

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

30-015-27044
Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

5. LEASE DESIGNATION AND SERIAL NO.

NM-86537

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Heyco Federal

9. WELL NO.

#1

10. FIELD AND POOL, OR WILDCAT

PWildcat Delaware

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA

Sec.1 - T26S-R27E

12. COUNTY OR PARISH 13. STATE

Eddy Co.

NM

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☐

MULTIPLE
ZONES ☐

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' FSL & 660 FWL

At proposed prod. zone

Same

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

10 miles Southwest of Malaga, NM

15. DISTANCE FROM PROPOSED*

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

660'

16. NO. OF ACRES IN LEASE

200

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40.

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

None

19. PROPOSED DEPTH

6150'

20. ROTARY OR CABLE TOOLS

Rotary

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

3150' GR

22. APPROX. DATE WORK WILL START*

July 10, 1992

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48#/ft	425'	400 sx. - circulated
11"	8 5/8"	24#/ft	2200'	975 sx. - tie back
7 7/8"	5 1/2"	15.5#/ft	TD	isolate prod. zone + 500'

See attached "Pertinent Information", "Supplemental Drilling Data"
& Multi-Point Surface Use and Operations Plan" for additional
information.

Part ID-1
7-3-92
New Lx + API

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 Michael J. Hagan TITLE Vice-Pres. DATE 6/17/92
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE 6-26-92

CONDITIONS OF APPROVAL IF ANY:

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS

*See Instructions On Reverse Side

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Artesia, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Hanagan Petroleum		Lease HEYCO Federal		Well No. 1
Unit Letter L	Section 1	Township 26 South	Range 27 East NMPM	County Eddy
Actual Footage Location of Well: 1980 feet from the south line and 660 feet from the west line				
Ground Level Elev. 3150.1'	Producing Formation Delaware		Pool Wildcat	Dedicated Acreage: 40 Acres
<p>1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.</p> <p>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).</p> <p>3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.? <input type="checkbox"/> Yes <input type="checkbox"/> No If answer is "yes" type of consolidation _____</p> <p>If answer is "no" list of owners and tract descriptions which have actually been consolidated. (Use reverse side of this form necessary.) _____</p> <p>No allowable will be assigned to the well unit all interests have been consolidated (by communitization, unitization, forced-pooling, otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.</p>				
				OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature Printed Name MICHAEL G. HANAGAN Position V.P. Company HANAGAN PET. CO. INC. Date 6/16/92
				SURVEYOR CERTIFICATION 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 June 8, 1992 Signature & Seal of Professional Surveyor

PERTINENT INFORMATION
for
HANAGAN PETROLEUM CORPORATION
#1 Heyco Federal

1980' FSL & 660' FWL
Section 1 - T26S - R27E
Eddy County, New Mexico

LOCATED: Approximately 10 miles southeast
of Malaga, New Mexico.

FEDERAL LEASE
NUMBER: NM-86537

LEASE ISSUED: June 1, 1991 (effective date)

ACRES IN LEASE: 200.00 acres
Township 26 South, Range 27 East,
Sec. 1: W/2 W/2, NE/4 NW/4

RECORD LESSEE: Harvey E. Yates Company

BOND COVERAGE: Statewide Bond of Hanagan Petroleum
Corporation from Planet Indemnity
Company: Surety Bond #B03222

BLM BOND FILE #: Statewide Bond 3104 (943-3ssp)

SURFACE OWNERSHIP: Federal Surface (BLM-Carlsbad)

GRAZING PERMITTEE: Draper Brantley
1317 E. Wood Street
Carlsbad, NM 88220

POOL RULES: Statewide Rules - 40 Acre oil spacing

EXHIBITS: A. USGS Topographic map showing roads
and wells.
B. State Road Map
C. Rig/pad Diagram
D. Statement of Responsibility

SUPPLEMENTAL DRILLING DATA
for
HANAGAN PETROLEUM CORPORATION
#1 Heyco Federal
1980' FSL & 660' FWL
Section 1 - T26S - R27E
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 @ 375'	
Lamar @ 2300' --	
Cherry Canyon @ 3200' --	Delaware Mountain Group
Brushy Canyon @ 4400' --	
Bone Springs @ 6100'	

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

Oil or Gas: Cherry Canyon/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 intermediate 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 17 1/2" hole to approx. 425' and set 13 3/8", 48.0 #/ft, H-40, STC casing. (Internal Pressure @ Min. Yield=1730 PSI, Min Collapse=770 PSI, Joint Strength=322,000#). Cement casing as follows:
200 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. 2200' and set 8 5/8", 24 #/ft, J-55, STC casing. (Internal Pressure @ Min. Yield=2950 PSI, Min Collapse=1370 PSI, Joint Strength=263,000). Cement casing w/approx. 725 sacks "C" Lite w/10# salt per sack + 250 sacks "C" neat w/1% CaCl, circulate excess cement to pits, allow 18 hours to set, pressure test to 1500# for 30 minutes using rig pumps.

Production String: Drill 7 7/8" hole to approx.

6,100', if commercial production is indicated, set 5 1/2", 15.5#, J-55, LTC casing (Internal Pressure @ Min. Yield=4810 PSI, Min. Collapse=4040 PSI, Joint Strength=239,000#).

Cement as necessary to tie back into intermediate casing + 500' (2 stage), pressure test plug to 1900# before completion.

5.

MUD PROGRAM:

- a. Surface - 400'; Native fresh water mud
- b. 400' - 2300'; Saturated brine system
- c. 2300' - TD; Cut Brine system having a viscosity of 32-38 sec., weight between 8.6 & 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 2300' - TD. A 2 man mudlogging unit will be utilized from 2300' - TD.

DST's: DST as warranted

Coring: Anticipate Coring Upper Cherry Canyon

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 2000#.

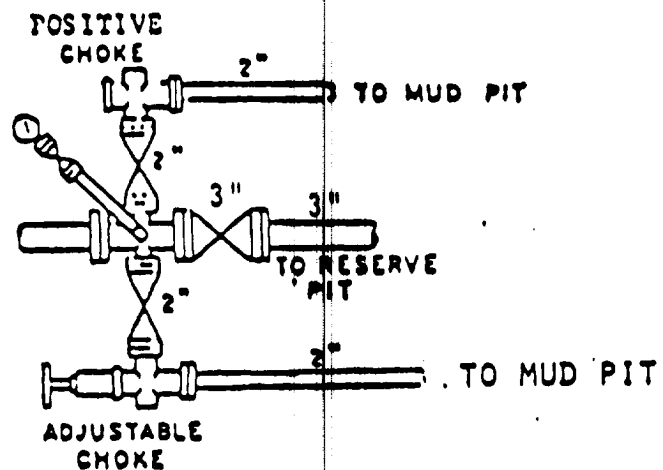
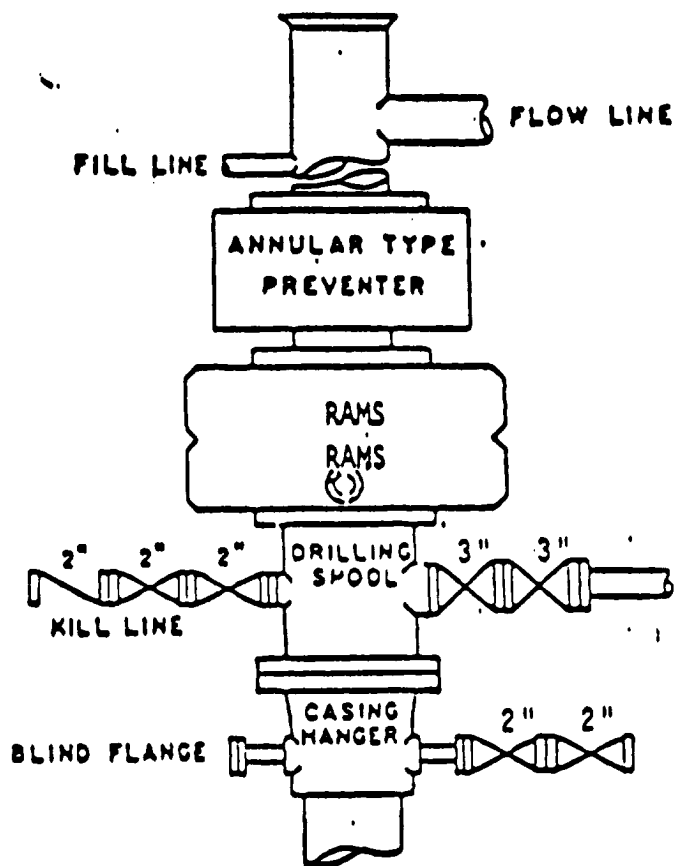
Anticipate bottom hole temperature of 125 deg.

Do not expect to encounter any H₂S.

9.

ANTICIPATED STARTING DATE:

Anticipate starting dirt work in early July with drilling operations to commence by July 10 depending on rig availability. Anticipate approx. 15 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
#1 Heyco Federal
1980' FSL and 660' FWL
Section 1 - T26S - R27E
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. 10 miles south of Malaga, 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 B shows access to the drillsite from various directions. The primary route is as follows;

From Carlsbad, N.M. take Hwy 285 (Pecos Highway) south for approximately 27 miles to White's City Road (Eddy County 724), go west on CR 724 approx. 5.5 miles, go northeast approximately 1/2 mile to location.

2. ACCESS ROAD AND WELL PAD:

- A. The access road will be approx. 1500' in length with new construction coming off of the existing road that goes to the Moore #1 Aztec dry hole on the SE/4 NE/4 of Section 2. The portion of the road located in section 2 will be located on state acreage and will not need BLM right of way. All of the remainder of the new construction will be within the boundaries of US Lease Serial # NM-86537. The access road will be approx. 12 feet in width.
- 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 cattleguard will be required on the new road.

3. LOCATION OF EXISTING WELLS:

- A. There is no drilling activity within one mile of the drillsite. The Moore #1 Aztec, a dry hole drilled in 1982, is located in the SE/4 NE/4 of sec. 2 which is a diagonal offset to the proposed well. The Jubilee Energy #1 Hay Hollow is an abandoned Bone Spring producer & is located in the SW/4 SE/4 of section 1 that plugged in 1985. Great Western Drilling drilled a Morrow dry hole in the SE/4 NW/4 in 1975.
- B. Exhibit "A" shows all existing wells within one mile of the wellsite as well as the proposed location.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. In the event that the well is productive, the production facilities will be installed on the drilling pad and will probably consist of 2 500 barrel storage tanks surrounded by an earthen berm, a heater treater, a separator and a pump jack.

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 "B".

6. SOURCE OF CONSTRUCTION MATERIALS:

Should a sufficient caliche source be found at the proposed location this will be the source of the caliche used for the pad and roads. If not 2 pits are located in the SW/4 SE/4 of section 1-T26S- R27E 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 and is shown on Exhibit A. 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 rolling plains. The surface is gradually sloping to the east-northeast. Regional drainage is eastward towards the Pecos River which is approximately 7 miles due east.
- B. Soil: Top soil at the wellsite consists of

loams belonging to the Reeves-Gypsum land-Cottonwood association.

- C. Flora and Fauna: Vegetative cover is moderate and consists predominantly of creosote bush, mesquite, various Yuccas, cacti and various 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: Pecos River approx. 7 miles east and the intermittent Delaware River approx. 4 miles southeast.

- E. Residences or structures: None in vicinity.

- F. Archaeological, Historical, and Cultural Sites: None observed. An archaeological reconnaissance survey has been performed by Pecos Arch. Consl. and has been submitted to the Carlsbad office.

- G. Land Use: Primary use of surface is for livestock grazing.

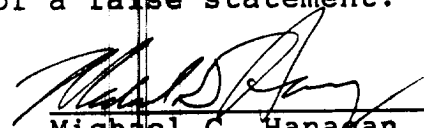
- H. Surface Ownership: All lands affected by this activity are located on Federal Surface administered by the BLM-Carlsbad.

Grazing Allotte is: Draper Brantley
1317 E. Wood Street
Carlsbad, NM 88220

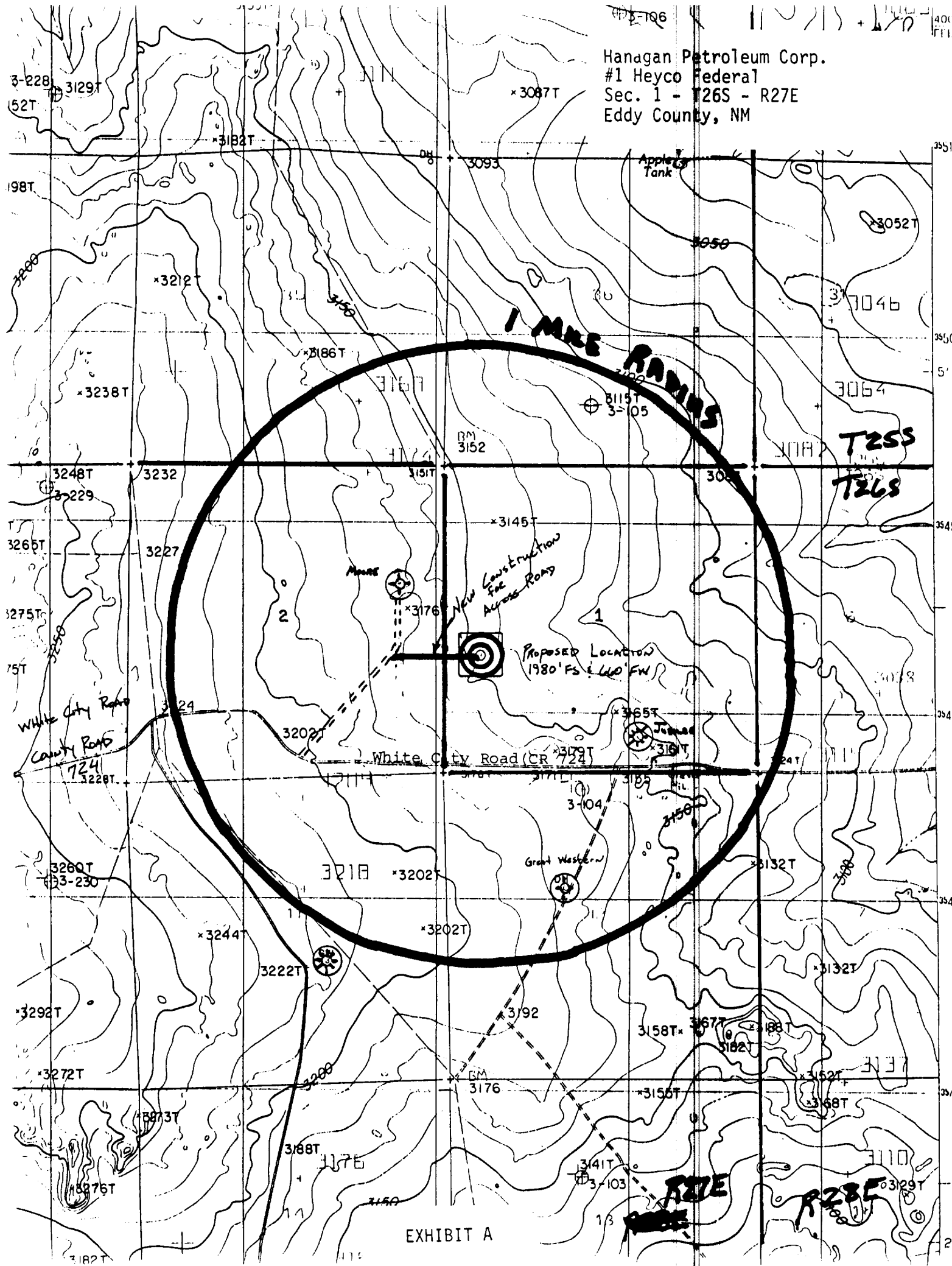
12. OPERATORS REPRESENTATIVE:
Mr. Michael G. Hanagan or Mr. Hugh E. Hanagan
P.O. Box 1737
Roswell, New Mexico 88202
Office Phone; 505-623-5053
Home Phone(MGH); 505-625-0388

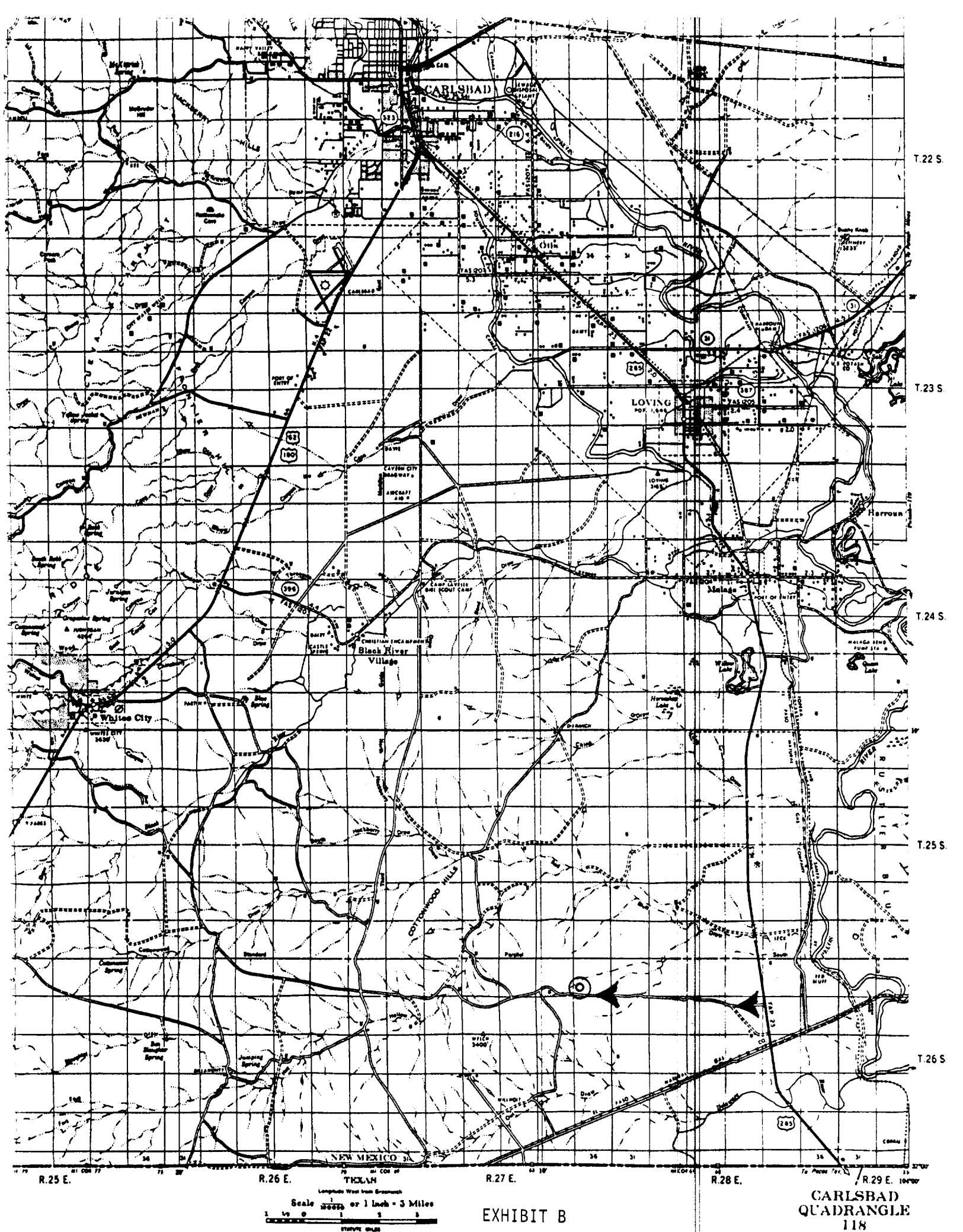
13. CERTIFICATION:
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by 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.

6/16/92
DATE


Michael G. Hanagan
Vice President

Handwritten: 106
Hanagan Petroleum Corp.
#1 Heyco Federal
Sec. 1 - T26S - R27E
Eddy County, NM





Scale 1 inch = 3 Miles
STANDARD MAP

EXHIBIT B

CARLSBAD
QUADRANGLE
118

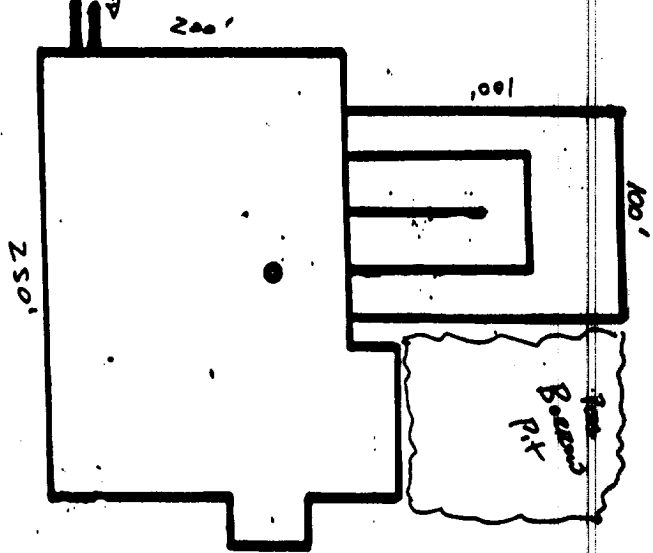
400' x 400' Work Area
to be
Staked & Aired

400 Feet

400 Feet

1
N

1/2" Wide Access Road
Approx. 1400' Long



HRC #1 Heyco Fed.
Rad Diagram

SCALE
DATE
May, 1972

1780' B & 640' FW
Sec 1 - T24S - R27E

DRAWING NUMBER
EXA. C

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS
43 CFR 3100.0-5
NTL 89-1 New Mexico

Hanagan Petroleum Corporation accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

LEASE NUMBER: NM 86537

LEGAL DESCRIPTION OF LAND: NW/4 of the SW/4 of
Sec. 1 - T26S - R27E
Eddy County, New Mexico

BOND COVERAGE: Statewide bond of Hanagan Petroleum Corp.
from Planet Indemnity Company.
Surety Bond # B03222

FORMATIONS: Surface to 6,100' or Base of Delaware.

BLM BOND FILE NUMBER: Statewide Bond 3104 (943C-3ssp)

DATE: 3/16/92

AUTHORIZED SIGNATURE


Hugh E. Hanagan

TITLE: President