

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT - 2 1991

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL WELL ☒

GAS WELL ☐

OTHER

SINGLE ZONE ☐

MULTIPLE ZONE ☐

2. NAME OF OPERATOR

Hanagan Petroleum Corporation

3. ADDRESS OF OPERATOR

P.O. Box 1737, Roswell, NM 88202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

1980' FNL & 990' FEL

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

37 miles northeast of Loving, New Mexico

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

159.81

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

19. PROPOSED DEPTH

8500'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40 acres

20. ROTARY OR CABLE TOOLS

Rotary

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

22. APPROX. DATE WORK WILL START*

Oct. 10, 1991

23.

PROPOSED CASING AND CEMENTING PROGRAM

Secretary's Potash/R 111-P Potash

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	54.50# 48 ^{mk}	750'	circulate - 800 sacks
11"	8 5/8"	32.00#	4,200'	circulate - 2000 sacks
7 7/8"	5 1/2"	17# & 20#	TD	Adequate to cover zone (tie back)

Hanagan Petroleum Corporation proposes to drill and test the Delaware Formation. Approximately 750' of surface casing will be set with cement circulated to the surface. Approximately 4200' of intermediate casing will be set and cement will be circulated to the surface. Should commercial production be indicated, production casing will be run and cemented with adequate cover to isolate and protect, perforate and stimulation as needed.

See Attached Supplemental Drilling Data for further information.

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 Asst. Vice President

DATE

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

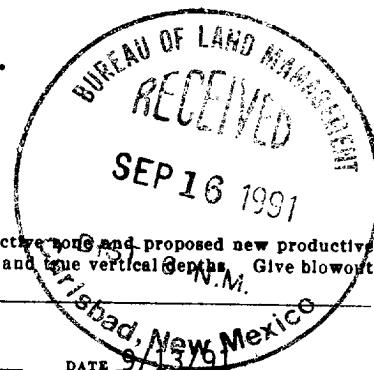
APPROVAL SUBJECT TO

GENERAL REQUIREMENTS AND

SPECIAL STIPULATIONS

*See Instructions On Reverse Side

Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



All Distances must be from the outer boundaries of the section

SUPPLEMENTAL DRILLING DATA
for
HANAGAN PETROLEUM CORPORATION
#2 Unocal-HPC
1980' FNL & 990' FEL
Section 1 - T22S - R31E
Eddy County, New Mexico

The following items supplement Form 3160-3 in accordance with applicable BLM requirements.

1. ESTIMATED GEOLOGIC FORMATIONS:

Quaternary Sandy Alluvium @ Surface	
Rustler @ 640'	
Lamar @ 4480' --	
Cherry Canyon @ 5470'	Delaware Mountain Group
Brushy Canyon @ 6665' --	
Bone Springs @ 8450'	

2. ESTIMATED WATER, OIL AND/OR GAS ZONES:

Oil or Gas: Brushy Canyon

3. PRESSURE CONTROL EQUIPMENT:

Pressure control equipment will include a 3000# WP blowout preventer stack (see attached diagram). BOPE will be nipped up and pressure tested prior to drilling surface casing shoe. Pipe rams to be tested daily and blind rams tested when out of hole. Crew will hold weekly BOP drills. All drills and tests will be recorded in drillers log.

4. CASING & CEMENTING PROGRAM:

Surface String: Drill ^{48#} 17 1/2" hole to approx. 750' and set 13 3/8", ~~34-3~~ #/ft, J-55, STC casing, cement casing with approx. 600 sacks Class "C" light w/2% CaCl + 200 sacks "C" neat cement with 2% CaCl and circulate excess cement to pits. Allow 18 hours for cement to set. Pressure test with rig pumps to 500# for 30".

Intermediate String: Drill 11" hole to approx. 4200' and set 8 5/8", 32.0 #/ft, J-55, STC casing, cement casing w/approx. 1800 sacks "C" Lite w/10# salt per sack + 200 sacks "C" neat w/1% CaCl, allow 18 hours to set, pressure test to 1000# for 30 minutes using rig pumps.

Production String: Drill 7 7/8" hole to approx. 8500', if commercial production is indicated, set 5 1/2", 15.5# & 17#, J-55, LTC casing, Cement as necessary and pressure test to 1900# using rig pumps.

5. MUD PROGRAM:

- a. Surface - 750'; Native fresh water mud
- b. 750' - 4200'; Saturated brine system
- c. 4200' - TD; Fresh H2O system having a viscosity of 32-38 sec., weight between 8.8 & 9.2, and water loss less than 15. Starch and gel will be used to control water loss and viscosity.

6. AUXILIARY EQUIPMENT:

Auxiliary equipment will include a kelly cock on the kelly joint and a full opening safety valve with appropriate drill pipe fittings available on rig floor.

7. TESTING, LOGGING AND CORING PROGRAM

Samples: Samples will be caught at 10" intervals from 750' - TD. A 2 man mudlogging unit will be utilized from 4200' - TD.

DST's: DST as warranted

Coring: None anticipated

Logging: Gamma Ray/Neutron/Density/Pe/Caliper
Gamma Ray/Laterlog &/or Induction/MSFL

8. ANTICIPATED PRESSURE, TEMPERATURE, AND H2S:

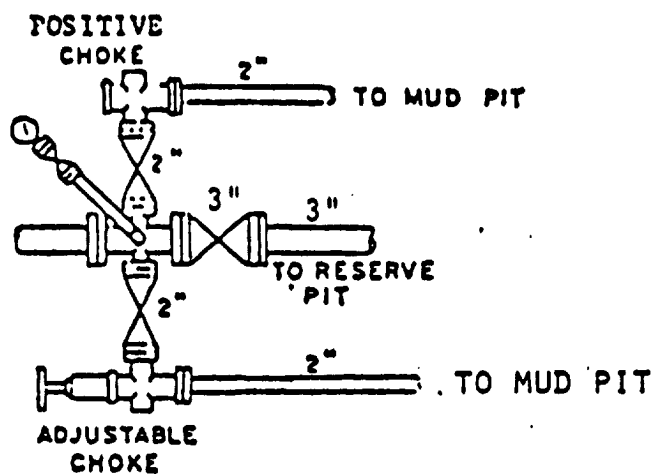
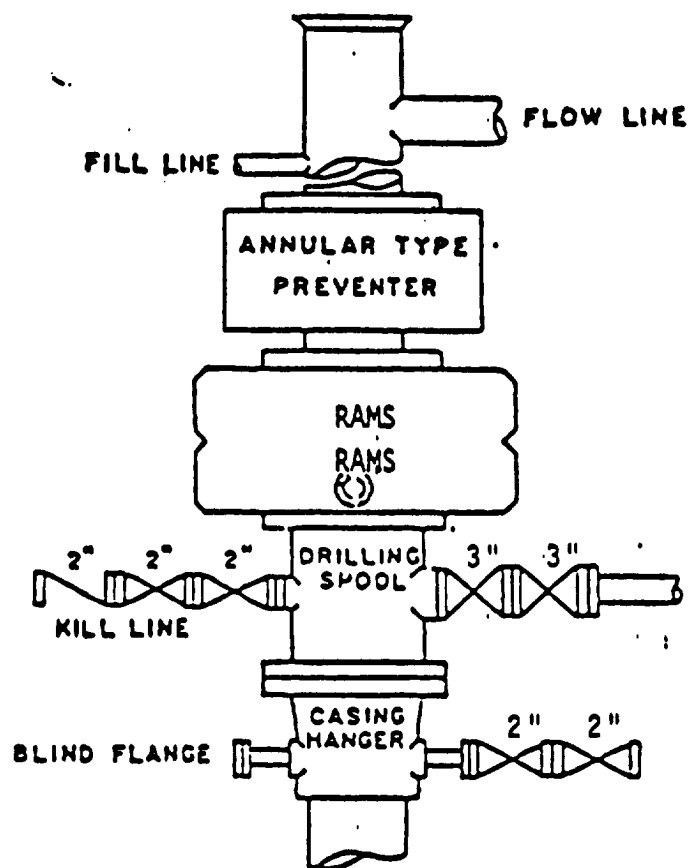
Anticipated bottom hole pressures of approximately 2900# from nearby DST's.

Anticipate bottom hole temperature of 150 deg.

Do not expect to encounter any H2S.

9. ANTICIPATED STARTING DATE:

Anticipate starting dirt work in early October with drilling operations to commence by October 10 depending on rig availability. Anticipate approx. 20 days to reach TD with completion operations to begin after evaluation of drilling information.



BOP STACK

3000 PSI WORKING PRESSURE

BOP ARRANGEMENT

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
for
HANAGAN PETROLEUM CORPORATION
#2 Unocal-HPC
1980' FNL and 990' FEL
Section 1 - T22S - R31E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, in accordance with Onshore Oil and Gas Order #1 item 4.b1-b13. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operational plan, the magnitude of surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of operations, so that a complete appraisal can be made of the environmental effect associated with the operation.

1. EXISTING ROADS:

Exhibit "A" is a portion of a USGS map showing the proposed well, existing wells within a one mile radius, existing roads, and the new access road. The proposed wellsite is located approx. 37 miles northeast of Loving, New Mexico. The existing access route to the location is indicated in yellow with the new access road indicated in red on exhibit "A".

DIRECTIONS: Exhibit A1 shows access to the drillsite from various directions. The primary route is as follows; From Carlsbad, N.M. take Hwy. 62/180 (Carlsbad/Hobbs Hwy) east approx 32 miles. Turn south on Lea County Road 29 (paved road) and proceed south 9.5 miles. Go west at cattlegaurd approximately .3 miles. Turn south and go approx. .3 miles. Turn back east to well.

2. ACCESS ROAD AND WELL PAD:

- A. The access road will be approx. 1000' in length begining at the SE corner of the HPC #1 Unocal-HPC Fed. and heading southeasterly to the SW corner of the proposed location.
The access road will be approx. 14 feet in width. All new construction activity will be within the boundry of lease NM 43556.
- B. The access road will be surfaced with 5"caliche , watered, compacted and graded.
- C. No turnouts will be necessary and the route of the road is visible.
- D. The new road will be bladed with drainage on

- both sides to control runoff and soil erosion.
- E. No culverts will be required.
- F. No cattle guard will be required.

3. LOCATION OF EXISTING WELLS:

- A. There is drilling activity within one mile of the drillsite. The Yates Pet. #2 Unocal "AHU", a new producing oil well, is located in the NE/4NE/4 of the same section and the Hanagan Pet. #1 Unocal-HPC is located in the SW/4NE/4 of the same section. Several other proposed locations have been staked within a one mile radius of the proposed location
- B. Exhibit "A" shows all existing wells within one mile of the wellsite. Proposed locations are also shown.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. In the event that the well is productive, the existing production facilities at the HPC #1 Unocal-HPC Fed. in the SW/4NE/4 will be used to handle production from the proposed well. The flowlines necessary to transport fluid will be buried directly adjacent to the access road.

5. LOCATION AND TYPE OF WATER SUPPLY:

All water used in the drilling and completion of this well will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit "A" and A1, or will be transported via a temporary surface flowline from the Double Eagle Water line.

6. SOURCE OF CONSTRUCTION MATERIALS:

Pit is located in the E/2SW/4 of section 12-T22S-R31E on BLM lands. Pit location is shown on Ex. A.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in reserve pits.
- B. Drilling fluids will be allowed to evaporate in reserve pits until pits are dry.
- C. Water produced during operations will be collected in tanks until hauled to an approved disposal system. Water recovered during completion testing will be disposed of in the reserve pits.
- D. Oil produced during completion and production

operations will be stored in tanks until sold.
E. Trash, waste paper, garbage and junk will be collected in portable trash baskets and will be transported to an approved waste dump upon finishing drilling/completion operations.

8. ANCILLARY FACILITIES:
None Required.

9. WELLSITE LAYOUT:

- A. Exhibit "C" shows the relative location and dimensions of the well pad, reserve pits, drilling equipment, rig orientation, and access road approach.
- B. The reserve pits will be approx. 125' x 100' and will be plastic lined.
- C. The drill pad will be approx. 270' x 200'.
- D. A 400' x 400' area has been staked and flagged. All pad construction activity will be confined within this staked area.

10. PLANS FOR RESTORATION OF THE SURFACE:

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing condition as is reasonably possible.
- B. Any unguarded pits containing fluid will be fenced until they have been dried and leveled.
- C. If the well is non-productive, or upon abandonment of a producing well, the surface area will be rehabilitated as specified by the BLM in the approved APD.

11. OTHER INFORMATION:

- A. Topography: The surface in the immediate area is mostly level with small, undulating sand dunes. The surface is very gradually sloping to the west. Regional drainage is west - south west.
- B. Soil: Top soil at the wellsite consists of red sands.
- C. Flora and Fauna: Vegetative cover is moderate and consists predominantly of shinners oak and mesquite with some yucca and range grasses. Wildlife in the vicinity would probably consist of desert type of wildlife such as coyotes, rabbits, rodents, reptiles, quail, dove and raptors.

- D. Ponds and Streams: None in vicinity.
- E. Residences or structures: None in vicinity.
- F. Archaeological, Historical, and Cultural Sites:
None observed. An archaeological reconnaissance
survey will be performed and submitted.
- G. Land Use: Primary use of surface is for
livestock grazing.
- H. Surface Ownership: All lands affected by this
activity are located on Federal Surface
administered by the BLM-Carlsbad. The Grazing
Allottee is Kenneth Smith
P.O. Box 764
Carlsbad, N.M. 88220

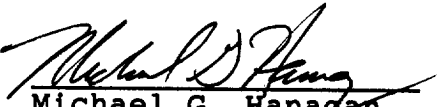
12. OPERATORS REPRESENTATIVE:

Mr. Michael G. Hanagan or Mr. Hugh E. Hanagan
P.O. Box 1737
Roswell, New Mexico 88202
Office Phone; 505-623-5053
Home Phone(MGH); 505-625-0388

13. CERTIFICATION:

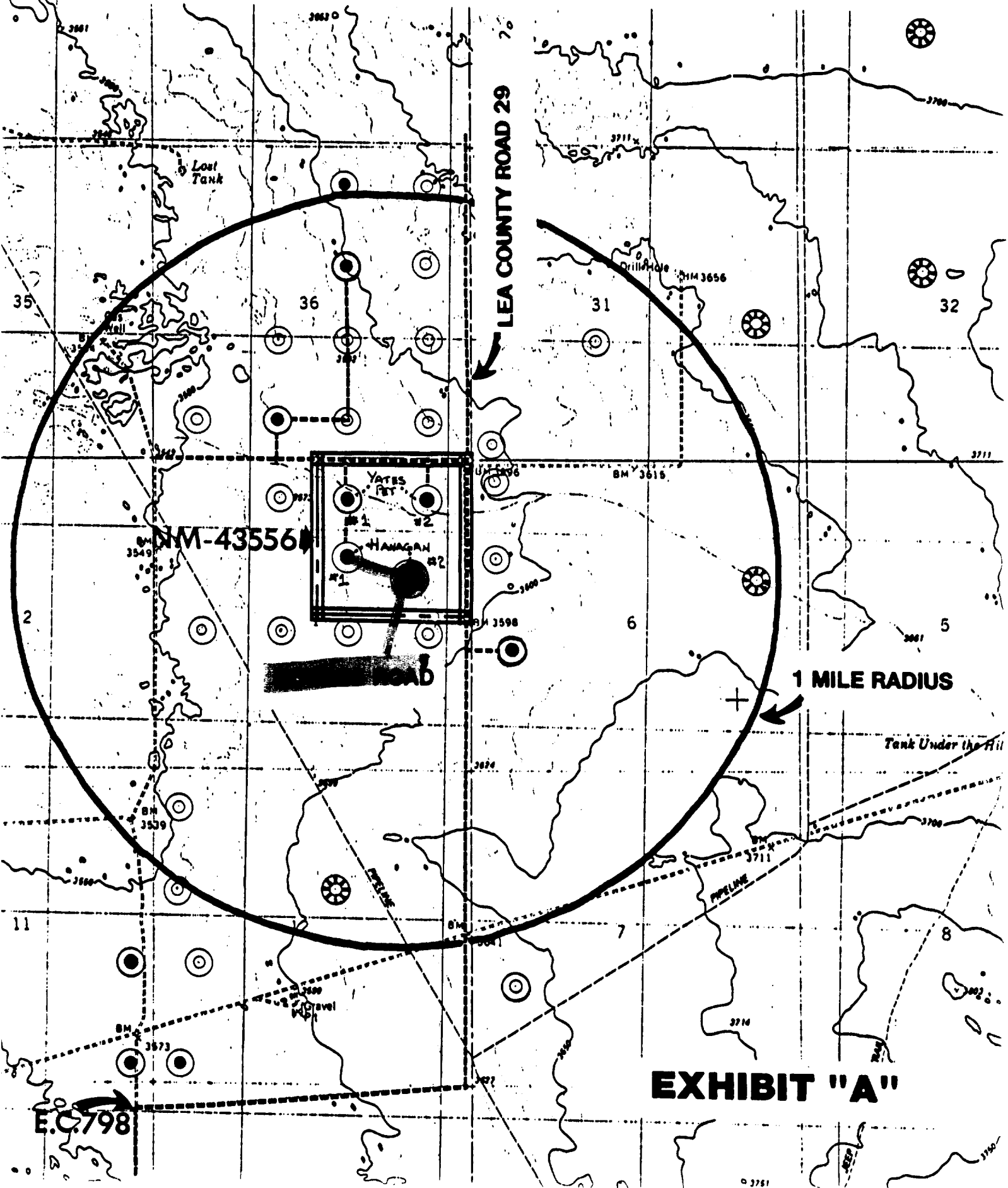
I hereby certify that I, or persons under my
direct supervision, have inspected the proposed
drill site and access route, that I am familiar
with the conditions which presently exist; that
the statements made in this plan are to the best
of my knowledge, true and correct; and, that the
work associated with the operations proposed
herein will be performed by Hanagan Petroleum
Corporation and its contractors and subcontractors
in conformity with this plan and the terms and
conditions under which it is approved. This
statement is subject to the provisions of 18
U.S.C. 1001 for the filing of a false statement.

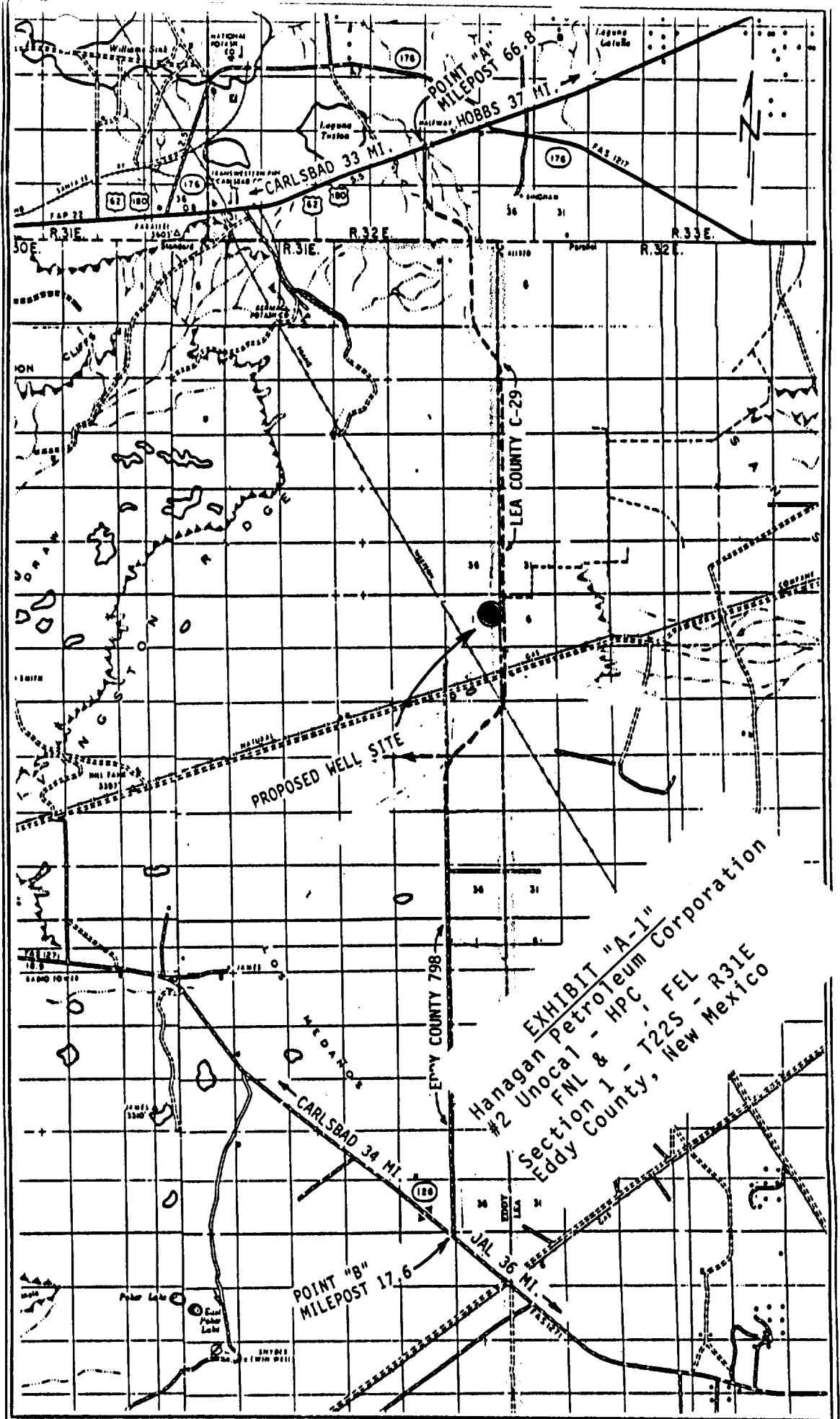
9/13/91
DATE


Michael G. Hanagan
Ast. Vice President

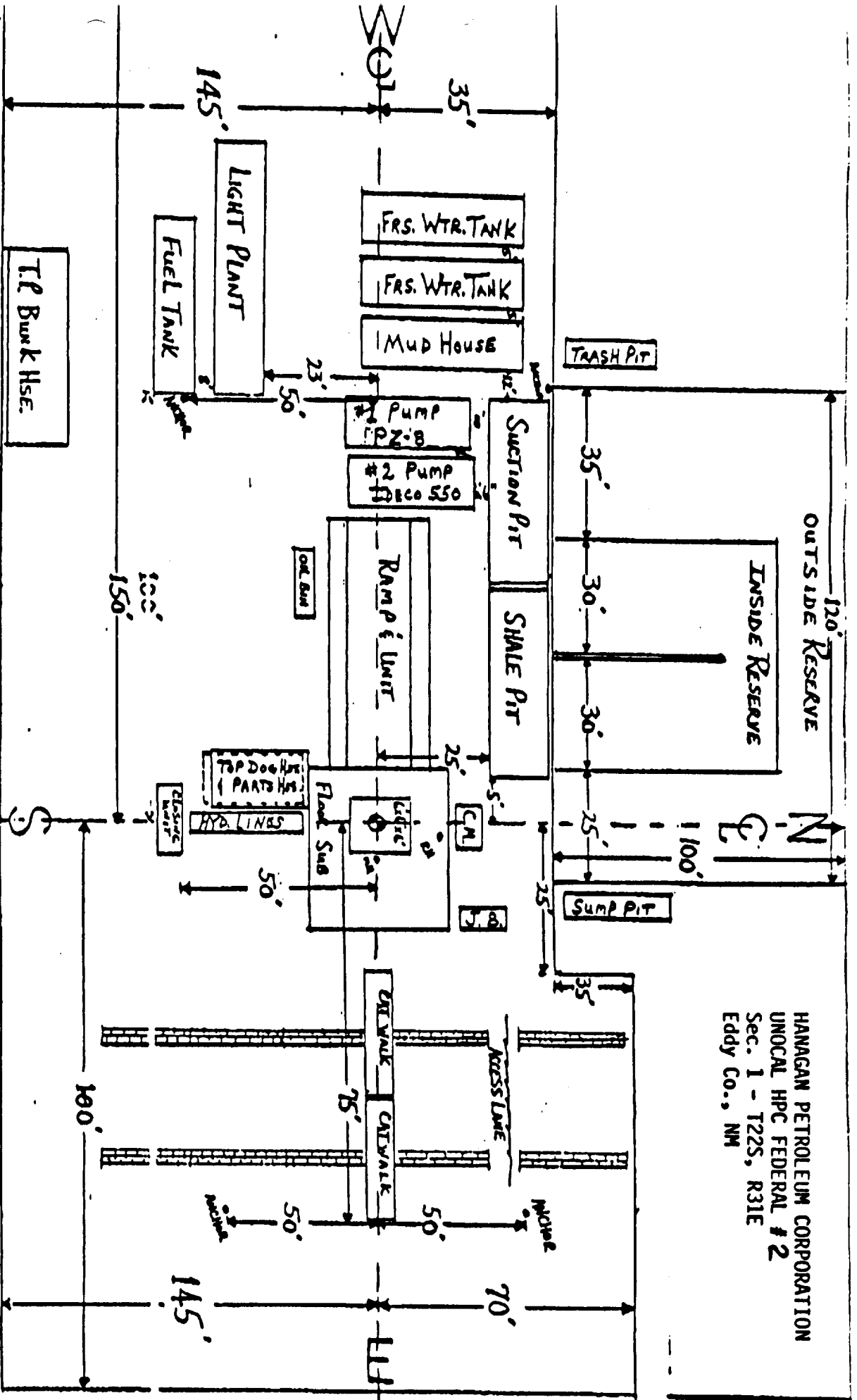
HANAGAN PETROLEUM CORPORATION

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HANAGAN PETROLEUM CORPORATION
 UNOCAL HPC FEDERAL #2
 Sec. 1 - T22S, R31E
 Eddy Co., NM



Location Dimensions

Approx. 250' x 200'

Reserve Pits

Approx: 100' x 125'