

Geology of subsheets Q and W of Yabello map sheet (NB37-14)

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ABSTRACT

This report deals about the geology of Dubluk (Q) and Mega (W) sub-sheets of Yabello map sheet (NB 37-14), which is located in southern Ethiopia and by bounded by 4° 00'-4° 30' N latitude and 38° 15'-38° 30' E longitude. It covers 1500 sq.kms. The area contains Precambrian rocks that include biotite and granitic gneisses locally grading to granulite and massive to weakly deformed granite intrusive. Microporphyratic vesicular basaltic flow, scoria and pyroclastic falls represent the quaternary volcanics. Unconsolidated sediment covers more than half of the study area.

S, Z and M folds that are recorded in the oldest unit (Mega granulite) are formed during D₁. The metamorphic condition (M₁) assumed to occur during this event is not clear due to overprinting by latter metamorphic events. The post tectonic intrusive to the earliest deformation and the older rock affected by D₁ were highly strained during D₂ and associated with regional metamorphism (M₂). The gneissic rocks attained middle to upper amphibolite facies metamorphism locally the older rock reaches granulite facies metamorphism during this event. Regional folds with fold axis trending in NNW-SSE were formed during D₃. Granite was intruded rocks in northern part of the area during D₃. NW-SE trending sinistral and NE-SW trending dextral mesoscopic conjugate shearing is the last event recognized in Precambrian rocks of the area. Mineral alteration was extensively occurred in the area.

In southwestern and central part of the area the volcanic rocks uncoformably rests on the Precambrian rocks. The alignment of spatter cones and craters define the volcanic belt has NE-SW trend. Two cycles of volcanic eruptions are recognized in the area. The nature of field occurrence of the volcanics show the volcanism is of central type and the products were erupted from different sized cones.