

AMOCO AUSTRALIA PETROLEUM COMPANY
PELICAN NO. 5

DISCUSSION BY INTERVAL

17¹/₂" HOLE INTERVAL (Cont'd)

Solids Control Equipment (Cont'd)

Difficulties in running the 13³/₈" may be partially attributable to mud properties. The water loss of 12 - 17.5 cc/30 min would probably cause the formation of a thicker than desirable filter cake opposite the porous calcarenites below 2600 ft (792.4m). This in combination with an excessive mud weight would produce ideal conditions for differential sticking. When the filtrate was reduced to 6 and the weight lowered to 9.3 ppg, the casing was run without difficulty.

In retrospect, a water loss of less than 10 cc/30 min., a lower mud weight and Lime additions would probably ensure better hole conditions initially.

Recommended mud properties are compared against actual mud properties below:-

| <u>Mud Properties</u> | <u>Programmed</u> | <u>Achieved</u> |
|---------------------------------------|-------------------|-------------------|
| Density (ppg) | 8.9 - 9.2 | 9.0+ - 10.0 - 9.3 |
| Funnel Viscosity (sec/qt) | Not Specified | 39 - 72 |
| Yield Point (lb/100 ft ²) | 8 - 20 | 11 - 40 |
| 10 Sec Gel (" " ") | 6 - 15 | 2 - 18 |
| 10 Min Gel (" " ") | 15 - 20 | 8 - 40 |
| API Fluid Loss (cc/30 min) | 20 or Less | 6.2 - 17.5 |
| MBT (ppb reactive clay) | 20 - 30 | 19 - 33 |
| pH | 10.5 - 11.0 | 9.8 - 11.8 |

Conclusions

The Seawater-Bentonite-Starch system as selected for this hole phase is probably the right choice, despite the difficulties experienced during running casing.