Engineering geology of the Kenyir Damsite, Trengganu.

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The Trengganu River Basin Development Project is undertaken jointly by the Malaysian Government and the Snowy Mountains Engineering Corporation of Australia for the construction of a multi-purpose rock-fill dam.

The proposed dam is located along Sungai Trengganu just below the confluence of Sungai Trengganu - Sungai Kenyir. The damsite is underlain by a medium to coarse grained biotite granite. Numerous outcrops are particularly prevalent below the flood level on the right bank. These outcrops are also found along many of the minor creeks on either banks. Large landslides on the valley slopes have left many exposed rock faces. Landslide debris in the form of large accumulations of earth and boulders are common on both banks, expecially on the left bank. Dolerite dykes, ranging from a few centimetres to several metres in width, are common and strike generally from 035° to 070° and dip 70° SE through vertical to 80° NW.

Open sheet joints are commonly observed along rock faces. Apart from sheet joints, there are another 2 major sets of joints. They are:

i) striking from 030° to 070°; dipping 70° SE through vertical to 75° NW, spaced 0.6 m to 1.6 m and form rock faces up to 100 m long;

ii) striking from 110° to 160°; dipping 65° SW through vertical

to 55° NE, spaced 0.03 m to 1.0 m with an average spacing of 0.2 m to 0.5 m.

Diamond drilling up to a depth of 75.0 m in the damsite indicated average joint spacings to vary from 0.1 m to 3.0 m, with most lying between 0.5 m to 1.0 m. These joints are not normally continuous over long distances. A number of rehealed, sheared and brecciated zones have been intersected by drilling.

Principal dimensions of project

Kenyir Dam:	*Type:*	*Earth and rockfill*
	Crest Level:	*EL 155 m*
	Dam Crest Length:	*800 m*
	Height of Dam:	*150 m*
	Volume of Dam Embankment:	*15.2 x 10^6 m^3*
Storage Reservoir:	*Full Supply Level:*	*EL 145 m*
	Minimum Operating Level:	*EL 120 m*
	Maximum Flood Level:	*EL 153 m*
	Gross Storage Volume at F.S.L.:	*13,600 x 10^6 m^3*
	Live Storage Volume:	*7,400 x 10^6 m^3*
	Surface Area at F.S.L.:	*36,900 hectares.*

Power Station: Number and Rated Capacity of Units: 4 x 100 MW.

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