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Hydrocarbon Resource Assessment of Sedimentary Basins of India with special reference to Cambay Basin

Assessment of hydrocarbon resources and exploration scenario planning in different basins / sectors/ blocks is a prerequisite for any prioritization of available / likely to be available acreages and investment forecasting to assess the right opportunity at the right time and to avoid consequences of opportunity loss. The objective of the present study is to carry out assessment of present, yet to find and ultimate hydrocarbon resource potential of Cambay basin, covering exploration acreages held by ONGC and other companies. Hydrocarbon resources have been assessed using Monte Carlo simulation technique in different tectonic blocks for prospective sequences Paleocene (including fractured Deccan Trap), Early Eocene, Middle to Late Eocene, Early Oligocene and Miocene identified by sequence stratigraphic studies. Although the degree of conversion of hydrocarbon resources to inplace hydrocarbons is quite high in a mature basin like Cambay, this study observes an increase in the hydrocarbon potential of the basin compared to earlier assessments, with redistribution of resources within different sequences and tectonic blocks. The hydrocarbon potential (inplace) of the basin has also been estimated using parabolic fractal analysis, which shows the yet to find hydrocarbon potential to be distributed in about 78 yet to be discovered fields of sizes more than 0.1 MMtOE, including 2 fields of sizes more than 100 MMtOE and 5 fields between 50 and 100 MMtOE.