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Signatures Of Himalayan Orogeny On Ganga - Brahmputra Delta Complex : A sequence stratigraphic approach for Hydrocarbon exploration

The Orogenic processes accompanied by closure of Oceans and suturing of continents have their imprints on sediment dispersal pattern and chemistry. The Composition and texture of fluvial detritus depends on geology and geomorphology of provenance, climatic influence to which the detritus was subjected before final burial.The Ganges-Brahmputra delta complex is one of the worlds largest sedimentary accumulation owing its origin to the breakup of Gondwanaland along incipient sutures.The sediments has imprints of various tectonic episodes which Indian plate has gone through on its subsequent journey from near south pole upto collision with Eurasian plate. Sediments derived from rising Himalaya are transported across the Indian plate and deposited as Ganges-Brahmputra delta complex.Each tectonic pulse has given a surge of coarser clastics followed by a lull in form of finer clastics. This episodic nature is very well depicted by Sequence stratigraphic studies done in Himalayas and their extension down to resulting delta system.The coarser clastics are a candidate for good reservoir while finer clstics acts as a cap rock for entrapment of Hydrocarbons. World wide large no. of delta systems are proved to be hydrocarbon bearing, in comparison Ganges Brahmputra Delta system is very little explored. Authors in their present study have brought out Spatio-temporal distribution of likely Source-Reservoir-cap rock and tried to delimit the focal points for exploration in this hitherto less explored though Largest Delta System.