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MORROW

The top of the Morrow carbonate section was picked at 9670' by drilling time (Note: There is a 60' sample gap from 9660' to 9710'.) and at 9696' by electric log. Mostly light tan, tan, and brown, fine crystalline, fossiliferous limestone was logged from this point down to the top of the M3 unit at 9970'. Oolites were scattered throughout the section from 9800' to 9970'.

The M3 unit came in as dark brown, fine crystalline, sandy, glauconitic, oolitic limestone accompanied by ten to twenty percent dark brown, fine, calcareous, glauconitic sandstone. A slight drilling break occurred from 10,016' to 10,022' and clear fine, medium, and some coarse, angular quartz sandstone and loose sand was logged in the samples. Gas readings were C₁ 350, C₂ 175, C₃ 110, and C₄ 50 units. Another fair break occurred from 10,142' to 10,148' and the samples contained clear, medium to coarse, angular, quartz sandstone and loose sand; however, there was no recordable gas.

The top of the M4 unit was picked at 10,165' by drilling time and electric log. Sand development was poor in this unit except for a basal, clear, medium to coarse, angular, loose quartz sand at 10,315' to 10,330'. A fair drilling break occurred opposite this zone but no gas was recorded.

Oolitic limestones were prevalent throughout both the M3 and M4 Units and the occurrence appears to have been at the sacrifice of sand or potential sand development.

BARNETT SHALE

Drilling was terminated 50' into the Barnett shale at 10,390' on April 4, 1974, at 2:45 PM.

The hole was conditioned for logging and Welex conducted compensated acoustic - gamma ray, guard, Forxo, and microseismogram surveys. Logging operations were completed at 6:30 AM, April 8, 1974.

After an examination of the electric logs, a decision was made to drill-stem test the Canyon zone from 7940' to 8160' (see results under Canyon heading).

Plugs were set as follows: