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NE WEXICO OIL CONSERVATION COMMISS WELL LOCATION AND ACREAGE DEDICATION FLAT

Form C-102 Supersedes C-128 Effective 1-1-65

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MULTI-POINT SURFACE USE AND OPERATIONS PLAN



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. <u>Surfacing Material</u>: Six inches of caliche, water, compacted and graded.
- C. Maximum Grade: 3 percent.
- D. Turnouts: None required.
- E. <u>Drainage Design</u>: 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 EXIST...G 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. <u>Flora and Fauna</u>: 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. <u>Ponds and Streams</u>: There are no rivers, streams, lakes or ponds in the area.
 - E. <u>Residences and Other Structures</u>: 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. <u>Surface Ownership</u>: Wellsite is on surface owned by U.S.A. Approximately 2000feet 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 subcontractors in conformity with this plan and the terms and conditions under which it is approved.

<u>// /5/6/</u> Date Walter P. Oliver

QUANAH PETROLEUM, INC. Vice President Operations

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



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EXHIBIT B

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

4a. The Proposed Casing Program.

ine riopooe				Setting	New or
Hole Size	Casing O.D.	Grade	Weight	Depth	Used
14-3/4"	11-3/4"	As ava	ilable	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% CaCl₂ - 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% CaCl₂, tailed by 200 C with 2% CaCl₂ - 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. flocele and 2% Ca Cl_2 , tailed by 200 "C" with 2% Ca Cl_2 - 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: <u>DO NOT</u> 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 $1/2^{\circ}$ 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.