Form 3160-5
November 1983)
Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

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

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.)

5. LEASE DESIGNATION AND SERIAL NO.: SF-077123

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

1. OIL WELL ☐ GAS WELL ☒ OTHER

8. FARM OR LEASE NAME: Warren

2. NAME OF OPERATOR: Tenneco Oil Company

9. WELL NO.: 4E

3. ADDRESS OF OPERATOR: P. O. Box 3249, Englewood, CO 80155

10. FIELD AND POOL, OR WILDCAT: Basin Dakota

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1850' FNL, 1050' FEL

RECEIVED
SEP 17 1984
BUREAU OF LAND MANAGEMENT
FARMINGTON RESOURCE AREA

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 13, T28N, R9W

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5847' GR

12. COUNTY OR PARISH: San Juan

13. STATE: NM

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐
REPAIR WELL	☐	CHANGE PLANS	☐
(Other)			

SUBSEQUENT REPORT OF:

WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
(Other)			

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

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.)*

Tenneco requests permission to change the intermediate casing depth according to the attached detailed procedure.

RECEIVED
SEP 20 1984
OIL CON. DIV.
DIST. 3

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

SIGNED Scott McKinney TITLE Sr. Regulatory Analyst DATE 9/12/84

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE SEP 18 1984

CONDITIONS OF APPROVAL, IF ANY:

APPROVED
S/Arlan D. Hines
for AREA MANAGER
FARMINGTON RESOURCE AREA

*See Instructions on Reverse Side

NMOCC

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.

Doc 1858M

TENNECO OIL COMPANY
WESTERN ROCKY MOUNTAIN DIVISION
6162 SOUTH WILLOW DRIVE
ENGLEWOOD, COLORADO 80155

DRILLING PROCEDURE

DATE: September 10, 1984

LEASE: Warren WELL NO: # 4E

LOCATION: 1850' FNL, 1050' FEL
Section 13, T28N, R9W
San Juan County, NM

FIELD: Basin Dakota

ELEVATION 5,847'

TOTAL DEPTH: 6,790'

PROJECTED HORIZON: Dakota

SUBMITTED BY: Mark Kangas DATE: September 10, 1984

APPROVED BY: Mark Kangas DATE: 9-10-84

CC: Administration
CRJ Well File
Field File

ESTIMATED FORMATION TOPS

Ojo	1250'	Water
Kirtland	1310'	
Fruitland	1920'	Coal Gas
Pictured Cliffs	2200'	
Lewis	2280'	
Chacra	3140'	
Cliff House	3850'	Gas (800 psi)
Menefee	3880'	Gas (800 psi), Lost Circulation
Point Lookout	4500'	Gas (800 psi), Lost Circulation
Mancos	4800'	
Gallup	5650'	Oil/Possible
Greenhorn	6410'	
Graneros	6470'	
Dakota	6530'	Gas
TD	6790'	

DRILLING, CASING AND CEMENT PROGRAM

1. MIRURT. Notify MMS of spud.

2. Drill a 12-1/4" hole to ± 300 ft. with a gel water mud.

3. Rig up and run 9-5/8" 36# K-55 ST&C casing to bottom. Cement with Class B + 2% $CaCl_2$ in sufficient quantity (200-250sx) to circulate cement to surface. If conditions warrant the use of loss circulation agents, 1/4 #/sx celloflake may be added. Wait on cement a minimum of 12 hours prior to drilling out.

4. While waiting on cement, screw on a 9-5/8" -8rd X 11-3M casinghead. NU BOP's. Pressure test casing, blinds, manifold and lines to 1000 psi for 30 minutes. GIH with drill pipe and test the pipe rams in the same manner. Record all tests on the IADC report sheet.

5. Drill out with an 8-3/4" bit and clear water. Drill to ± 3550' or 175' below base of Chacra. Mud up prior to reaching intermediate T.D. Circulate at casing point a sufficient time to clean the hole to run casing. GE's may decide to log intermediate hole.

6. Install casing rams, run 7" 23# K-55 casing equipped with a guide shoe on bottom, float collar one joint up and a stage collar 200' below the Ojo Alamo. Bakerlock from the shoe to the top of the float collar and run casing to bottom. Centralize casing with one centralizer in the middle of shoe joint and then on every other collar for total of 6 centralizers. Place one centralizer above and below the stage tool. Cementing baskets may be used if lost circulation has been encountered.

INTERMEDIATE CEMENTING PROGRAM

FIRST STAGE	LEAD	TAIL
Type	Lite + 1/4 #/sx flocele + 2% $CaCl_2$	Cl B + 1/4 #/sx flocele + 2% $CaCl_2$.
Sacks		100 sx
Slurry yield	1.84 cu. ft./sx	1.18 cu ft/sx
Mix weight	12.7 ppg	15.6 ppg
Water req's.	9.9 gal/sx	5.20 gal/sx

SECOND STAGE	LEAD	TAIL
Type	Lite + 1/4 #/sx flocele + 2% $CaCl_2$	Cl B + 2% $CaCl_2$ + 1/4 #/sx flocele
Sacks	Calculated annular volume	50-75
Slurry yield	1.84 cuft/sx	1.18 cuft/sx
Mix weight	12.7 ppg	15.6 ppg
Water req's.	9.9 gal/sx	5.2 gal/sx

Precede the first stage with 20 bbls chemical wash and circulate four hours after opening the stage tool. Precede the second stage with 10 bbls "flow-check" or equivalent. If cement is not circulated to surface run a temperature survey after 8 hours to determine actual TOC as MMS requires. Wait on cement a total of 18 hours (from first plug down) before drilling is resumed.

7. Set slips with casing in full tension and cut-off. NU BOE and test as in procedure 4 above. Record tests on IADC report.

8. Drill out, dry up hole and drill a 6-1/4" hole to T.D. (see Mud Program) surveying as required. Lay down square drill collar before cutting the Dakota.

9. Log open hole as directed by GE department.

10. If productive, run 4-1/2" 11.6# and 10.5# K-55 casing as a liner. Equip the casing with a float shoe, float collar and latch down collar on the top of the first joint. No threadlock or centralizers are to be used on this arrangement. Hang liner with a 150' lap in the intermediate casing and 3' off bottom.

11. Cement with a filler slurry as used for the intermediate string. Start with a 20 barrel mud flush, followed by the lead slurry with a fluid loss control additive and tail with 100 sx Cl B plus .6% fluid loss additive. Use sufficient quantity (70-75% excess) to circulate cement to the liner top.

12. Circulate out the excess cement, LDDP and MORT.

13. In non-productive, P & A as required by USGS.

14. Install tree and fence remainder of reserve pit.

CASING PROGRAM

INTERVAL	LENGTH	SIZE	WEIGHT	GRADE	OPTIMUM MAKE-UP TORQUE
0-300	300	9-5/8	36. #	K-55	STC 4230
0-3550	3550	7	23. #	K-55	STC 3090 LTC 3410
3400-6790	3390	4-1/2	10.5#	K-55	STC 1460
		4-1/2	11.6#	K-55	STC 1700 LTC 1800

MUD PROGRAM

0-300'	Spud mud.
300-3550'	Low solid, fresh water mud. (Water and Rapid Mud.) Mud up prior to running casing.
3550'-T D	Gas - If mud up is required, 3% KCL must be added to the system.

EVALUATION

Cores and DST's:

NONE.

Deviation Surveys

1. Survey surface hole at 100' intervals. Maximum allowable deviation at 500' is 1-1/2°

2. From surface to the Mancos formation, deviation surveys must be taken every 500'. In the Mancos/Gallup zones, surveys to be each 250'. Record all surveys in IADC Report book. Maximum allowable change in deviation is 1° per 100'. Maximum deviation allowable is 5°.

Samples: As requested by Wellsite Geological Engineer

Logs:
1. GR/INDUCTION T D to Intermediate
2. CDL/GR/CALIPER T.D. 2000' Minimum

BLOWOUT EQUIPMENT

11" - 3000 BOP with rotating head to comply with TOC requirements as shown in BOE arrangement, Figure C. Preventers must be checked for operation every 24 hours with each check recorded on the IADC Drilling Report Sheet.

REPORTS

Drilling Reports for the past 24 hours will include depth, footage, time distribution, activity breakdown, mud properties, bit record, bottom hole assembly, types of logs and depths ran, daily and cumulative mud cost, deviation surveys, and other pertinent information to be called into Division Office by 7:30 AM Monday thru Friday.

TENNECO OIL COMPANY
P.O. Box 3249
ENGLEWOOD, COLORADO 80155
PHONE: 303-740-4800

OFFICE DIRECTORY

Charles R. Jenkins	740-2575
Ted McAdam	740-2576
Tom Dunning	740-4813
Mark Kangas	740-4810

In case of emergency or after hours call the following in the preferred order.

(1)	Mark Kangas Senior Drilling Engineer	740-4810 973-8846	Office Home
(2)	Ted McAdam Drilling Engineering Supervisor	740-2576 978-0724	Office Home
(3)	Charles R. Jenkins Division Drilling Engineer	740-2575 987-2290	Office Home
(4)	Harry Hufft Division Production Manager	771-5257	Home