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T.A. McGilvery and Daniel L. Cook, Phillips Petroleum Company, Bartlesville, OK

**Sediment Dispersal Patterns, Gradients, and Accommodation Space Across a Stepped Slope Profile, Offshore Brunei**

A 10,000 km<sup>2</sup> 3-D seismic survey on the modern slope offshore Brunei provides an outstanding opportunity to document the relationships between syndepositional structure, slope accommodation space, and sediment dispersal systems. The bathymetric profile is best described as a "stepped slope" characterized by elongate, structurally controlled mini-basins in contrast to the elliptical salt withdrawal "intraslope" basins of the Gulf of Mexico. Progressive basinward thrusting, driven by updip sediment loading of the Baram delta, has divided the area into alternating thrust-cored structures and elongate mini-basins 2-10 km in width and 20-60 km in length. The dominant class of accommodation space in this setting is healing phase and bypass phase slope accommodation space with a subordinate amount of truly ponded accommodation space. The primary control on net deposition vs. bypass is local, structurally controlled changes in sea floor gradient. Calculated gradients along sediment dispersal pathways range from 1.930 to 0.380. Local gradients along the basinward margins of thrust structures and along submarine canyon walls are substantially higher (>9.00). Sediment dispersal pathways are quite tortuous across the irregular bathymetric relief. A single flow path can extend for >60km and encounter a variety of depositional elements along its length. These elements include: 1) local cohesive slump complexes up to regional debris field/mass transport complexes, 2) submarine canyons up to composite, subregional submarine "erosional unconformities", 3) sediment dispersal fairways and slope channel systems which include straight erosional channels and sinuous leveed channels, and 4) distributary channel/lobe complexes.