

TECTONO-SEDIMENTARY EVOLUTION OF LAISONG SANDSTONES EXPOSED IN AND AROUND PHERIMA, DIMAPUR, NAGALAND

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Abstract

Oligocene Laisong sandstones are composed of angular to sub-rounded, monocrystalline, non-undulatory and undulatory as well as polycrystalline quartz. Both potash and plagioclase feldspar and chlorite are present in small quantity. Volcanic glass, chert, and schistose rock fragments represent the lithic components and are second in abundance. Iron and silica are the two cements observed in these sediments. Heavy minerals recorded from these sediments include zircon, tourmaline, rutile, kyanite and opaques in order of their decreasing abundance. Most of the heavy minerals are sub-angular to very well rounded. Framework composition in conjugation with heavy mineral assemblage points towards a mixed source. This also suggests that sedimentation kept pace with changing plate interaction which must have reorganized the drainage pattern in the vicinity of the basin producing such an anomalous composition.

Keywords: Oligocene, Laisong sandstones, Petrography, Heavy minerals, Nagaland