Page 2 - Drilling Program Collins & Ware Spike Federal No. 1

Cemented in two stages with 300 sacks of 7" Second Intermediate: light cement tailed in with 100 sacks of Class "C" with 1% CaCl in first stage; in second stage, cement with 300 sacks of light and 100 sacks of Class "C" with 1% CaCl to circulate.

Cement with 250 sacks of Class "C" cement 4.5" Production Casing: to tieback to 7" and protect all oil, gas and water zones.

5. PRESSURE CONTROL EQUIPMENT: Blowout prevention equipment, while drilling below surface casing will be a 3000 psi working pressure stack. The BOP sketch is shown as Exhibit 1.

€).	CIRCULATING ME Surface to 400'	: Fresh water spud mud - Viscosity 30 to 30 as
		required for hole cleaning; 8.8-9.0#/gal.
	400' to 1300'	: Brine conditioned as necessary for control of viscosity with salt gel and lost circulation ma- terial as required, 28-30 viscosity, pH 9-10,
		weight 10.0-10.1#
	1300, to 3300,	: Fresh water system Weight 8.7-10.2#, pH 9-10, viscosity 28-30.
	3200' to TD	: Drill out with existing brine system circulating reserve plt conditioned as necessary for control of viscosity(35-40), water loss(10-15), weight (9.4-10#), and pH(9-10).

Sufficient mud materials to maintain mud properties and mum tost circulation and weight increase requirements will be kept at the well site at all times.

AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT: 9.

- A. A kelly cock will be used.
- B. A full-opening stabbing valve with proper drill pipe connections will be on the rig floor at all times.
- C. The drilling fluids system will be visually monitored at all times.
- D. A mud-logging unit will monitor drilling penetration rate and hydrocarbon shows from 3000'.
- TESTING, LOGGING, AND CORING PROGRAMS:
- A. No drill stem tests are planned.
 - B. Compensated Neutron/LDT Log GR and Dual Laterolog w/ MSFL. The Gamma Ray log will be continued back to surface.
 - C. Mud-logging unit will be used below 3000'.
 - D. No cores anticipated.

8.

E. Other testing procedures may be used after the production casing has been set depending on shows and other testing indicators.