

## **HYDROCARBON POTENTIAL OF THE LATE MIOCENE-PLIOCENE LOWSTAND SEDIMENTS OF THE NE JAVA BASIN, INDONESIA**

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Sequence stratigraphic analysis of the Late Miocene-Pliocene succession of the NE Java Basin reveals that the sediments deposition were predominantly controlled by a major sea level drop event which resulted in the deposition of the lowstand sediments along the transition zone of the Rembang Platform-Randublatung Slope Basin. Two main reservoir intervals are identified within the Late Miocene-Pliocene lowstand sediments: incised valley fill sediments equivalent to the Ledok Formation and sandy contourite facies of the Globigerinid sand of the Selorejo Formation. The N-S orientation Late Miocene-Pliocene incised valley is bounded by type-1 sequence boundary with more or less 10-25 km width and 25-75 km long. Two main phases of sediments filling can be recognized: the early phase of the sea level drop was typified by lowstand clastic deposition, and subsequently was followed by transgressive clastic deposition. The Globigerinid sand is 20-50 m thick, elongate or mound of porous sediments of the contourite deposits which are distributed along the E-W trending Randublatung Slope Basin. Subsequent thick marine shales/marls deposition can be acted as an effective seal. Furthermore, the Plio-Pleistocene inversion event and the occurrence of stratigraphic traps; such as sub/supra unconformities, pinc-out, and channeling can be performed as efficient hydrocarbon traps for those clastic lowstand reservoirs in this region.