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**Deep Marine Sedimentation Adjacent to a Submarine Fault Scarp: An Example from the Hammam Faraun Fault Block, Suez Rift, Egypt**

The deep water, Miocene Rudeis Formation of the Hammam Faraun fault block, Suez Rift Egypt is deposited in the hangingwall to a major rift border fault zone. We document the sedimentary evolution of the Rudeis Formation 'rift climax' deposits to illustrate i) the temporal and spatial development of deep water 'rift climax' sequences in response to the development of the Thal fault zone, and ii) the influence of other factors controlling distribution of coarse clastics and their stratigraphic evolution.

The Rudeis Formation is characterised by basinal, mudstone-dominated depositional environments, with locally restricted coarse-grained units. Antecedent sediment transport pathways controlled the location of these coarse-grained units in the centre of the Sarbut El Gamal segment of the Thal fault. These deposits are discontinuous along strike and comprise of megabreccias, channelised and lobate submarine mass flows and major syn-sedimentary slides, which pass rapidly into sheet-like interbedded basinal mudstones and turbiditic sandstones within <500 m of the fault zone. The temporal evolution of the deep marine sedimentation was influenced by the unroofing history of the footwall. In particular the erosion of the mudstone dominated pre-rift units (e.g. Esna Shale) led to the switching off of major fan bodies. Several major stratal surfaces can however be identified basin-wide and are approximately contemporaneous (within biostratigraphic resolution) and are believed to be the result of relative base-level changes operating at a larger scale than the individual fault segments e.g. the T20 surface which represents a major basin-wide influx of coarse clastics.