
Integration of geophysical and geotechnical techniques in site investigation: A case study of a karstic area

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An integrative approach of geophysical and geotechnical techniques have been applied to the site investigation of the subsurface karstic area in Ipoh. The vertical electrical sounding, profiling and the pole-dipole resistivity methods were integrated with the shallow seismic refraction survey. Comparisons were made with results from the boreholes and the JKR probes.

The study found that the method most suitable to detect cavity was the pole-dipole technique. The vertical electrical sounding was more accurate in locating the water table and the shallow seismic refraction was more accurate in locating the bedrock boundary.

Both the standard penetration test and the JKR probe blow count decreases before bedrock was reached at areas where cavities were found.

May-Jun 1993