KELANTAN GROUNDWATER COMPUTER MODEL

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A computer digital model has been constructed in order to assess the potential groundwater development of Kelantan. The model was based on Darcy and continuity equations. The model has 17 by 14 grid lines. The boundary conditions imposed on the model are the 'fixed-head' and the 'no-flow' boundaries. Basic aquifer parameters were introduced into the model and the model was calibrated using actual historical data. The model was used to assess the water requirement and the potential development of two areas within the model boundary; Kemasin-Semerak and Tanah Merah. Abstraction of the groundwater for the Kelantan State, including the projected irrigation requirements for the two areas, was simulated for ten years. The model predicted that the maximum limit that could be abstracted from the aquifer without causing adverse effects on the environment is about 150,000 m^3/day.

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