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SOME OBSERVATIONS OF THE STRUCTURE AND LITHOLOGY OF VIJAYAN COMPLEX, SRI LANKA

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The Vijayan Complex of Sri Lanka extends under peneplains from the coast to the foothills of the central highlands of the island. The present study is based on field and laboratory observations on the Vijayan Complex rocks occurring in Eastern Sri Lanka in an area covered by Elahera, Polonnaruwa, Vakaneri and Rukam topographic sheets.

The study area shows a peneplained surface with scattered hills of weak relief (less than 50 m) isolated inselberg type rock masses (50 to 700 m) and, ridges of considerable relief (200 to 500 m) with associated boulder terrains aligned parallel to the general strike direction. The main rock types are hornblende biotite gneisses, migmatitic gneisses, grantic gneisses with less significant occurrences of quartzites, calc gneisses and pegmatites.

Aerial photo interpretations of the area supported by ground data indicate the existence of dome structures, plunging synforms and antiforms. The cores of these structures are formed of granitic gneisses which at points occur as granites. The granitic rocks show closely spaced joint patterns suggesting intense shearing. The contact between the granitic bodies and the adjacent migmatitic gneisses is abrupt though pegmatites are observed to intrude into the migmatites. Mylonitic breccia are noted at certain points of the contact zone. Away from the contact area, the migmatitic gneiss with ptygmatic folding contains amphibolitic boudinage bodies aligned

parallel to the general foliation. Further away, the migmatitic character fades out to show a well banded hornblende biotite gneiss. The thinly banded hornblende gneiss contains pegmatitic bodies intruded parallel to foliation. Sometimes quartzites are seen to be interbanded with these gneisses. Calc gneiss is rarely found to be associated with granitic and migmatitic gneisses as thin bands, which are often highly contorted.

These observations suggest that the eastern Vijayan Complex area is characterized by granitic gneisses which have intruded or domed into a terrain earlier underlain probably my metasedimentary hornblende biotite gneisses which have subsequently undergone migmatization at points closer to the intrusions.