

NM OIL CONS COMMISSION
Drawer DD
Artesia, NM 88210

Form 3160-5
(December 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: September 30, 1990

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

RECEIVED

5. Lease Designation and Serial No.

NM 04421

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

NE Square Lake Unit

8. Well Name and No.

25

9. API Well No.

30-015-87364

10. Field and Pool, or Exploratory Area

NE Square Lake

11. County or Parish, State

Eddy, NM

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other Injection well

2. Name of Operator

Evergreen Operating Corporation

3. Address and Telephone No.

1512 Larimer Street, Suite 1000, Denver, CO 80202 (303) 534-0400

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2310' FSL, 990' FEL
Sec. 10-T16S-R31E

JUL 19 1994

O. C. D.

ARTESIA OFFICE

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent

☒ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☒ Other

☐ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut-Off

☐ Conversion to Injection

Shut-in

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

This well was shut in 12/31/93.

An evaluation of procedures & expenses required to bring this unit back to economic levels is currently underway.

Evergreen requests that this well remain in a SI status until a full evaluation, as shown in the attached plan of development, has been completed.

APPROVED FOR 12 MONTH PERIOD

ENDING 6/16/95

RECEIVED
JUN 16 11 00 AM '94
CALLING OFFICE
AREA OFFICE

14. I hereby certify that the foregoing is true and correct

Signed Stephanie Basy

Title Petroleum Engineer

Date 6/13/94

(This space for Federal or State office use)

Approved by Eng. Signed by Shannon J. Shaw

Title

Petroleum Engineer

Date

7/15/94

Conditions of approval, if any:

-This well will require M.I.T. by 6/15/95 if it remains inactive.

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

See instruction on Reverse Side

NE SQUARE LAKE UNIT PLAN OF DEVELOPMENT
T16S-R31E
EDDY AND LEA COUNTIES, NM

OPERATED BY:
EVERGREEN OPERATING CORPORATION

OBJECTIVE:

Evaluation of the entire field to determine feasibility of bringing this unit back to full waterflood status by obtaining individual well data required for a reservoir study.

CURRENT UNIT STATUS:

The #9 and #30 are being worked on now. The #30 has just been re-fraced and the #9 is being flowtested. The only operating injection well is the #21.

TESTING AND INFORMATION OBTAINED FROM DRILLING #30 IN 9/93:

- While drilling the #30 well, we ran a mud log from 2800' to 3741'. This log shows drilling rate, lithology and hydrocarbon shows on 10 foot intervals. Hydrocarbon shows were observed in the following intervals:
 - 2968' to 3016'
 - 3529' to 3538'
 - 3618' to 3741'The mud log also describes the core taken from 3657'-3701' on a foot-by-foot basis.
- 73% of a 60' Premier Sand core was recovered from 3657' to 3701'.
- A CNL/GR/Caliper log was run from surface to TD.
- A DLL/ML/GR log was run from 2600' to TD.
- Foot-by-foot core analysis gave us the following information:
 - Two permeability measurements, one relative to air and one taking into account the Klinkenberg Effect.
 - Porosity measurements.
 - Oil and water saturations.
 - Sample description.
- Relative permeability and capillary pressure evaluations were done at core depths of 3659.5', 3665.4', 3689.0', 3692.1' and 3695.3'. Conclusions of this analysis show that:
 - Relative permeability determinations indicate this reservoir may have mixed wettability properties with an average mobility ratio of 1.78 for water displacing oil.
 - Very little additional oil will be recovered after water breakthrough.
 - Injection of produced water should recover an average of 37% of OOIP.
 - Mercury injection capillary pressure curves suggest that greater than 75% of the pore volume space should have been originally occupied by oil.
- A complete fluid analysis was done on both produced water and oil.

Plan of Development

Page two

- A five day pressure build-up test immediately following perforating showed a reservoir pressure of 2,580 psig. This reservoir pressure was 1,380 psi higher than our records show the original reservoir pressure to be.
- The first frac screened out after pumping only 358 bbls of Viking II-30 and 12,300 lbs of 12/20 sand.
- Due to low production levels, #30 was shut in on February 1, 1994 and a second build-up test was done. After 17 days, the pressure had built up to only 2,287 psig. This test took 12 days longer to build up to 300 psi less than the final build-up pressure from the previous test.
- The #30 was re-fraced on 6/1/94 and is currently flowing up the casing at 30# casing pressure and 60 BFPD with a 5-15% oil cut.

TENTATIVE PLANS FOR NEXT 12 MONTHS:

- Produce the #30 until stabilized production rates are achieved (or a maximum of three months) to obtain pre-waterflood information.
- Work over the #9 to evaluate whether to move on a pumping unit, re-frac or plug.
- Reinstate injection into the 3 injection wells surrounding the #30 while monitoring pressure and production rates from the #30 to obtain post-waterflood information.
- Evaluate and upgrade surface equipment as necessary.
- Evaluate infill drilling sites.
- Evaluate recompleting the #31.

LONG-TERM PLANS:

- Evaluate, recomplete and bring on all current wells, one five-spot at a time, if economically feasible.
- Drill infill wells as economically feasible.
- Return unit to economic production levels.