Form: 3160-5 November 1983)	UNITED STATES TMENT OF THE INTERIO	SUBMIT IN TRIPLICATE* (Other instructions on re-	Expires August 31, 10 5. LEASE DESIGNATION AND SE	985
	EAU OF LAND MANAGEMENT		&F-077833	
. SUNDRY NO	OTICES AND REPORTS O	rk to a different reservoir.	6. IF INDIAN, ALLOTTER OR TO	LIBE NAME
OIL GAS X			7. UNIT AGREEMENT NAME	
WELL WELL A OTHER			S. FARM OR LEASE NAME	
Tenneco Oil Company			Florance 9. watt #0.	·
P. O. Box 3249. Fna	lewood, CO 80155		2E	
LOCATION OF WELL (Report location See also space 17 below.) At surface	on clearly and in accordance with any 8		Basin Dakota	DCAT
990' FSL, 1450' FEL	,	JAN 141985	11. SEC., T., R., M., OR BLK. AS EURYRY OR AREA	KUD.
BUREAU OF LAND MANAGEMENT FARMINGTON RESOURCE AREA		Sec. 20, T30N R9W		
4. PERMIT NO.	15. ELEVATIONS (Show whether DF, 5997 GL		12. COUNTY OF PARISH 18. San Juan	ETATE IM
6. Check	Appropriate Box To Indicate No	ature of Notice, Report, or C		
	CTENTION TO:		DENT REPORT OF:	
TEST WATER SHUT-OFF	PULL OR ALTER CASING	WATER SHUT-OFF	REPAIRING WELL	
PRACTURE TREAT	MULTIPLE COMPLETE	FRACTUBE TREATMENT	ALTERING CASING	
BROOT OR ACIDIZE	ABANDON®	BHOOTING OR ACIDIZING	ABANDONMENT [®]	
REPAIR WELL Foam cemen		(Other)	of multiple completion on W letion Report and Log form.)	ell ell
(Other) FORM COMPLETED 17. DESCRIBE PROPOSED OR COMPLETED proposed work. If well is di nent to this work.)*	opperations (Clearly state all pertinent rectionally drilled, give subsurface locations)	detail and sive northant dates	including estimated date of	tarting any sones perti-
	ests permission to do a hed detailed procedure.	OIL O	© E I V E D IN 2 4 1985 CON. DIV. DIST. 3	
18. I hereby certify that the fortes	the first and correct	or. Regulatory Analys	ARRAVE	<u>D11, 198</u>
(TL's space for Federal or Sta-	te office vse)			
APPROVED BYCONDITIONS OF APPROVAL,	TITLE		JAN 16 1985 'Zs/ J. Stan McKee	
	*See Instruction	s on Reverse Side MAC C	FARMINGTON RESOURCE	AREA
Title 15 U.S.C. Section 1001, a United States any false, faction	IV) makes it a crime for any person kno cus or fraudulent statements or rep	WICOO make willfully to make stressentations as to any matter	o any department or agen-	

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

DRILLING PROCEDURE

DATE:

January 11, 1985

LEASE:

Florance

WELL NO: # 2E

FIELD: Basin Dakota

LOCATION:

990' FSL, 1450' FEL Section 20, T30N, R9W

San Juan County, NM

ELEVATION

5997' (G.L.)

TOTAL DEPTH:

7270'

PROJECTED HORIZON: Dakota

DATE: 1-11-6-5

CC: Administration

CRJ Well File

Field File

ESTIMATED FORMATION TOPS

Ojo	1470'	Water
Kirkland	1540'	
Fruitland	2250'	Coal, Gas
Pictured Cliffs	2680'	
Lewis	2780'	
Chacra	3410'	
Cliff House	4300'	Gas (800 psi)
Menefee	4400'	Gas (800 psi)
Point Lookout	4910'	Gas (800 psi)
Mancos	5072'	
Gallup	6170'	
Greenhorn	6915'	
Dakota	7020'	Gas (2200 psi)
D	7270'	

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% CaCl₂ 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 <u>+ 3280'</u> or 500' 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. <u>GE's may decide to log intermediate hole.</u>
- 6. Install casing rams, run 7" 23# K-55 casing equipped with a guide 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 FOAM CEMENTING PROGRAM

Lead: 300 sacks of Class B + 2% CaCl₂ with a <u>foamed</u> slurry weight of 8.0 ppg (prefoamed of 15.7 ppg).

Tail: 100 sacks of Class B + 2% CaCl₂ with slurry weight of 15.7 ppg.

Cap: 75 sacks of 10-2 RFC with slurry weight of 14.5 ppg will be pumped down braden head at end of regular cement job to provide a "cap" of cement at the surface.

A 20 barrel preflush of Hydrolite will be pumped ahead of the cement to reduce the hydrostatic and condition the hole for improved bonding.

Density control is accomplished with nuclear densimeters. Foam quality is constantly checked with two liquid flow meters. Dispersion of nitrogen in the cement is done with a "foaming tee". To provide for a controlled rate of rise of the cement on the backside, a 2" choke and 2" flow meter is used.

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 24 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. Equip the casing with a float shoe and both 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.
- 11. Precede cement with a 20 barrel pre-flush. Cement with 65/35/6 + .6% fluid loss additive and tail with 100 sacks class B + .6% fluid loss additive. Use sufficient quantity (± 75% excess) to circulate cement to 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 <u>TORQUE</u>
0-300	300	9-5/8	36. #	K-55	STC 4230
0 -3280	3280	7	23. #	K-55	STC 3090 LTC 3410
3130-7000	3870	4-1/2	10.5#	K-55	STC 1460
7000-7270	270	4-1/2	11.6#	K-55	STC 1700 LTC 1800

MUD PROGRAM

0-300'	Spud mud.
300-3280'	Low solid, fresh water mud. (Water and Rapid Mud.) Mud up prior to running casing.
3280'-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 $1-1/2^{\circ}$
- 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	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		