University of London gravity work in Southeast Asia

JOHN MILSON

Laporan (Report)

Dr. John Milson, a Senior Lecturer in Exploration Geophysics at the University of London gave the above talk to an audience of about 23 on the 2nd August 1995 at the Geological Survey Department, Kota Kinabalu and to about 40 on the 8th August 1995 at the Geology Department, University of Malaya.

Dr. John Milson started off with a background on the University of London's gravity work in Southeast Asia and proceeded to give an example of how their work in the Banda Arc contributed to a better understanding of the geology and tectonics of the region. He also touched on the usefulness of offshore gravity data from satellites. He finished off his talk with a summary of the gravity work in Sabah. An important preliminary finding from his recent survey is that the ophiolites in Segama valley do not continue to those in the Labuk Valley. Apparently, there is a gravity high over the Darvel Bay indicating a much thicker ophiolite sequence there.

Abstrak (Abstract)

The University of London Consortium for Geological Research in Southeast Asia has been active in Malaysia, Thailand and Papua New Guinea since 1982. One aspect of its work is the acquisition of regional gravity data and their interpretation in conjunction with available seismic and geological information. Recently completed studies of the Banda Arc in eastern Indonesia provide an example of the approach. The location of the Australia-Eurasia collision trace in the area has been debated for many years, the critical location being the Kai Archipelago in the extreme east of the Banda Arc. Gravity surveys in the Archipelago have revealed a pattern of variation different from those elsewhere in the arc. Taken together with the oil industry seismic sections, the gravity results indicate a smooth curvature of the arc through 180° and not, as in most published maps, a major strike slip displacement of the Eurasion Plate.

Gravity surveys recently completed in Sabah are providing regional coverage of the southern and eastern parts of the State, and also are allowing the results of earlier surveys to be adjusted to the current international networks. Preliminary analysis shows gravity highs associated with the ophiolite bodies near Telupid and in Darvel Bay but has not substantiated a subsurface linkage between the two areas.

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