

Geology of subsheets C, D and E of Bure map sheet (NC 37 - 5)

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ABSTRACT

The map area is situated in Bure sheet (NW Ethiopian Plateau) bounded by 10°45'-11°00' N latitude and 36°30'- 37°15' E longitude and has covered an area of 2260 sq. kilometers.

Field geological mapping supported by thin section studies has revealed occurrences of six major units, from older to younger: Lower Basalt, Middle Basalt, Upper Basalt, Trachyte plugs, Scoria cones and Olivine-phyric basalts. Classification in to Lower-, Middle- and Upper Basalts is based on composition, texture, relative stratigraphic position and geomorphic features they developed and have conformable relationship. The Trachyte plugs and Scoria cones have intruded the older basalt units and have a general NE-SW alignment. The olivine-phyric basalt filling an old paleo-relief surfaces, rests on Quaternary soil and has shown both “aa” and “pahoehoe” type lava surfaces.

Major structures observed are classified in to tectonic and volcanic structures. The tectonic structures are faults, joints/fractures and lineaments whereas volcanic structures are craters and volcanic centers, flow bandings and vesicles.

The volcanic rocks are widely used as construction material. Besides, the presence of many streams shows that the fractured basalts are good aquifer for ground water in the region.