

SUPPLEMENTAL DRILLING DATA

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TOG Federal # 4

1. SURFACE FORMATION: Quaternary Alluvium

2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

Rustler Anhydrite	180'
Tansil	1010'
Yates	1110'
Goat Seep Reef	1360'
T/Delaware Sand series	3200'
T/Bone Springs Lime	5856'
T/First Bone Springs sand	5670'

3. ANTICIPATED POSSIBLE WATER AND HYDROCARBON BEARING ZONES:

Fresh Water	above 200'
Delaware (oil)	3350' - 5950'
Bone Springs	5950' - 6500'

4. PROPOSED CASING AND CEMENTING PROGRAM:

Casing program is shown on Form 9-331 C.

Surface and intermediate casing on this well have already been set and cement circulated. The production portion of the hole will be drilled to approximately 6000' and 5-1/2" casing will be cemented at a total depth if significant shows are encountered in the Delaware sand series.

5. PRESSURE CONTROL EQUIPMENT:

Pressure control equipment will consist of a 3000# double ram hydraulically controlled blow out preventer and a 3000# choke manifold.

6. CIRCULATING MEDIUM:

The circulating medium will be brine water below 3200' and will be used to drill out existing cement plugs.

7. AUXILARY EQUIPMENT:

Not Applicable.

8. TESTING, LOGGING AND CORING PROGRAM:

Formation testing will be made by conventional drill stem test; however none are anticipated.

It is planned that a compensated neutron-density gamma ray and gamma ray dual laterolog will be run when total depth is reached, with a backup computer analysis utilizing these logs.

No coring is planned.

9. ABNORMAL PRESSURES, TEMPERATURES OR HYDROGEN SULFIDE GAS:

None anticipated.

10. ANTICIPATED STARTING DATE:

It is planned that operations will commence on August 1, 1989, or as soon as the application is approved.