

Facies Analysis of Early Miocene Bombay Formation in Panna-Bassein-Heera Area, Mumbai Offshore Basin

Jitendriya Mishra, Gajraj Singh, Rama Paul, B. K. Rath, and R. K. Phukan

ONGC, KDMIPE, Dehradun, India

[*mishra_j1@ongc.co.in*](mailto:mishra_j1@ongc.co.in)

The Early Miocene carbonates are known to be the one of the important reservoirs in Mumbai Offshore Basin particularly in the Mumbai-High platform area. However, in the Heera-Panna-Bassein area to the east of Mumbai High, there is a significant facies variation within the Miocene sequences observed in the drilled wells. The Early Miocene Bombay Formation, in particular, shows facies variation from carbonates to alternations of clastics-carbonates to clastic facies in this area, which has created velocity anomalies resulting in pseudo-structures at lower levels of Middle-Late Eocene.

The present analysis attempts to bring out the facies distribution and the depositional setting of the Early Miocene Bombay Formation in the Heera-Panna-Bassein area to the east of Mumbai High. Integrated analysis of well data, electrologs, laboratory data including sedimentological and biostratigraphic inputs and 3D seismic data has been carried out to understand the facies variation and depositional framework.