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ChevronTexaco
Russell Pool
Technical Team Leader
Vacuum Enhanced Oil Recovery Team
15 Smith Road
Midland, TX 79705
poolre@chevrontexaco.com

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OIL CONSERVATION
DIVISION

ChevronTexaco

November 25, 2003

**APPLICATION FOR AUTHORIZATION
TO INJECT - OCD FORM C-108
VACUUM GRAYBURG SAN ANDRES UNIT
GRAYBURG SAN ANDRES POOL
LEA COUNTY, NEW MEXICO**

State of New Mexico
Energy and Minerals Dept.
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Attention: Ms. Lori Wrotenbery, Director

ChevronTexaco requests your approval of the subject application to inject water into the Vacuum Grayburg San Andres Unit well # 233, located: 108' FNL & 2325' FWL, Unit Letter L, Sec. 1, T18R34, Lea County, New Mexico.

ChevronTexaco plans to inject water into this newly drilled water injection well to improve recovery efficiency of the waterflood patterns and enhance production of the VGSAU secondary recovery project.

Attached is an OCD Form C-108 with information relative to the water injection of the referenced well. A copy of the letter sent to this project's surface land owner, the New Mexico Department of Public Lands, along with certified documentation, is included in the attachments. ChevronTexaco is the only offset operator to this project.

Your prompt consideration and approval of this application will be greatly appreciated. If additional information is required, please contact me at (432) 687-7417.

Sincerely,



Russell Pool
Technical Team Leader, Vacuum Enhanced Oil Recovery Team

File
Attachments

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: ☒ Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? ☒ Yes _____ No
- II. OPERATOR: Chevron U.S.A. Production Company
- ADDRESS: 15 Smith Road, Midland, TX 79705
- CONTACT PARTY: Mario Ballesteros – Petroleum Engineer PHONE: (432) 687-7218
- 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: R-4442-A
- 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: Mario Ballesteros TITLE: Petroleum Engineer
- SIGNATURE: [Signature] DATE: November 21, 2003
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____
- DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 2040 South Pacheco, 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.

Application for Authorization to Inject (C-108)

List of Attachments

Section III (Well Data for Vacuum Grayburg San Andres Unit #233)

- Injection Well Data Sheet
- Wellbore Diagram
- Forms C-101 (Permit to Drill), C-102 (Well Location and Acreage Dedication Plat) and C-103 (Completion Sundry Notice)

Section IV

- NMOCD Division Order for Vacuum Grayburg San Andres Unit

Section V

- Both Small and Large scale maps showing ½ mile radius of VGSAU #233

Section VI

- Wellbore diagrams of wells within area of review

Section VII

- Proposed Operation Information and Step-Rate Test Results for VGSAU #233

Section VIII

- Geologic Data and Form C-105 (Well Completion Results) for VGSAU #233

Section IX

- Stimulation Program for VGSAU #233 as list on Wellbore Diagram

Section X

- Log for VGSAU #233

Section XI

- Chemical Analysis of Central Vacuum Unit Water Supply Well #1

Section XIII

- Proof of Notice Summary Section
 - Legal Notice dated 11/7/03
 - Certified documentation of letter sent to the NM Department of Public Lands, the owner of the surface of the land on which VGSAU #233 is located
 - ChevronTexaco is the only offset operator