

Form 7160-5
November 1983)
Formerly 9-331)

MINERAL OIL CONS. COMMISSION
Drawer DD

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

C/SF

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER SWD	RECEIVED BY ✓ MAR 03 1986 O. C. D. ARTESIA OFFICE
2. NAME OF OPERATOR Exxon Corporation Attn: Melba Knipling	
3. ADDRESS OF OPERATOR P. O. Box 1600, Midland, Texas 79702	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 1557' FNL and 660 FWL Sec. 4-T21S-R27E	
14. PERMIT NO. R-8050	15. ELEVATIONS (Show whether OF, TO, OR, ETC.) 3194' GR

5. LEASE DESIGNATION AND SERIAL NO. NM-01119
6. IF INDIAN, ALLOTTEE OR TRIBE NAME --
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME Yates "C" Federal
9. WELL NO. 22
10. FIELD AND POOL, OR WILDCAT Avalon-Delaware Lower 60
11. SEC., T., R., M., OR ALK. AND SURVEY OR AREA Sec. 4-T21S-R27E
12. COUNTY OR PARISH Eddy
13. STATE NM

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>
FRACTURE TREAT		REPAIRING WELL	
SHOOT OR ACIDIZE		ALTERING CASING	
REPAIR WELL		ABANDONMENT*	
(Other) Saltwater Disposal			
PULL OR ALTER CASING		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	
MULTIPLE COMPLETE			
ABANDON*			
CHANGE PLANS			

17. 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.)

It is proposed that Yates Federal "C" Well No. 22 which was originally completed in the Bone Spring formation at a depth of 5166' to 7442' be recompleted in the Delaware formation at a depth of 3938' to 4322'.

See enclosed application for any further information.

Let CIBP'S W/35' cmt at
7350' + 5150'

I hereby certify that the foregoing is true and correct

SIGNED <u>Melba Knipling</u>	TITLE <u>Section Head</u>	DATE <u>1-21-86</u>
This space for Federal or State office use		
APPROVED BY <u>Mark Jordan</u>	TITLE <u></u>	DATE <u>2-28-86</u>
CONDITIONS OF APPROVAL IF ANY:		

EXXON COMPANY, U.S.A.
POST OFFICE BOX 1600 • MIDLAND, TEXAS 79702

August 15, 1985

PRODUCTION DEPARTMENT
MIDCONTINENT DIVISION
THOMAS J. TIBBITTS
REGULATORY AFFAIRS MANAGER

Application for SWD Well
Yates Federal "C" Well No. 22
Eddy County, New Mexico

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Gentlemen:

Exxon Corporation respectfully requests administrative approval of the enclosed application to convert the subject well to salt water disposal. In support of this request, Form C-108 and all of its attachments are enclosed. Also included is a proof of publication of a legal notice in the Carlsbad Current-Argus newspaper. Copies of this application are being sent by certified mail to leasehold operators within one-half mile, and the Bureau of Land Management in Roswell is being notified as surface owner.

If you have any questions or require further information regarding this submittal, please contact Mr. J. K. Lytle or Ms. J. B. Edgar at the letterhead address or at (915) 686-4104.



JBE:bsc

Attachments

xc: New Mexico Oil Conservation Division
District 2 Office
Drawer DD
Artesia, New Mexico

Offset Operators
BLM-Roswell, NM

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: Exxon Corporation
Address: P. O. Box 1600, Midland, TX 79702
Contact party: J. K. Lytle Phone: (915) 686-4104
- 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-7408.
- 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: J. K. Lytle Title: Sr. Technical Advisor
Signature: J. K. Lytle Date: 8-13-85
- 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. Well log submitted with completion report which was filed

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.

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.

INJECTION WELL DATA SHEET

Exxon Corporation

Yates Federal "C"

OPERATOR

LEASE

22

5940' FSL & 660' FWL

4

21 S

27 E

WELL NO.

FOOTAGE LOCATION

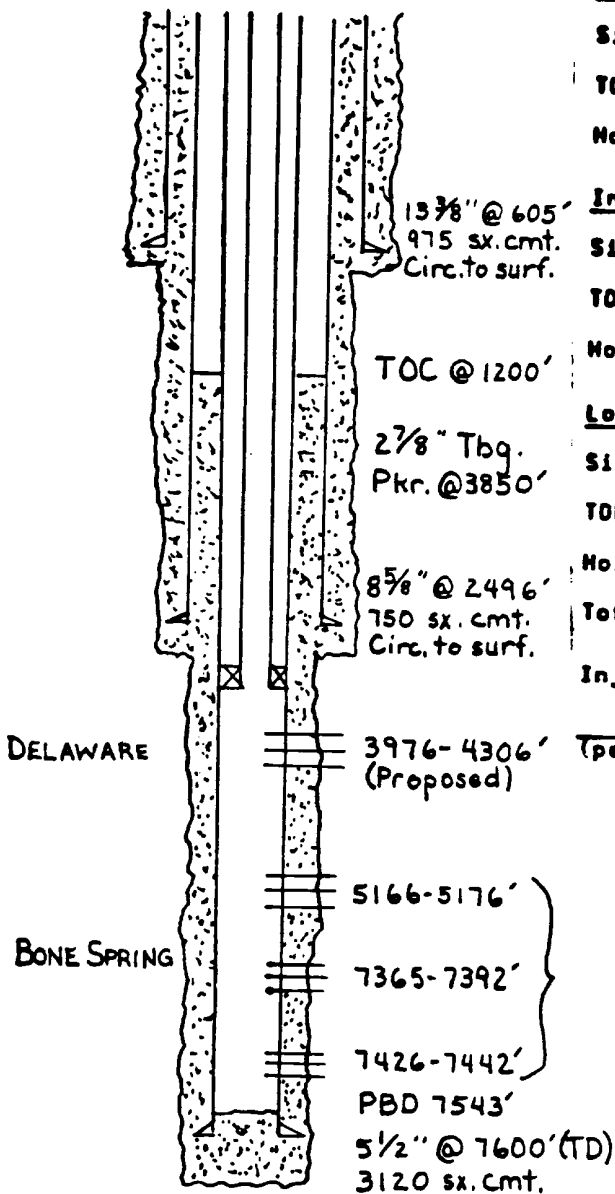
SECTION

TOWNSHIP

RANGE

Schematic

Tubular Data



Surface Casing

Size 13-3/8 " Cemented with 975 sx.

TOC Surface feet determined by Circ.

Hole size 17-1/2"

Intermediate Casing

Size 8-5/8 " Cemented with 750 sx.

TOC Surface feet determined by Circ.

Hole size 11"

Long string

Size 5-1/2 " Cemented with 3120 sx.

TOC 1200 feet determined by Temp. Survey

Hole size 7-7/8"

Total depth 7600

Injection interval (Perforated)

3976

feet to 4306

(perforated or open-hole, indicate which) feet

Tubing size 2-7/8" lined with cement set in a Baker lokset (brand and model) packer at ± 3850' feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Delaware

2. Name of field or Pool (if applicable) Avalon Delaware

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? The well was originally drilled to produce oil from the Bone Spring formation.

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) 5166-5176, 7365-7392, 7426-7442. (Will plug back if application is approved. - Set CIBP @ 5096' w/35' cmt. cap.)

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Overlying - Cedar Hills Yates (±525')

Underlying - Avalon Bone Springs (±5000')

SUPPLEMENT TO APPLICATION FOR AUTHORIZATION TO INJECT

V. Map is attached.

VI. Offset well data is supplied on attached schematics.

VII. Proposed Operation:

1. Average daily rate - 630 BPD
Maximum daily rate - 1600 BPD
Volume of fluids to be injected - 3,000,000 Bbls
2. System is closed.
3. Average injection pressure - 790 psig
Maximum injection pressure - 790 psig
4. The source of water that will be disposed of is from the Delaware Mountain Group. The water is being produced from the following wells: Exxon Yates Federal "C" numbers 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 17, and 18 in Section 31, T-20-S, R-28-E, Eddy County, New Mexico. Attached are chemical analyses of the produced water from the Yates Federal "C" #6 (3550' - 3624') and Yates Federal "C" #8 (2570' - 2694').
5. A chemical analysis of the disposal zone formation water is not available. However, we do not anticipate that it is significantly different from that of the Yates Federal "C" #6 or #8.

VIII. The proposed injection zone in the Yates Federal "C" #22 is at a depth of 3938' to 4322' (-728' to -1112' subsea). It is in the Brushy Canyon Member of the Delaware Mountain Group. The 384' thick interval consists of fine to very fine grained sand, composed primarily of quartz, with lesser amounts of feldspar, clay, dolomite, and calcite. Regional dip is to the SE at 3-4°. All our data indicates that there are no hydrocarbons within this zone.

Fresh water in this area has been encountered in the Rustler Formation and in the Capitan Reef. The deepest fresh water was found at approximately 1725' in the Capitan Reef. The nearest fresh water well - the Raines well - is about 3/4 mile to the NE.

The cross section shows that the proposed disposal interval is bounded both above and below by several impermeable layers. Therefore, no contact with nearby commercial oil production is expected.

There are no indications of open faults or other hydrological connections between the proposed disposal interval and fresh water zones.

IX. Proposed stimulation program on Exxon Yates Federal "C" #22 SWD; perforations 3976 - 4306.

1. Frac 4218 - 4306 and 3976 - 4136 with 75,000 gals. gelled KCL water and 78,000# 20-40 sand in 2 stages using diverter.
2. Run temperature survey
3. Swab/flow back load
4. Clean wellbore and prepare to inject

X. Test data on the Exxon Yates Federal "C" #22

1. Well logs have been filed with the Division.
2. Results of completion attempts:

8-30-83 to 11-14-83:

Perf 7426 - 7442 (4 spf), acidize with 2000 gals 7-1/2% HCl, frac with 20,000 gals UF frac fluid, CO₂ and 33,000# 20-40 sand.

Perf 7365 - 7392 (4 spf), frac with 40,000 gals YFCO₂ frac fluid and 58,000# 20-40 sand. Potential test (24 hours) 12 bbl oil, 2 bbl water and 56 MCF gas.

2-12-85 to 2-28-85:

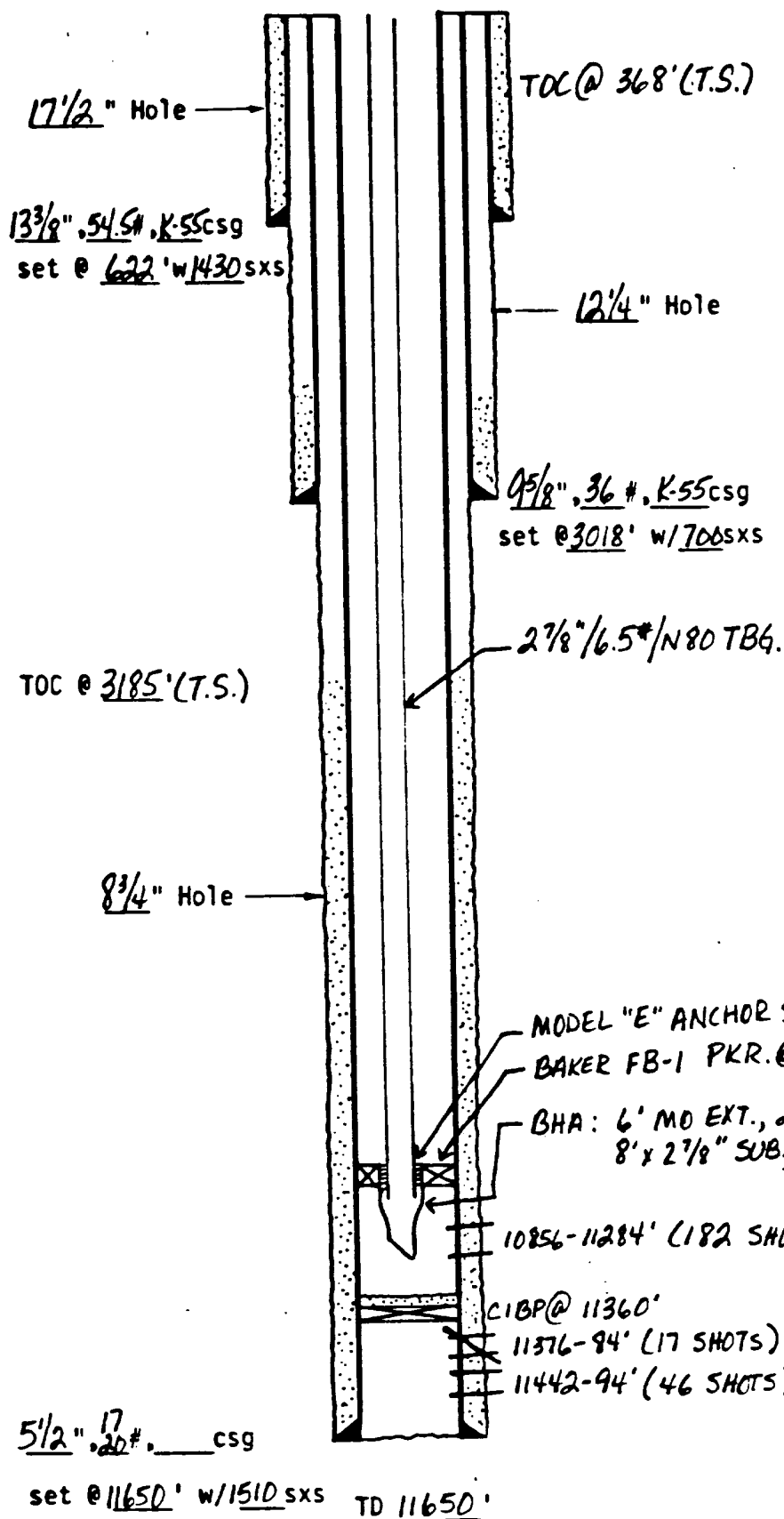
Perf 5166 - 5176 (4 spf), acidize with 1000 gals 15% HCl, frac with 8500 gals XL4, 21,000# 20-40 sand, 40 tons CO₂. 24 hour potential test - 10 bbls oil, 25 bbls water and 44 MCF gas.

XI. Attached is a fresh water analysis on the Raines water well located in Sec. 32, T-20-S, R-20-E. A map is also included showing approximate well locations.

XII. See top of this page for statement.

XIII. A signed statement of mailing of notice is attached, along with proof of publication.

WELLBORE SKETCH



DATE: 4-9-85

FIELD/POOL NAME Burton FlatLEASE NAME/WELL # James Rd "A" #19R.D.B. _____ ZERO _____ FT. _____
ELEV. _____ PT _____ ABOVE _____ELEV. GRD. LEVEL: 3198'Location: NW Sec. 4, T21S, R27E
Gas wellREMARKS: 11-23-82: SPUDDED WELL.1-16-83: TD REACHED.3-11-83: TREATED 10856-11284' W/
9000 GALS. 7 1/2% HCl.4-2-83: FRAC. PERFS. 10856-11284'
W/ 100,000 GALS. FRAC. FL.,
140,000# 20-40 SAND.5-83: SQZD. 11376-84'.6-23-83: FRW.

