

30-015-23983

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

C/SF

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

QUANAH PETROLEUM, INC.

3. ADDRESS OF OPERATOR

4835 LBJ Freeway, Suite 525 Dallas, Texas 75234

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

At surface

1980' FSL and 1980' FEL

At proposed prod. zone

NOV 12 1981

O. C. D.

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

13 miles SW of Malaga

ARTESIA, OFFICE

15. DISTANCE FROM PROPOSED*

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

1980'

16. NO. OF ACRES IN LEASE

800

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.

19. PROPOSED DEPTH

9350

20. ROTARY OR CABLE TOOLS

Rotary

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

3171.0 GL

22. APPROX. DATE WORK WILL START*

November 1, 1981

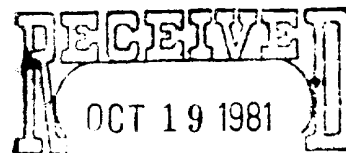
23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14-3/4"	11-3/4"	as available	CIRCULATE 500'	200 sx Class C
11"	8-5/8"	24#	CIRCULATE 650'	310 sx Light 200 sx Class C
7-7/8"	4-1/2"	11.6#	9350	240 sx Light 150 sx Class H

Please see the following attachments:

1. Surveyors plat.
2. Multi-purpose surface use and operations plan with maps.
3. 10-point drilling program.
4. BOP schematic.
5. Archaeological survey.

Posted ID-1
API + NL Book
11-13-81



OIL & GAS
U.S. GEOLOGICAL SURVEY
ROSWell, NEW MEXICO

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 Vice President Operations DATE 10-13-81

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

APPROVED

AS AMENDED

NOV 6 1981

JAMES A. GILLHAM
DISTRICT SUPERVISOR

**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

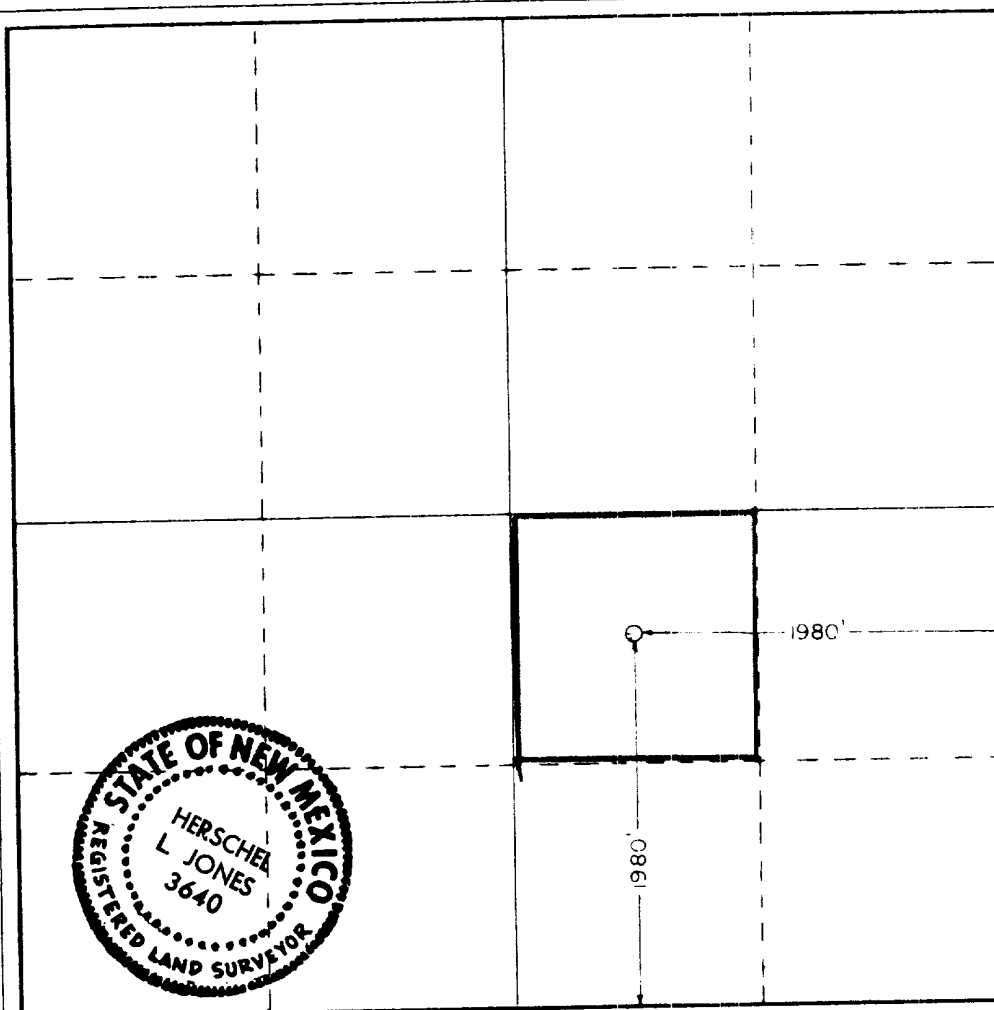
Operator QUANAH PETROLEUM, INC.			Lease A Hay Federal		Well No. 2
Init Letter J	Section 12	Township 26 South	Range 27 East	County Eddy	
Actual Footage Location of Well: <div style="display: flex; justify-content: space-between;"> 1980 feet from the South line and 1980 feet from the East line </div>					
Ground Level Elev. 3152.0	Producing Formation Wolfcamp	Pool Wildcat Wolfcamp	Dedicated Acreage: 40 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.

Walter P. Oliver
Name

Walter P. Oliver

Position
Vice President Operations

Company
Quanah Petroleum, Inc.

Date
October 13, 1981

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
August 17, 1981

Registered Professional Engineer
and/or Land Surveyor

[Signature]

Certificate No
3640

0 330 660 990 1320 1650 1980 2310 2640 2000 1600 1000 600 0

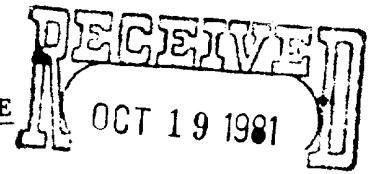
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

QUANAH PETROLEUM, INC.

WELL NAME: NO. 2 HAY FEDERAL A

1980' FSL 1980' FEL Sec. 12, T26S-R27E

Eddy County, New Mexico



OIL & GAS
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS:

- A. Exhibit "A" is a topo map showing all existing roads within a one-mile radius of the wellsite and the planned access road.
- B. Only minor repairs will be made on existing roads.

2. PLANNED ACCESS ROADS:

- A. Length and Width: New road required will be 12 feet wide and 2000 feet long. This new road is labeled and color coded red on Exhibit "A". The center line of the proposed new road from the beginning to the wellsite has been staked and flagged with the stakes being visible from any one to the next.
- B. Surfacing Material: Six inches of caliche, water, compacted and graded.
- C. Maximum Grade: 3 percent.
- D. Turnouts: None required.
- E. Drainage Design: New road will have a drop of 6 inches from center line on each side.
- F. Culverts: None required.
- G. Cuts and Fills: None required.
- H. Gates, Cattleguards: No gates or cattleguards are required.

3. LOCATION OF EXISTING WELLS:

A. Existing wells within a one-mile radius are shown on Exhibit "B".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. There are no existing tank batteries on the lease.

B. If the well is productive, the tank battery and flow line will be located on the well pad and no additional surface disturbance will occur.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. Water for drilling will be purchased and trucked to location.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. Caliche for surfacing the road and the well location will be furnished from an existing pit in the NW/4 of SE/4, Section 9, T26S, R27E. The pit is on land owned by U.S.A., who is also the owner of the surface location.

7. METHODS OF HANDLING WASTE DISPOSAL:

A. Drill cuttings will be disposed of in the drilling pits.

B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.

C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.

D. Current laws and regulations pertaining to the disposal of human waste will be complied with.

E. Trash, waste paper, garbage and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of trash pits is shown on Exhibit "C". (Alternate - all trash, junk and other waste material will be contained to prevent scattering and will be removed and deposited in an approved sanitary landfill.)

F. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

A. None required.

9. WELLSITE LAYOUT:

- A. Exhibit "C" shows the relative location and dimensions of the well pad, mud pits, reserve pit, trash pit and location of major rig components.
- B. Only minor leveling of the wellsite will be required. No significant cuts and fills will be necessary.
- C. The reserve pit will be plastic lined.
- D. The pad and pit area has been staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE:

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and location cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. After abandonment of the well, surface restoration will be in accordance with the agreement with the surface owner. Pits will be filled and location will be cleaned. The pit area, well pad, and all unneeded access road will be ripped to promote vegetation. Rehabilitation should be accomplished within 90 days after abandonment.

11. OTHER INFORMATION:

- A. Topography: Land surface is flat with minor slope.
- B. Soil: Soil is a deep fine sand underlain by caliche.
- C. Flora and Fauna: The vegetation cover is generally sparse and consists of mesquite, yucca, sandsage and native range grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, dove, quail and an occasional antelope.
- D. Ponds and Streams: There are no rivers, streams, lakes or ponds in the area.
- E. Residences and Other Structures: There are no occupied dwellings on the lease.
- F. Archaeological, Historical and Cultural Sites: None observed in the area.
- G. Land Use: Grazing and hunting in season.
- H. Surface Ownership: Wellsite is on surface owned by U.S.A. Approximately 2000 feet of the new road will be required.

12. OPERATOR'S REPRESENTATIVE:

The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

Walter P. Oliver
4835 LBJ Freeway, Suite 525
Dallas, Texas 75234

Office Phone: (214) 386-7354
Home Phone: (214) 368-8220

13. CERTIFICATION:

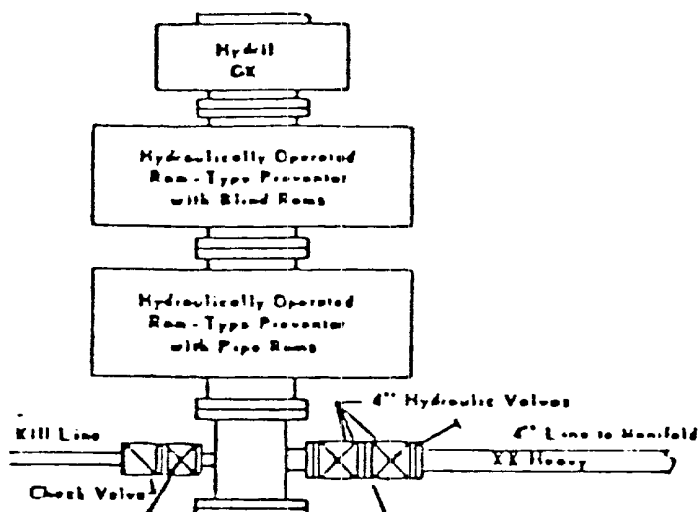
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge true and correct; and, that the work associated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

11-15-81
Date

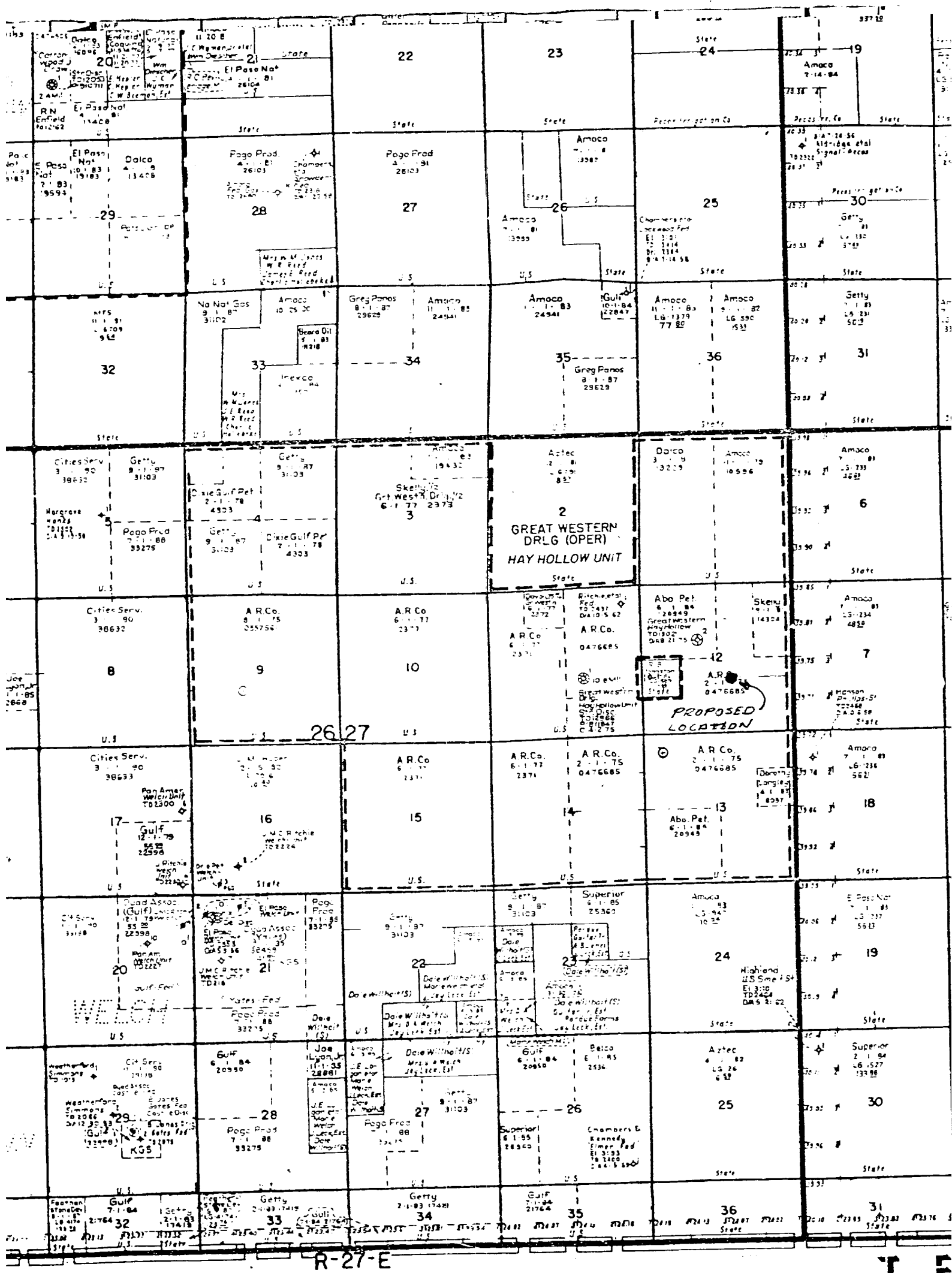
Walter P. Oliver
Walter P. Oliver
QUANAH PETROLEUM, INC.
Vice President Operations

BOP SCHEMATIC

QUANAH PETROLEUM, INC.
HAY FEDERAL "A" NO. 2
SEC. 12 - T26S - R27E
EDDY COUNTY, NEW MEXICO



All preventers are rated 3000 psi
working pressure.



C O .

EXHIBIT B

QUANAH PETROLEUM, INC.
Well No. 2 Hay Federal A
1980' FSL and 1980' FEL
Section 12, T26S-R27E
Eddy County, New Mexico

T E

QUANAH PETROLEUM, INC.

DRILLING OPERATIONS PLAN

HAY FEDERAL A WELL NO. 2

SECTION 12, T26S, R27E

1980' FSL and 1980' FEL

ELEVATION: 3171.0 G.L.

EDDY COUNTY, NEW MEXICO

1. Geologic Name of Surface: Castile

Salt	1300	Brushy Canyon	4390
Salt (Base)	1870	Bone Spring	6065
Delaware Lime	2315	Third Bone Spring	8755
Delaware Sand	2370	Wolfcamp Shale	9090
Cherry Canyon	3210		

2. Estimated Tops of Important Geologic Markers.

Salt	1300	Brushy Canyon	4390
Salt (Base)	1870	Bone Spring	6065
Delaware Lime	2315	Third Bone Spring	8755
Delaware Sand	2370	Wolfcamp Shale	9090
Cherry Canyon	3210		

3. Estimated Tops of Anticipated Water, Oil, Gas or other Mineral Bearing Formations.

Delaware Sand	2370 (oil)	Bone Spring	6065 (oil)
Cherry Canyon	3210 (oil)	Third Bone Spring Sand	8755 (oil)
Brushy Canyon	4390 (oil)	Wolfcamp Shale	9090 (oil)

4a. The Proposed Casing Program.

Hole Size	Casing O.D.	Grade	Weight	Setting Depth	New or Used
14-3/4"	11-3/4"	As available		500'	New
11"	8-5/8"	K-55	24#	2400'	New
7-7/8"	4-1/2"	K-55	11.6#	1000'	New
7-7/8"	4-1/2"	K-55	10.5#	6200'	New
7-7/8"	4-1/2"	K-55	11.6#	8500'	New

4b. Cementing Program, Including Types, Amounts and Additives.

The 11-3/4" casing will be cemented to surface with 200 sacks of Class C cement with 2% CaCl_2 - W.O.C. time, 8 hours.

The 8-5/8" casing will be cemented to surface with approximately 650 sacks of Class C cement with 4% gel, 1/4 lb/bbl. flocele and 2% CaCl_2 , tailed by 200 C with 2% CaCl_2 - W.O.C. time, 12 hours.

The 4-1/2" production casing will be cemented with 450 sacks 50/50 Poz-Mix H with 10% salt, tailed with 200 sacks Class H.

The 8 5/8" casing will be cemented to surface with approximately 650 sacks of Class "C" cement with 4% gel, 1/4 lb/bbl. floccle and 2% Ca Cl₂, tailed by 200 "C" with 2% Ca Cl₂ - W.O.C. time, 12 hours.

The 4 1/2" production casing will be cemented with 450 sacks 50/50 Pox-Mix "H" with 10% salt, tailed w/200 sx Class H.

5. B.O.P. Specifications and Testing (See attached Schematic for size and pressure rating.)

One annular BOP (Hydril) and dual ram type BOP with pipe rams and blind rams. All equipment to have a 3,000 # or better working pressure. The accumulator to close and open all components of the BOP stack without operating pump. Blind and pipe rams will be tested to 3000 psi and the annular preventer to 1500 psi before drilling out.

6. Mud Program.

Run a low solids, non-dispersed mud utilizing lime to flocculate gel.

As long as possible, mix sweeps 4-6 hours before pumping.

Utilize a desander to control weight and minimize water used and cut mud costs.

Do Not add oil, diesel, Soltex or Bentonite extenders to mud.

Do Not mix mud additives for water loss control.

Most of all, exercise prudent judgment on materials added, i.e., if you don't need it, don't add it.

For lost circulation: DO NOT pre-treat with LCM for circulation loss. In the event we do lose circulation, utilize the information available to you to decide your plan of action.

Mud weights will not exceed 10.0 ppg and will be less if water conditions will permit.

Materials planned for use in mud system are gel, caustic soda, lime and soda ash. Dick's mud seal and cottenseed hulls shall be used to control any possible lost circulation.

- 7a. Type of Drilling Tools and Auxiliary Equipment.

A drilling rate recorder, calibrated to record drilling time for each one foot interval will be used.

A kelly cock will be used, a TIW safety valve and inside BOP will be available on the rig floor. A float valve will be used at the bit.

The mud system will be monitored by use of manually placed floats and markers.

7b. Deviation Control.

Deviation will be monitored by wireline surveys, every 500' on surface hole and on bit trips thereafter. A maximum dogleg severity of $1\frac{1}{2}^{\circ}$ per hundred feet will be maintained with a maximum of 7° at total depth.

8. Sample, Logging, Testing and Coring Program.

Drill cutting samples will be taken every 10 feet from 3500' to total depth.

A guard foroxo and a density neutron log will be run from the base of the surface casing to total depth.

Drill stem tests and cores will be at the discretion of the wellsite geologist. Possible DST's may be run in the San Andres and ABO formations.

9. Anticipated Abnormal Pressure and Other Problems.

Normal pressure gradients are expected and no hydrogen sulfide or other potential hazards are expected.

10. Anticipated Starting Date and Duration.

The anticipated starting date, pending approval, will be November 1, 1981 due to rig availability. The duration will be approximately four weeks.