

SPONTANEOUS POTENTIAL (SP) – A CLUE TO IDENTIFY OVER PRESSURE ZONES IN OLIGOCENE SANDS OF TAPTI- DAMAN BLOCK, BOMBAY OFFSHORE BASIN, INDIA ---A CASE STUDY.

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Abstract : *Tapti – Daman block of Bombay Offshore Basin is fairly explored and located south- west of Ankleshwar field. The hydrocarbon in this block mainly occurs in the sandstone reservoirs of Mahuva and Daman Formations of Oligocene age. The sands are fine to medium grained, moderate to well sorted with low formation water salinity of 4-6 gm/ litre. These sands have complex geometry and have been deposited in a delta system which is influenced by tidal effects.*

SP reversal anomaly is observed in a number of wells near the boundary of Late Eocene to Early Oligocene. SP recorded is positive in the upper sand and negative in the lower sand. This difference in anomaly has been explained due to change in electrofiltration potential component that occurs between layers having different permeability. The SP reversal anomaly is due to the over pressure encountered in the zones below these sands. It is not due to the change in formation water salinity or change in mud parameters.

These signatures of SP anomaly can be taken as a positive indication for prediction of high pressure zone down below.

Key Words: *SP reversal, SP log, Tapti- Daman block, Bombay Offshore basin.*

Note: *The views expressed in the paper are of the authors only and do not to the organization to which they belong.*
