

GEOCHEMISTRY OF BARAIL SANDSTONES OCCURRING IN AND AROUND DIMA HASAO DISTRICT, ASSAM

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Abstract

Oligocene age medium to fine grained, massive and bedded sandstone of Barail Group occurs along with shale at Mandardisa of Dima Hasao district in Assam. For geochemical studies of this sandstone major, minor and trace element analyses have been carried out. These sandstones have high SiO₂ of 59.67 to 64.15 wt%. The Al₂O₃ content is also high (avg. 15.61 wt%). The TiO₂ content is low (1.07 to 1.67 wt%). CIA value is high (68.73 to 74.62) indicating high intensity of chemical weathering in the source area. These sandstones are chemically mature and suggest an arid climatic condition. Tectonically it is considered that Barail sandstones of the study area are of active continental margin type and were derived mostly from active continental areas. These are classified as sublitharenite to wacke type.

Keywords: Geochemistry, Barail Sandstone, Dima Hasao, Assam