Geochemistry of Sarnu Dandali Igneous Complex [SDIC], Barmer, Rajasthan, India

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The alkaline rocks belonging to ijolite series and carbonatites together constitute the Sarnu-Dandali Igneous Complex [68.5 Ma] which is associated with the Precambrian acid volcanics. Major, trace and REE of these tertiary rocks such as melteigite, baslat, foidal syenite phonolite and carbonatite has been discussed alongwith the Late Cretaceous syenite and Precambrian rhyolites. The data of alkaline rocks suggest their derivation from an alkaline [ijolitic] magma formed by the partial melting of mantle source. Ba-Sr-REE enriched carbonatites possibly represent an immiscible split from nephelinite. The basalt [Hawaiite] represents a subalkaline magmatic pulse unrelated to alkaline suite. Precambrian rhyolites should have been formed by a varied degree of partial melting of lower crust and/or upper mantle.