

Pencirian geofizik dan geologi kejuruteraan profil luluhawa syis kuarza-mika di km 67, Lebuhraya Timur-Barat, Malaysia

**ABDUL GHANI RAFEK¹, ABDUL RAHIM SAMSUDIN¹, RAHMAN YACCUP¹,
UMAR HAMZAH¹ DAN KHAIRUL ANUAR MOHD NAYAN²**

¹Pusat Pengajian Sains Sekitaran dan Sumber Alam, Fakulti Sains & Teknologi
Universiti Kebangsaan Malaysia
43600 Bangi, Selangor

²Jabatan Kejuruteraan Awam dan Struktur, Fakulti Kejuruteraan
Universiti Kebangsaan Malaysia
43600 Bangi, Selangor D.E.

Mapping of the weathering profile and determination of weathering grade were correlated with a refraction seismic survey and geoelectrical resistivity imaging of a quartz mica schist rock slope at km 67, east-west highway, northern Peninsular Malaysia, to obtain the true P-wave velocities (V_p) and specific geoelectrical resistivities for each weathering grade. Fresh and slightly weathered rock (grade I and II) is characterised by high V_p values ranging from 2,300 m/s to 5,300 m/s. The intensity and extent of discontinuities influence the V_p values, where lower V_p values are obtained for highly fractured zones. Grade III has V_p values between 1,200 m/s to 2,300 m/s with V_p values between 250 m/s to 1,200 m/s for grade VI, V and IV. The range of specific geoelectrical resistivities is <2,525 ohm.m for grade VI and V, 2,526 ohm.m to 5,025 ohm.m for grade IV, 5,026 ohm.m to 7,025 ohm.m for grade III dan more than 7,025 ohm.m for grade II and I.
