GEOCHEMICAL CHARACTERISTICS OF AMGAON MAFIC ROCKS, WESTERN BASTAR CRATON, CENTRAL INDIA: EMPHASIS ON THEIR PALAEOTECTONIC EVOLUTION.

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Abstract

The Amgaon mafic rocks occur as restite blocks within Amgaon gneissic complex which are metamorphosed upto amphibolite facies. Low Na₂O+K₂O (<4%), moderate concentration of SiO₂, low differentiation index (DI<30) and solidification index (SI: avg. 32.18) are the characteristics of basic nature of these rocks. Na₂O, MgO and CaO/Al₂O₃ values are similar to MORB (2.68%, 7.6% and 0.74% respectively) values. They show low-K tholeiitic characteristics which have evolved under ocean related tectonic environment close to mid oceanic ridge (MOR) and Fe-rich Archean mantle may be the source of these rocks.

Keywords: Mafic rocks, Tectonic Setting, Amgaon Group, Western Bastar Craton.