. FOR APPROVAL OF A SALT WATER DISPOSAL WELL, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on June 16, 2005, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 28th day of June, 2005, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

- (1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.
- (2) The applicant, Smith & Marrs, Inc. ("Smith & Marrs" or "applicant"), seeks authority to utilize its Anderson Well No. 1 (API No. 30-025-29962), located 330 feet from the South line and 1980 feet from the East line (Unit O) of Section 8, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, to dispose of produced water into the Lower San Andres and Glorieta formations from a depth of 4,350 feet to 5.180 feet.
- (3) Smith & Marrs originally filed the subject application for administrative approval on December 8, 2004. On December 13, 2004, the Division received a letter of objection to the application from Rice Operating Company. On December 15, 2004, the Division also received a letter of objection to the application from Amerada Hess Corporation, an offset operator to the proposed disposal well. The subject application was subsequently set for hearing before a Division examiner.

- (4) Rice Operating Company ("Rice") appeared at the hearing through legal counsel in opposition to the application. Rice cross-examined Smith & Marrs' witness, but presented no evidence or testimony.
 - (5) Amerada Hess Corporation did not appear at the hearing.
 - (6) Smith & Marrs presented evidence that demonstrates that:
 - (a) the injection interval in the Anderson Well No. 1 was originally proposed to encompass the Lower San Andres, Glorieta, Blinebry and Tubb formations; however, due to concerns expressed by Amerada Hess Corporation regarding injection into the Blinebry and Tubb intervals, the injection interval in the well is to be contracted to include only the Lower San Andres and Glorieta intervals from a depth of 4,350 feet to 5,180 feet;
 - (b) the Anderson Well No. 1 is cased and cemented adequately to preclude the movement of fluid from the injection zone into other formations, including any fresh water aquifers;
 - (c) the Anderson Well No. 1 will be utilized for the commercial disposal of produced water from various oil and gas pools in this area. Approximately 3,000-5,000 barrels of water per day will be disposed of in the subject well; and
 - (d) all "area of review" wells are cased and cemented and/or plugged and abandoned adequately so as to confine the injected fluid to the proposed injection interval

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- (7) Rice currently operates three (3) commercial disposal wells in this area. These wells are identified as the: i) EME SWD Well No. 5 (API No. 30-025-05902) located in Unit M of Section 5, Township 20 South, Range 37 East, NMPM; ii) EME SWD Well No. 8 (API No. 30-025-06017) located in Unit G of Section 8, Township 20 South, Range 37 East, NMPM, and; iii) EME SWD Well No. 9 (API No. 30-025-12801) located in Unit M of Section 9, Township 20 South, Range 37 East, NMPM. Testimony in this case demonstrates that all of Rice's wells are injecting into the same interval that will be utilized in the Anderson Well No. 1.
- (8) Rice's concern is that approval of the subject application will adversely affect its ability to inject water into its EME SWD Wells No. 5, 8 and 9 due to the finite reservoir capacity of the San Andres formation.
- (9) The Division is not statutorily obligated to protect the rights of operators with regards to conducting produced water disposal operations, unless such injection activities impair an operator's ability to produce hydrocarbons.
- (10) Approval of the application will prevent the drilling of unnecessary wells and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT;

- (1) The applicant, Smith & Marrs, Inc., is hereby authorized to utilize its Anderson Well No. 1 (API No. 30-025-29962), located 330 feet from the South line and 1980 feet from the East line (Unit O) of Section 8, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, to dispose of produced water into the Lower San Andres and Glorieta formations from a depth of 4,350 feet to 5,180 feet.
- (2) The operator shall take all steps necessary to ensure that the injected fluids enter only the proposed injection interval and are not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.
- (3) Injection shall be accomplished through 3-1/2 inch internally plastic-lined tubing installed in a packer set at approximately 4,250 feet. The casing-tubing annulus shall be filled with an inert fluid and a gauge or approved leak-detection device shall be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

- (4) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 870 psi.
- (5) The Division Director may administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.
- (6) Prior to commencing injection operations, the applicant shall effectively isolate all formations deeper than the Glorieta formation in the well. This shall be accomplished by setting a cast iron bridge plug (CIBP) with cement on top at a depth of approximately 5,300 feet; provided however, that the supervisor of the Division's Hobbs District Office may approve an alternate method to isolate these formations in the well.
- (7) Prior to commencing injection operations and every five years thereafter, the casing shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of such casing.
- (8) The operator shall give advance notice to the Supervisor of the Division's Hobbs District Office of the date and time the following operations are to be conducted on the Anderson Well No. 1 in order that these operations may be witnessed; i) disposal equipment installed; ii) all formations deeper than the Glorieta formation isolated; and iii) the conductance of the mechanicial integrity pressure test.
- (9) The operator shall immediately notify the Supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer in the disposal well or the leakage of water, oil or gas from or around any producing or plugged and abandoned well within the area, and shall take all steps as may be timely and necessary to correct such failure or leakage.
- (10) The operator shall submit monthly reports of the disposal operations on Form C-120-A in accordance with Division Rules No. 19.15.9.706 and 19.15.13.1120.
- (11) The injection authority granted herein for the Anderson Well No. 1 shall terminate one year after the date of this order if the operator has not commenced injection operations into the well; provided, however, the Division, upon written request by the operator, may grant an extension for good cause.

- (12) Pursuant to the requirements set forth on Part VI(4) of Division Form C-108, the applicant shall provide the Division an analysis of all source water that is to be disposed of in the Anderson Well No. 1. This shall be accomplished within six months after commencement of injection operations, and each time thereafter a new source of injected fluid is placed in the well.
- (13) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

SEAL

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

MARK E. FESMIRE, P. E.

Director

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Entered april 20, 1976

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

CASE NO. 5655 Order No. R-5196

APPLICATION OF APOLLO OIL COMPANY FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

. . .

This cause came on for hearing at 9 a.m. on March 31, 1976, at Santa Fe, New Mexico, before Examiner, Richard L. Stamets.

NOW, on this $20\,\mathrm{th}$ day of April, 1976, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Apollo Oil Company, is the owner and operator of the Brown Well No. 5, located in Unit E of Section 25, Township 25 South, Range 36 East, NMPM, Jalmat Gas Pool, Lea County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the lower Yates-Seven Rivers formation, with injection into the open-hole interval from approximately 3289 feet to 3363 feet.
- (4) That the injection should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 3150 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure and/or vacuum gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.
- (5) That if injection into said well should be under pressure, the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 825 psi.

-2-Case No. 5655 Order No. R-5196

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- (6) That the operator should notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.
- (7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.
- (8) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Apollo Oil Company, is hereby authorized to utilize its Brown Well No. 5, located in Unit E of Section 25, Township 25 South, Range 36 East, NMPM, Jalmat Gas Pool, Lea County, New Mexico, to dispose of produced salt water into the lower Yates-Seven Rivers formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3150 feet, with injection into the open-hole interval from approximately 3289 feet to 3363 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure and/or vacuum gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

- (2) That if injection into said well shall be under pressure, the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 825 psi.
- (3) That if injection into said well is under a vacuum, the operator shall conduct an annual pressure test of the casing-tubing annulus to determine leakage of the casing, tubing, or packer in said well.
- (4) That the operator shall notify the Hobbs office of the Commission of the date and time of such pressure tests in order that they may be witnessed by a Commission representative.
- (5) That the operator shall notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

-3-Case No. 5655 Order No. R-5196

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- (6) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.
- (7) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.
- (8) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO

OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member

FOE D. RAMEY, Member & Secretary

SEAL

jr/

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