WARRIOR, INC. Federal D No. 12 2

- 6. The circulating system will consist of the rig mud pumps and mud pits. The mud system will consist of salt gel (viscosity 31-33 sec/1000 cc), starch will be added at 3850' to 3900' to lower the water loss to 10-15 cc/30 min. and viscosity at 36-37 sec/1000 cc. Mud weight will be 9.8 to 10.0#/gallon.
- 7. Auxiliary equipment will consist of the following:

A. Drill Pipe sub

- B. Full opening valve tested to 3000#
- 8. Logging program in the open hole will consist of a Sidewall Neutron, Gamma Ray-Caliper log before running 4-1/2" casing. If open hole logs will not go to total depth, then 4-1/2" casing will be run. After casing is run and cemented at total depth, a Gamma Ray, Neutron, Collar Log will be run.
- 9. No abnormal pressure, temperature or hydrogen sulfide gas is anticipated at this field development well.
- 10. Starting date is expected to be November 15, 1977 or upon approval by the U.S.G.S.. Cactus Drilling Co. of Midland, Texas, will be the drilling contractor and they anticipate a rig available during the month of November, 1977. The operation is expected to be completed in three weeks.
- 11. Cementing program:
 - Surface: Drill 12-1/4" hole to 330', run 8-5/8" 28#, K-55 used casing to 330'. Cement to surface with 250 sx. Class C plug 2% CaCl.

Production: Run 4-1/2" 10.5# K-55 new casing to 4100'.

- 1. Either cement to surface with 800 sx. Common + 12% gel + .4 HR-7 and 200 sx. Class C salt saturated cement.
- Or cement with 200 sx. Class C salt saturated cement as first stage, open DV tool to be run below the Top Anhydrite and cement second stage to surface with 200 sx. Common + 12% gel + .4 HR-7.

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GIL CO. SCIENCED COMM. HOLDS, N. M.