

AMOCO AUSTRALIA PETROLEUM COMPANY
KOORKAH NO. 1

DISCUSSION BY INTERVAL

17¹/₂" Hole (Cont'd)

Mud Properties

Mud weights while drilling were maintained as low as possible and ranged from 8.8 ppg when fresh to 9.3 ppg. This was subsequently raised to 9.8 ppg prior to logging and running casing.

Plastic viscosities showed an increasing trend, despite continuous use of all solids control equipment, as fine solids build-up occurred. Yield points were kept high enough to ensure adequate hole cleaning. Typical PV/YP ranges were 8-17 / 10-20.

Filtration control was obtained through the use of DEXTRID initially, but as drilling of dispersive gumbo clays proceeded, filtrate control was supplemented through a higher MBT content and Q-BROXIN. API filtrate loss values ranged from 4.2 to 10.7 cc /30 min.

Mud solids were kept at an acceptable average of 5-7% at low mud weights as a result of the efficient solids control system. A mud dilution rate as calculated on the material recap of 1.71 bbl/ft gives an acceptable but artificially high figure, as this also includes pills and weighted mud displaced into the hole after reaching 5246 ft. A dilution rate of 1.48 bbl/ft is correct for this section while actual drilling was in progress.

The clay content was maintained at 25-27.5 ppb. The fact that the clay content did not become any higher, despite the presence of significant amounts of gumbo, is further proof of the value of the improved solids control equipment layout.

Slight carbonate contamination was inferred below 5,000 feet. This was corrected with small additions of Lime to the system. Carbonate contamination was also evident in Yolla No. 1 and Tilana No. 1.