

TENNECO OIL COMPANY - 10 POINT PLAN

1. The geological name of the surface formation:
2 & 3. Estimated Formation Tops:

(See Attached Drilling Procedure)
4. Proposed Casing Program:

(See Attached Drilling Procedure)
5. Blowout Preventors:
Hydraulic double ram. One set of rams will be provided each size drill pipe in the hole. One set of blind rams at all times. Fill line will be 2", kill line will be 2", choke relief line will be 2". BOP's, drills and tests will be recorded in the driller's log. BOP will be tested every 24 hours and recorded in IADC Log.
6. Mud Program: (Sufficient quantity of mud and weight material will be available on location).

(See Attached Drilling Procedure.)
7. Auxiliary Equipment:
 - a. Kelly cock will be in use at all times.
 - b. Stabbing valve to fit drill pipe will be present on floor at all times.
 - c. Mud monitoring will be visual. No abnormal pressures are anticipated.
 - d. Floats at bits.
 - e. Drill string safety valve(s) to fit all pipe in drill string will be maintained on the rig floor while drilling operations are in progress.
8. Coring, Logging, and Testing Program:

(See Attached Drilling Procedure)
9. No abnormal pressures, temperatures or potential hazards such as H₂S are expected to be encountered.
10. The drilling of this well will start approximately (July) and continue for 10 to 12 days.

Your office will be notified of spudding in sufficient time to witness cementing operations. Immediate notice will be given on blowouts, fires, spills, and accidents involving life threatening injuries or loss of life. Prior approval will be obtained before appreciably changing drilling program or commencing plugging operations, plug back work, casing repair work or corrective cementing operations.

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION
PENTHOUSE, 720 SOUTH COLORADO BOULEVARD
DENVER, COLORADO 80222

DRILLING PROCEDURE

DATE: December 6, 1979

LEASE: Sullivan Frame Com

WELL NO.: B-1

LOCATION: 1100' FNL, 800' FWL
Sec. 30, T 29N, R 10W
San Juan County, New Mexico

FIELD: Undesignated Mesa Verde
Bloomfield Chacra

ELEVATION: 5470' Est. G.L.

TOTAL DEPTH: 4500'

PROJECTED HORIZON: Chacra/Mesaverde

SUBMITTED BY: DJ K...

DATE: DEC 15 1979

APPROVED BY: B. J. ...

DJK/ms

CC: Administration
Well file
Field File

ESTIMATED FORMATION TOPS

000	650'	Water
Farmington	1050'	Gas
Picture Cliffs	1800'	Gas
Lewis Shale	1990'	
Chacra	2420'	Gas
Chacra A	2780'	Gas
Chacra B	2880'	Gas
Cliffhouse	3380'	Gas
Menefee	3510'	Gas
Point Lookout	4080'	Gas
T.D.	4500'	

DRILLING, CASING, AND CEMENT PROGRAM

1. Move in, rig up rotary tools.
2. Drill a 13 1/4" hole to \pm 250'.
3. Run 9 5/8", 36#, K-55, ST&C casing to 250'.
4. Cement with Class "B" with 2% CaCl_2 w/ sufficient volume to circulate to surface.
5. Wait on cement a minimum of 12 hours. Install 9 5/8" series-900 casing head.
6. Nipple up blowout preventers and manifold with relief lines. Pressure test choke manifold lines and valves to 1500 psi for 30 minutes. Pressure test blind rams to 1500 psi for 30 minutes.
7. Trip in hole with 8 3/4" bit, drill collars, and drill pipe. Test pipe rams to 1500 psi for 30 minutes. Record all tests on IADC Daily Report Form.
8. Drill 8 3/4" hole to 3100'. Log as per wellsite Geological Engineer.
9. Run 7", 23#, K-55, ST&C casing to 3100'.
10. Cement with 50/50 pozmix and 150 sx Class "B" with 2% CaCl_2 in sufficient volume to circulate to surface.
11. Wait on cement a minimum of 18 hours. Pressure test casing to 1000 psi for 30 minutes. Nipple up to gas drill.
12. Pick up 4 3/4" drill collars and 3 1/2" drill pipe with 6 1/4" drill bit. Drill cement guide shoe and 5' of open hole with water.
13. Displace water with nitrogen. Displace nitrogen with gas. Blow hole dry.
14. Drill a 6 1/4" hole with gas to T.D. Log as per wellsite Geological Engineer.
15. Run 4 1/2", 10.5#, K-55, LT&C casing liner to T.D. (4500') with a 150' minimum overlap of liner inside 7" casing.
16. Cement with 50/50 pozmix tailed by 150 sx Class "B" in sufficient volume to circulate cement to top of liner.
17. Reverse out excess cement. Lay down 3 1/2" drill pipe. Install well head.
18. If well is not productive, plug and abandon according to state requirements.
19. Move out rotary tools.

CASING PROGRAM

0-350'	9 5/8", 36#, K-55, ST&C
0-3100'	7", 23#, K-55, LT&C
2950'-T.D.	1550' of 4 1/2", 10.5#, K-55, LT&C

MUD PROGRAM

0-250'	Native solids. Run viscous sweeps as necessary to clean hole. Have sufficient viscosity to run casing.
250'-3100'	Benex and water. Sweeps as necessary. Have sufficient viscosity to log and run casing. Control WL for logging.
3100'-T.D.	Gas.

EVALUATION

Cores and DST's:

None anticipated.

Deviation Surveys:

1. Survey surface hole at 100' intervals. Maximum allowable deviation a surface is 1°.
2. From Surface to total depth, deviation surveys must be taken every 500' or each trip, whichever is first. This may entail running the TOTCO on wireline. Record each survey on the IADC Drilling Report Sheet. Maximum allowable change in deviation is 1° per 100'. Maximum deviation is 5°.

Samples:

None.

Logs:

Induction/SN/SP/GR.

FDC/CNL/GR/CAL

- In two sets: 1. Intermediate T.D. to 1800'
2. Final T.D. to base of Intermediate casing.

BLOWOUT EQUIPMENT

900-series double ram hydraulic and rotating head with a minimum of 150 psi working pressure. Kill lines, choke lines and manifold to meet Tenneco Oil standards.

Preventors must be checked for operation every 24 hours, and the check must be 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, daily and cumulative mud costs, plus any other pertinent information, will be called into Tenneco Oil Company, Denver, Colorado, between 7:30 a.m. and 8:00 a.m.

1. 303-758-7130 (office) Don Barnes.
303-758-7287 (office) Don Barnes' private line, Monday-Friday (before 7:45 a.m.)
2. 303-936-0704 (home) Don Barnes, weekends and holidays.
3. 303-795-0221 (home) John Owen, if Don Barnes is not available.

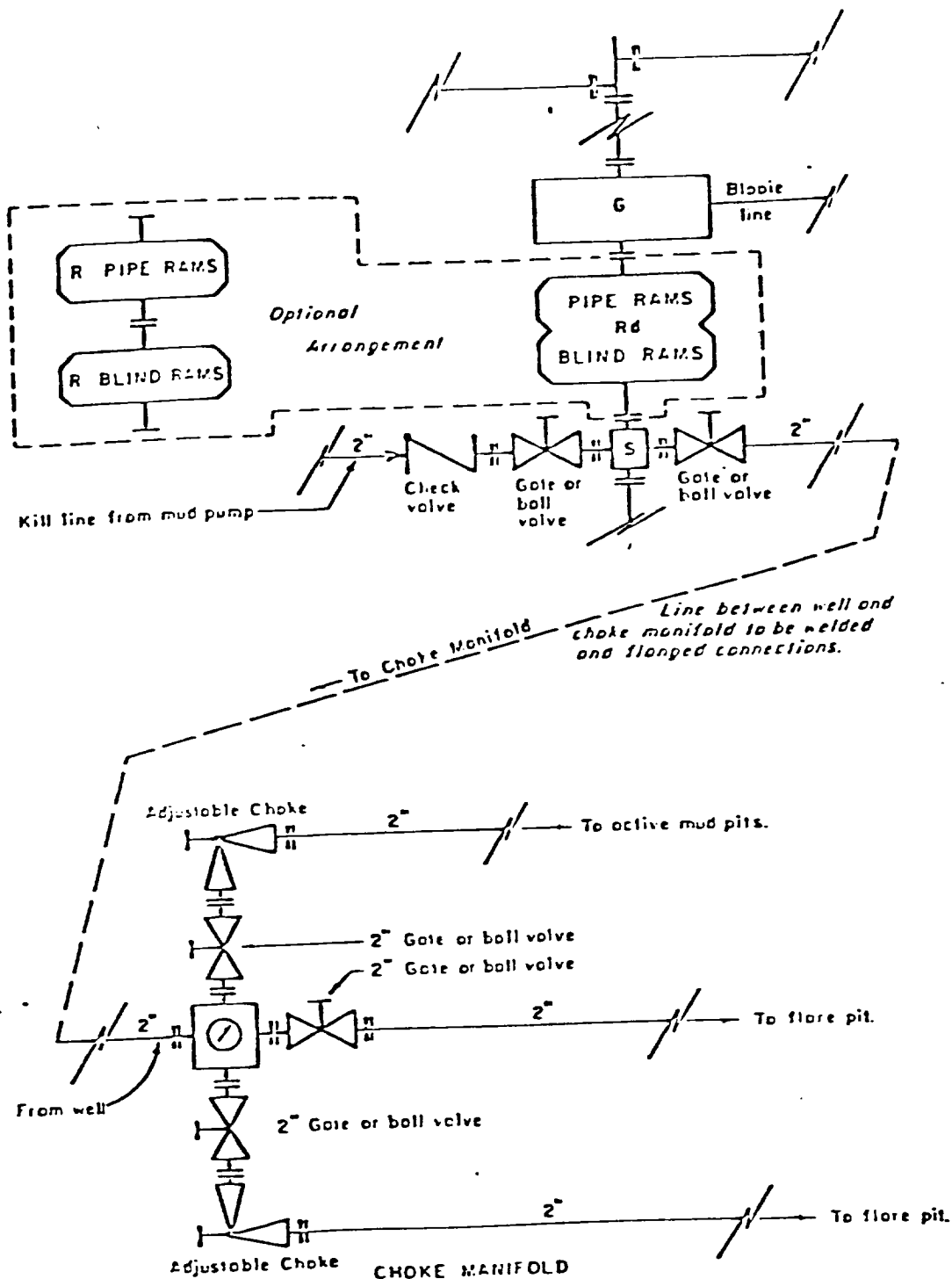
The yellow sheet of the IADC Report to be filled out completely, the original copy of the drilling time recorder, and copies of any invoices from this well, signed and received for Tenneco Oil Company will be mailed daily to:

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION
PENTHOUSE, 720 SOUTH COLORADO BOULEVARD
DENVER, COLORADO 80222

ATTENTION: Drilling Department

In case of emergency, notify the following:

1. Mr. Don Barnes, Division Drilling Engineer - 303-936-0704
2. Mr. John Owen, Project Drilling Engineer - 303-795-0221
3. Mr. Mike Lacey, Division Production Manager - 303-979-0509



- All equipment to be 3,000 psi working pressure except as noted.
- Rd Double ram type preventer with two sets of rams.
- R Single ram type preventer with one set of rams.
- S Drilling spool with side outlet connections for choke and kill lines.
- G Rotating head 150 psi working pressure minimum

ARRANGEMENT C

TENNECO OIL COMPANY
 ROCKY MOUNTAIN DIVISION
 REQUIRED MINIMUM
 BLOWOUT PREVENTER AND
 CHOKES MANIFOLD