9-331-3.

(Other instructions on reverse side)

30-031-20546

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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

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

2. NAME OF OPERATOR: Tenneco Oil Comapny

3. ADDRESS OF OPERATOR: 720 S. Colorado Blvd., Denver, Colorado 80222

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1120' FNL and 2510' FEL
B
At proposed prod. zone

5. LEASE DESIGNATION AND SERIAL NO.: NM 8269 ~~81208~~

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Hospah

9. WELL NO.: 61

10. FIELD AND POOL, OR WILDCAT: South Lower Hospah

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 12, T17N, R9W

12. COUNTY OR PARISH: McKinley

13. STATE: NEW MEXICO

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: See surface use plan 1 B

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: 40 joint

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

19. PROPOSED DEPTH: 1715'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 7003'

22. APPROX. DATE WORK WILL START*: September 15, 1978

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#	± 200'	Sufficient to circulate to surface
8-3/4"	7"	23#	1715'	Sufficient to circulate to surface

1. The geological name of the surface formation is Mesa Verde.

2&3. Estimated Formation Tops:
Lower Hospah ± 1550'
Lower Hsopah ± 1625' possible oil and gas producer

4. Run 9-5/8" OD, K-55 new casing to ± 200' and circulate sufficient cement to surface. Run 7" OD, K-55 new casing to TD and cement sufficient to surface. Casing head will be a standard API type.

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. We will use water with gel sufficiently as needed from 0-200' and water with gel and Ben X as needed from ± 200- to TD. Quantities will vary as conditions vary.

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 the rig floor while drilling operations are in progress.
   f. Rotating head will be used while drilling with gas.

8. Coring program will consist of coring the upper and lower zones (approximately 1545' to 1665'. Induction electric-gamma ray and density neutron surveys will be done.

9. No abnormal pressures or temperatures are anticipated. See point #5 for blowout prevention equipment.

10. The drilling of this well will take approximately 10 days.

SEP 7 1978 OIL CON. DIST. 3

RECEIVED SEP -5 1978 U. S. GEOLOGICAL SURVEY FARMINGTON, N. M.

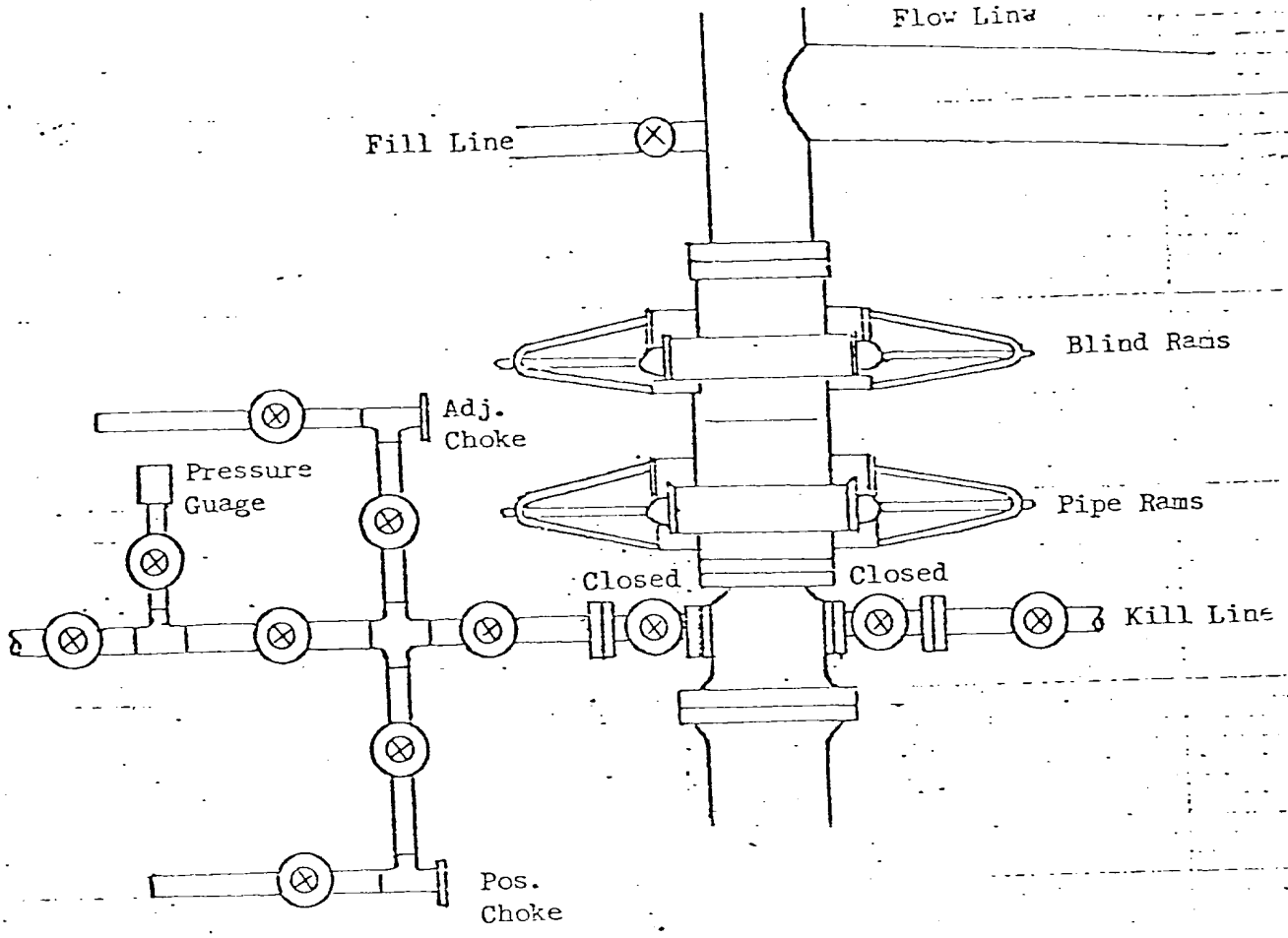
IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED [signature] TITLE Div. Production Manager DATE 8-31-78

(This space for Federal or State office use)

PERMIT NO. [signature] APPROVAL DATE

NMOCC



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

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 1120' FNL and 2510' FEL, McKinley County, New Mexico. (See Exhibit I - Well Location Plat)

B. Planned Access Route:
The planned access route goes south from Hospah into Tenneco's Lower Hospah field with existing roads. (See Exhibit II)

C. Access Road Labelled:

Color Code: Red - Improved Surface
Blue - New Access Road

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

E. The proposed well is a development well. See Exhibit III 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 average width of the road is twelve feet.

B. Maximum Grades:
The maximum grades is about one percent, because the area is nearly level, with some rolling hills.

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:
The terrain is relatively flat and drainages are not too numerous. Culverts will probably not be needed because we can slope dry drainage crossings to maintain normal drainage.

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: One.
B. Abandoned Wells: None.
C. Temporarily Abandoned Wells: One.
D. Disposal Wells: One.
E. Drilling Wells: None.
F. Producing Wells: See Exhibit III
G. Shut-In Wells: None.
H. Injection Wells: 26.
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:

(1) Tank batteries - See Exhibit III
(2) Production facilities - See Exhibit III
(3) Oil Gathering Lines - See Exhibit (see below)
(4) Gas Gathering Lines - See Exhibit (see below)
(5) Injection Lines - to injection wells.
(6) Disposal Lines - to Whigham Well #2 SE/NE Section 11.

The area has numerous lines throughout the area which were installed over the past several years. It would be extremely difficult to show each line as they exist in this area.

B. New facilities in the event of production:
(1) N/A
(2) N/A
Existing facilities will be used in the event of production.
(3) Construction Materials/Methods:
Construction materials will be native to the site. Facilities will consist of a well pad and later a pumping unit.
(4) Protection of Wildlife/Livestock:
Pumping units will be guarded to prevent contact with any moving parts which would present a potential hazard to wildlife.

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

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

(5) Proposed power line will follow existing, cleared routes already in existence.

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 and bought from a private source (rancher) located near White Horse Trading Post.

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. No major cuts and fills will be necessary.

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 well site is located in low rolling hills, sandy soil and sparse vegetation, consisting of grasses and semi-arid plant life such as Yucca and Prickly Pear Cactus.

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: 2-31-78

D. D. Myers
Division Production Manager

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	HOSPAH	61

Unit Letter	Section	Township	Range	County
B	12	17N	9W	McKinley

Actual Footage Location of Well: 1120 feet from the North line and 2510 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
7003	Lower Hospah	South Hospah Lower	40 Joint

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

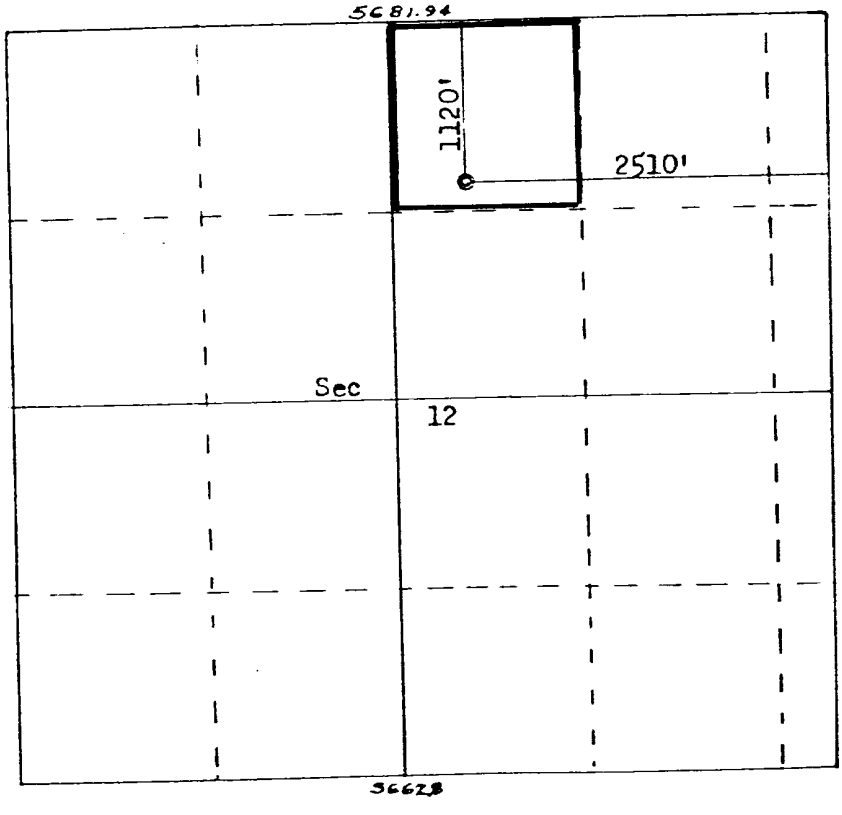
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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: August 29, 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.

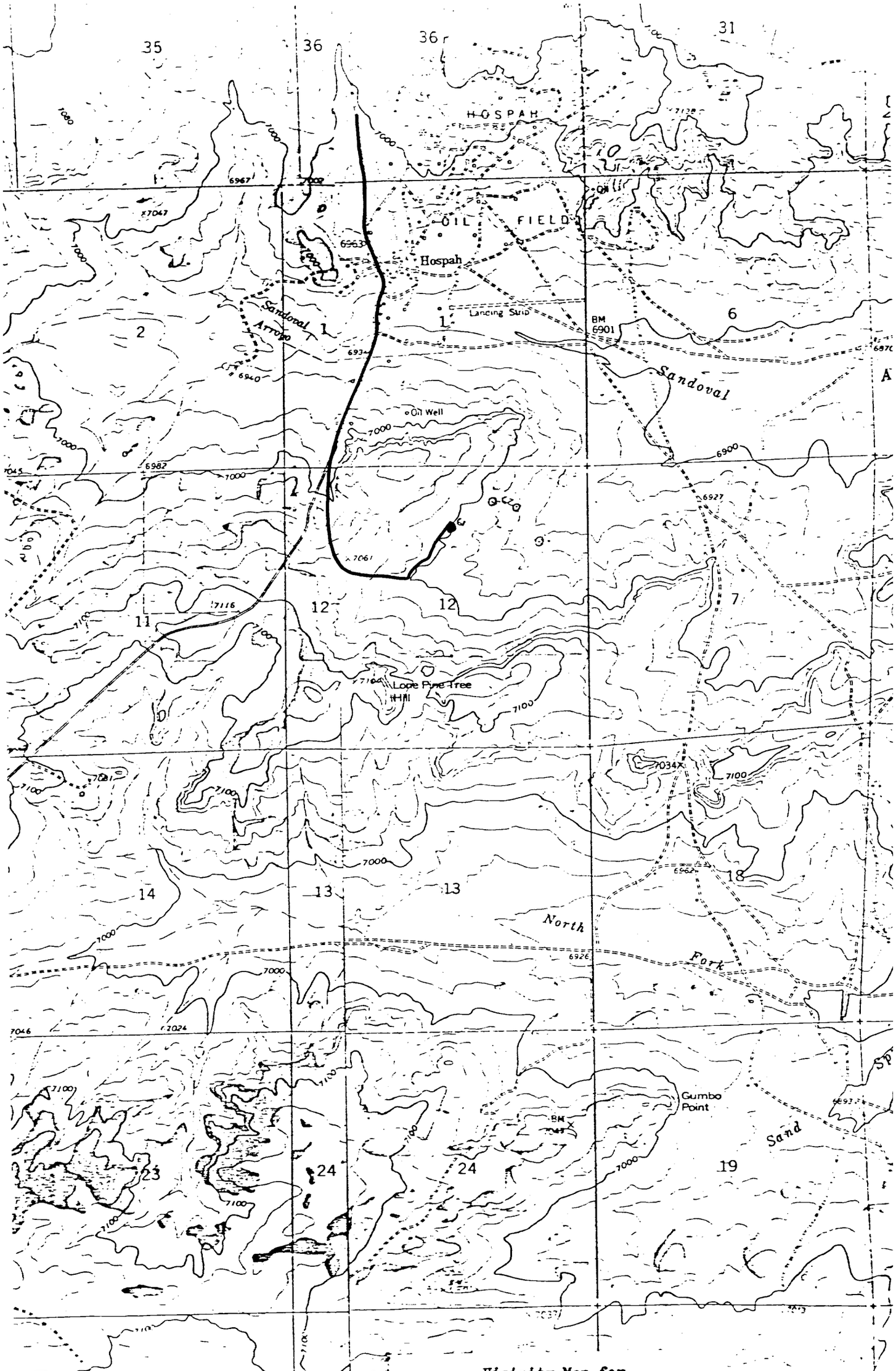
SEP 7 1978
OIL CON. COM.
DIST. 3

Date Surveyed: July 21, 1978

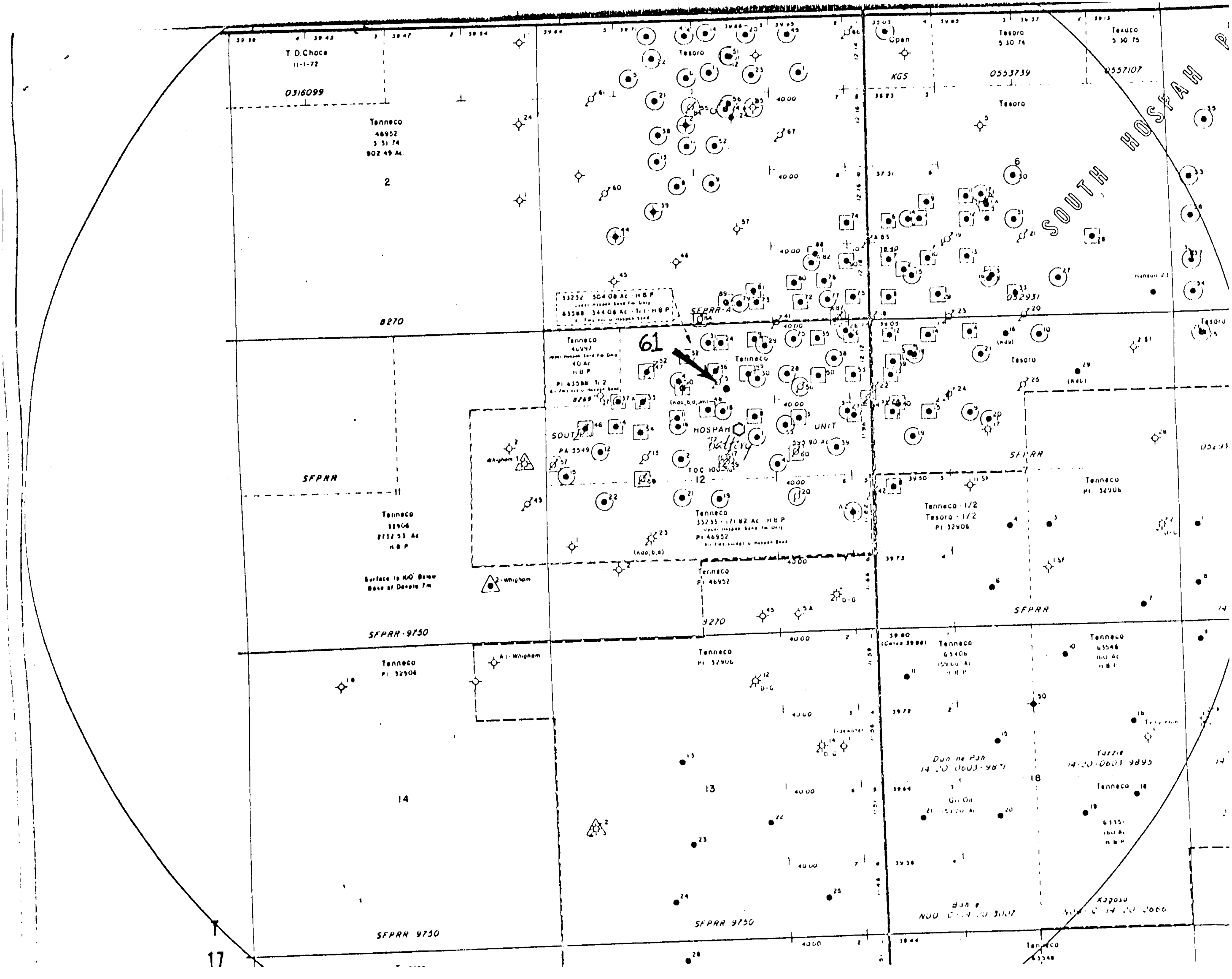
Registered Professional Engineer and Land Surveyor

Fred B. Kerr Jr.

Certificate No. 3950



Vicinity Map for
TENNECO OIL COMPANY #61 HOSPAH
1120'FNL 2510'FEL Sec 12-T17N-R9W
McKinley County, New Mexico



T.D.Choce
0316099
Tenneco
46952
3.31.74
902.49 Ac
2
8270
SFPRR
Tenneco
32906
H.B.P.
Surface to 100' Below Base of Dakota Fm
SFPRR-9750
Tenneco
Pl 32906
14
SFPRR 9750
17
Tesoro
Open
KGS
0553739
Tesoro
5.30.74
Texaco
5.30.75
0557107
SOUTH HOSPAH
61
Tenneco
46952
40 Ac
H.B.P.
PA 5549
HOSPAH
UNIT
Battery
TOC 100
12
Tenneco
33233 - 171.82 Ac. H.B.P.
Pl 46952
Tenneco
Pl 46952
9270
Tenneco
Pl 32906
13
SFPRR 9750
SFPRR
Tenneco - 1/2
Tesoro - 1/2
Pl 32906
Tenneco
Pl 32906
SFPRR
Tenneco
63406
H.B.P.
Tenneco
63546
160 Ac
H.B.P.
Dun ne Pah
18
Gil Oil
Yazzie
14-20-0603-9895
Tenneco
63351
160 Ac
H.B.P.
Kagoso

TENNECO OIL COMPANY

CALCULATION SHEET

Exhibit IV

COMPANY

SUBJECT Drilling Well Site Layout - Lower Hospah Well 61

LOCATION 1120 FNL, 2510 FEL 12-17N-9W BY DATE