

### **c) Lithostratigraphic Column**

# Thunderbolt (TB #1)- Predicted Section AMG 66 Coordinates:466 844 mE, 5 287 200 mN

Depth (m)	Lithology	Age	Unit	Lithological Description
100		Jurassic	Dolerite	Dolerite (diabase). (seal)
200				
300				
400				
500		Triassic	Upper P.S. U. Freshwater S.	Hornfels
600				Knocklofty Formation (~ 185 m): Well-sorted cross-bedded sandstone, quartz sandstones and dominantly lutite sandstone . (reservoir)
700				
800				Cygnets Coal Measures: Carbonaceous rocks, coal measure. (source & reservoir)
900		Late Permian	Upper M. S.	Ferntree Formation (30-180 m): Massive, grey mudstone with bioturbation and dropstones. Massive grey-cream mudstone and sandstone. (seal)
1000				
1100				Malbina Formation: Grey mudstone, siltstone and sandstone.
1200				Cascades Group: Poorly sorted sandstone.
1300		Late Carboniferous - Early Permian	Lower Parmeenel Seq.	Faulkner Group: Fine grained dark grey micaceous siltstone, sandstone with some coal measures. (source & reservoir).
1400				Bundella Formation: Alternating sequences of fossiliferous siltstone & sandstone. Minor limestone.
1500				Woody Island Formation: Well sorted dark grey siltstone. Dark massive bedded pyritic and carbonaceous siltstone. (source)
1600				Tasmanite oil shale (~2 m). (source)
1700		Late Carboniferous - Early Permian	Lower Marine Seq.	Truro Formation: Lower glacial marine sequences of mudstone, pebbly mudstone, pebbly sandstone and poorly sorted lithified boulder clay with quartzite clasts in basal tillite.
1800				
1900				Paleokarst ( reservoir)
2000				Upper Limestone Member (~700 m): Coralline and stromatoporeid biocalcarenes. (reservoir)
2100		Ordovician	Gordon Group	Mainly fossiliferous, subtidal micrite with shallowing upward cycle some biocalcarenes. (source)
2200				
2300				
2400				
2500		Ordovician	Gordon Group	Lords Siltstone: Fossiliferous siltstone
2600				
2700				Lower Limestone Member (~390m): Mainly dolomitic, fossiliferous, micritics with minor bioclastic grainstone beds. Upward shallowing cycles. (source, reservoir)
2800				Unfossiliferous, cherty limestone.
2900		Ordovician	Gordon Group	
3000				
3100				
3200				
3300		Ordovician	Gordon Group	

All thicknesses are approximate and are based on preliminary seismic data interpretation or extrapolation from fieldwork. Sources, reservoirs and seals are predicted from field work and laboratory data.