More Glimpses of Engineering Geology in Malaysia*

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This short note provides more glimpses of Engineering Geology in Malaysia, following two previous articles in JURUTERA, Tan (2005b, 2006). Some other recent publications on Engineering Geology are listed in the references for those interested in knowing more about the subject.

The various applications or actual case histories of Engineering Geology as it relates to various aspects of civil engineering works are illustrated by photographs as follows. Detailed discussion is contained in the paper by Tan (2007) submitted to the 16th S.E.Asian Geotechnical Conference 2007, K.L.

ENGINEERING GEOLOGY APPLICATIONS AND CASE STUDIES

Foundations in Limestone

F1(a)

F1(b)

Fig. 1a, 1b. Pinnacled limestone bedrock, Sunway.

Limestone Cliff Stability

Fig. 2. Rockfall hazard map, Tambun, Ipoh.

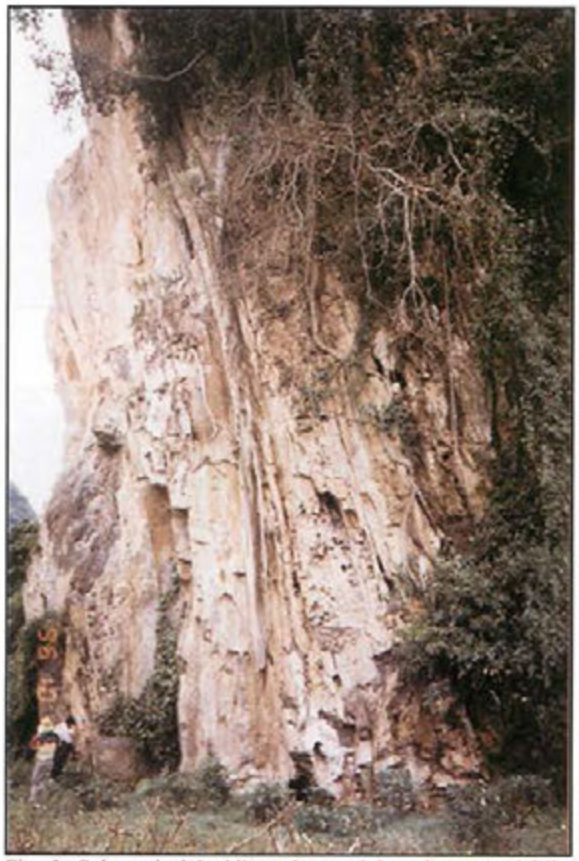

Fig. 3. Sub-vertical bedding planes giving rise to rockfall., Tambun, Ipoh.

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Fig. 4. Water tank at Batu Caves limestone cliff, Kuala Lumpur.

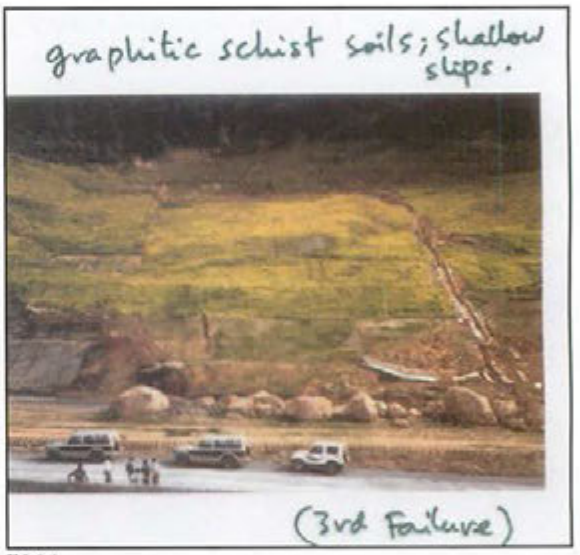
Rock Slope Stability

F5 (a)

F5 (b)

Figs. 5a, 5b: Graphitic schist, Senawang-Ayer Keroh Highway.

Fig. 5c. Secondary minerals on graphitic schist, Senawang-Ayer Keroh Highway.



F6 (a)

F6 (b)

Fig. 6a, 6b. Failures in graphitic schist cut slopes, Lojing Highway.

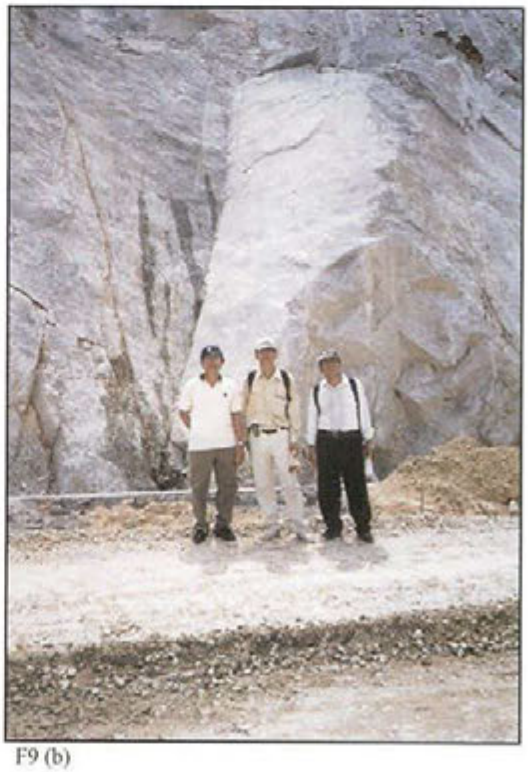
Fig. 7. "Flattened" cut slope in graphitic schist, N-S Highway near Rawang.

F8(a)

F8 (b)

Fig. 8a-8b. Slope failures controlled by bedding planes and faults, Sarawak rural road.

F9 (a)



F9 (b)

Fig. 9a-9b. Classic examples of planar and wedge failures in granite cut slope, SILK highway, Kajang.

Tunnels

F10 (a)

F10 (b)

Fig. 10a-10b. Highly fractured granite and steel sets support, diversion tunnel, Sg. Selangor dam.

Riverbank Instability

Fig. 11. Riverbank instability, Sarawak.

Slope Failure due to Rapid Draw-down

Fig. 12. Rapid draw-down of mining pond triggering slope failure and destroying houses, Kuala Lumpur.

Urban Geology & Hillsite Development

F13 (a)

F13 (b)

F13 (c)

Fig. 13a-13c. Slope failures associated with housing projects in hilly terrains, Kuala Lumpur.

Dam Geology

Fig. 14. Foundation grouting at Batu Dam, K.L.

Fig. 15. Kenyir Dam, a rockfill dam, Kuala Berang, Terengganu. Dolerite dykes (black) in granite.

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