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POSTER PRESENTATION

Provenance and Significance of Neogene Sediments from Offshore NW Borneo, Malaysia

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This study focuses on the provenance of the Neogene clastic sediments in offshore Sabah, NW Borneo, particularly in the offshore Sabah fold and thrust belt, with thick Neogene sediments, which is a major hydrocarbon province. There have been a few previous studies concerned with sediment provenance and geochronology in NW Borneo, but all of them have been performed on land. There have been no studies of the provenance of offshore sandstones and this is the first study utilising sediments from offshore Sabah. The primary aim is to determine the sources of the Neogene clastic sediments supplied to this area and to link offshore to onshore geology. This will provide a clearer indication of the temporal and spatial changes in provenance of sands offshore and subsequently help understand tectonic influences on the distribution of these sediments.

Previous provenance studies of the sediments of onshore Sarawak and Sabah have suggested sources include nearby Borneo and Sundaland. The initial results from this research suggest similar interpretations. Heavy minerals indicate contributions from ophiolites and granitic rocks. The age populations of the detrital zircons indicate SW Borneo and Peninsula Malaysia as potential sources for some of the NW Borneo offshore sediments but sources for some zircon age groups have not yet been identified. Further analyses are in progress to build a more robust provenance database for the offshore sediments in NW Borneo.