

TABLE 18

EL20/80 LAUNCESTON

SUMMARY OF GEOMECHANICAL PROPERTIES OF LITHOLOGIES
INTERSECTED DURING EXPLORATORY DRILLING AND DRILLING PROBLEMS ENCOUNTERED

<u>AGE</u>	<u>LITHOLOGY</u>	<u>GEOMECHANICAL DESCRIPTION</u>	<u>DRILLING PROBLEMS ENCOUNTERED</u>
Quaternary	Alluvium, terrace deposits marsh and swamp deposits boulder beds and gravel	Very loose to loose, can be excavated by hand and shovel respectively	Caving of uncased holes. Difficulty in sealing mud pit or seating stand pipe. Circulation loss.
Tertiary-Quaternary	Lag deposits of ferruginous buckshot gravel and ferricrete	As above, for lag deposits. Ferricrete low to moderate strength and brittle	As above
Tertiary Volcanics Post Eocene - Mid Tertiary	Mid to dark grey, vesicular to extremely dense alkali olivine basalts		
	Weathered basalt	Low to moderate strength brittle rock. Commonly jointed and fractured, and in this state can behave like a gravel	Difficulty in seating stand pipe. Circulation loss. Caving of hole wall.
	Fresh basalt	High to extremely high strength brittle to tough rock	Slow penetration rate
Tertiary Palaeocene - Upper Oligocene	Clay	Soft to firm, generally highly plastic and dispersive. Commonly sticky. Some clays are soft, of low plasticity and highly dispersive. in general silty clays more highly dispersive than non silty clays. Commonly sub-fissile. Fissility is observed when clay dry.	Clay balling. Thickening of circulating fluid due to clay dispersing. Core loss when slickensides present in clay.
Tertiary	Silt, sand	Soft to firm, generally loose. hole wall conditions stable.	Generally no problems encountered. Minor circulating fluid loss.
	Brown coal	Soft to firm and friable, occasionally soft and gelatinous, and are weak zones in the coal.	Generally no problems encountered although some circulating fluid loss.
	Ligneous clay	Soft to firm, low to high plasticity. Generally non dispersive and not 'sticky'.	Generally no problems encountered, rare clay balling.

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