

Eocene Magmatic Rocks of NE Iran (Abbasabad Region)

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The Abbasabad Eocene magmatic rocks are composed of alkali basalt, trachybasalt, trachyandesite and some volcano-sedimentary rocks.

At the end of Eocene these sodic alkaline rocks become more postassic and rich of Ba and Th due to contamination with crustal materials (AFC Process).

Geochemical studies show some similarities between Abbasabad alkali basalt and within-plate basalts (WPB) and is produced by low rate partial melting of mantle. It is relatively rich of Nb and Ta. Geodynamically these sodic alkaline rocks are erupted in an extensional tectonic regime.