AMOCO AUSTRALIA PETROLEUM COMPANY
PELICAN NO. 5

DISCUSSION BY INTERVAL

8 1/2" HOLE INTERVAL (Cont'd)

General (Cont'd)

Drilling continued to 10,765 ft (3281 m) when after a drilling break, maximum gas levels rose to 1250 units. The mud weight was raised to 11.7 ppg, prior to tripping for a new bit. No fill was found on bottom after the trip. While driling ahead, the weight was raised to 11.8 ppg at 10,779 ft (3285 m), after further gas readings of 415 units.

Gas readings of 1210 units at 11,123 ft (3390 m), caused the mud weight to be cut to 10.4 ppg at the flowline. The mud weight was increased to 12.0 ppg. Lime and Caustic additions continued to neutralise continual CO_2 influxes. By 11,500 ft (3505 m), the mud weight had been increased to 13.0 ppg on the strength of continual high background gas and connection gas. Before tripping at 11,493 ft (3503 m), 20 gallons of THEMATHIN/mud mixture were spotted over the open hole. Mud viscosity of 90 seconds was less than the previous trip. Trip gas was 416 units.

Drilling proceeded to 11,966 ft (3647 m). Background gas levels while drilling reach 1000 units. The mud weight was progressively raised to 14.4 ppg, where the background gas was still 50 units. Obvious CO_2 contamination of the mud was associated with gas peaks.

Wireline logs were run at 11,966 ft (3647 m) without problems. A wiper trip was made after 20 hours out of the hole. Bottoms-up gas was 270 units. The mud weight was raised to 14.8 ppg. After the wiper trip, 400 bbls of heavily CO_2 contaminated mud were circulated out of the hole. The Pf had dropped from 2.6 - 1.0, the Mf from 4.6 - 2.0, the pH from 12.2 - 10.5 and the filtrate had increased from 5.6 - 8.2. Rheology was unmeasurable. 116 bbls of this contaminated mud were dumped, and the remainder of the 400 bbls were treated with Lime, Caustic Soda and Q-BROXIN. Despite the severe flocculation the contaminated mud responded well to chemical treatment.

From temperature data taken during logging, a static B.H.T. of 323^{O}F at 11,966 ft (3647 m) was inferred. RFT readings showed the formation pressure to be within 50 psi of balance with 14.8 ppg mud in the lower zones.