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**Depositional/Stratigraphic Model for Deepwater Discoveries in the Kutei Basin, East Kalimantan, Indonesia**

The Pleistocene in the northern Kutei Basin was studied with 3D seismic data to formulate depositional models for deepwater exploration. Pleistocene systems demonstrate relationships between lowstand deltas, slope channels, and basin-floor fans. Deep-water strata extend from clinofolds of lowstand deltas that prograded over the shelf edge and fed channel-levee complexes on the slope which, in turn, fed fans on the basin floor.

The modern slope in the northern Kutei Basin contains many relatively straight canyons; however most of those canyons have not carried any sand to the basin. Those canyons formed initially by slumping, and increased relief by deposition of hemipelagic mud on their margins. One canyon captured sediment from a 270 ka lowstand delta and carried the sediment to a basin-floor fan. That canyon has a lower, high-amplitude fill inferred to be sand-rich, and an upper, low-amplitude channel-levee complex inferred to be shale-rich. The channel-levee complex has a sinuous morphology.

A Pleistocene basin-floor fan formed at the toe-of-slope in ~2000 m of water. The fan is ~20 km wide, 100-300 m thick, and has two stratigraphic parts. The lower part has high-amplitude, continuous reflectors, interpreted as relatively continuous, sand-rich layers. The upper part is a channel-levee complex that aggraded and prograded over the lower fan, and fed high-amplitude continuous layers at its mouth. This fan demonstrates sheet-like lobes succeeded by channel-levees which prograded further basinward. Large oil and gas fields have been discovered in analogous channel-levee systems and basin-floor fans in the Pliocene and Miocene of the Kutei Basin.