

7-2-66
TERRACO OIL COMPANY

JUN 27 8 10 AM '66

DRILLING PROCEDURE

MIDLAND DISTRICT

SOUTHWESTERN DIVISION

LEASE: State "Q"

WELL: No. 4

FIELD: Lovington Paddock

STATE: New Mexico

LOCATION: 2310' FNL & 1983' FWL, Section 30,
T-16-S, R-37-E, Lea County, New Mexico

PROJECTED TD: 6500

TYPE OF WELL: Oil, Pumping

EST. ELEV.: 3840 GL

DRILLING, CASING AND CEMENTING PROGRAM

1. Drill 11" hole to 2100' $\frac{1}{2}$ (50' into Anhydrite).
2. Run and cement 8-5/8", J-55, 24#/ft, ST&C to T.D. Cement with sufficient class A plus 16% gel plus 3% salt and tail in with 100 sacks class A plus 2% CaCl_2 to circulate to surface. Use guide shoe and insert float. Use bar centralizers on guide shoe and first two joints.
3. If float holds, release pressure immediately and install BOP's. Pressure test casing to 800 psi for 30 minutes and drill out as soon as possible from plug down.
4. Drill 7-7/8" hole to T.D.
5. Cement 4-1/2" casing as per attached design with sufficient class C cement with 16% gel plus 3% salt to reach 3000', and tail in with Pozmix Latex to reach 100' above pay zone.
6. Use guide shoe, differential fill collar. Use reciprocating scratchers and centralizers to cover pay zone.
7. If float holds, land casing, set slips. Run temperature survey after 8 hours and release rig.

ASING TESTER

CONFIDENTIAL

Interval	Length	Weight	Grade	Thread	Csg. Cost/Ft.	Cum. Cost
b. SUMMARY	8-5/8	In. O.D.				
Interval	Length of Int. #/Ft.	Interval Weight	Cum. Weight	Grade	Joint	Col.
0-2100	2100	24	J-55	ST&C		
c. INTERMEDIATE	4-1/2	In. O.D.	Max BHP			
Interval	Length of Int. #/Ft.	Interval Weight	Cum. Weight	Grade	Joint	Col.
0-6500	6500	10.5	J-55	ST&C		
d. LINER		In. O.D.				
Interval	Length of Int. #/Ft.	Interval Weight	Cum. Weight	Grade	Joint	Col.

LINE in. O.D.

0-2100' $\frac{1}{2}$ Spud mud using gel and lime as needed.

2100' $\frac{1}{2}$ - 4400' $\frac{1}{2}$ Brine water and drilling detergent.

4400' $\frac{1}{2}$ - 6000' $\frac{1}{2}$ Low solids Fosal and oil type fluid as follows:

Weight: 9.8 to 10.4 lbs per gallon
 Viscosity: 32 to 34 sec/1000cc
 Water Loss: No Control
 Oil Content (No. 2 diesel): 8-10%

6000' $\frac{1}{2}$ - T.D. Low solids with water loss control.

Weight: 9.8 to 10.4 lbs/gal
 Viscosity: 36 to 38 sec/1000cc
 Water Loss: 10cc or less
 Oil Content: 8-10%

1. Circulate portion of reserve and add all water at flowline.
2. Possible seepage to slight loss of returns may occur in the San Andres and Glorieta. Paper will usually control this loss.

BLOWOUT PREVENTERS

1. Use Series 900 blowout preventers as per Company specifications.
2. When tripping up, test blowout preventer and manifold to full working pressure with cold water, or as specified by Company representative.
3. Operate blowout preventers at least once each day, or as Company representative requires.
4. An extra set of drill pipe rams will be required on location at all times while drilling or completing.
5. All choke manifolds, lines and valves will be located at the side of and away from substructure.

DRILL PIPE MEASUREMENTS

1. Drill pipe will be tallied at all coring, testing, logging and casing points.

1. Deviation surveys shall be taken on every trip or every 500', whichever is first. All straight hole surveys will accompany AASMG tour sheet reports.
2. Deviation should not change more than $1\frac{1}{2}^{\circ}$ in any 100'. If deviation exceeds 2° per 100', hole shall be plugged back and straightened.
3. Maximum deviation shall be allowed as follows:

0 - 500	$\frac{1}{8}^{\circ}$	4000 - 6000	$1\frac{1}{2}^{\circ}$
500 - 1000	$\frac{1}{4}^{\circ}$	6000 - 8000	2°
1000 - 2000	$\frac{1}{2}^{\circ}$	8000 - 10000	$2\frac{1}{2}^{\circ}$
2000 - 4000	3°	12000 - 14000	3°

RECORDING

1. A recorder with torque, hook load, and rate of penetration will be used.
2. Record 1' drilling time on recorder from surface to T.D.
3. Record 10' drilling time from 2100 to T.D. on Company forms. Will each show as soon as recorded with Daily Drilling Reports.

1. G.R.-Sonic from surface casing to T.D.
2. Others as selected by geologist.
3. Perforating control.

One set of 10' samples from surface casing to T.D. Washed, sacked, labelled and tied in bundles of 100.

None

EXPERIMENTAL TESTS

None

FORMATION LOGS

Jurassic	Red Beds	300'	Queen	Sand	3990'
Rustler	Anhydrite	2070'	San Andres	Dolomite	4700'
Salado	Salt	2180'	Glorieta	Sand	6050'
Tansill	Anhydrite	3000'	Paddock	Dolomite	6260'
Yates	Sd & Anny.	3100'			
7 Rivers	Dolomite	3300'			

MISCELLANEOUS

1. The AATC Daily Drilling Report will be filled out completely and neatly each 8-hour tour. One clear and legible copy will be mailed daily to Tenneco Oil Company. Mail Company drilling sheets as soon as each sheet is finished with Daily Drilling Report.
2. A daily report sheet and a cost sheet will be furnished by the operator for the well. The contractor's tool pusher will keep these forms current and complete. The daily cost, total cumulative cost and cumulative mud cost will be given daily along with the Tenneco morning report. At the conclusion of the well, the cost forms will be mailed to Tenneco Oil Company, P. O. Box 1031, Midland, Texas.
3. The morning report shall be called to Tenneco's Midland office as soon after 8:00 C.S.T. each weekday morning as practical. Phone number is MU 3-4621, area code 915.
4. For notifications at other than office hours, call:

LOGGING:

James Eaton OX 4-7668
B. E. Desadier MU 4-5390

EMERGENCIES:

A. W. Lang MU 2-3010
A. R. Gibson MU 4-7545

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