Sedimentary Facies and Penecontemporaneous Deformation Features in Andaman Flysch at South Point, South Andaman Island and their Implications for Depositional Environment.

Sandip K. Roy and Santanu Banerjee
Department of Earth Sciences, IIT, Bombay
09406803@iitb.ac.in

The Andaman island arc, a part of the Burma Java subduction complex, comprises marine sequences ranging from Late Cretaceous to Recent. These rocks are exposed in the Andaman Nicobar Island chain which is an uplifted subduction complex. Within these exposures, a Palaeogene siliciclastic marine sequence, the Andaman Flysch, has drawn attention of Petroleum Geologists and sedimentologists as a good reservoir section for hydrocarbon exploration and because of their intriguing nature of deposition. The sediments of the Andaman Flysch has been studied bed by bed for their sedimentary structures and described in detail at South point section in South Andaman Islands. The sedimentary structures along with sedimentary facies and geometry, points out deposition in a deep water realm .The ramifications of realising the facies and depositional system of the flysch lies in predicting reservoirs in the Forearc section for hydrocarbon exploration. Seven sedimentary facies have been recognised in the south point section viz, massive sandstone, sandstone with clasts, contorted sandstone, plane laminated sand shale intercalations, ripple laminated sand shale intercalations, contorted sand shale and contorted shale. Associated sedimentary structures like planar laminae ripple and cross laminae, contorted beds, flame structures, flute marks, prod and groove marks, burrows have aided in identifying gravity flow processes, particularly debris flows in greater part of the section. Athough cyclicity in form of fining upwards cycles of sand to shale have been observed, yet vertical stacking of clear sand rich and mud rich intervals reveal a channel and levee system for the Andaman flysch at South Point, South Andamans.