

WORKSHOP ON STRATIGRAPHIC CORRELATION OF
THAILAND AND MALAYSIA

Haad Yai, Thailand
8-10 September, 1983

GEOELECTRICAL SURVEY AT THE PHUKET MINING CO. LTD.
TUMBON LIDON, CHANGWAT YALA

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ABSTRACT Geoelectrical survey was carried out at the Phuket Mining Co. Ltd. Tumbon Lidon Changwat Yala covering an area of 1.5 Square kilometres. The array contain 68 measuring points, arranged in the grid 100 x 100 square metres. The Wenner configuration was spread nearly in the north-south direction approximately parallel to the general structure found at the mine. To check the lateral inhomogeneous medium the Carpenter and Haabergam's method was used. The smoothing of field data was done by the computer. The average lateral inhomogeneous index of this area is about 1.0. This figure shows that the ground medium is roughly homogeneous. The field data, after they were analysed by Tagg's method, were fed into the computer to calculate and to draw the theoretical curve which should match the field curve. All data were analysed by the same method, and the geoelectrical layers were determined at every measuring point. The geoelectrical contours of bedrocks were drawn. The main structure was interpreted as follows: the bedrocks are composed of granite and limestone. They were located at the 45,000 ohm-feet contour line. Probable fracture zone is shown by the abrupt change in the gradient contour. When the geoelectrical data of the measuring points were compared with the geological information from the bored hole nearby the geologic cross-section was drawn to show the geologic structure in that area. After six cross-section lines were drawn in the surveying area, the resistivity table was made.

	Resistivity ohm-feet
The weathering layer	215-9299
Clay with fine and coarse sand	400-45600
Laterite	1965-45600
Alluvium, decomposed schist and shale	13-564
Porous limestone	1000-7800
Hard limestone	6162-34425
Decomposed granite	529-7029
Granite	76440-280