# Unlocking Alluvial Facies Potential in Northern Part of South Sumatra Basin

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## ABSTRACT

Lower Talang Akar Formation (LTAF) is the most productive reservoir for oil and gas in South Sumatra Basin (SSB). Most of productive zones is fluvio-deltaic reservoir from either braided, meandering and deltaic facies. Yet, rarely been published, that productive zone come from alluvial facies. In Jabung Block, LTAF developed in multiple facies from alluvial, fluvial to deltaic, given different reservoir characterization, production and reservoir management.

The alluvial facies reservoir identification in Jabung Block is marked high radioactive gamma ray which somewhat difficult to distinguish between reservoir and non-reservoir zones. Alluvial facies dominated by conglomeratic reservoir with high radioactive content, whereas the total Gamma observed over 300 deg API, consist of high Thorium and Uranium content over 30 ppm and 10 ppm respectively.

Petrographic and biostratigraphic analysis has been conducted to determine mineral composition, reservoir characterization, and depositional environments of the alluvial facies. They are dominated by feldspar, mica, and quartz. Grains are poorly sorted, either conglomeratic or breccia. Seismic attribute and mapping show the alluvial fan reservoirs are associated with paleohigh area.