

AMOCO AUSTRALIA PETROLEUM COMPANY
PELICAN NO. 5

DISCUSSION BY INTERVAL

17¹/₂" HOLE INTERVAL (Cont'd)

Conclusions (Cont'd)

The casing difficulties can be attributed to initially having a higher than desirable filtrate - due to heavy dilution and flocculation by chloride ions and carbon dioxide contamination. The high filtrate, although within specifications, in combination with the porous calcarenites below 2000 ft (610 m), allowed the formation of a thicker than desirable filter cake.

Conditions for differential sticking were ideal when the weight was raised to 10.0 ppg. During running casing, the casing became differentially stuck, but was fortunately freed by rotation. As the mud weight was reduced, in combination with lower filtrate values, the casing was successfully run.

For future wells, the mud weight should be kept below 9.5 ppg if possible. The filtrate values should be kept low and preferably below 10 cc's. Lime additions should begin below 2000 feet (610 m) and be maintained until casing point is reached. The pH of the mud should be maintained above 11.0.

Good solids control practices are emphasized.

12¹/₄" HOLE INTERVAL

General

After cementing the 13³/₈" casing, the hole was displaced with Seawater and this was used to drill out the float collar and shoe. At the shoe, the hole was displaced with 9.3 ppg mud salvaged from the previous section. After washing to bottom and drilling 5 ft (1.5 m) of new formation, a leak-off test was performed and yielded a formation fracture pressure of 14.7 ppg EMW.

Carbonate contamination was suspected from approximately 6000 ft (1830 m) onwards. Lime additions were begun to counteract this problem.