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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease	
STATE <input type="checkbox"/>	FEE <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.	

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work - DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		7. Unit Agreement Name
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		8. Farm or Lease Name Sullivan Frame Gas Unit
2. Name of Operator Tenneco Oil Company		9. Well No. 1E
3. Address of Operator 720 So. Colorado Blvd., Denver, Colorado 80222		10. Field and Pool, or Wildcat Basin/Undes./Bloomfield Dakota M.V./Chacra
4. Location of Well UNIT LETTER <u>A</u> LOCATED <u>990</u> FEET FROM THE <u>North</u> LINE AND <u>790</u> FEET FROM THE <u>East</u> LINE OF SEC. <u>30</u> TWP. <u>29N</u> RGE. <u>10W</u> NMPM		12. County San Juan
19. Proposed Depth 6400		19A. Formation Dakota M.V./Chacra
20. Rotary or C.T. Rotary		
21. Elevations (Show whether DF, RT, etc.) 5502 GR	21A. Kind & Status Plug. Bond Nation Wide	21B. Drilling Contractor Four Corners
22. Approx. Date Work will start July 1980		

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	9 5/8"	36#	±250'	Circulate to surface	
8 3/4"	7"	23#	±4650'	Circulate to surface	
6 1/4"	4 1/2"	10.5#	±6400'	Circulate to liner top	

See attached.

The gas is dedicated.

APPROVAL VALID
FOR 90 DAYS UNLESS
DRILLING COMMENCED,

EXPIRES 10-1-80



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed [Signature] Title Staff Production Analyst Date July 2, 1980

(This space for State Use)

Original Signed by CHARLES GHOLSON

APPROVED BY [Signature] TITLE DEPUTY OIL & GAS COMMISSIONER, DIST #3 DATE JUL 7 1980

CONDITIONS OF APPROVAL, IF ANY:

All distances must be from the outer boundaries of the Section.

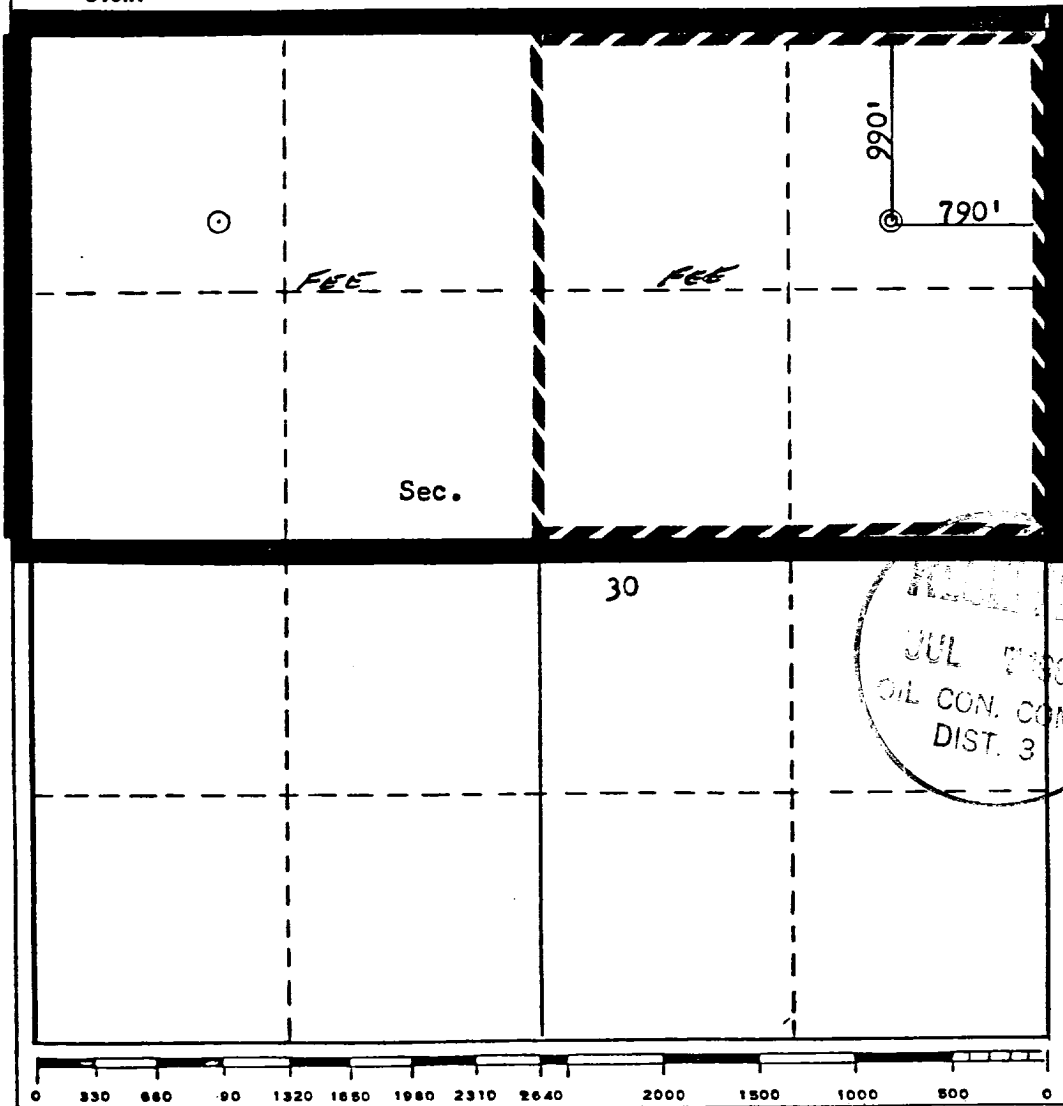
Operator TENNECO OIL COMPANY			Lease SULLIVAN FRAME GAS UNIT "A"		Well No. 1-E
Unit Letter A	Section 30	Township 29N	Range 10W	County San Juan	
Actual Footage Location of Well: 990 feet from the North line and 790 feet from the East line					
Ground Level Elev. 5502	Producing Formation Dakota / M.V. / Chacra		Pool Basin / Undesignated / Bloomfield Dakota / Mesa Verde / Chacra		Dedicated Acreage: 320/160/160 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation communitization in progress

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name M. L. Freeman
Position Staff Production Analyst
Company Tenneco Oil Company
Date July 2, 1980

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed September 3, 1979
Registered Professional Engineer and/or Land Surveyor
Frederick Kerr Jr.
Certificate No. 3950

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.

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

DRILLING PROCEDURE

DATE: Sept. 4, 1979 - Revised July 1, 1980

LEASE: Sullivan Frame Gas Unit

WELL NO.: A-1E

LOCATION: 990 FNL 790 FEL
Sec. 30, T29N, R10W
San Juan County, N.M.

FIELD: Basin Dakota
Undesignated Mesa Verde
Bloomfield Chacra

ELEVATION: 5500 EST GL

TOTAL DEPTH: 6400'

PROJECTED HORIZON: CH-MV, commingled & Dakota Dual

SUBMITTED BY: D. J. Kardash DATE: July 2, 1980

APPROVED BY: *Jah W. Ch...* DATE: 7/2/80

JCM/ms

CC: Administration
DSB Well File
Field File

ESTIMATED FORMATION TOPS

GL	5500
OJO	530
PICTURED CLIFFS	1720
CHACRA	2360
CHACRA A	2710
CHACRA B	2810
CLIFFHOUSE	3300
MENEFEE	3400
PT. LOOKOUT	4080
MANCOS	4392
GREENHORN	6000
DAKOTA	6120
TD.	6400

DRILLING, CASING, AND CEMENT PROGRAM

1. MI RURT
2. Drill a 12 1/4" hole to $\pm 250'$.
3. RU & run 9 5/8" 36# K-55 STC casing.
4. Cement with sufficient volume to CIRC cement to surface using CaCl_2 as accelerator.
5. WOC a minimum of 12 hours. Nipple up BOPS, manifold and lines. Pressure test blinds, lines and casing to 1000 PSI for 30 minutes. GIH with drill pipe and test pipe rams to 1000 PSI for 30 minutes. Record all tests on IADC Report Sheet. Drill out.
6. Drill an 8 3/4" hole to ± 4650 or 250' into the Mancos shale. Treat mud system for possible lost circulation in the Mesa Verde.
7. Log open hole as directed by GE Dept.
8. RU & run 7" 23# K-55 STC to TD, with DV tool at $\pm 3100'$. Use cement baskets throughout the MV.
9. Cement first stage with "lite" tailed by 150 SX class B+ 2% CaCl_2 in sufficient quantity to raise cement to stage tool. Circulate 4 hours through DV and WOC. Cement 2nd stage with "lite" in sufficient volume to raise cement to surface.
10. WOC 18 hours. Set slips and cut off casing. NU BOPS and pressure test. Record tests on IADC Report Sheet. PU 3 1/2 drilling assembly, 6 1/4 bit.
11. Drill to within 5' of shoe. Displace water with nitrogen, nitrogen with gas. Drill a few feet of hole until dusting. Drill with gas to TD.
12. Log open hole as GE Dept. directs.
13. If productive, run 4 1/2 10.5# casing as a liner to TD. Have 150' of overlap in the 7" casing. Make sure this doesn't interfere with Mesa Verde bottom perforations.
14. Cement with sufficient quantity to circulate cement to the liner top.
15. Circulate out excess cement and LDDP.
16. Install tree and fence reserve pit.
17. If non-productive, P & A as USGS requires.

CASING PROGRAM

<u>Interval</u>	<u>Footage</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>
0-250	250	9 5/8	36#	K-55 STC
0-4650	4650	7	23#	K-55 STC
4500-6400	1900	4 1/2	10.5#	K-55 STC

MUD PROGRAM

0-250' Native solids. Have sufficient viscosity to clean hole and run casing.

250'-4650' Benex and water. Have sufficient viscosity to run casing.

4650'-6400' Gas.

EVALUATION

Cores and DST's:

No cores or DST's are anticipated.

Deviation Surveys:

1. Survey surface every 100'. Maximum allowable deviation at surface is 1°.
2. From surface to T.D., surveys must be taken every 500', or each trip, whichever is first. This may entail running the TOTCO on wireline. Record surveys on IADC Drilling Report. Maximum allowable change is 1° per 100'.

Samples:

As directed.

Logs:

1. IND SN-SP-GR
2. FDC-CNL-GR-CAL

BLOWOUT EQUIPMENT

10", 3000 psi, double ram hydraulic operated with closing unit and 40 gallon accumulator.

10", 150 psi, rotating head and 7" blooie line.

See Arrangement "C".

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.)
- 303-936-0704 (Home) Don Barnes, weekends and holidays.
2. George Ramsey (Home) 303-771-5154.
3. John Owen (Home) 303-795-0221.

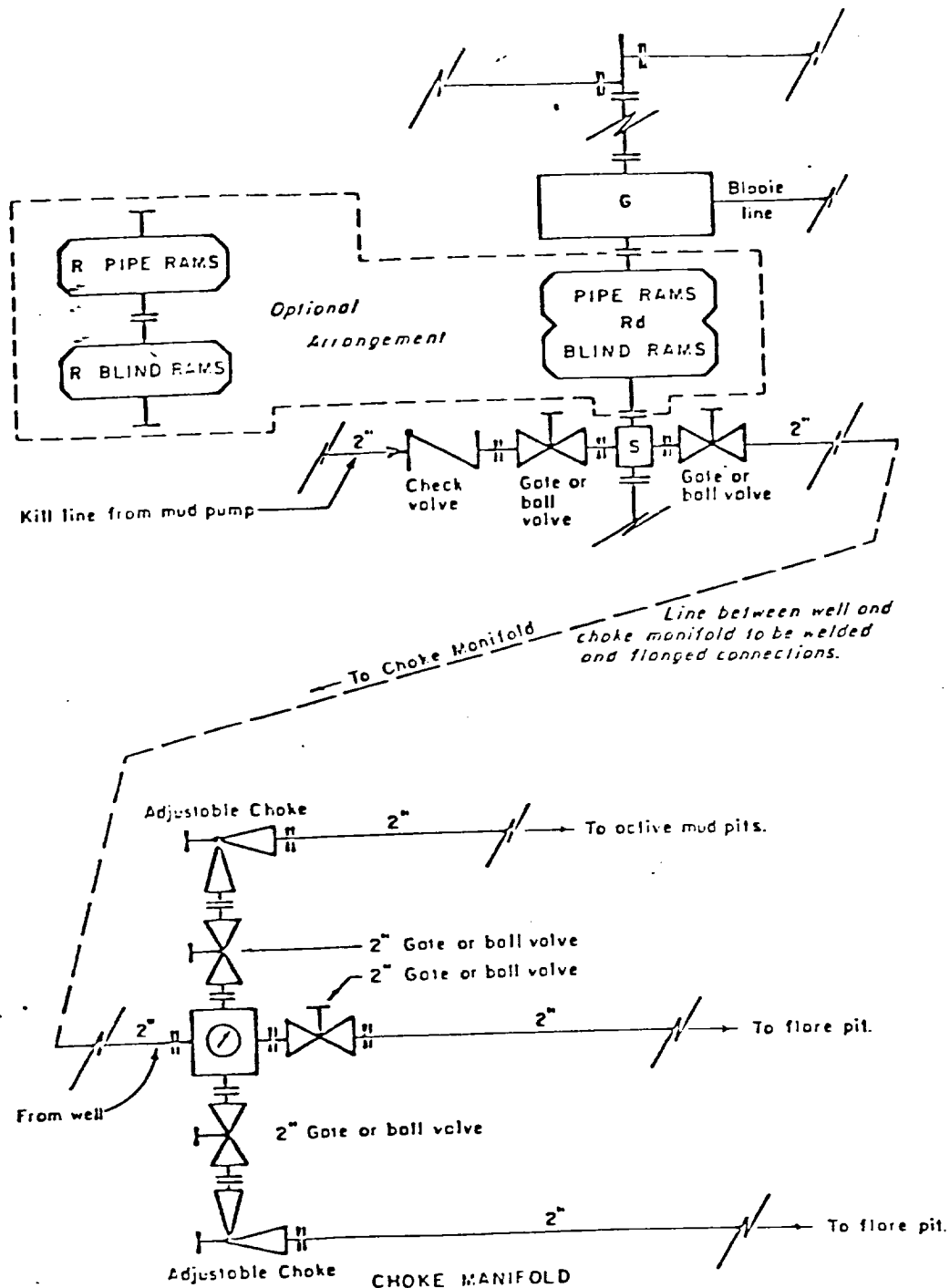
The yellow sheet of the IADC Report is to be filled out completely. The original copy of the drilling time recorder, and copies of any invoices from this well, signed and received for Tenneco Oil Company, will be mailed daily to:

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.
2. Mr. George E. Ramsey, Jr., Drilling Engineers Supervisor
3. Mr. John W. Owen, Project Drilling Engineer.
4. Mr. Mike Lacey, Division Production Manager (Home 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
 CHOKER MANIFOLD

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

