AMOCO AUSTRALIA PETROLEUM COMPANY
PELICAN NO. 5

CONCLUSIONS AND RECOMMENDATIONS

High Bottom Hole Temperatures (Cont'd)

Thermal degradation of mud products is accelerated by the presence of dissolved oxygen and at low pH. A high pH above 11.5 was maintained at all times. This had the added effect of minimising the effects of carbonate contamination from CO_2 and served to neutralise the effects of other acid gases generated as a result of the thermal decomposition of mud additives. Freshwater and THERMATHIN were added often to prevent the dehydration and flocculation of Bentonite clay under the severe temperatures. This approach was highly successful.

Carbonate Contamination

As with all Amoco's Bass Basin wells, carbonate contamination from CO_2 was a continual problem. This carbonate contamination combined with elevated temperatures made mud control very difficult.

The carbonate contamination was treated out by maintaining a pH above 11.5 and continually adding Lime to precipitate out the CO_2 as $CaCo_3$. In all phases below the $13^3/8$" casing, the mud was run as a Low Lime system.

Coal Seams

As with other Bass Basin wells, coal seams in the Eastern View Coal Measures washed out, resulting in unstable ledges of siltstones and shale on either side of the seam. This borehole instability resulted in tight hole and necessitated some reaming to clean out the ledges.

This problem was partly counteracted by the use of Gilsonite to slow down the entry of water into these fractured formations. However the only method available to control severe caving/instability was to increase the mud weight as necessary.