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BOMBAY 'PALAEOHIGH' - THE CAUSE OF AN OIL FIELD

Ву

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ABSTRACT

The Bombay High, an oil-bearing structure in the Arabian Sea, is situated in the offshore extension of the Tertiary Cambay Basin. It is a doubly plunging anticline with a northwestern trend, bound to the east by a major synsedimentary fault parallel to the Dharwarian grain. This grain is reflected by the structural elements in Deccan trap lava flows, which form the basement of the basin. Palaeostructural analysis indicates that the eastern flank fault was active and quiescent at different geological ages. These movements are reflected in the stratigraphic section over the structure.

Seismic data over the structure show increasing thickness of sedimentary section on the flanks with a rapid increase to the east, across the synsedimentary fault. The wells drilled on the crest and on the flanks of the structure support the above. Late Eocene and Early Oligocene fauna, noted in a well on another structure to the east of the fault, are absent on the crest of the structure. The lithostratigraphy of the early Tertiary section on the structure and in the deeper part of the basin points out the difference in the environment of deposition.

All evidence suggests that a palaeogeomorphic 'high' is the cause of the Bombay High structure. The early formation of the structure favoured the accumulation of oil in suitable reservoir rocks.