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## The Northwest Borneo Geosyncline In Its Geotectonic Setting

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### ABSTRACT

The Cretaceous-Cenozoic Northwest Borneo Geosyncline shows many similarities with the geosynclinal couple described by Auboin (1965). Previous syntheses have assumed that the foreland of the geosyncline was the so-called "Continental Core" of west Kalimantan lying to the south, but it is here suggested that the "Continental Core" did not act as a foreland, but as a eugeanticlinal ridge and intermediate hinterland. Thus the internal zones of the geosyncline lay to the south. The main eugeosynclinal furrow occupied the present outcrop of the Rajang Group whereas the later miogeosynclinal furrow lay further north; a submerged miogeanticlinal ridge, not so clearly defined, separated the furrows. The Plateau Group, part of the Nyalau Formation, and the Brunei Group represent post-orogenic molasse-type deposits. The position of the "foreland" in this pattern would be to the north, in the region of the present South China Sea; and this area may have acted as a *tieferaton* (in the sense of Stille), taking the place of the normal continental foreland.

A marked dynamic polarity is shown by migration of flysch deposition, orogeny, and molasse deposition, from south to north across the geosyncline; these processes also seem to have migrated along the geosyncline from west to east and northeast.

The distribution of the main ophiolite-chert belt along the internal side of the eugeosynclinal furrow, and of the late-geosynclinal and post-geosynclinal lavas and acid intrusions in west Sarawak and west Kalimantan follows the typical pattern. A terminal volcanic phase is represented by extrusion of late Cenozoic lavas over the eugeosynclinal deposits.

**DISCUSSION:** Discussion centered around the nature and age of the 'continental core', the sources of sediment for the geosyncline, and the structure and in-filling of the deep portions of the geosyncline.

B. N. Koopmans asked whether the apparent polarity, younging to the north, might not be due to structure and not original deposition; that is, that the younger flysch to the north could be underlain by Cretaceous flysch. The speaker replied that this seemed unlikely when the great thickness of the more southern Cretaceous flysch was taken into account.