

P. Bowden: Anorogenic tin granites: Classical examples from Africa.

Abstrak (Abstract)

The Nigerian anorogenic ring complexes range in age from Permo-Carboniferous centres at the Niger-Nigerian border to late Jurassic intrusions in the south which just predate the initial opening of the Bernue trough. The disposition of the ring structures was largely controlled by ancient lineaments in the polymetamorphic basement of Pan Africa age. The complexes have some mineralization features in common with a 400 km NE-SW zone of Palaeozoic pegmatites.

The majority of the ring complexes represent the roots of volcanoes with dominantly syenitic to granitic compositions. They are A-type granites of long time duration petrologically similar to, but chronologically older than, their counterparts to the north in Niger. In a few northern centres the volcanic rocks are preserved indicating an alkaline trend through hawaiite,

mugearite, trachyte to rhyolite. Some mixing of contrasting magma compositions has occurred to produce andesitic suites with disequilibrium mineral reactions.

In the Jos Plateau and other regions to the south, erosion has removed the volcanic cover exposing a multifarious array of granitic textures; varied subsolidus compositions due to rock-fluid interaction; primary uranium-niobium, zinc-tin mineralization; and placer deposits with rich concentrates of cassiterite and other resistant ore minerals, often buried in Tertiary river systems and covered by Quaternary basaltic lava flows. Cretaceous to Recent sedimentary successions which fringe the Plateau are important traps for secondary uranium mineralization.

Laporan (Report)

Prof. Peter Bowden who is with the Department of Geology, University of St. Andrews, Fife, Scotland presented the above-mentioned talk to about 15 members at the Geology Department, University of Malaya on the 7th April 1986.

It has been quite a while since we last had an authority on tin granites. As such the talk proved interesting and the discussion that followed most lively. Prof. Bowden was able to better appreciate the problem of our granites as he has just participated in a field trip from Johore Baru to Kuantan and Kuala Lumpur with a group of staff members of Geology Department, University of Malaya.

G.H. Teh