Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-045-23653

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 [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Sun Oil Company

3. ADDRESS OF OPERATOR: 2525 NW Expressway, Oklahoma City, OK 73112

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1000' FSL & 1000' FEL (SE SE)
At proposed prod. zone: Same

5. LEASE DESIGNATION AND SERIAL NO.: USA - 407

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: New Mexico-Federal "N"

9. WELL NO.: ~~#B~~ 6E

10. FIELD AND POOL, OR WILDCAT: Basin - Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 6 -T 30N-R 12W

12. COUNTY OR PARISH: San Juan

13. STATE: New Mexico

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 10.2 Miles North-Northeast of Farmington, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 1000'

16. NO. OF ACRES IN LEASE: 320

17. NO. OF ACRES ASSIGNED TO THIS WELL: S/319.50 ~~320~~

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 2460+'

19. PROPOSED DEPTH: 6,900'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6042' GR

22. APPROX. DATE WORK WILL START*: July 30, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM * 2nd Stage: 1200sx 50-50 Poz W/additives

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12¼"	8-5/8" New	24#K55 ST&C	350'	250 sx Class "A" W/additives
/-//8"	4½" New	9.5 #K-55 ST&C	6,900'	1st Stage: 425sx Light W/ additives + 100 sx Class"A" W/ additives *

1) Drill 12¼ " hole and set 8-5/8 " surface casing to 350 ' with good returns.
2) Log B.O.P. checks in daily drill reports and drill 7-7/8" hole to 6,900'.
3) Run tests if warranted and run 4½ " casing if productive.
4) Run logs, as needed, and perforate and stimulate as needed.

EXHIBITS ATTACHED:

"A"	Location & Elevation Plat	"G"	Drill Pad Layout, Cut-Fill Cross-Section & Production Facilities
"B"	The Ten-Point Compliance Program		
"C"	The Blowout Preventer Diagram	"H"	Drill Rig Layout
"D"	The Multi-Point Requirements for A.P.D.	"K"	Fracturing Program Layout
"E"	Access Road Map to Location		
"F"	Radius Map of Field		

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 _____ TITLE District Drilling Engineer DATE June 11, 1979

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

ok Frank

NMOCC

RECEIVED
JUN 22 1979
OIL CON. COM.

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128

EXHIBIT "A"
Location & Elevation Plat

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Sun Oil Company	New Mexico - Federal "N"	#6E

Unit Letter	Section	Township	Range	County
P	6	30 North	12 West	San Juan

Actual Footage Location of Well:
1000 feet from the South line and 1000' feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6042'	Dakota	Basin	319.50 Acres

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

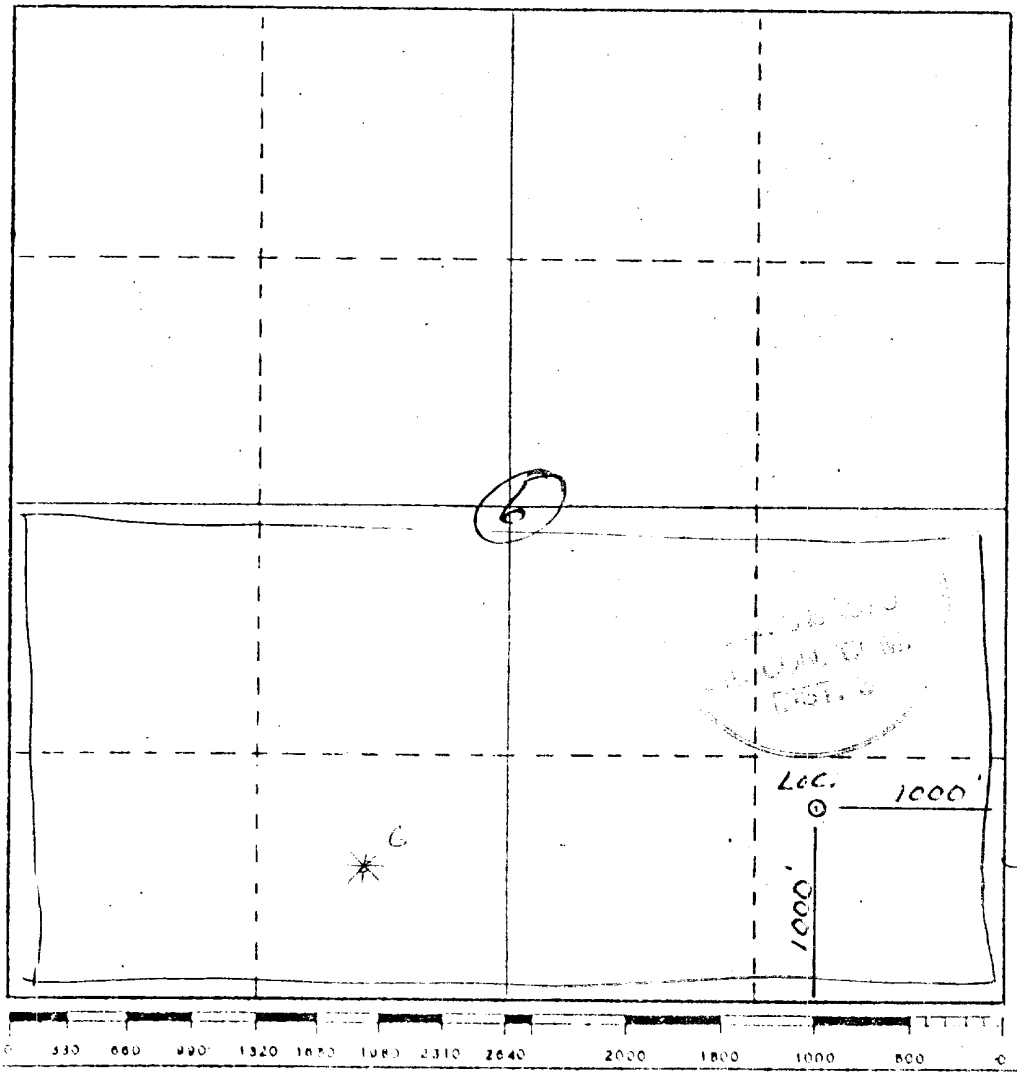
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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 George Lapaseotes

Position Vice-President

Company Powers Elevation

Date June 13, 1979

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.

NEALE C. EDWARDS
NEW MEXICO
6857
REGISTERED LAND SURVEYOR

6-4-79

Date Surveyed

Neale C. Edwards

Registered Professional Engineer and/or Land Surveyor

6857

Certificate No.

EXHIBIT "B"

TEN-POINT COMPLIANCE PROGRAM

OF NTL-6 APPROVAL OF OPERATIONS

Sun Oil Company
7 New Mexico - Federal "N"
SE SE Sec. 6 T30N R12W
1000' FSL & 1000' FEL
San Juan County, New Mexico

1. The Geologic Surface Formation

Torrejon - Puerco

2. Estimated Tops of Important Geologic Markers

Fruitland	1,775'
Picture Cliffs	2,100"
Cliff House	3,700'
Point Lookout	4,475'
Gallup	5,980'
Basin Dakota	6,635'
Total Depth	6,900'

3. Estimated Depths of Anticipated Water, Oil, Gas or Minerals

Fruitland	1,775'	gas
Picture Cliffs	2,100'	gas
Cliff House	3,700'	gas
Point Lookout	4,475'	gas
Gallup	5,980'	gas
Basin Dakota	6,635'	gas

4. The Proposed Casing Program

Casing Design

HOLE SIZE	INTERVAL	SECTION LENGTH	SIZE (OD)	WEIGHT, GRADE, & JOINT	NEW OR USED	MUD * WEIGHT	SF t	SF c	SF b
12-¼"	0-350'	350'	8-5/8"	24#K-55 ST&C	New	9.0	31+	8+	1.4
7-7/8"	0-6900'	6900'	4-½"	9.5#K-55 ST&C	New	9.5	1.71	.97	1.1

*At casing setting depth (PPG)

Cement Program

Surface - Set 8-5/8 casing at 350' and cement with 250 Sacks Class "A + 2% $CACl_2$ + ¼#/Sack Flake. Circulate to Surface.

Production - 1st Stage:- Set 4½ casing at 6,900' and cement with 425 Sacks Light + 6% Gel + 10#/Sack Gilsonite. Tail in with 100 Sacks Class "A" + .75% CFR -2.

2nd Stage:- Set DV tool at 4,300' and cement with 1200 Sacks 50 - 50 Pozmix + 2% Gel + 10#/Sack Gilsonite. Calculated top of cement = 1,000'.

5. The Operator's Minimum Specifications for Pressure Control

EXHIBIT "C" is a schematic diagram of the blowout preventer equipment. The BOP's will be hydraulically tested to the full working pressure after nippling up and after any use under pressure. Pipe rams will be operationally checked each 24-hour period, as will blind rams and checks of BOP will be noted on daily drilling reports.

Accessories to BOP will include a kelly cock, floor safety valve, drill string BOP and choke manifold with pressure rating equivalent to the BOP stack.

6. The Type and Characteristics of the Proposed Circulating Muds

Mud system will be water-gel chemical with adequate stocks of sorptive agents on site to handle possible spills of fuel and oil on the surface. Heavier muds will be on location to be added if pressure requires.

Interval	Weight	Water Loss	Viscosity	Mud Type
0-350'	8.5-9.oppg	N.C.	28-40 sec.	Water - Gel & Lime
350' - 4,000'	8.8-9.5ppg	15-25cc	28-30 sec.	Water - Gel & Soda Ash
4,000'-6,900'	9.0-9.5pps	10-12cc	34-36 sec.	Low Solids Dispersed Loss Circ. Material as Required

7. The Auxiliary Equipment to be Used

(a) A kelly cock will be kept in the string

(b) A float will not be used at the bit.

(c) A mud logging unit at 1500', and a gas detecting device will be monitoring the system.

(d) A stabbing valve will be on the floor to be stabbed into the drill pipe when kelly is not in the string.

8. The Testing, Logging and Coring Programs to be Followed

(a) No DST's are anticipated.

(b) The logging program will consist of a DIL-LL from 350' to total depth, and a CNL - FDC from 350' to total depth; other logs will be determined at well site to best evaluate any shows.

(c) No coring is anticipated.

(d) Completion program will consist of acidizing perforations down the tubing and cleaning up; and fracturing down the casing with gelled water and sand. Maximum treating pressure will be 3500#. See EXHIBIT "K" for equipment layout diagram.

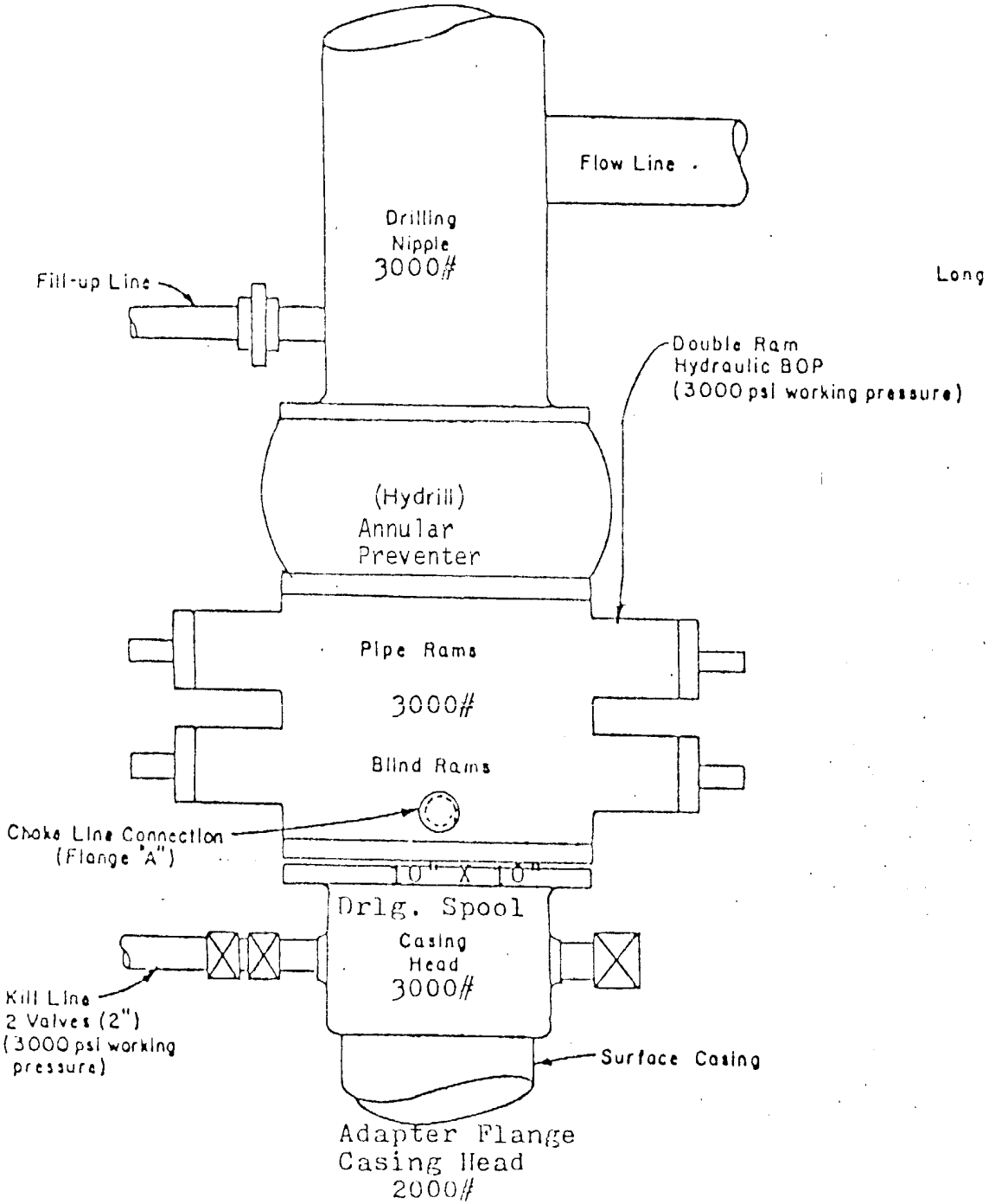
9. Any Anticipated Abnormal Pressures or TEMPERATURES

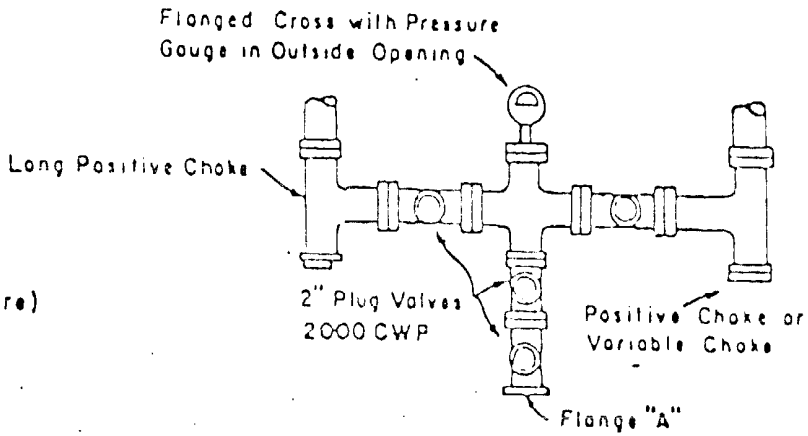
No abnormal pressures or temperatures have been noted or reported in wells drilled in the area nor at the depths anticipated in this well. Bottom hole pressure expected is 3250 psi.

No hydrogen sulfide or other hazardous fluids or gases have been found, reported or known to exist at these depths in the area.

10. Anticipated Starting DAte and Duration of the Operations

The anticipated starting date is set for July 30, 1979, or as soon as possible after examination and approval of drilling requirements. Operations should be completed within 30 days after spudding the well and drilling to casing point.





PLAN VIEW - CHOKE MANIFOLD

EXHIBIT "C"

BLOWOUT PREVENTER
DIAGRAM

EXHIBIT "D"

MULTI-POINT REQUIREMENTS TO ACCOMPANY A.P.D.

Sun Oil Company
#7 New Mexico - Federal "N"
SE SE Sec. 6 T30N R12W
1000' FSL & 1000' FEL
San Juan County, New Mexico

1. Existing Roads

A. The proposed well site and elevation plat is shown as EXHIBIT "A".

B. The distance from Farmington, New Mexico, is 10.2 miles. From the intersection of Glade and Municipal Streets, take Glade road which is gravel, North-Easterly for 9.0 miles; turn right (Southeast) on existing oil field road for 1.0 miles, thence left (East-Northeast) access road for 0.2 miles to location, as shown on EXHIBIT "E".

C. All roads to location are color-coded on EXHIBIT "E". An access road 0.2 miles from the existing oil field road will be required, as shown on EXHIBIT "E".

D. N/A

E. This is a development well. All existing roads within a one-mile radius are shown on EXHIBIT "E".

F. The existing roads need no improvement.

2. Planned Access Roads

Map showing all necessary access roads to be constructed or reconstructed is shown as EXHIBIT "E" for the following:

(1) The maximum width of the running surface of the 0.2 mile of access road extending beyond the existing oil field road will be 18'.

(2) The grade will be 8% (eight percent) or less.

(3) No turn outs are planned.

(4) Appropriate water bars will be constructed to assure drainage off location to conform with the natural drainage pattern.

(5) No culverts are needed. No major cuts or fills are anticipated along access road during drilling operation.

(6) Surfacing materials will be native soil.

(7) No gates, cattle guards or fence cuts are needed.

(8) The new access road to be built has been staked during the time of staking the location, and is centerline flagged as shown on EXHIBIT "E".

3. Location of Existing Wells

For all existing wells within a one-mile radius of development well, see EXHIBIT "F".

(1) There are no water wells within a one-mile radius of this location.

(2) There are no abandoned wells in this one-mile radius.

(3) There are no temporarily abandoned wells.

(4) There are no disposal wells.

(5) There are no wells presently being drilled.

(6) There are 5 producing wells within this one-mile radius.

(7) There are no sut-in wells.

(8) There are no injection wells.

(9) There are no monitoring or observation wells for other uses.

4. Location of Existing and/or Proposed Facilities

A. Within one-mile radius of location, the following existing facilities are owned or controlled by lessee/operator:

(1) Tank Batteries: None

(2) Production Facilities: None

(3) Oil Gathering Lines: None

(4) Gas Gathering Lines: None

(5) Injection Lines: None

(6) Disposal Lines: None

B. If production is obtained, new facilities will be as follows:

(1) Production facilities will be located on solid ground of cut area of drill pad, as shown on EXHIBIT "G".

(2) All well flow lines will be buried and will be on the well site and battery site.

(3) Facilities will be 300' feet long and 200' feet wide.

(4) All construction materials for battery site and pad will be obtained from site. No additional material from out-side sources is anticipated.

(5) Any necessary pits will be fenced and flagged to protect livestock and wildlife.

C. Rehabilitation, whether well is productive or dry, will be made on all unused areas in accordance with BLM stipulations.

5. Location and Type of Water Source

A. LaPlata River, 4 miles SW of location, as shown on EXHIBIT "E".

B. Water will be transported by truck over existing roadways.

C. No water well is to be drilled on this lease.

6. Construction Materials

A. No construction materials are needed for drilling and access roads into the drilling location unless production is obtained. The surface soil materials will be suffieient or will be provided by the Dirt Contractor as needed.

B. No construction materials will be taken off Federal land.

C. All surface soil materials for construction of access roads are sufficient.

D. All major access roads presently exist as shown on EXHIBIT "E".

7. Handling of Waste Materials and Disposal

(1) Drill cuttings will be buried in the reserve pit and covered.

(2) Drilling fluids will be handled in the reserve pit.

(3) Any fluids produced during drilling test or while making production test will be collected in a test tank. If a test tank is not available during drilling, fluids will be handled in reserve pit. Any spills of oil, gas, salt waters or other noxious fluids will be cleaned up and removed.

(4) Chemical facilities will be provided for human waste.

(5) Garbage and non-flammable waste and salts and other chemicals produced during drilling or testing will be handled in trash pit. Flammable waste will be disposed of in burn pit. Drill fluids, water, drilling mud and tailings will be kept in reserve pit, as shown on EXHIBIT "H". The trash and/or burn pit will be totally enclosed with small mesh wire to prevent wind scattering trash before being burned or buried. Reserve pit will be fenced on three sides and the fourth side fenced upon removal of the rig.

(6) After the rig moves out, all materials will be cleaned up and no adverse materials will be left on location. Any dangerous open pit will be fenced during drilling and kept closed until such time as the pit is leveled.

8. Ancillary Facilities

No air strip, camp or other facilities will be built during drilling of this well.

9. Well Site Layout

(1) EXHIBIT "G" is the Drill Pad Layout as staked, with elevations by Powers Elevation of Durango Colorado. Cuts and fills have been drafted to visualize the planned cut across the location spot and to the deepest part of the pad. Topsoil will be stockpiled per BLM specifications determined at time of pre-drill inspection.

(2) EXHIBIT "H" is a plan diagram of the proposed rig and equipment, reserve pit, burn and trash pit, pipe racks and mud tanks. No permanent living facilities are planned. There will be a trailer on site.

(3) EXHIBIT "G" is a diagram showing the proposed production facilities layout.

(4) The reserve pits will not be lined. Steel mud tanks may be used during drilling operations.

10. Plans for Restoration

(1) Backfilling, leveling and contouring are planned as soon as all pits have dried. Waste disposal and spoils materials will be buried or hauled away immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.

(2) The soil banked material will be spread over the area. Revegetation will be accomplished by planting mixed grasses as per formula provided by the BLM. Revegetation is recommended for road area, as well as around drill pad.

(3) Three sides of the reserve pit will be fenced during drilling operations. Prior to rig release, the reserve pit will be fenced on the fourth side to prevent livestock or wildlife from becoming entrapped; and the fencing will be maintained until leveling and cleanup is accomplished.

(4) If any oil is on the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or covered with wire mesh.

(5) The rehabilitation operations will begin immediately after the drilling rig is removed. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation is considered best in Spring, 1980 unless requested otherwise.

11. Other Information

(1) The soil is very sandy. No distinguishing geological features are present. The area is covered with cactus, sagebrush, cedar trees, Mormon tea & weeds. There are rabbits and lizards in the area. The topography is rolling sand hills sloping southerly.

(2) The primary surface use is for grazing. The surface is owned by the U.S. Government.

(3) The closest live water is LaPlata River, 4 miles SW of location, as shown on EXHIBIT "E". The closest occupied dwellings are houses 4 miles South in the town of Farmington, as shown on EXHIBIT "E". There are no known archaeological, historical, or cultural heritages that will be disturbed by this drilling.

(4) There are no reported restrictions or reservations noted on the oil and gas lease.

(5) Drilling is planned for on or about July 30, 1979. It is anticipated that the casing point will be reached within 30 days after commencement of drilling.

12. Lessee's or Operator's Representative

George Lapaseotes
Agent Consultant for
Sun Oil Company
600 South Cherry Street
Suite 1201
Denver, Colorado 80222
Phone (303) 321-2217

Ralph Maness
District Drilling Engineer
Sun Oil Company
2525 NW Expressway
Oklahoma City, Oklahoma 73112
Phone (405) 843-9711

13. Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Sun Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

6-13-79
Date

George Lapaseotes
Agent Consultant for
Sun Oil Company

7½ MINUTE SERIES (TOPOGRAPHIC) GEOLOGICAL SURVEY

EXHIBIT "E"
Access Road onto Location

[redacted]
San Juan County, New Mexico

LEGEND
Gravel Road
Oil Field Road
New Access Road

[redacted]

[redacted]

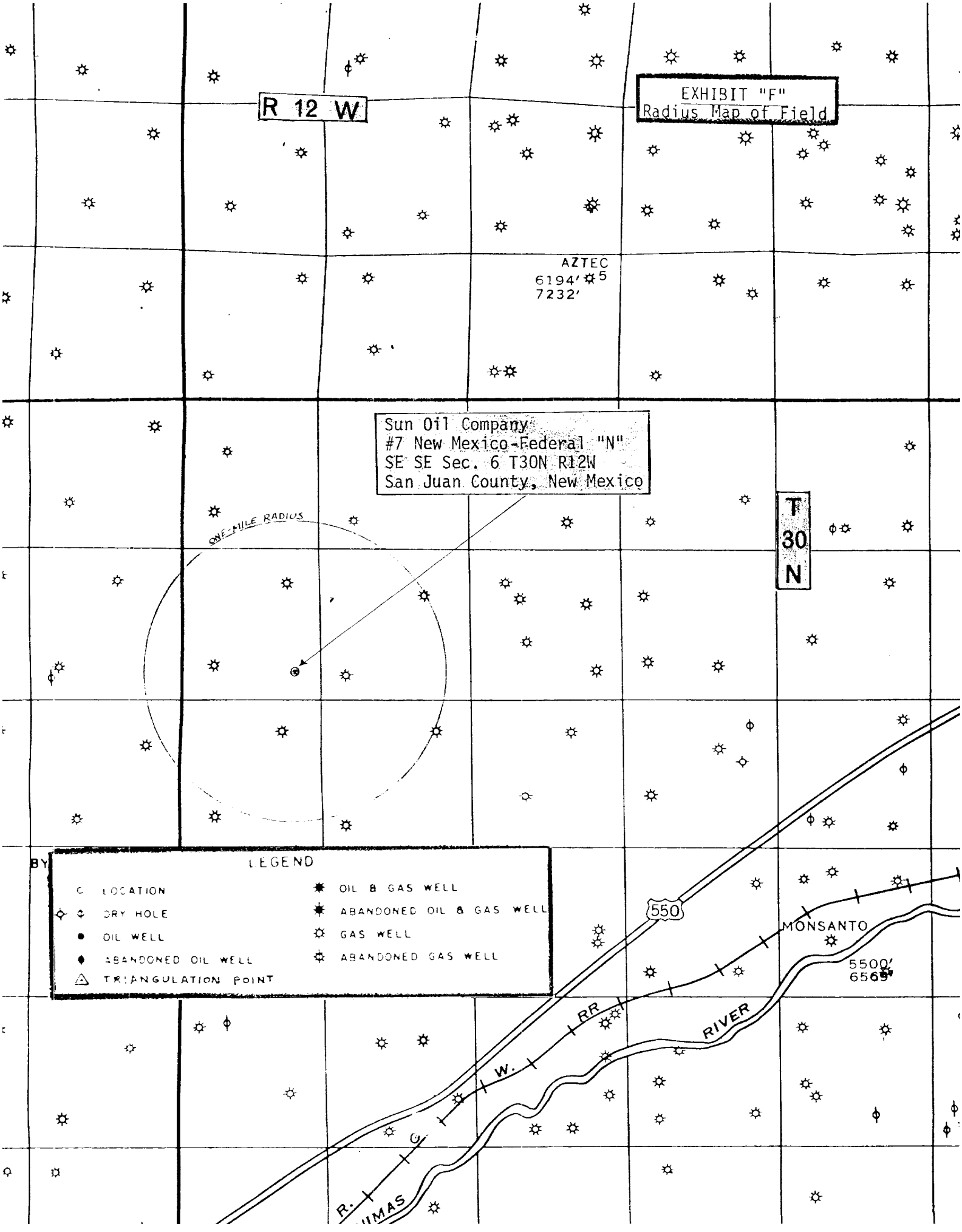


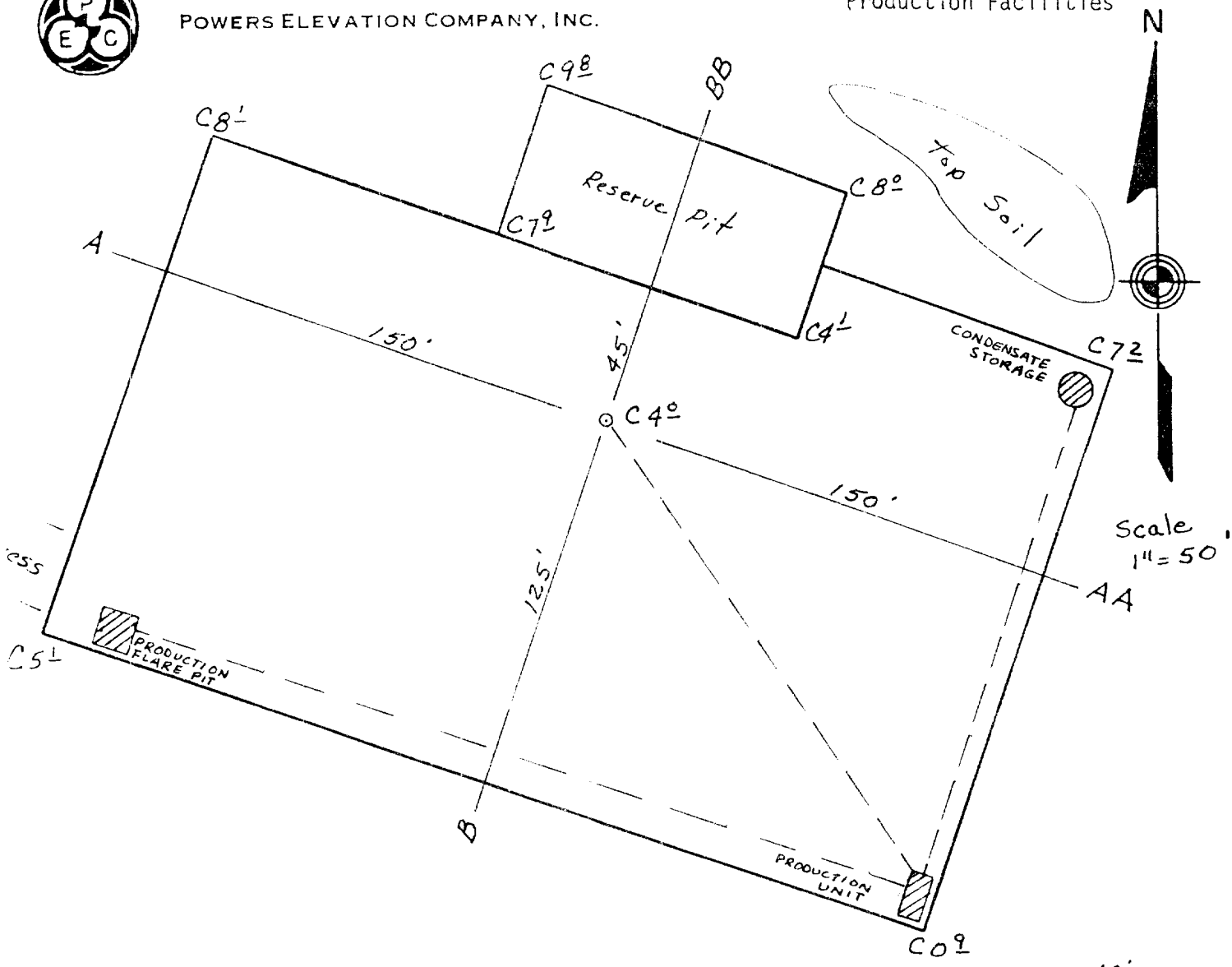
EXHIBIT "F"
Radius Map of Field
R 12 W
AZTEC
6194'
7232'
Sun Oil Company
#7 New Mexico-Federal "N"
SE SE Sec. 6 T30N R12W
San Juan County, New Mexico
ONE-MILE RADIUS
T 30 N
LEGEND
LOCATION
DRY HOLE
OIL WELL
ABANDONED OIL WELL
TRIANGULATION POINT
OIL & GAS WELL
ABANDONED OIL & GAS WELL
GAS WELL
ABANDONED GAS WELL
550
MONSANTO
5500'
6569'
RR
RIVER
W.
R.

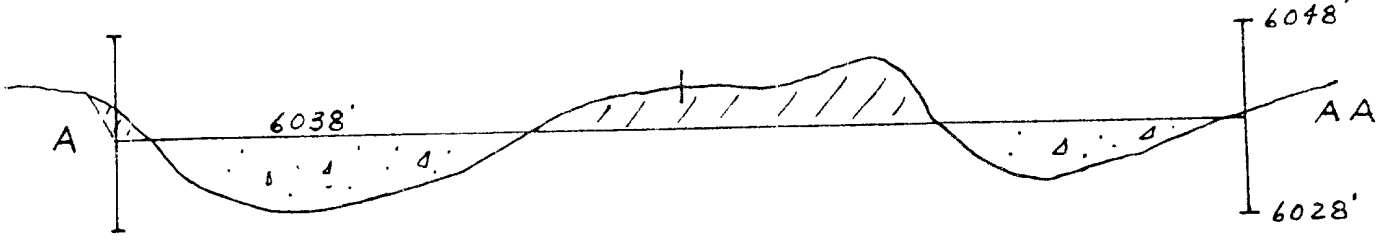
New Mexico - Federal "N" #7

EXHIBIT "G"

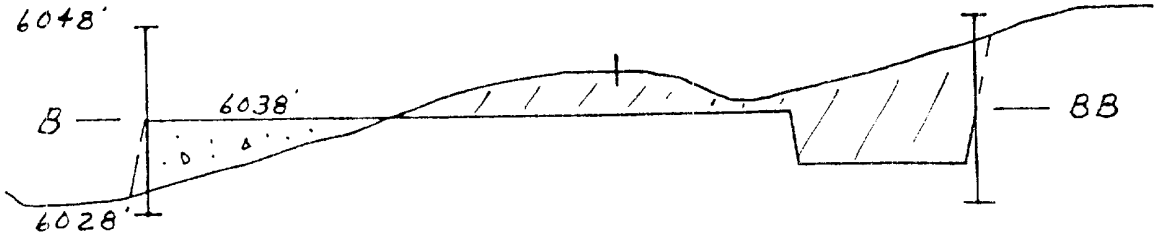
Drill Pad Layout,
Cut-Fill Cross-Section &
Production Facilities

POWERS ELEVATION COMPANY, INC.



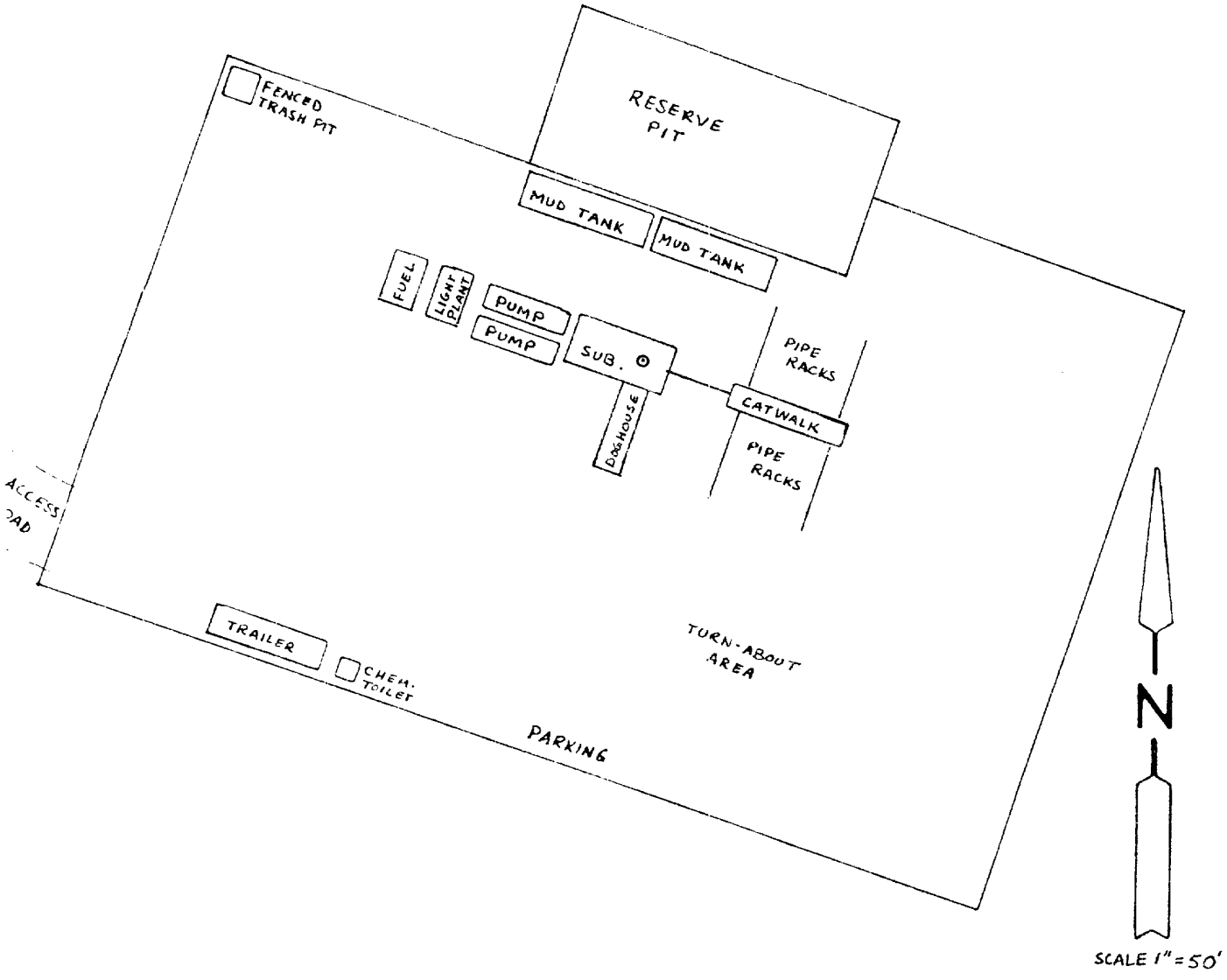


Horz. 1" = 50' Vert. 1" = 20'



Sun Oil Company
#7 New Mexico-Federal "N"
SE SE Sec. 6 T30N R12W
San Juan County, New Mexico

EXHIBIT "H"
Drill Rig Layout



Sun Oil Company
#7 New Mexico-Federal "N"
SE SE Sec. 6 T30N R12W
San Juan County, New Mexico

EXHIBIT "K"

Fracturing Program Layout