

## SUPPLEMENTAL DRILLING DATA

### J.C. WILLIAMSON WELL INGRAM-GROOMS FEDERAL NO.1

1. SURFACE FORMATION: Recent

2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

Rustler	400'
T/Salt	930'
B/Salt	3300'
Delaware Mt. Grp.	3500'

3. ANTICIPATED POSSIBLE WATER AND HYDROCARBON BEARING ZONES:

Fresh Water	200'
Lower Delaware (oil)	6500'

4. PROPOSED CASING AND CEMENTING PROGRAM:

Casing program is shown on Form 9-331 C.

Hole for surface casing will be drilled to a depth below fresh water zones. 12-3/4" surface casing will be run to 400 feet, below all fresh water zones and will be circulated to the surface with 450 sacks of Class "C" cement.

8-5/8" casing will be run and cemented at 3100 feet, prior to entering Delaware section and will be cemented with 200 sacks of Class "C" cement or sufficient to raise cement into the base of the lower salt.

4-1/2" casing will be run to total depth and will be cemented with 1350 sx in 2 stages w/DV tool @ 4600'+-, all pay zones will be covered by cement.

5. PRESSURE CONTROL EQUIPMENT:

A. Wellhead Equipment - Flanged type, 3000 psi WP for 12-3/4" X 8-5/8" X 4-1/2" casing program with 2-3/8" tubing anchor.

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

6. CIRCULATING MEDIUM:

The circulating medium will be fresh water down to 350 feet and brine water in the rest of the hole, once the water saturates itself naturally with salt.

7. AUXILARY EQUIPMENT:

A. Kelly cocks: Upper installed on Kelly.

B. Full opening ball type to fit each type and size of drill pipe in use will be available on rig floor at all times. The valves will be in the open position for stabbing into drill pipe when Kelly is not in the string.