

Sachsenhofer, Reinhard F.¹; Fikri, Hafidz Noor²; Horsfield, Brian³; Mahlstedt, Nicolaj³

From peat facies to oil quality: Investigations in the Barito Basin (Indonesia)

¹Montanuniversität Leoben, Österreich;

²Universitas Lambung Mangkurat, Indonesia;

³Geos4, Deutschland;

reinhard.sachsenhofer@unileoben.ac.at

The Barito Basin in southern Borneo (Kalimantan; Indonesia) is a small oil-producing hydrocarbon province, but hosts major Eocene and Miocene coal deposits. Two oil families are present in the Barito Basin. High wax paraffinic oil (“Tanjung oil family”) is produced mainly from Eocene reservoirs, while a paraffinic-naphthenic-aromatic mixed oil with moderately high wax content (“Warukin oil family”) occurs dominantly in Miocene reservoirs. Detailed petrographic and organic geochemical investigations (maceral analysis, Rock-Eval pyrolysis, MSSV pyrolysis, biomarkers, pyrolysis-GC) have been applied to relate the Tanjung and Warukin oil families to Eocene and Miocene coal deposits, respectively. A clear relation between peat facies (e.g., presence or absence of specific resin-producing plants in Eocene rheotrophic and Miocene ombrotrophic mires) and oil composition has been recognized. Apart from the local aspect, this study therefore contributes significantly to the understanding of petroleum systems with coal-derived oil deposits.

Session: *Pangeo workshop: Mineral Raw Materials, and Energy Transition*

Keywords: *Kohle, Erdöl, Torffazies, Borneo*