# YATES PETROLEUM CORPORATION Long Arroyo WH Federal #2 660' FSL AND 660' FEL Section 11-T14S-R27E Chaves County, New Mexico

1. The estimated tops of geologic markers are as follows:

| Yates Seven Rivers Queen Grayburg San Andres Glorietta Tubb Abo | 165'<br>365'<br>855'<br>1165'<br>1465'<br>2805'<br>4225'<br>5015' | Cisco Lower Canyon Strawn Atoka Morrow Clastics Austin Cycle Chester TD | 6975'<br>7265'<br>7445'<br>7685'<br>7805'<br>7925'<br>7985'<br>8135' |
|---|---|---|--|
| Abo<br>Wolfcamp   | 5015<br>6045'   | טו  | 0133   |

2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water: 250'-350'

Oil or Gas: All Potential formations

3. Pressure Control Equipment: BOPE will be installed on the 8 5/8" casing and rated for 3000# BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventor controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventors will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.

# Auxiliary Equipment:

- A. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment, and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.
- 4. THE PROPOSED CASING AND CEMENTING PROGRAM:

| A. Casir             | ng Program: (Al | l New) |              |          |                 |               |
|----------------------|-----------------|--------|--------------|----------|-----------------|---------------|
| Hole Size            | Casing Size     | Wt./Ft | <u>Grade</u> | Coupling | <u>Interval</u> | <u>Length</u> |
| 14 3/4"              | 11 3/4"         | 42#    | H-40         | ST&C     | 0-300'          | 300'          |
| 11"                  | 8 5/8"          | 24#    | J-55         | ST&C     | 0-1500'         | 1500'         |
| 7 7/8"               | 5 ½"            | 17#    | J-55         | LT&C     | 0-100'          | 100'          |
| 7 7/8"               | 5 ½"            | 15.5#  | J-55         | LT&C     | 100'-6900'      | 6800'         |
| 7 7/8"               | 5 ½"            | 17#    | J-55         | LT&C     | 6900'-8135'     | 1235'         |
| - · · · <del>-</del> | ·               |        |              | T        | 01 4 00         |               |

- 1. Minimum Casing Design Factors: Collapse 1.125, Burst 1.0, Tensile Strength 1.80
- 2. Yates Petroleum Corporation requests that a variance be granted in requiring the casing and BOPE to be tested to 2000 PSI to testing the casing and BOPE to 1000 PSI. The rig pumps will be used to test the casing and BOPE. Rig pumps used in this area cannot safely test above 1000 PSI. We would have to go to the greater expense of hiring an independent service to do the testing. Also, the maximum shut-in bottom hole pressure is 1100 PSI. Pressure at the surface is much less. Most of the time the Abo formation requires treatment before it flows.

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#### B. CEMENTING PROGRAM:

Surface Casing:

Cement with 220 sx. Premium "C" (Yld 1.32 Wt. 14.8).

Intermediate Casing: 250 sx Interfill (Yld 2.0 Wt 13). Tail in with 200 sx Premium "C"

(Yld 1.67 Wt 13.0).

Production Casing: TOC-4500'. Cement with 600 sx Super "H" (Yld 1.67 Wt 13).

# 5. Mud Program and Auxiliary Equipment:

| <u>Interval</u> | <u>Type</u>     | <u>Weight</u> | <u>Viscosity</u> | Fluid Loss |
|-----------------|-----------------|---------------|------------------|------------|
| 0-300'          | FW/Native Mud   | 8.6-9.6       | 28-32            | N/C        |
| 300'-1500'      | Brine           | 10-10.2       | 28               | N/C        |
| 1500'-7400'     | Cut Brine       | 8.8-9.4       | 28               | N/C        |
| 4400'-TD        | Salt Gel/Starch | 9.2-9.8       | 30-38            | <10cc      |

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Mud will be checked hourly by rig personnel.

#### 6. EVALUATION PROGRAM:

Samples:

10' samples out from surface casing to TD.

Logging:

Platform Express, CNL/LDT W/NGT to TD to surface casing, w GR/CNL TD

to surface, DLL/MSFL TD to surface casing , BHC Sonic TD to surface

casing.

Coring:

None

DST's:None

# 7. Abnormal Conditions, Bottom hole pressure and potential hazards:

300"

**Anticipated BHP:** 

From: 0 To: From: 300' To:

Anticipated Max. BHP: Anticipated Max. BHP:

130 PSI 700 PSI

From:

300' To: 1500' 1500' To: TD

Anticipated Max. BHP:

4100 PSI

Abnormal Pressures Anticipated: None

Lost Circulation zones anticipated: None

H2S Zones Anticipated: None

Maximum Bottom Hole Temperature: 179 F

#### 8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 15 days to drill the well with completion taking another 15 days.

# MULTI-POINT SURFACE USE AND OPERATIONS PLAN YATES PETROLEUM CORPORATION Long Arroyo WH Federal #2 660' FSL AND 660' FEL Section 11-T14S-R27E Chaves County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

# 1. EXISTING ROADS:

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed wellsite is located approximately 9 miles east of Hagerman, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

### **DIRECTIONS:**

From the east side of Hagerman, New Mexico, go east on Aberdeen Road (Highway 249) for approx. 6.1 miles. There will be a cattleguard on the left side of the road. Turn left crossing cattleguard on an existing lease road and go northeast. At approx. 6 of a mile you will pass the Long Arroyo OD Fed. #2 well. Continue east for approx. 1.2 miles passing stock tanks on the way to an old pit on the left. The road will turn left (north). Continue north for approx. .4 of a mile. The new road will start here going to the west.

# 2. PLANNED ACCESS ROAD:

- A. The proposed new access will be approximately 400 feet in length from the point of origin to the southeast corner of the drilling pad. The road will lie in an east to west direction.
- B. The new road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion.
- C. The new road will be bladed with drainage on both sides. No traffic turnouts will be built.
- D. The route of the road is visible.
- E. Existing roads will be maintained in the same or better condition.

# LOCATION OF EXISTING WELL

- A. There is drilling activity within a one-mile radius of the wellsite.
- B. Exhibit D shows existing wells within a one-mile radius of the proposed wellsite.

# 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

- A. There are production facilities on this lease at the present time.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power. No power will be required if the well is productive of gas.

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## LOCATION AND TYPE OF WATER SUPPLY:

A. It is planned to drill the proposed well with a fresh water system. The water 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.

# 6. SOURCE OF CONSTRUCTION MATERIALS:

The dirt contractor will be responsible for finding a source of material for construction of road and pad and will obtain any permits which may be required.

# METHODS OF HANDLING WASTE DISPOSAL:

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

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

C. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.

D. Oil produced during operations will be stored in tanks until sold.

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

F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary land fill. Burial on site is not approved.

# 8. ANCILLARY FACILITIES: NONE

### WELLSITE LAYOUT:

- A. Exhibit C shows the relative location and dimensions of the well pad, the reserve pits, the location of the drilling equipment, rig orientation and access road approach.
- B. The reserve pits will be plastic lined.
- C. A 400' x 400' area has been staked and flagged.
- D. The pits will be put to the **WEST**.

#### 10. PLANS FOR RESTORATION

- 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 a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have dried and been leveled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level after they have evaporated and dried.

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11. SURFACE OWNERSHIP: Bureau of Land Management, Roswell, New Mexico.

## 12. OTHER INFORMATION:

- A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.
- B. The primary surface use is for grazing.

### 13. OPERATOR'S REPRESENTATIVE

A. Through A.P.D. Approval:

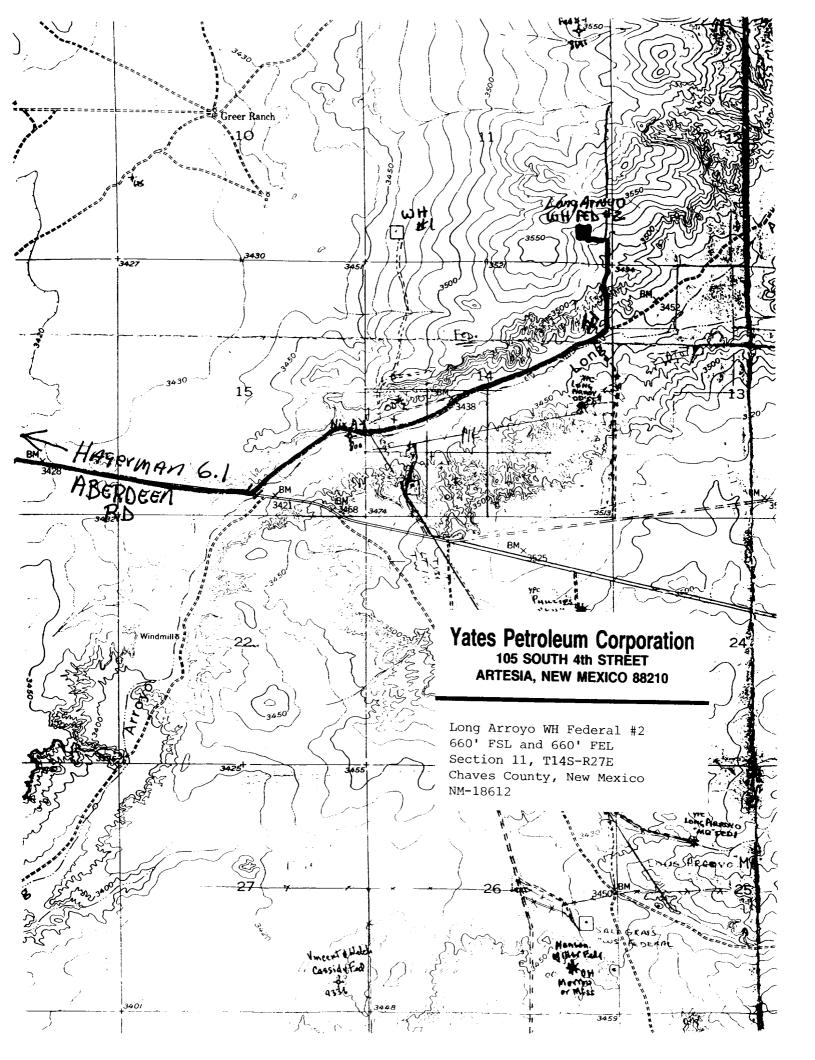
Cy Cowan, Regulatory Agent Yates Petroleum Corporation 105 South Fourth Street Artesia, New Mexico 88210 Phone (505) 748-1471 B. Through Drilling Operations, Completions and Production: Pinson McWhorter, Operations Manager Yates Petroleum Corporation 105 South Fourth Street Artesia, New Mexico 88210 Phone (505) 748-1471

### 14. CERTIFICATION:

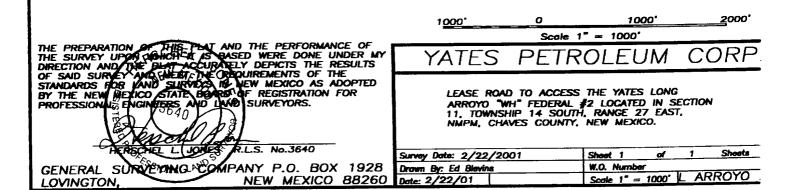
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and, that the work associated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

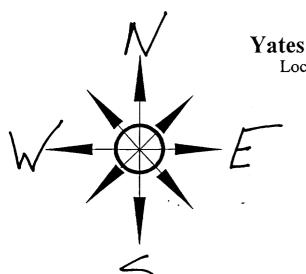
3/27/01

Regulatory Agen



SECTION 11, TOWNSHIP 14 SOUTH, RANGE 27 EAST, NMPM, CHAVES COUNTY, NEW MEXICO. 3550 YATES PETROLEUM CORP. LONG ARROYO "WH" FED.#2 660/S & 660/E 3550



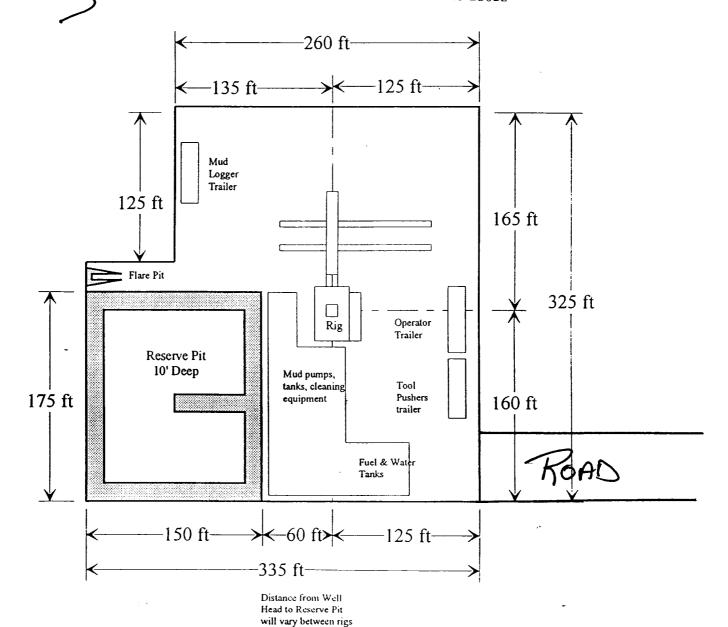


# Yates Petroleum Corporation Location Layout for Permian Basin

Up to 12,000'

# Yates Petroleum Corporation 105 SOUTH 4th STREET ARTESIA, NEW MEXICO 88210

Long Arroyo WH Federal #2 660' FSL and 660' FEL Section 11, T14S-R27E Chaves County, New Mexico NM-18612



The above dimension should be a maximum

