CONFERENCE ABSTRACTS

TECHNICAL SESSION 2: ADVANCEMENT IN GEOPHYSICS & REMOTE SENSING

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Satellite-derived facies map as a holistic approach for facies mapping in Holocene Kepulauan Seribu complexes, north-west Java Basin, Indonesia

SHAFIQAH AMIR*, HAYLAY TSEGAB

Department of Geoscience, Universiti Teknologi PETRONAS,
32610 Bandar Seri Iskandar, Perak, Malaysia
* Corresponding author email address: shafiqah_19000176@utp.edu.my

Abstract: The analogue study between Holocene carbonate and ancient counterpart is not odd in studying the relationship of architectural complex and heterogeneity features of carbonate components. Holocene carbonate platforms are valuable for describing facies distribution and facies heterogeneity. Analogue study assists exploration geologists to predict facies distribution, volume, and reservoir quality. This could enhance the opportunities for more detailed and accurate environmental facies mapping for Holocene carbonate platforms such as Kepulauan Seribu modern reef complexes located in Java Basin Indonesia. In this study, satellite images acquired through open access sources; OpenStreet map and Aerial Bing. Satellite data was processed using single band images (blue, green, and red bands, which is sensitive to radiation in a narrow band of visible light). The carbonate platform features analyzed on the satellite image of the study area are classified into three main facies namely reef sand apron, subtidal reefal margin, and shallower subtidal lagoon through supervised classification technique intended for generating environmental facies map.

Keywords: Holocene carbonate, remote sensing, geomorphological features

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