

**SUPPLEMENTAL DRILLING PLAN****J. C. WILLIAMSON****TOG Federal #1****Re-entry**

1. **SURFACE FORMATION:** Quaternary Alluvium
2. **ESTIMATED TOPS OF GEOLOGIC MARKERS:**

Rustler Anhydrite	150'
Tansil	1050'
Yates	1200'
Goat Seep Reef	1400'
T/Delaware Sand series	3100'
T/Lower Delaware	5400'
T/Bone Springs Lime	5850'
T/First Bone Springs Sand	6050'
3. **ANTICIPATED POSSIBLE WATER AND HYDROCARBON BEARING ZONES:**

Fresh Water	above 200'
Delaware Sand Oil	3350' - 6000'
4. **PROPOSED CASING AND CEMENTING PROGRAM:**

12-3/4" casing is set @ 632' w/600 ex. 8-5/8" casing is set @ 2280' w/1600 ex. 4-1/2" casing is set @ 6000' W/1325 SX. Plan to clean out cement plugs @ surface, 582', and 1450'.
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 fresh water.
7. **AUXILIARY EQUIPMENT:**

Not Applicable.
8. **TESTING, LOGGING AND CORING PROGRAM:**