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PALAEOGENE LARGER FORAMINIFERAL CORRELATION OF ASSAM-SHILLONG SHELF-AN EXAMPLE OF HIGH RESOLUTION BIOSTRATIGRAPHY

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ABSTRACT

The Assam–Arakan Basin covering north-eastern India and the adjoining areas is one of the hydrocarbon producing sedimentary basins with great thickness of the Cenozoic sediments. The lower Palaeogene shelf carbonate and intermittent clastic facies over the Assam-Arakan shelf signifies marine sedimentation of the Tethyan realm. Recent oil finds in the pre-Barail sediments in Assam has pointed to the enhanced stratigraphic exploration of the pre-Barail sediments in future by bringing in new concepts and high impact biostratigraphic tools, being developed world over. One such scheme followed have is that of shallow benthic zones [SBZ] proposed by Serra-kiel *et al.* (1998). This biostratigraphic zonation comprises twenty zones covering the Palaeocene-Eocene time span (32 M.A) and represents faunal assemblages of both concurrent and mutually exclusive species from the key-levels and key-localities. The SB zones are largely "Oppel zones" with key foraminifera along with the association of other taxa spread over vast areas in the Tethyan region.

Twenty three wells spread over the Assam-Arakan shelf were analyzed to propose a framework of biostratigraphic correlation on the lines of IGCP-286 scheme. Several other wells were also studied for supportive micropalaeontological data. Indian equivalent species for each SBZ have been worked out. They include both the Tethyan key foraminifera and concurrent shallow larger benthic species acting as the local reference. Recognition of Indian equivalent species to the European and far-Tethyan taxa is primarily aimed to make the SBZ scheme directly useful to the biostratigraphic correlations in our sedimentary basins. These of local bio-events in chronostratigraphic mapping is expected to provide robust framework to the sequence stratigraphic models in the area. Integration of SBZ data with other geological information would also be immensely useful in the stratigraphic exploration.

Keywords: Larger foraminifera, shallow benthic zones [SBZ], Paleogene, Assam-Arakan shelf. The views expressed in the paper are of authors only and may not necessarily be of the organization to which they belong.