

Benom Complex: Evidence of magmatic origin

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The study area is underlain predominantly by syenite, monzonite and gabbro. The area lies on the western flank of Benom batholith. Field mapping has proven the intrusive nature of the suite of rocks into the surrounding country rocks. The country rocks were contact metamorphosed into various hornfelses of hornblende hornfels facies. The occurrence of a crystal settling layer within the suite of rocks is particularly convincing of an igneous origin. Moreover, the occurrence of accidental xenoliths in these igneous rocks, which correspond to the aureole rocks, indicate that the xenoliths were incorporated during magma intrusion. The presence of different types of cognate xenoliths ranging from pyroxinite to gabbroic and syenitic in composition, is also widespread in the study area. The occurrence of planar flow structure in the syenite and monzonite defined by megacrystic K-feldspar, is evident of magmatic flow. Petrographic studies reveal that igneous foliation in the suite of rocks is made up of euhedral to subhedral plagioclase and K-feldspar crystals.