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)

Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.: SF-079289A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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. OIL WELL ☐ GAS WELL ☒ OTHER

7. UNIT AGREEMENT NAME: San Juan 28-7 Unit

2. NAME OF OPERATOR: Tenneco Oil Company

8. FARM OR LEASE NAME:

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

9. WELL NO.: 159M

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1700' FSL, 1010' FEL

10. FIELD AND POOL, OR WILDCAT: Blanco MV/Basin Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 22, T28N-R7W

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 7875' GL

12. COUNTY OR PARISH: Rio Arriba

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	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(Other) Change of name	☐			(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 name from San Juan 28-7 Unit #159M to San Juan 28-7 Unit #159E. We are also submitting a new drilling procedure at this time. This was a dual Mesaverde/Dakota and will now be a single Basin Dakota.

RECEIVED
MAR 18 1986
OIL CON. DIV.
DIST. 3

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

SIGNED Ruck Roark TITLE Administrative Operations DATE 3-13-86

APPROVED

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE MAR 17 1986

CONDITIONS OF APPROVAL, IF ANY:

For AREA MANAGER

*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.

#2664M

DRILLING PROCEDURE

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

DATE:	February 20, 1986	
LEASE:	San Juan 28-7 Unit	WELL NO 159E
LOCATION:	1700' FSL, 1010' FEL Section 22, T28N, R7W Rio Arriba County, New Mexico	FIELD: Basin Dakota
ELEVATION	6690' (GL)	
TOTAL DEPTH:	7875'	
PROJECTED HORIZON:	Dakota	

SUBMITTED BY: Mark Kangas DATE: Feb 21, 1986

APPROVED BY: Charles R Fenton DATE: 2/21/86

CC: Administration
CRJ Well File
Field File

ESTIMATED FORMATION TOPS

Ojo	2530'	Fresh Water
Kirtland	2645'	
Fruitland	3120'	
Pictured Cliffs	3350'	
Lewis	3420'	
Chacra	4335'	
Cliff House	5011'	
Menefee	5043'	
Point Lookout	5568'	
Mancos	5975'	
Gallup	6658'	
Greenhorn	7534'	
Graneros	7595'	
Dakota	7712'	Gas
TD	7875'	

DRILLING, CASING AND CEMENT PROGRAM

1. MIRURT. Notify BLM of spud.

2. Drill a 12-1/4" hole to ± 280 ft. with a gel water mud.

3. Rig up and run 9-5/8" 36# K-55 ST&C casing to bottom. Cement with 250 sx (295 ft^3 @ 1.18 ft^3/sx) Class B + 2% $CaCl_2$ 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 ± 3670' or 250' into the Lewis Shale. Mud up prior to reaching intermediate T.D. Circulate at casing point a sufficient time to clean the hole to run casing. GE Department will NOT run logs in intermediate hole. NOTE: It may be necessary to use an aerated or nitrified mud system to control potential loss circulation in the PC/Lewis.

6. Install casing rams, run 7" 23# K-55 casing equipped with a Texas Patternguide shoe on bottom, and a float collar one joint up. 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. Cementing baskets may be used if lost circulation has been encountered.

INTERMEDIATE CEMENTING PROGRAM

	LEAD	TAIL
Type	Lite + 1/4 #/sx flocele + 2% $CaCl_2$	Cl B + 1/4 #/sx flocele + 2% $CaCl_2$.
Volume	535 sx (984 ft^3)	100 sx (118 ft^3)
Slurry yield	1.84 cu. ft./sx	1.18 cuft/sx
Mix weight	12.7 ppg	15.6 ppg
Water req's.	9.9 gal/sx	5.20 gal/sx

Precede the cement with 20 bbls chemical wash. If cement is not circulated to surface run a temperature survey after 8 hours to determine actual TOC as BLM requires. Wait on cement a total of 18 hours 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. 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. TOL @ 3520' 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 at least 3' off bottom..

11. Precede cement with a 20 barrel mud flush. Cement with a lead slurry of 380 sx (699 ft ^{3} @ 1.84 ft^3/sx) 65/35/6 + .6% fluid loss additive. Tail with 100 sx (118 ft^3 @ 1.18 ft^3/sx) Class B and a fluid loss additive. Circulate cement to the liner top.

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

13. If non-productive, P & A as required by BLM.

14. Install tree and fence remainder of reserve pit.

CASING PROGRAM

INTERVAL	LENGTH	SIZE	WEIGHT	GRADE	OPTIMUM MAKE-UP TORQUE
0-280	280	9-5/8	36. #	K-55	STC 4230
0-3670	3670	7	23. #	K-55	STC 3090 LTC 3410
3520-7000	3480	4-1/2	10.5#	K-55	STC 1460
7000-7875	875	4-1/2	11.6#	K-55	STC 1700 LTC 1800

MUD PROGRAM

0-280'	Spud mud.
280'-3670'	Low solid, fresh water mud. (Water and Rapid Mud.) Mud up prior to logging and running casing.
3670'-T D	Gas - If mud up is required, add 3% KCL to system. If mist up is required, add Shale Inhibitor and 3% KCl to 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^{o}

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^{o} per 100'. Maximum deviation allowable is 8^{o}.

Samples: As requested by Wellsite Geological Engineer

Logs: Run # 1: GR-DIL: TD to 5568'
GR-CDL-Caliper: TD to 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	740-4810	Office
	Project Drilling Engineer	973-8846	Home
(2)	Ted McAdam	740-2576	Office
	Drilling Engineering Supervisor	978-0724	Home
(3)	Charles R. Jenkins	740-2575	Office
	Division Drilling Engineer	987-2290	Home
(4)	Harry Hufft	771-5257	Home
	Division Production Manager		