

AMOCO AUSTRALIA PETROLEUM COMPANY
PELICAN NO. 5

DISCUSSION BY INTERVAL

12¹/₄" HOLE INTERVAL (Cont'd)

Solids Control Equipment (Cont'd)

There is however, one weak link in the closed loop solids control system and that is the shakers. The maximum screen sizes used over this section were only 60 x 60 and that was only on one shaker, the other required 40 x 40 mesh screens to enable it to handle the mud flow rate. For this system to be used at its maximum efficiency, shakers should be used that would allow 100 x 100 mesh screens to be used through this section.

Mud Properties

For this section a Freshwater-AQUAGEL-Polymer mud system was used comprising of mud salvaged from the 17¹/₂" Section and new pre-mix mud. Immediately drilling commenced, the mud was broken over to a low-Lime system in expectation of CO₂ contamination which had been experienced on most other wells drilled in the area.

The mud weight was increased slowly over the section (9000 - 9850 ft) (2743 - 3002 m) until it was 9.9 ppg at 9850 ft (3002 m). This was done due to the necessity of having to ream large sections of the hole after coring. It was attributed to bridges associated with coal beds and some swelling of the shales.

Carbonate contamination continued to be noticed throughout the section. As previously mentioned, the mud system was converted to low-Lime. This controlled the problem through the majority of the section, however, by the time drilling reach 9000 ft (2743 m), the mud properties were becoming increasingly difficult to control and it was necessary to add large amount of deflocculants such as DFLC and TERMATHIN to maintain reasonable rheology. The mud circulated out of the hole after logging was completed, was heavily contaminated and in future it may be necessary to increase the Lime concentration to 4 - 6 ppb to counteract this problem.