



CONCLUSIONS AND RECOMMENDATIONS

FLINDERS #1

36" HOLE SECTION

The 36" hole was successfully drilled using seawater and high funnel viscosity SM(X) sweeps. No mud related hole problems were encountered and the 30" casing was run and cemented at the programmed depth of 124.75 m without problems. The SM(X) at concentrations of 2 - 3 lb/bbl gave viscosities in range 80 - 100 sec/l and yield points in the range of 50 - 60 lb/100 ft². This provided excellent hole cleaning characteristics as evidenced by the fill and trouble free nature of this and 17¹/₂" hole sections. Due to the savings in transportation and handling costs and the elimination of prehydration requirements, the use of SM(X) is cost effective and efficient hole cleaning viscosifier. It is quick and easy to use. The pits can be continuously topped up with seawater and the polymer added between sweeps with small quantities required for high yields.

17¹/₂" HOLE SECTION

This section was drilled without hole problems again using a seawater and high funnel viscosity SM(X) sweeps. High viscosity Bentonite fluid was used to displace the hole prior to running casing due to its superior suspension properties.

12¹/₄" HOLE SECTION

Time delays incurred in the drilling and logging of the 12¹/₄" section resulted possibly from clay hydration and caving due to under balanced mud weight. The hole was drilled from 408 m to 1525 m with the 9⁵/₈" casing set at 1520 m, using a SEAWATER/GEL/POLYMER mud system.

Heavy dilution with seawater (13 m³/hr) was required to control solids and weight build up due to the dispersive nature of the formation and fast rates of penetration. The main affect of the solids on the fluid was the weight increase which was slowed by the dilution but not stopped. The losses noted below 565 m possibly occurred as a result of the porous nature of the formation drilled and stopped when the clay formations were drilled. They returned when the weight increased due to solids build up and later due to additions of BARITE to control the cavings.