

Confirmation of the Yan Magnetic Anomaly by Gravity Data

C.Y. LEE, L.C. SWEE & A.C. YEE

School of Physics, Universiti Sains Malaysia
11800 USM Penang, Malaysia

The well-defined Yan aeromagnetic anomaly located north of Gunung Jerai in Kedah was investigated further by running a detailed gravity traverse over it in an approximately north-south direction. After the standard reductions to the raw gravity data were made, a Bouguer gravity profile was obtained. A clear regional trend, with gravity values decreasing uniformly towards the south, is apparent. This is attributed to the major granite intrusion centred at Gunung Jerai. Superimposed on this regional trend are two negative and one positive gravity anomalies. The middle anomaly with a magnitude of -1.2 mgal coincides with the Yan magnetic anomaly. Mathematical modelling indicates that the causative body is an igneous intrusion with its top at approximately 31 m below the surface. This gravity model is entirely consistent with the magnetic model based on detailed ground magnetic data of previous surveys.

Warta Geologi, Vol. 26, No. 5, Sept–Oct 2000