

C. Formation Pore Pressure

Refer to Appendix C (i - iv).

During the drilling of Tilana No.1, penetration rate, drilling exponent, flow-line temperature, gas and hole behaviour were continuously monitored and plotted so that abnormal pore pressure could be detected and evaluated. Wireline data, consisting of sonic, resistivity and density values, were also incorporated in this evaluation.

In the 12.25" pilot hole section, no abnormal pore pressure indicators were visible. The Dxc varied with lithology, and no trend was visible in the generally under-compacted and immature upper claystones. All hole problems were related to the nature of these clays rather than abnormal pressure. No trends were visible from temperature data due to the constant addition to, and dilution of, the mud system in use. No connection gas, and only relatively low trip gas, was recorded in this section which was drilled with a mud density of 9.2 ppg or less.

No abnormal pore pressure indicators were noted in the 12.25" hole section from 1662 - 3900.3m (5452 - 12796') except for the interval 3530 - 3570m (11581 - 11713'). In this interval connection gases from 16 - 44u, a background gas increase from 4u to over 25u and a slight increase in the amount of splintery cavings and a moderate increase in the amount of coal cavings were noted. The estimated formation pressure was 9.3 - 9.4 ppg EMD, the mud density used over the interval was 9.6 ppg. The pore pressure returned to the estimated normal value of 8.7 ppg below 3570m (11713'). The section was drilled with a mud density which was dominantly in the range 9.3 - 9.7 ppg.