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1912 - 1985  
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1936 - 1986



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June 28, 1991

10381

New Mexico Energy & Minerals Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, NM 87504

Attention: David Catanach

Dear Mr. Catanach,

Enclosed please find our C-108 application for authorization to inject into the Woodpecker SY State #1, #4, #5, and #8 wells located in Section 21-14S-33E of Lea County for the purpose of Lease Pressure Maintenance.

Should you have any questions or need further information, please call me at 748-1471.

Thank you.

Sincerely,

*Theresa Padilla*

Theresa Padilla  
Petroleum Engineer

TP/sj

Enclosures

POST OFFICE BOX 2018  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501

OIL CONSERVATION DIVISION  
RECEIVED

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose:  Secondary Recovery  Pressure Maintenance  Disposal  Storage  
Application qualifies for administrative approval?  yes  no
- II. Operator: Yates Petroleum Corporation  
Address: 105 S. 4th Street Artesia, NM 88210  
Contact party: Theresa Padilla Phone: (505) 748-1471
- 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 geological data on the injection zone including appropriate lithologic detail, geological 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 source 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 source 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: Theresa Padilla Title: Petroleum Engineer  
Signature: Theresa Padilla Date: 6/28/91
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance 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 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, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

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

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

C-108  
Application For Authorization To Inject  
Yates Petroleum Corporation  
Lea County, New Mexico

Woodpecker SY State #1  
A 21-14S-33E

Woodpecker SY State #5  
G 21-14S-33E

Woodpecker SY State #4  
C 21-14S-33E

Woodpecker SY State #8  
E 21-14S-33E

- I. The purpose of this application is to request authorization to inject into the Saunders-Permo Upper Pennsylvanian Bough formation in the four above-mentioned wells for the purpose of lease pressure maintenance.  
  
Yates Petroleum plans to convert these four wells to injectors in the Bough formation.
- II. Operator: Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, NM 88210  
Theresa Padilla (505) 748-1471
- III. Well Data: See Attachment A
- IV. This is not an expansion of an existing project.
- V. See attached maps, Attachment B
- VI. See Attachment C
- VII.
  1. Proposed average daily injection volume between approximately 1000-1500 BWPD per injection well. Maximum daily injection volume approximately 2000 BWPD per injection well.
  2. This will be a closed system.
  3. Proposed average injection pressure-unknown. Proposed maximum injection pressure--1965 psi.
  4. Sources of injection water will be produced Permo-Upper Pennsylvanian waters from the Saunders, Lazy J, and Tulk Penn fields. These waters are presently being injected into the Swan VB State #2 salt water disposal well in

Application for Authorization to Inject  
Woodpecker SY State #1, #4, #5, #8

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J 21-14S-33E. A combination of produced Upper Penn waters and Ogallala aquifer waters will be injected into the Bough formation. Several representative water analyses are attached. (Attachment D)

5. Not applicable

VIII. 1. The proposed injection interval is the portion of the Bough formation consisting of a fossiliferous limestone with vuggy porosity from 9775' to 10061'.

2. Fresh water zones overlie the Bough formation at depths to approximately 250 feet.

IX. The proposed disposal intervals will be acidized with 15% NEFE HCl acid in the approximate quantities of 8000 gal, 17,000 gal, 18,000 gal and 13,000 gal for the Woodpecker SY State injection wells #1, #4, #5 and #8 respectively.

X. Logs were filed at your office when the Woodpecker SY State wells #1, #4, #5, and #8 were drilled and completed between 1982 and 1984.

XI. Three windmills (A, B, E) were located within the one-mile radii of the injection wells. (Attachment E) Records at the State Engineer's office indicated three other water wells (C, D, F) in the area. On-site inspection failed to locate these wells. The water analyses for A, B, & E are attached. (Attachment F)

XII. Yates Petroleum Corporation has examined geologic and engineering data and has found that there is no evidence of faulting in the proposed interval.

XIII. Proof of Notice

A. Certified letters sent to the surface owner and offset operators--attached. (Attachment G)

B. Copy of legal advertisement attached. (Attachment H)

XIV. Certification is signed.