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STRATIGRAPHY AND PETROLOGY OF TIPAM SANDSTONE IN BANGLADESH

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ABSTRACT

Five stratigraphic sections of Tipam Sandstone were measured in Sylhet, Chittagong and Chittagong Hill Tracts. Systematic samples were collected from these sections. Tipam Sandstone has been divided into three members on the basis of lithology. They are (1) Lower sandstone member, (2) Middle shale-siltstone member and (3) Upper sandstone member.

Mineralogical and Textural analysis of sandstone samples were carried out.

The sandstone is arkose, containing 42.5 to 70.5 per cent quartz, 27 to 55 per cent alkali feldspar, 0 to 4.5 per cent quartzite and 0 to 3 per cent rock fragments. Heavey minerals form 0.22 to 3.92 per cent of the 60 mesh fraction and are magnetite, phologopite, biotite, muscovile, chlorite, amphibole, staurolite, garnet, kyanite, tourmaline, monazite, zircon, epidote, sphene and rutile.

On an average the sandstone is fine grained and is moderately to poorly sorted.

Lithological and textural characteristics suggest that the sediments were deposited in fluviatile environment.

Mineralogy indicates that the source rocks were predominantly metamorphic, and the source area was rapidly uplifted during the deposion of Tipam Sandstone.