Seismic sub-bottom profiling and borehole analysis of Pantai Kundor, Melaka

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A total of twenty boring logs were studied in conjunction with four seismic sub-bottom profiling data. Most of the boreholes drilled at depth ranging from 12 to 40 meters were located close to the seismic profiles. By comparing the borehole with the seismic data, empirical relationship between the character of the seismic records and the corresponding lithology was established. Seismic data were analysed using a velocity of 1600 m/sec to convert the two-way travel times into depth. Four distinct lithological units were recognized and classified into units A, B, C and D. The uppermost unit, unit D, representing soft clay with some coarse sand is characterized by strong horizontal stratification on seismic profiles. Unit C which is made up of medium to coarse sand with some clay and shell fragments is recognized by a chaotic reflection pattern in seismic data. Unit B is represented by dense silty sand with numerous mica flakes and is interpreted as weathered granite. The lowermost unit, unit A, comprises of lowly weathered to fresh coarsed grained granite or bedrock and shows a domed reflection pattern on seismic sections. Using these empirical relationship, all the four seismic profiles were interpreted and analysed.

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