reverse side)

UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

30-045-23092

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL
OIL WELL [ ] GAS WELL [X] OTHER SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR
Tenneco Oil Company

3. ADDRESS OF OPERATOR
720 South Colorado Blvd., Denver, Co 80222

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
G 2400' FNL 1560' FEL
At proposed prod. zone

5. LEASE DESIGNATION AND SERIAL NO.
USA SF-078415

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Roelofs

9. WELL NO.
3

10. FIELD AND POOL, OR WILDCAT
Basin Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 9, T29N, R8W

12. COUNTY OR PARISH
San Juan

13. STATE
New Mexico

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
See Point 1B, Surface Use Plan

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED TO THIS WELL
320

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH
7675'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6463 G.L.

22. APPROX. DATE WORK WILL START*
January 15, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13-3/4"	9-5/8"	36#	± 400'	Sufficient to circulate to surface.
7-7/8"	4-1/2"	10.5#	7675	Two stages to Mesa Verde & surface.

1. The geologic name of the surface formation is the Tertiary San Jose.
2&3. Estimated Formation Tops

Fruitland	2810'	Point Lookout	----	
Pictured Cliffs	3140'	Mancos	----	
Lewis Shale	3225	Gallup	6575'	
Cliffhouse	4695	Greenhorn	7335'	
Menefee	----	Dakota "A"	7435'	Possible oil/gas prod.

4. Run 9-5/8" OD, K-55 new casing to ± 400' and circulate to surface. Run 4½" OD, K-55 new casing to 7360' with cement in two stages. Place D.V. tool at top of Mesa Verde zone and cement. Place two cement baskets below D.V. tool and cement second stage to surface. Casing-head will be approved API type 10".
5. Blowout Preventors: Hydraulic, double ram, 10". One set of rams will be provided for 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" with variable choke. BOP's will be installed, tested and in working order before drilling below surface casing and shall be maintained ready for use until drilling operations are completed. BOP's, drills, and tests will be recorded in the IADC Drilling Report. They shall be checked every 24 hours. All rig equipment will be tested to above BOE ratings.
6. 0-400' Spud Mud.
400' - 6800' Low Solids, fresh water mud. No water loss control. 6800 - T.D., water loss 10cc. Raise viscosity for logging to approximately 50 seconds/quart.
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 in this area.
   d. Floats at bits.
   e. Drill string safety valve(s) to fit all pipe in the drill string will be maintained on th rig floor while drilling operations are in progress.
   f. Rotating head will be used while drilling with gas.
8. No cores will be taken. GR-FDC-CNL-Caliper-T.D. to base of Mesa Verde. GR-Induction SP-SN-T. to surface casing.
9. No abnormal pressures or temperatures are anticipated. See point #5 for blowout prevention equipment.
10. The drilling of this well will take approximately ten days. The gas is not yet contracted.

DEC 6 1978 OIL CON. COM. DIST. 3

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. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.
SIGNED D.D. Myers TITLE Division Production Manager DATE 12-1-78

(This space for Federal or State office use)

PERMIT NO. APPROVAL DATE

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

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

Operator	Lease	Well No.
TENNECO OIL COMPANY	ROELOFS	3

Unit Letter	Section	Township	Range	County
G	9	29N	8W	San Juan

Actual Footage Location of Well:
2400 feet from the North line and 1560 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6463	Dakota	Basin Dakota	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

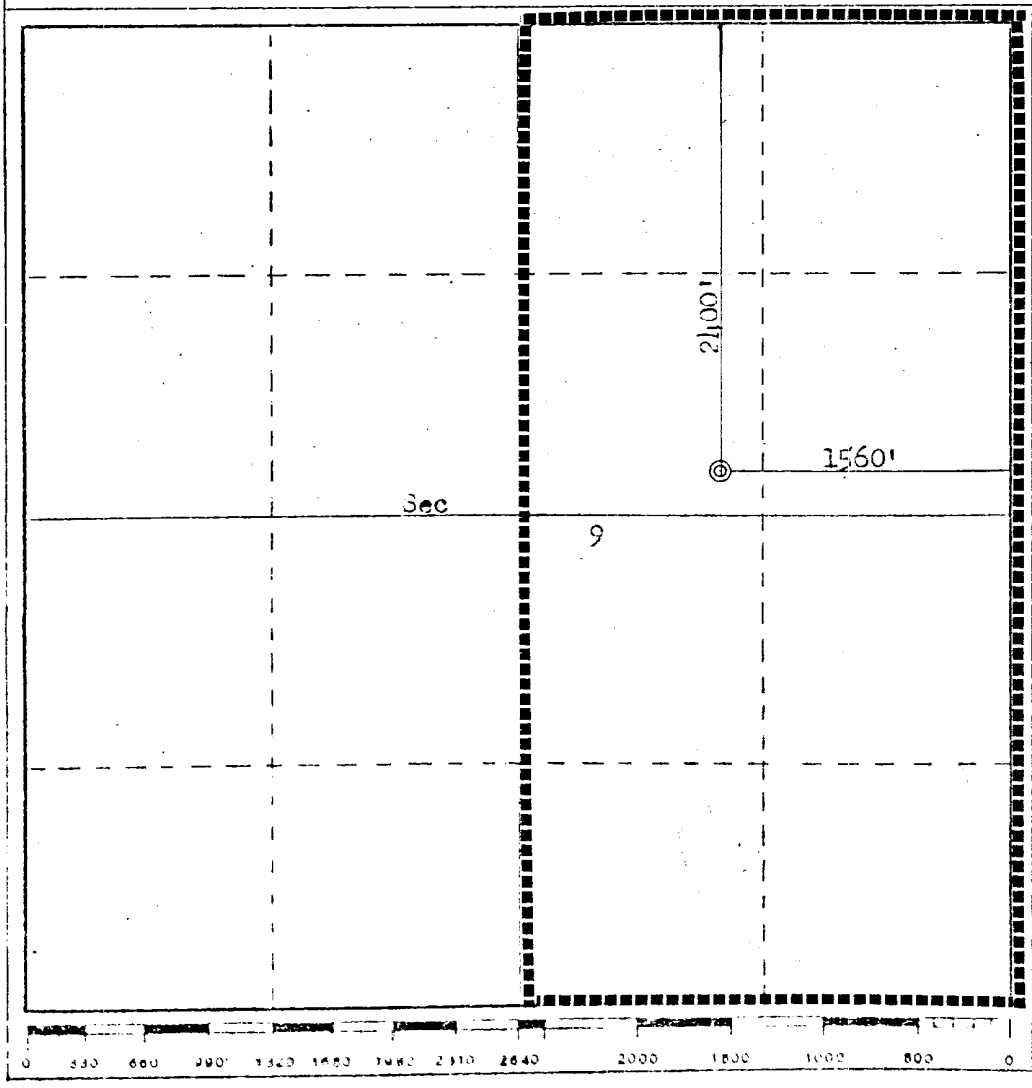
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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 _____

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 J. A. Rush

Position Environmental Coordinator

Company Tenneco Oil Company

Date November 30, 1978

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 October 1, 1978

Registered Professional Engineer and/or Land Surveyor

Fred B. Kerr Jr.

Certificate No. 3950

FRED B. KERR, JR.

ROELOFS 3

1. Existing Roads

A. Proposed Well Site Location:
The proposed well site location was surveyed and staked by a registered land surveyor and is located 2400' FNL and 1560' FEL, Section 9, Township 29 North, Range 8 West, San Juan County, New Mexico. (See Exhibit I Surveyor Plat).

B. Planned Access Route:
The planned access route begins in Blanco, New Mexico and proceeds east on Highway 17 for approximately 7.5 miles to the junction of a road which goes NW. Proceed on this road for approximately 1.2 miles to the junction of a gravel road. Turn southeast on this and

C. Access Road Labelled: / go ¼ mile. The new road to the location / begins here and goes SW 1/8 mile to the loc
Color Code: Red - Improved Surface / (See Exhibit II).
Blue - New Access Road

D. Not applicable - the proposed well is a development well.

E. The proposed well is a development well. See Exhibit II for existing roads within a one mile radius.

F. Existing Road Maintenance or Improvement Plan:
The existing roads will require minimal maintenance.

2. Planned Access Roads

(All roads are existing roads.)

A. Width:
The 600' of new road will be 12 feet wide.

B. Maximum Grades:
Maximum grades will be six percent.

C. Turnouts:
There are no turnouts planned as sight distance is sufficient.

D. Drainage Design:
The road is center crowned to allow drainage. The road is flat primarily.

E. Culverts Use Major Cuts and Fills:
No culverts will be needed. An eight foot cut will be required on the NW area of the pad to build the location.

F. Surfacing Material:
Native soil has been wetted, bladed and compacted to make the road surface, which is existing.

2. Planned Access Roads (Cont'd)

G. Gates, Cattleguards, Fence Cuts:
No gates, cattleguards or fences will be needed.

H. New Roads Centerlined Flagged:
Existing Roads.

3. Location of Existing Wells

The proposed well is a development well. Exhibit III shows existing wells within a one mile radius.

A. Water Wells: None.
B. Abandoned Wells: None.
C. Temporarily Abandoned Wells: None.
D. Disposal Wells: None.
E. Drilling Wells: None.
F. Producing Wells: See Exhibit III.
G. Shut-In Wells: None.
H. Injection Wells: None.
I. Monitoring or Observation Wells: None.

4. Location of Existing and/or Proposed Facilities

A. Existing facilities within one mile owned or controlled by Lessee/Operator:
See Exhibit III.

(1) Tank batteries - See Exhibit III.
(2) Production facilities - See Exhibit III.
(3) Oil Gathering Lines - n/a.
(4) Gas Gathering Lines - n/a.
(5) Injection Lines - n/a.
(6) Disposal Lines - n/a.

B. New facilities in the event of production:
(1) Facilities will be within the dimensions of the drill pad.
(2) Dimensions are shown on Exhibit IV.

(3) Construction Materials/Methods:
Construction materials will be native to the site.
Facilities will consist of a well pad.

(4) Protection of Wildlife/Livestock:
Facilities will be fenced as needed.

4. Location of Existing and/or Proposed Facilities (Cont'd)

B. New facilities in the event of production: (cont'd)

(5) The new facilities will consist of a tank, production unit and wellhead.

C. Rehabilitation of Disturbed Areas:
Following the completion of construction, those areas required for continued production will be graded to provide drainage and minimize erosion. Those areas unnecessary for use will be graded to blend with surrounding topography per BLM recommendations.

5. Location and Type of Water Supply

A. Location and type of water supply:
Water will be hauled from a private source.

B. Water Transportation System:
Water trucks will be used.

C. Water wells:
N/A.

6. Source of Construction Materials

A. Materials:
Construction materials will consist of soil native to the site. Any topsoil, if present, will be stripped and stockpiled as needed.

B. Land Ownership;
The planned site and access road is on federal land administered by the Bureau of Land Management.

C. Materials Foreign to the Site:
N/A.

D. Access Roads:
No additional roads will be required.

7. Methods for Handling Waste Disposal

A. Cuttings:
Cuttings will be contained in the reserve pit.

B. Drilling Fluids:
Drilling fluids will be retained in the reserve pit.

C. Produced Fluids:
Produced fluids, including produced water will be collected in the reserve pit. Any small amount of hydrocarbon that may be produced during testing will be retained in the reserve pit. Prior to clean up operations, the hydrocarbon material will be skimmed.

7. Methods for Handling Waste Disposal (Cont'd)

D. Sewage:
Sanitary facilities for sewage disposal will consist of at least one pit toilet, during the driller operations. The pit will be backfilled immediately following completion of the drilling operation.

E. Garbage:
There probably will not be much putriscible garbage to dispose of. However, it will be disposed of along with the refuse in a constructed burn pit, which will be fenced. The small amount of refuse will be burned and the pit will be covered with a minimum 36 inch cover upon completion.

F. Clean-Up of Well Site:
Upon the release of the drilling rig, the surface of the drilling pad will be prepared to accommodate a completion rig, if testing indicates potential productive zones. In either case, the "mouse hole" and "rat hole" will be covered to eliminate a potential hazard to livestock. The reserve pit will be fenced to prevent entry of livestock until the pit is backfilled. Reasonable clean up will be performed prior to final restoration of the site.

8. Ancillary Facilities

None required.

9. Well Site Layout

A. See Exhibit IV.

B. Location of pits, etc. See Exhibit IV.

C. Rig orientation etc. See Exhibit IV.

D. Lining of pits:
Pits will not be lined. They will be covered with a fine mesh netting, if necessary, for the protection of wildlife if fluids are found to be toxic.

10. Plans for Restoration of Surface

A. Reserve pit clean up:
The pit will be fenced prior to rig release and shall be maintained until clean up. Prior to backfilling any hydrocarbon material on the pit surface will be removed. The fluids and solids contained in the pit shall be backfilled with soil excavated from the site and with soil adjacent to the reserve pit. The restored surface of the reserve pit will be contoured as needed to minimize erosion. The reserve pit area will be seeded per BLM recommendations during the appropriate season following final restoration of the site.

10. Plans for Restoration of Surface (Cont'd)

B. Restoration Plans - Production Developed:
The reserve pit will be backfilled and restored as described under Item A. In addition, those disturbed areas not required for production will be graded to blend with the surrounding topography, and seeded, per BLM recommendations. The portion of the drill pad required for production and turning areas will be graded to minimize erosion and provide access to production facilities under inclement conditions. Following depletion and abandonment of the site, restoration procedures will be those under Item C. below.

C. Restoration Plan - No Production Developed:
The reserve pit will be restored as described above. With no production developed, the entire surface disturbed by construction of the drilling pad will be restored. The site will be contoured to blend with the surrounding topography. The site will be seeded according to BLM recommendations. If the new access road is not required for other development plans, it will be obliterated and restored and seeded per BLM recommendations.

D. Rehabilitation Time Table:
Upon completion of operations the intial clean up of the well site will be performed. Final restoration of the site will be performed as soon as possible according to procedural guidelines published by the USGS and BLM. Seeding of the disturbed areas which are no longer required will be performed during the appropriate season, following final restoration.

11. Other Information

A. Surface Description:
The surface topography of the area is relatively flat and gently sloping from the existing access road.

B. Surface Use Activities:
The surface is federally owned and managed by the BLM. The predominant surface use is mineral exploration and production.

C. Proximity of Water, Dwellings and Historical Sites:

1. Water:
There are no reservoirs or streams in the immediate area.
2. Occupied Dwellings:
There are no occupied dwellings or buildings in the area.
3. Sites:
An archeological reconnissance has been performed for this location and clearance has been granted.

12. Operator's Field Representative

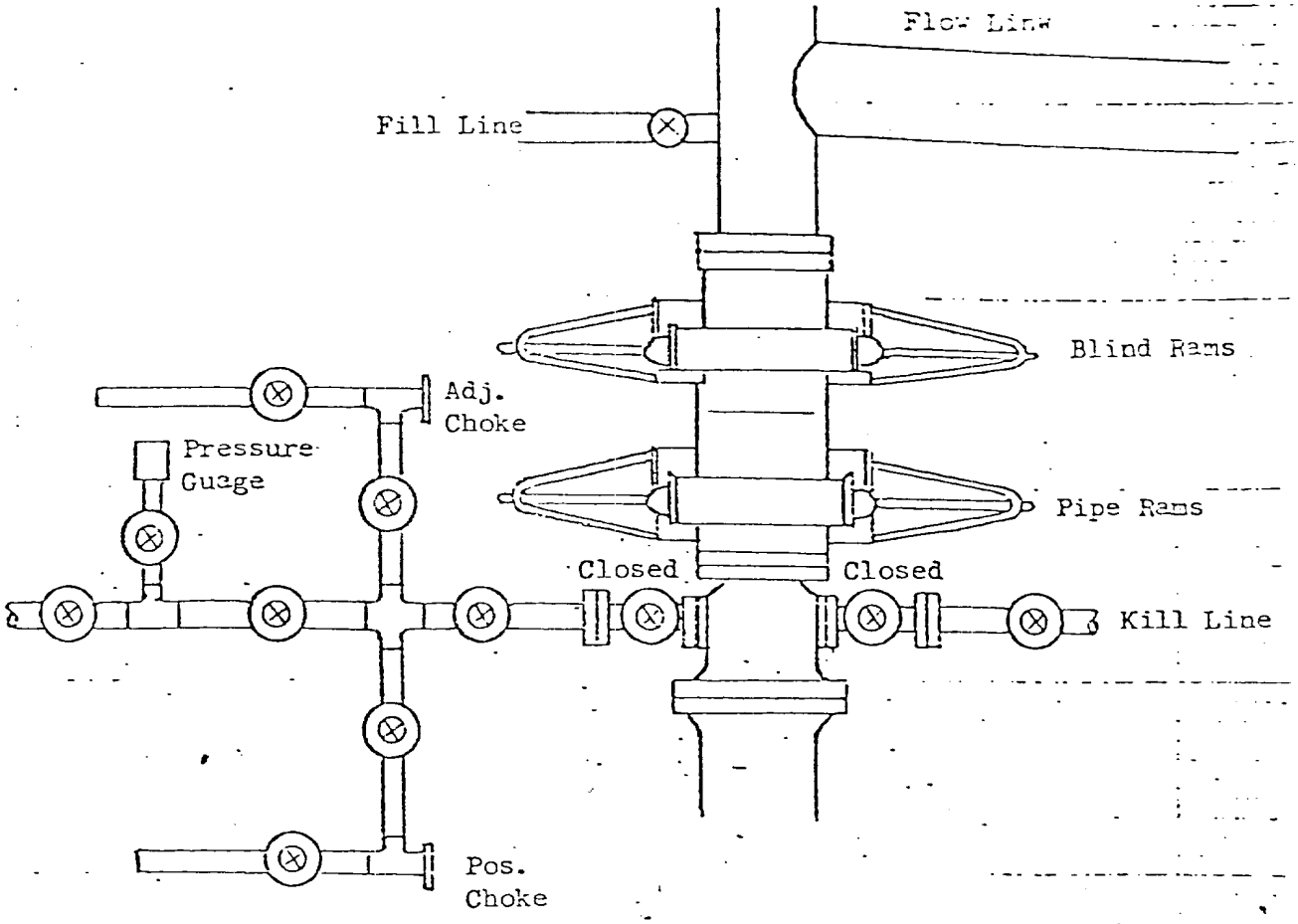
Donald S. Barnes
Division Drilling Engineer
Tenneco Oil Company
720 South Colorado Blvd.
Penthouse
Denver, CO 80222
(303) 758-7130 Ext. 212

13. Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions as they actually exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the proposed work performed by Tenneco Oil Company and its contractors and subcontractos will conform to this plan.

Date: 12-1-78

D. D. Myers
Division Production Manager



All valves 2"

All BOPs, flanges, spools, valves, & lines must be series 900 or 3000 psi working press.

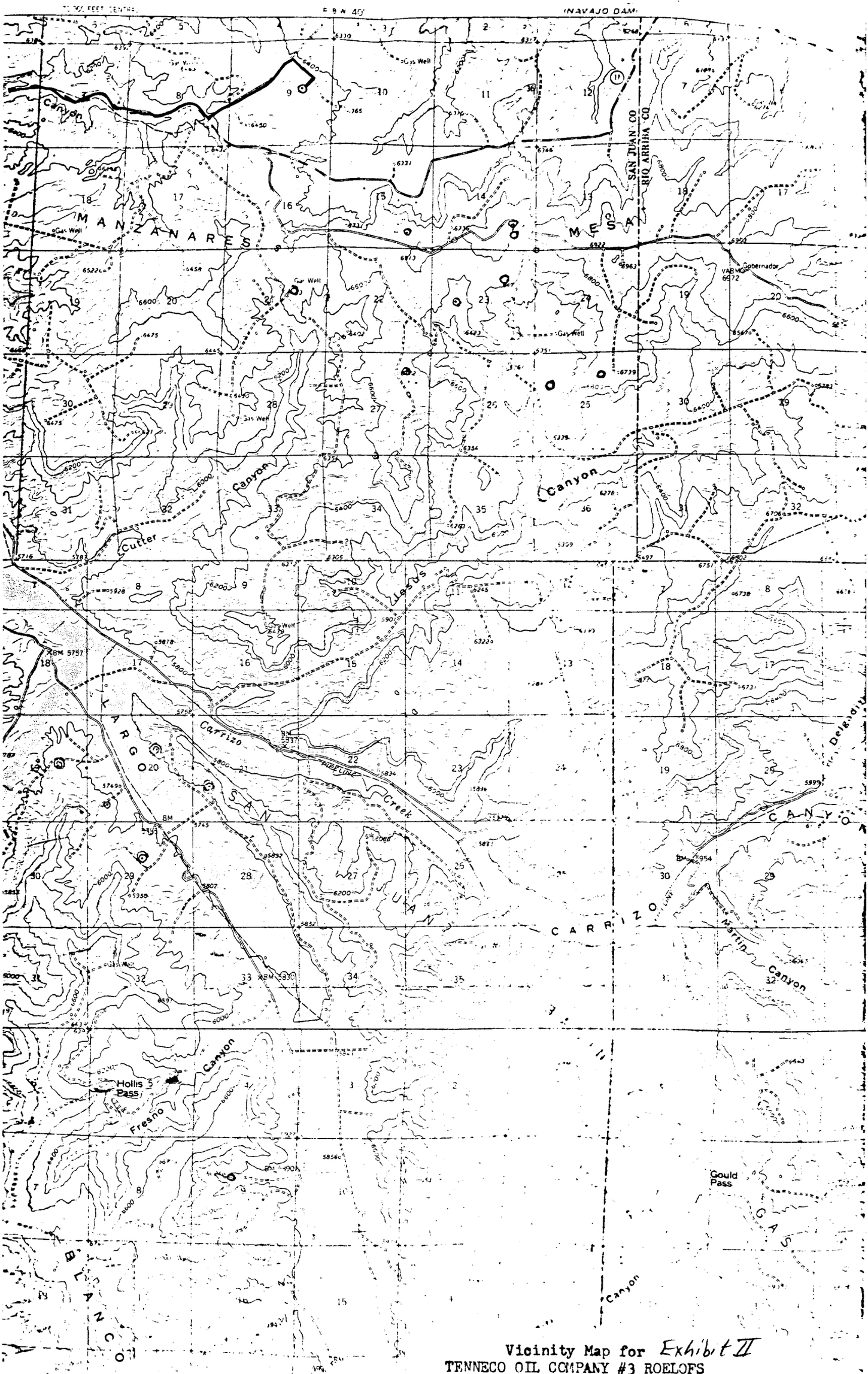
Choke manifold must be at ground level and extended out from under substructure.

TENNECO OIL COMPANY

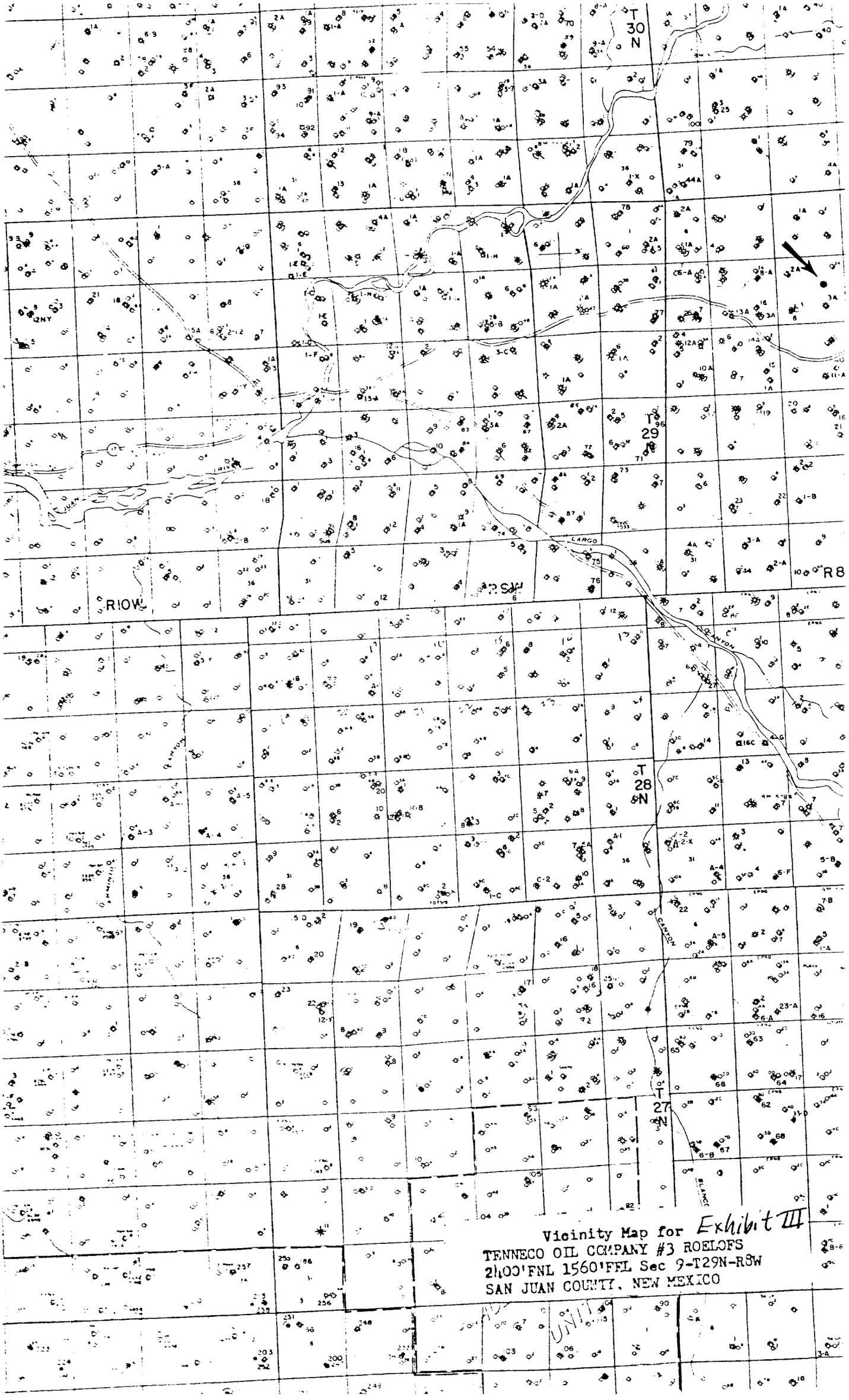
REQUIRED MINIMUM BLOWOUT PREVENTOR

HOOKUP

Denver, Colorado



Vicinity Map for Exhibit II
TENNECO OIL COMPANY #3 ROELOFS
2400'FNL 1560'FEL Sec 9-T29N-R8W



Vicinity Map for Exhibit III
TENNECO OIL COMPANY #3 ROELOFS
2400'FNL 1560'FEL Sec 9-T29N-R8W
SAN JUAN COUNTY, NEW MEXICO

TOC 541 - 7 61

TENNECO OIL COMPANY

CALCULATION SHEET

COMPANY

Exhibit III

SUBJECT Drilling Well Site Layout - Roelofs #3

LOCATION Sec 9, T29N, R8W San Juan BY DATE 11/78