

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1. TYPE OF WORK
DRILL ☒ DEEPEN ☐ PLUG BACK ☐

2. TYPE OF WELL
OIL WELL ☒ GAS WELL ☐ OTHER ☐ SINGLE PHASE ☒ MULTIPHASE ☐

3. NAME OF OPERATOR
Kerr-McGee Corporation
4. ADDRESS OF OPERATOR
P.O. Box 250 Amarillo, Texas 79139

5. LOCATION OF WELL (Report to the nearest section corner with any State requirements)
A. Section
1901' T1N 4' R10E E1/4 (SW NW)

B. Township and Range
29.3 miles Southwest of Amarillo, New Mexico
C. County or Parish, State
San Juan New Mexico

14. DISTANCE IN MILES AND DEGREES FROM THE NEAREST WATER OR OIL WELL
29.3 miles Southwest of Amarillo, New Mexico

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.
650'

16. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, (OIL, GAS, WATER, OR OTHER), FT.
2640'

17. DEPTH OF WELL, (OIL, GAS, WATER, OR OTHER), FT.
3006' GR

18. APPROX. DATE WORK WILL START
September 25, 1979

SIZE OF HOLE	SIZE OF CASING	WELL DEPTH	DEPT. OF CASING	QUANTITY OF CEMENT
12 1/4"	8 5/8" new	248 K-55 STAC	300'	215 sacks Class "8"
7 7/8"	5 1/2" new	15.5" K-55 STAC	4800'	400 sacks and 560 sacks

1. Drill 12 1/4" hole and set 8 5/8" surface casing to 300' with good returns.
2. Log B.O.P. checks to daily drill reports and drill 7 7/8" hole to 4800'.
3. Run tests if warranted and run 5 1/2" casing if productive.
4. Run logs, as needed, and perforate and stimulate as needed.

EXHIBITS ATTACHED:

- "A" Location and Elevation Plot
- "B" The Ten-Point Compliance Program
- "C" The Blowout Prevention Program
- "D" The Multi-point Requirements for A.P.D.
- "E" Access Road Maps to location
- "F" Radius Map of Field
- "G" Drill Pad Layout, Production Facilities & Out-Fill Cross-Section
- "H" Drill Rig Layout

19. I, the undersigned, hereby certify that the information furnished herein is true and correct to the best of my knowledge and belief, and that I am not aware of any false or misleading information being furnished herein.

20. I, the undersigned, hereby certify that I am a duly qualified and experienced person, and that I am not aware of any false or misleading information being furnished herein.

21. I, the undersigned, hereby certify that I am a duly qualified and experienced person, and that I am not aware of any false or misleading information being furnished herein.

22. I, the undersigned, hereby certify that I am a duly qualified and experienced person, and that I am not aware of any false or misleading information being furnished herein.

23. I, the undersigned, hereby certify that I am a duly qualified and experienced person, and that I am not aware of any false or misleading information being furnished herein.

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACPLAGE DEDICATION PLAT

EXHIBIT "A"

Form O-11
Supersedes O-12, 20
EDC 11-1-1977

All distances measured from the corner boundaries of the section.

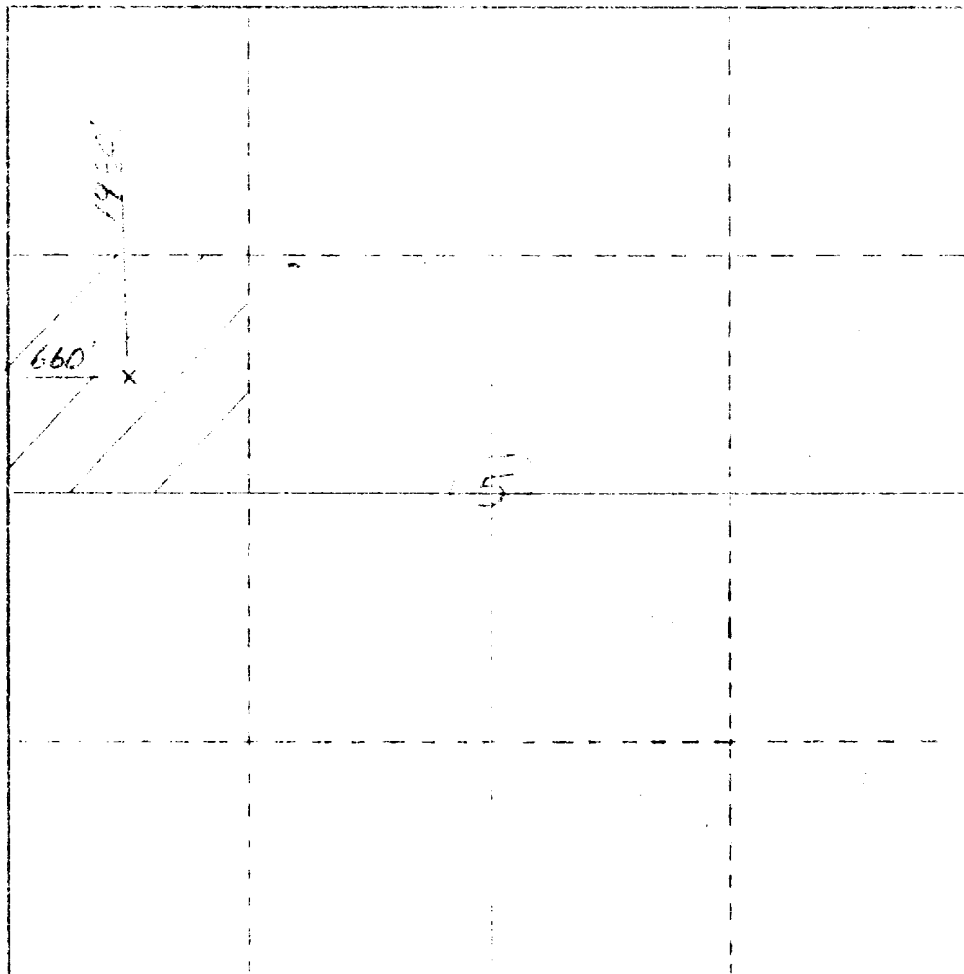
Owner <u>Navajo 5 Corp</u>		Well No. <u>(660-C-14-20-2937) Navajo 5</u>		Section <u>18</u>	
Section <u>F</u>	Range <u>5</u>	Block <u>1</u>	Tract <u>1/4</u>	County <u>Navajo</u>	
Actual acreage of the subject well: <u>19.00</u> Section No. <u>18</u> Range <u>5</u> Block <u>1</u> Tract <u>1/4</u> Township <u>34N</u> Range <u>5E</u> Section <u>18</u>					
Section <u>5906</u>	Range <u>Lower Gallup</u>	Block <u>Wildcat</u>	Tract <u>40</u>	County <u>Navajo</u>	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, forced 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.) NONE

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 September 10, 1979

I hereby certify that the 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 9-31-79

Signature [Signature]
Position Surveyor

Section 18

EXHIBIT "B"

TEN-POINT COMPLIANCE PROGRAM

OF HTL-6 APPROVAL OF OPERATIONS

Attached to Form 9-3310
Kerr-McGee Corporation
#1-5 Navajo
SW NW Sec. 5 T26N R14W
1980' FNL & 660' FWL
San Juan County, New Mexico

1. The Geologic Surface Formation

The surface formation is the Kirtland.

2. Estimated Totals of Important Geologic Markers

Ojo Alamo	300'
Pictured Cliff Sand	1110'
Lewis Shale	1200'
Mesaverde Group	1830'
Menefee Formation	2450'
Point Lookout Sand	3545'
Gallup Marker	4385'
Lower Gallup (Bisti)	4745'
Total Depth	5100'

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

Lower Gallup (Bisti)	4745'	Oil
----------------------	-------	-----

4. The Proposed Casing Program

<u>HOLE SIZE</u>	<u>INTERVAL</u>	<u>SECTION LENGTH</u>	<u>SIZE (OD)</u>	<u>WEIGHT, GRADE & JOINT</u>	<u>NEW OR USED</u>
12 1/4"	0-300'	300'	8 5/8"	24# K-55 ST&C	New
7 7/8"	300'-5100'	4800'	5 1/2"	15.5# K-55 ST&C	New

Cement Program

- (a) Surface Casing: 215 sacks Class "B" with 2% CaCl and 6½lb. per sack cellophane 100% excess.
- (b) Production Casing: First stage - 400 sacks Class "B" and 50-50 Litepoz w/2% Bentonite and 6½lb. per sack Gilsonite and 0.8% flac.
Second stage - 560 sacks Class "B" with perlite and 4% Bentonite.

5. The Operator's Minimum Specifications for Pressure Control

The Blowout Preventer Equipment will be a 10" X 900 Series double space saver. EXHIBIT "C" is a schematic diagram of the blowout preventer equipment. The BOP's will be hydraulically tested to the full working pressure after nipping up and after any use under pressure. Pipe rams will be operationally checked each 24-hour period, as will blind rams each time pipe is pulled out of the hole. Such checks of BOP will be noted on daily drilling reports.

Accessories to BOP will include an upper and lower kelly cock and floor safety valve, with pressure rating equivalent to the BOP stack.

6. The type and Characteristics of the Proposed Circulating Muds

Mud system will be 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.

<u>DEPTH</u>	<u>WEIGHT #/gal.</u>	<u>VISCOSITY-sec./qt.</u>	<u>FLUID LOSS cc</u>
0-4700'	8.0-9.0	36-38	10cc and or less

7. The Auxiliary Equipment to be Used

- (a) A kelly cock will be kept in the string.
- (b) A float will be used at the bit.
- (c) A mud logging unit and 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) A DST is anticipated in the Lower Gallup Sand formation. Will test other zones with significant shows.
- (b) The logging program will consist of a Dual Induction Laterlog with 2" liner correlation from total depth to base of surface casing; a Compensated Neutron Formation Density Gamma Ray Caliper from total depth to base of surface; a Gamma Ray from base of surface casing to surface.
- (c) Cores will be taken 10 feet above Lower Gallup Sand to 10 feet below Lower Gallup Sand. Estimated interval - 4735'-4785'. One core should be sufficient.
- (d) Stimulation procedures will be determined after evaluation of logs. If treatment is indicated, appropriate Sundry Notice will be submitted.

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.

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 September 25, 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.

EXHIBIT "C"
Blowout Preventer Diagram

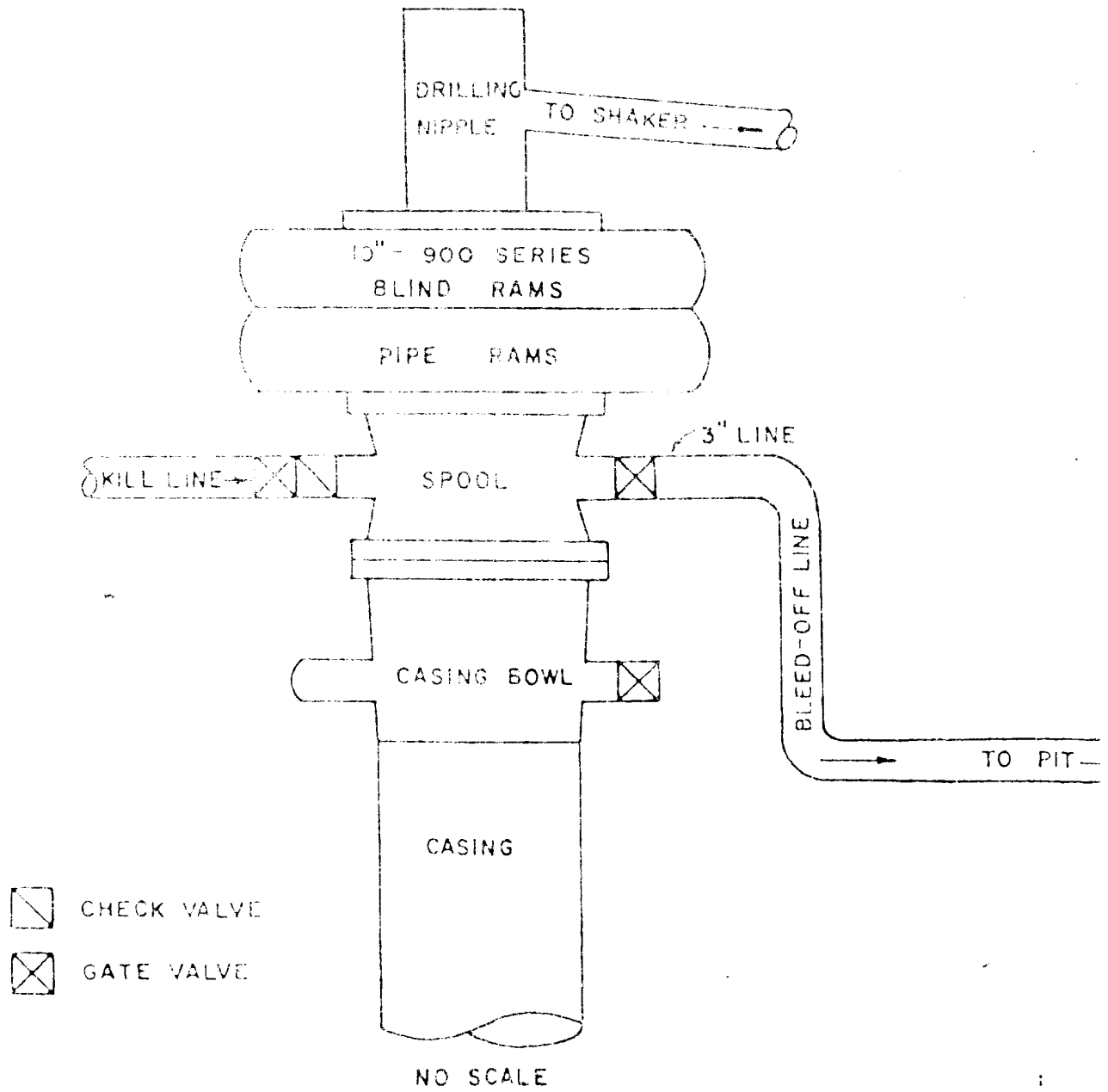


EXHIBIT "D"

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

Attached to Form 9-3310
Kerr-McGee Corporation
#1-5 Navajo
SW NW Sec. 5 T26N R14W
1980' FNL & 660' FWL
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 29.3 miles. Proceed South on Highway #371 from Farmington, New Mexico for 14.5 miles to county road B1. Turn West and go 12 miles on gravel road, then North on dirt trail 1.1 miles; turn left at fork and go past dwelling 1.5 miles to fence; thence 0.2 mile on proposed access road to location, as shown on EXHIBIT "E".
- C. All roads to location are color-coded on EXHIBIT "E". An access road 0.2 mile from the existing trail will be required, as shown on EXHIBIT "E".
- D. This is an exploratory well. All existing roads are shown on EXHIBIT "E".
- E. N/A
- F. The existing trail needs improvement. Maintenance and upgrading will be performed as required.

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 trail 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) One cattle guard and fence cut is needed, as shown on EXHIBIT "E".
- (8) The new access road to be constructed was staked and centerline flagged, as shown on EXHIBIT "E".

3. Location of Existing Wells

For all existing wells within a two mile radius of exploratory well, see EXHIBIT "E".

- (1) There are no water wells within a two-mile radius of this location.
- (2) There are two abandoned wells in this two-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 no producing wells within this two-mile radius.
- (7) There are no shut-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 a 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 the well is productive, 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 310 feet long and 150 feet wide.
- (4) All construction materials for battery site and pad will be obtained from site. No additional material from outside 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 B.I.A. stipulations.

5. Location and Type of Water Supply

- A. The source of water will be bought from private sources in Farmington, New Mexico.
- 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 well is productive. The surface soil materials will be sufficient or will be purchased from Dirt Contractor as needed.
- B. No construction materials will be taken off Indian 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 water or other noxious fluids will be cleaned up and removed.
- (4) Chemical facilities will be provided for human waste.
- (5) Garbage, waste, salts and other chemicals produced during drilling or testing will be handled in trash/burn pit. Drill fluids, water, drilling mud and tailings will be kept in reserve pit, as shown on EXHIBIT "H". The trash/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 the deepest part of the pad. Topsoil will be stockpiled per BIA specifications determined at time of pre-drill inspection.
- (2) EXHIBIT "H" is a plan diagram of the proposed rig and equipment, reserve pit, trash/burn 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 BIA. 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 are 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.

II. Other Information

- (1) The soil is sandy. No distinguishing geological features are present. The area is sparsely covered with cactus, sagebrush, and native grass. There are livestock and rabbits in the area. The topography is flat at location with surrounding hilly terrain.
- (2) The primary surface use is for grazing. The surface is owned by the B.I.A.
- (3) There is no live water within the impact area.

The closest occupied dwelling is a farm located one mile East of the proposed site, 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 September 25, 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

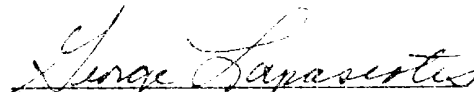
George Lapaseotes
Agent Consultant for
Kerr-McGee Corporation
600 South Cherry Street
Suite 1201
Denver, Colorado 80222
Phone (303) 321-2217

Carl Sweatfield
Kerr-McGee Corporation
P.O. Box 250
Amarillo, Texas 79189
Phone (806) 359-0351

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 Kerr-McGee Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

September 10, 1979
Date


George Lapaseotes
Agent Consultant for
Kerr-McGee Corporation

LEGEND
 --- Gravel Road
 --- Existing Trail
 --- New Access Road

EXHIBIT "E"
 Access Road onto Location

Kerr-McGee Corporation
 #1-5 Navajo
 SW 1/4 Sec. 5-T28N R14W
 1980' FRL & 660' FWL
 San Juan County, New Mexico

Closest Dwelling

Cattle Guard

Fence Cut

Drill Hole

26.5 mi. to Farmington

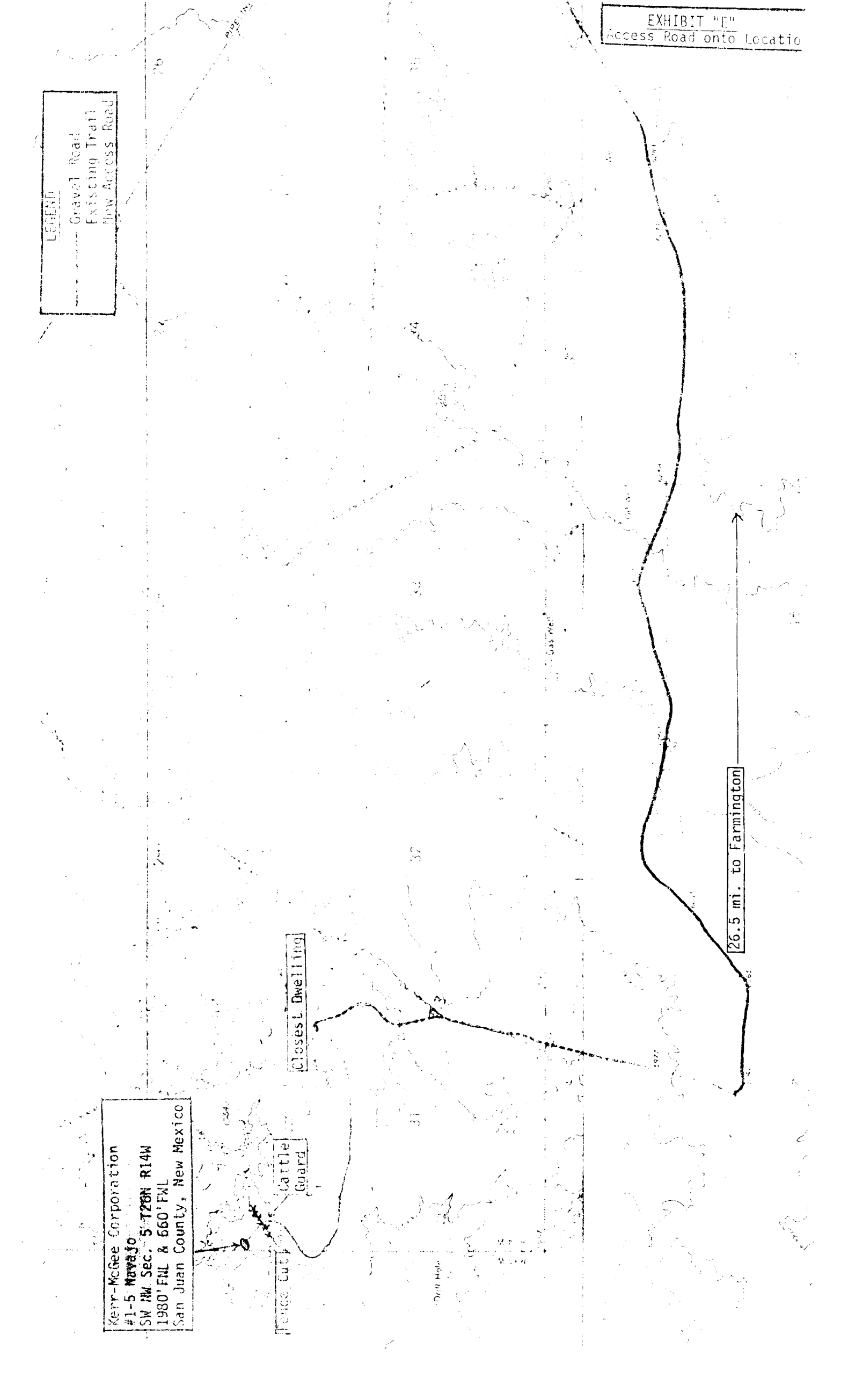


EXHIBIT "F"
Radius Map of Location

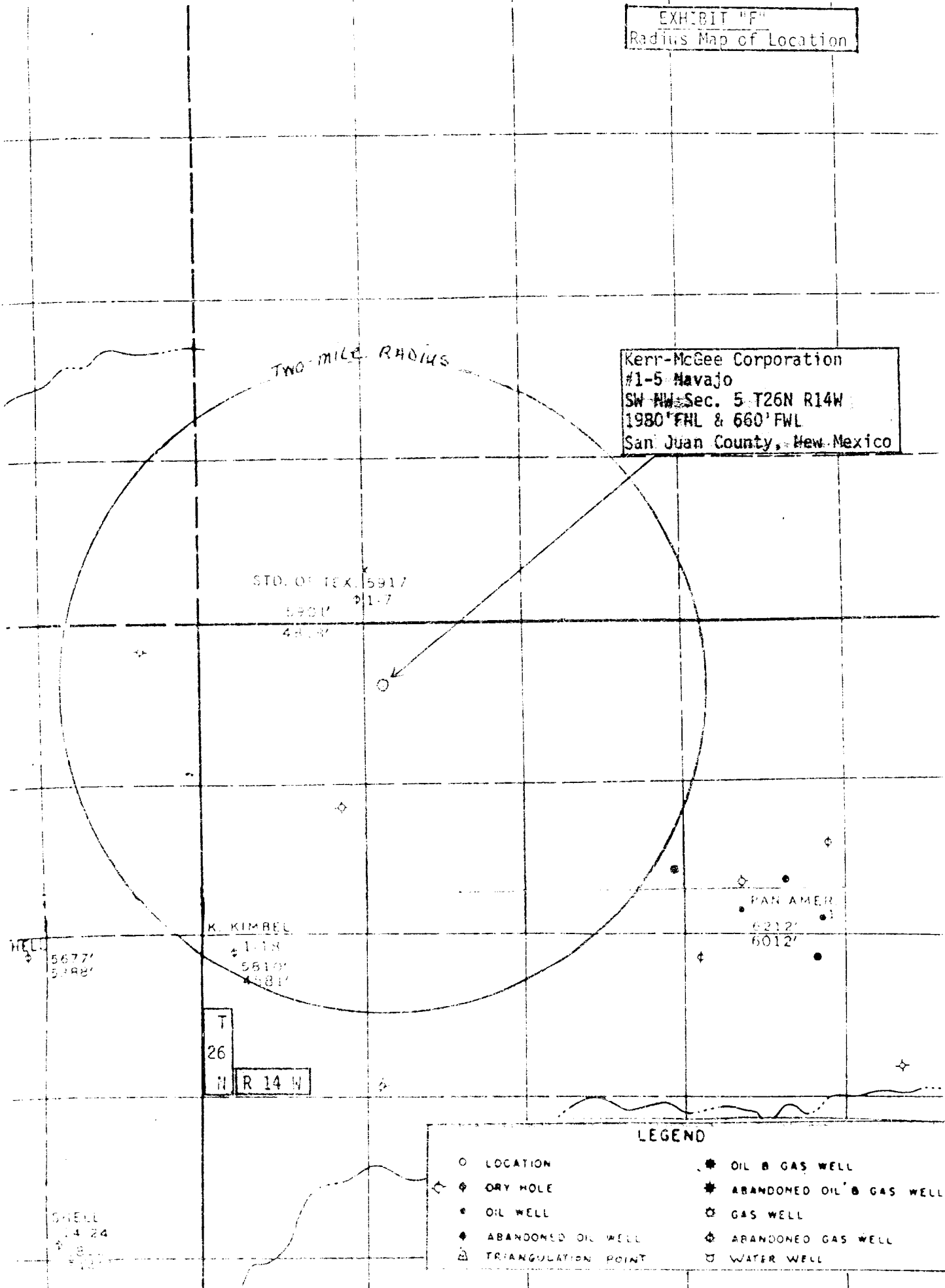


EXHIBIT "G"

#1-5 Navajo

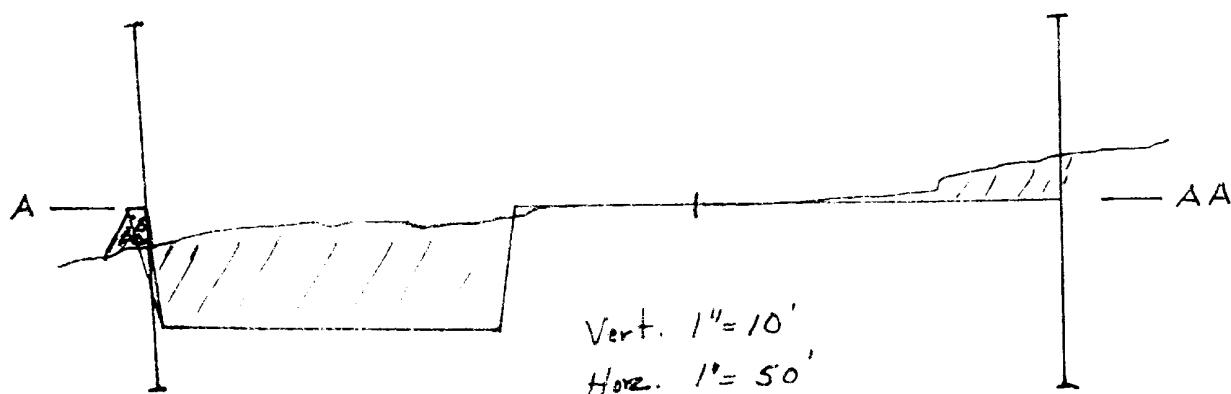
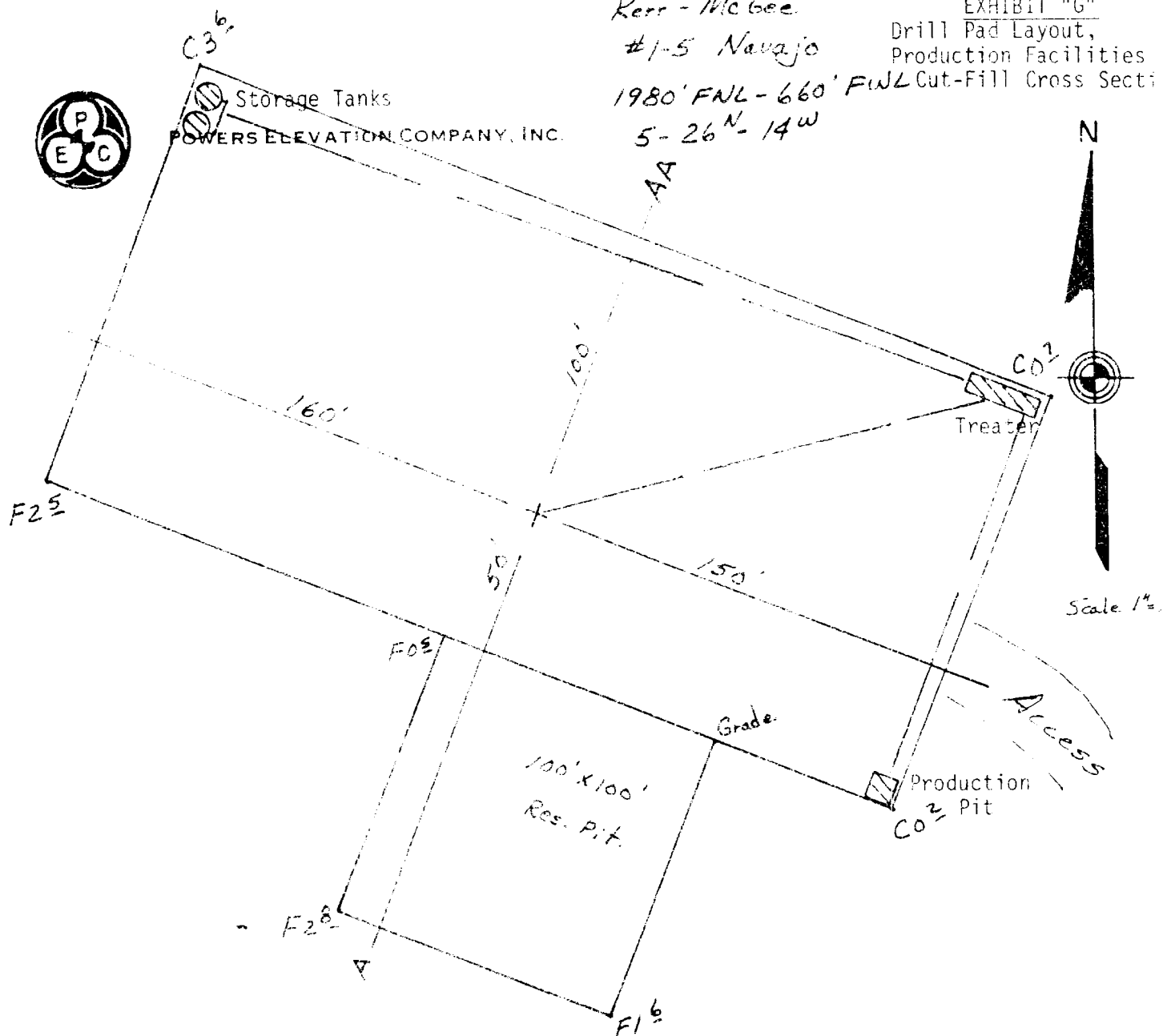
Drill Pad Layout,
Production Facilities
Cut-Fill Cross Section

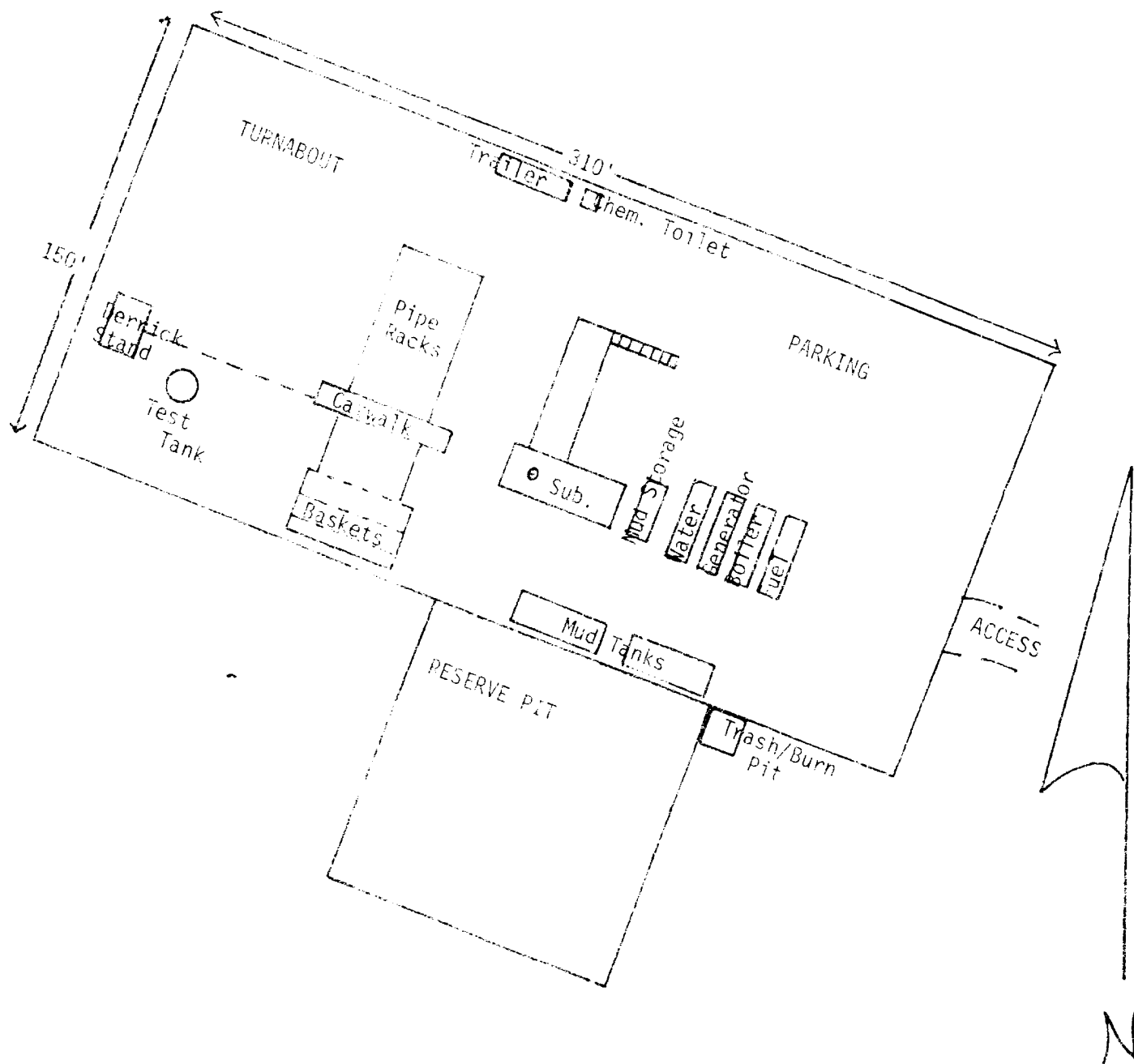
1980' FNL - 660
5-26^N - 14^W



~~Storage Tanks~~

POWERS ELEVATION COMPANY, INC.





Scale: 1" = 50'