Application for Permit to Drill Little Box Canyon Unit No. 4

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August 15, 1977

- B. 8-5/8" OD surface casing set at 1800'. Cement with 700 sacks Halliburton Lite weight cement with 5# Gilsonite, 1/4# Flocele and 2% Calcium Chloride followed by 300 sacks Class C with 2% Calcium Chloride. If cement does not circulate, run temperature survey then run 1" in annulus and finish cementing to the surface using Class C and 2-4% Calcium Chloride in stages.
- C. 5-1/2" OD production casing set at 8270'. Cement with 1000 sacks Class H with 3/4% CFR-2 and 3# KCL per sack. Bring cement back to 5500'.
- 11. Pressure Control Equipment.

0-1800' - 12" 3000# BOP with blind and pipe rams.

1800-8270' - 10" 3000# BOP with blind and pipe rams, 10" 3000# annular type preventer, 3000# choke manifold, 80 gallon accumulator (minimum) with floor and remote operating station and auxiliary power system, upper and lower kelly cocks, inside BOP's for all size equipment in drill string. The BOP's and choke manifold will be tested to rated working pressure 3000# by an independent testing company prior to drilling out cement in the 8-5/8" casing.

> The pipe rams and Hydril will be actuated at least once each 24 hours and the blind rams each time the drill pipe is out of the hole.

> A drill string safety valve in the open position will be maintained on the rig floor at all times while drilling operations are being conducted.

> BOP drills will be conducted as necessary to insure that each drilling crew is properly trained to carry out emergency duties.

Accumulators shall maintain a pressure capacity reserve at all times to provide for repeated operation of hydraulic preventers.

A mud/gas separator will be installed after drilling out from under the 8-5/8" so it will be operable by 4800'.