

Figure
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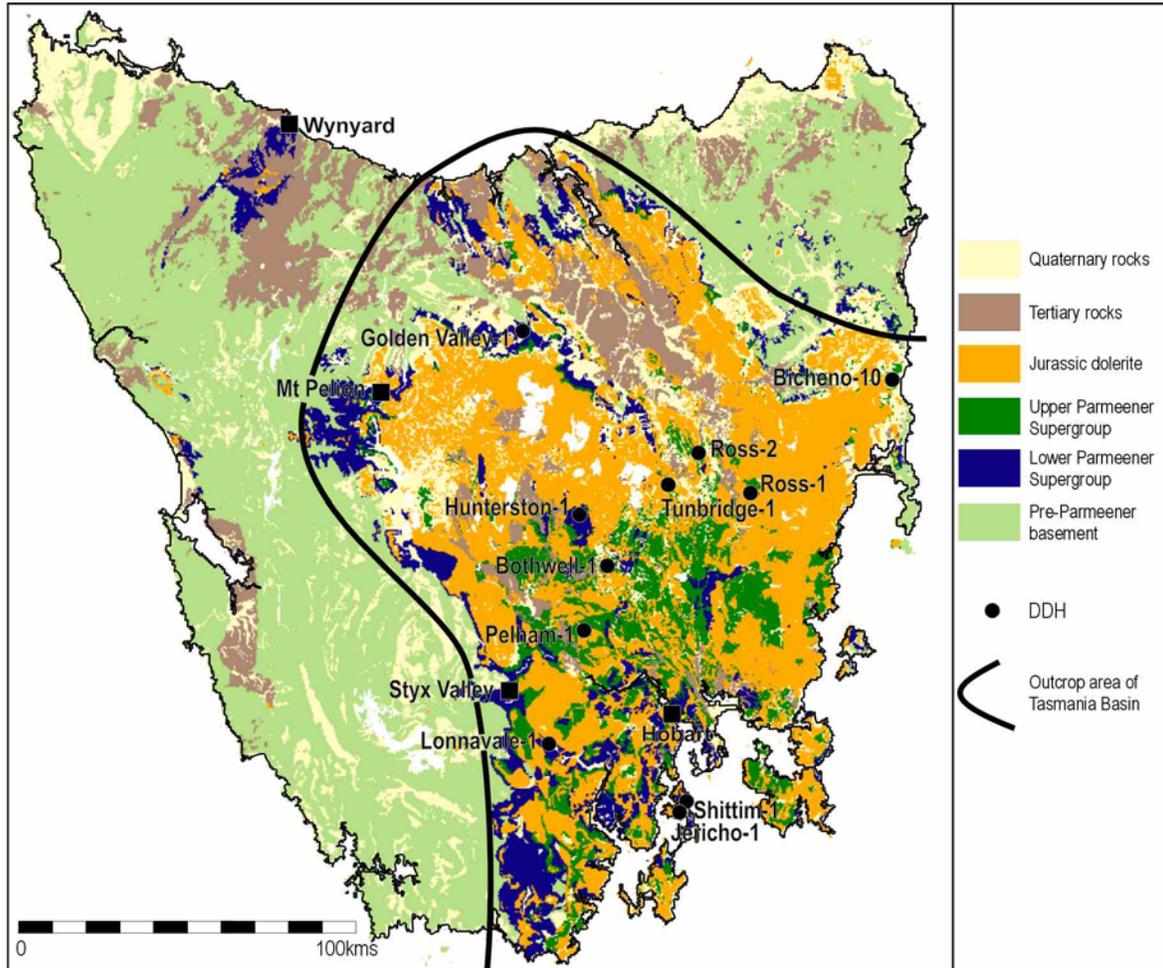


Fig 1 – Geology of the Tasmania Basin showing Parmeener Supergroup and Jurassic dolerite outcrop. Locations of diamond drill hole and outcrop sites discussed in the text are shown.

Figure
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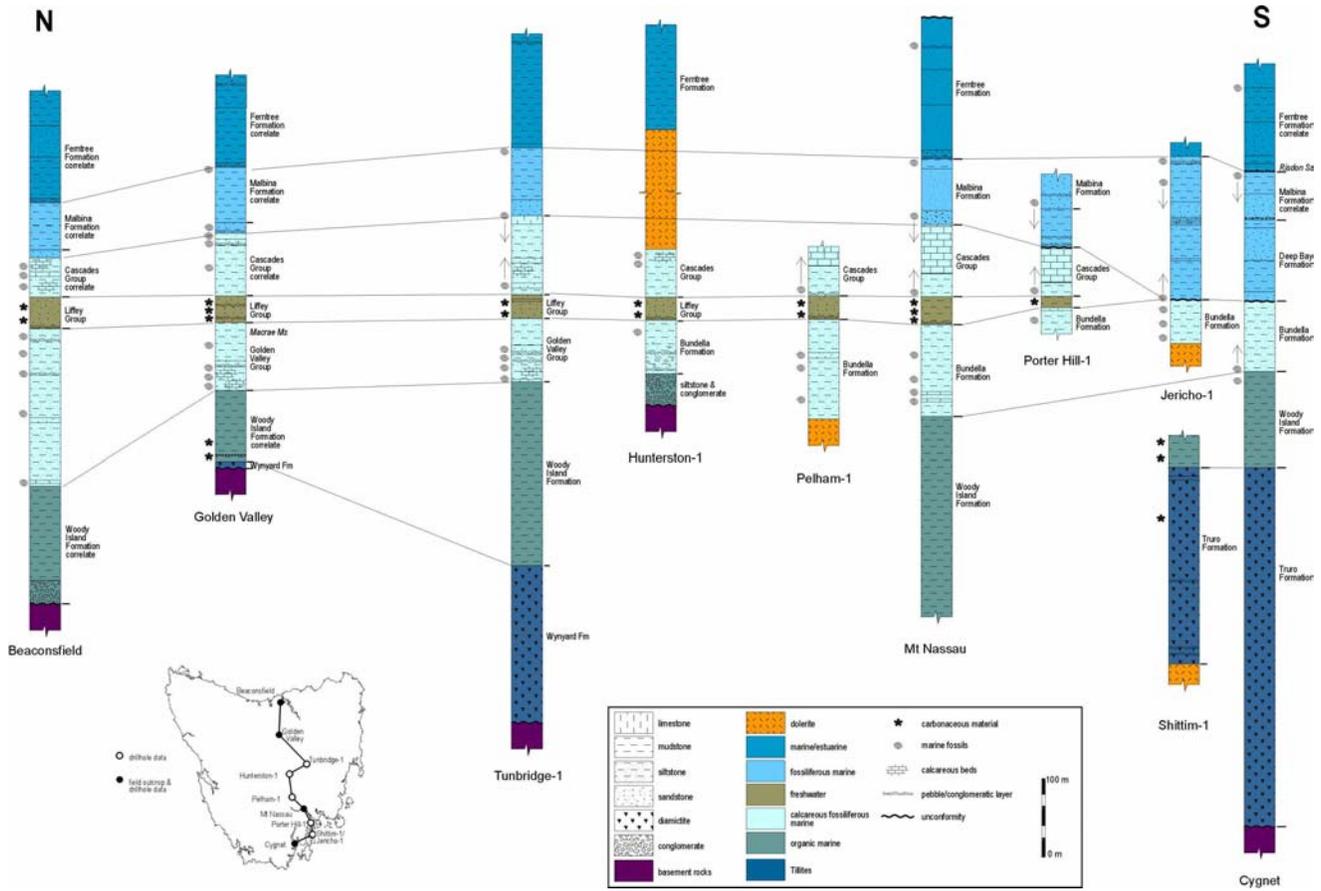


Fig 2 – Lower Parmeener Supergroup stratigraphy across the Tasmania Basin. Location of drill hole and outcrop shown, inset. The base of the Cascades Group, recording a basin wide marine transgression, is taken as a level palaeosurface for the purposes of correlation.

Figure
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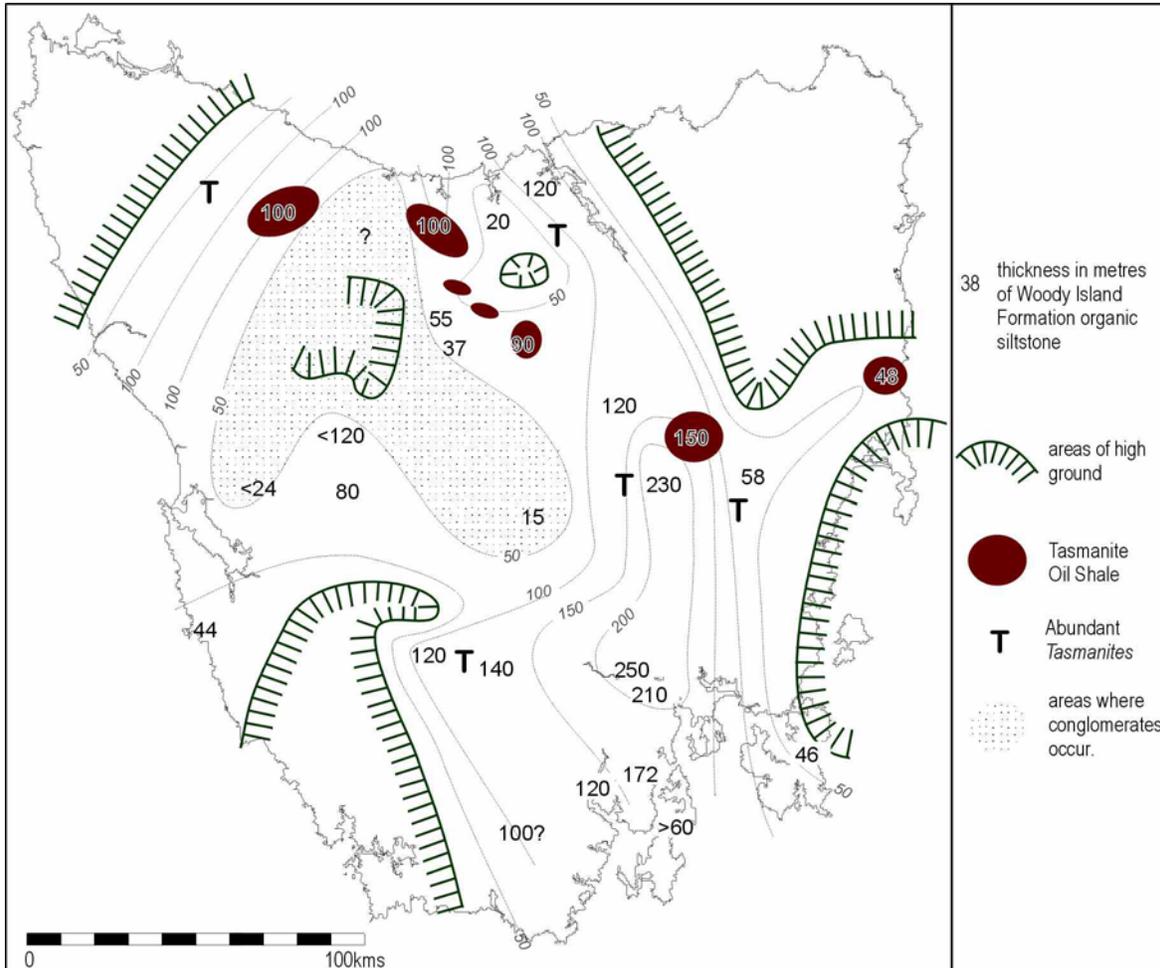


Fig 3 – Thickness and distribution of Woody Island Formation source facies, and distribution of Tasmanite Oil Shale. Woody Island conglomeratic facies in the central Tasmania Basin is also shown. (After Reid et al 2003, Bacon et al 2000).

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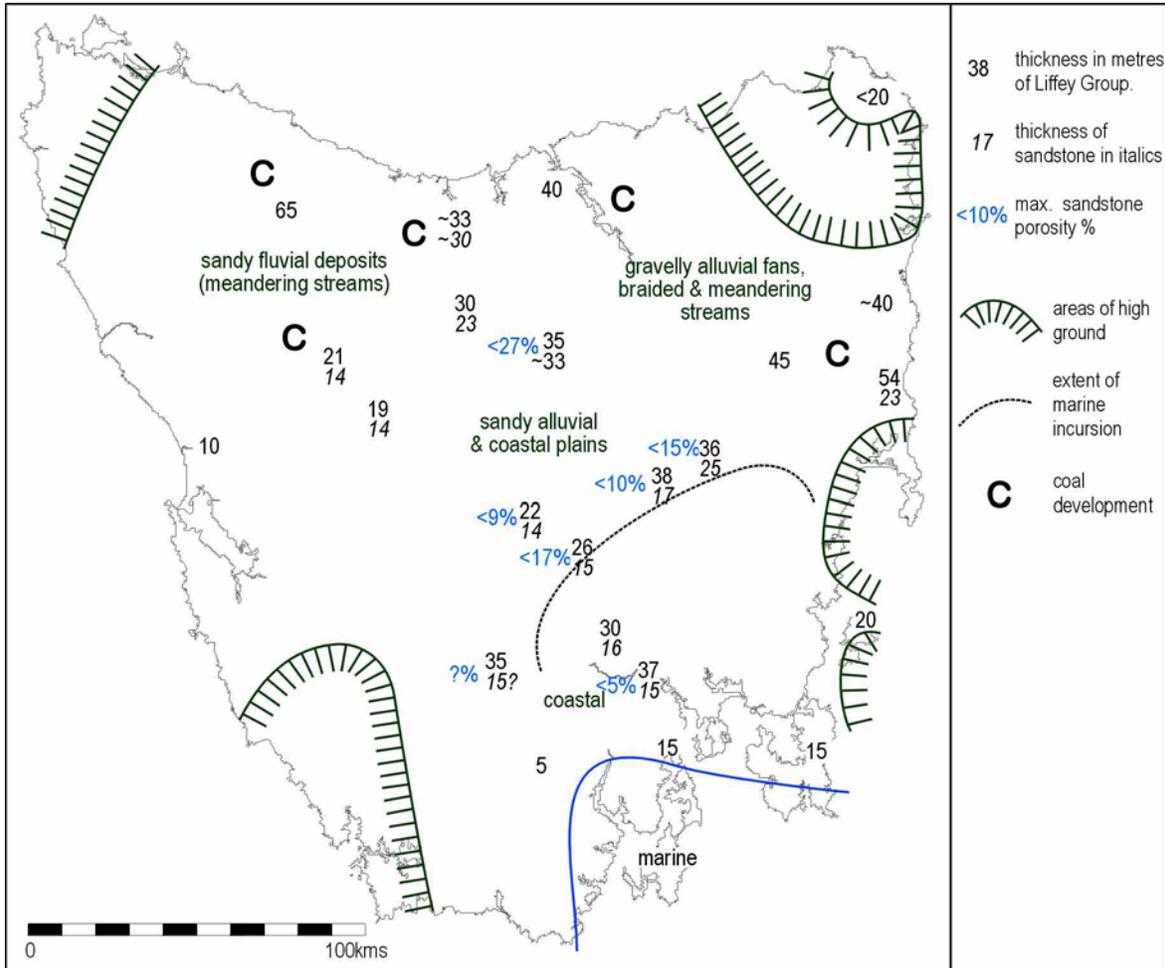


Fig 4 – Thickness and distribution of Liffey Group. Also shown are total thickness of sandstone beds and cycles, and the upper porosity value for some localities.

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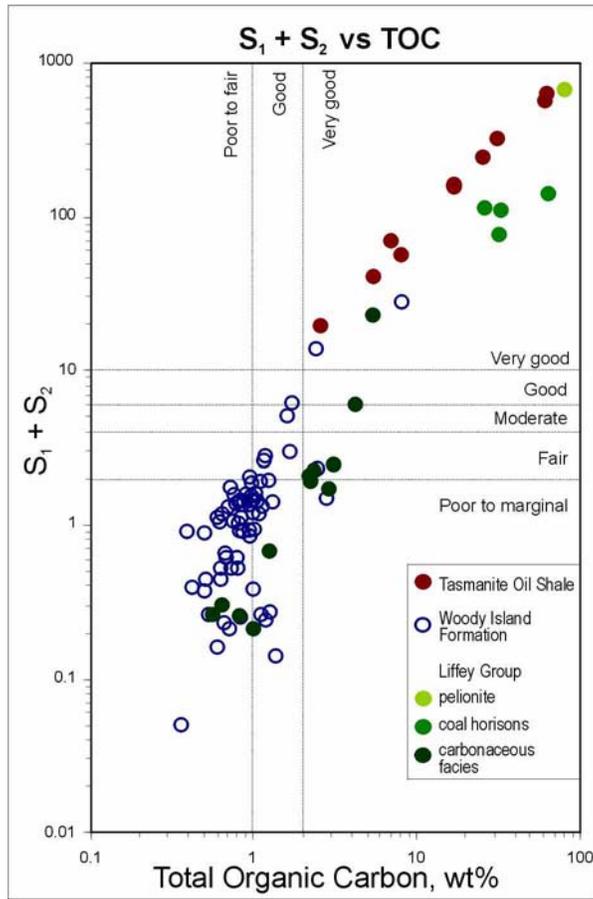


Fig 5 – Tasmania Basin source rock quality, as expressed by a plot of $S_1 + S_2$ and Total Organic Carbon. Data from this study and Bacon et al (2000).

Figure
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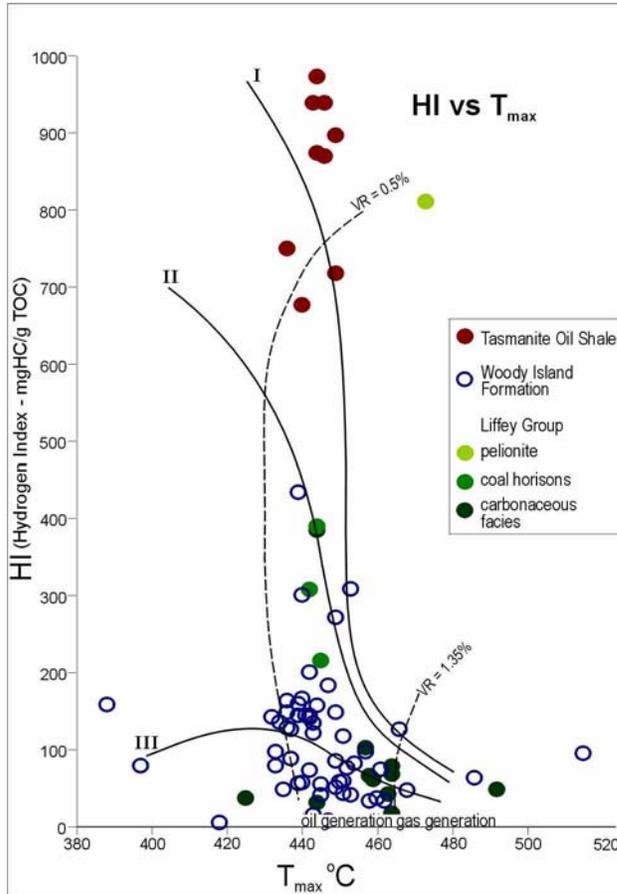


Fig 6 – Hydrogen Index vs Temperature Maximum plot for Tasmania Basin source rocks. Tasmanite Oil Shale samples are from immature parts of the basin in the far northwest. Woody Island Formation samples predominantly show Type III kerogens, from disseminated organic matter. Those plotting as Type I and II kerogens are sampled in close stratigraphic proximity to the Tasmanite Oil Shale.

Figure
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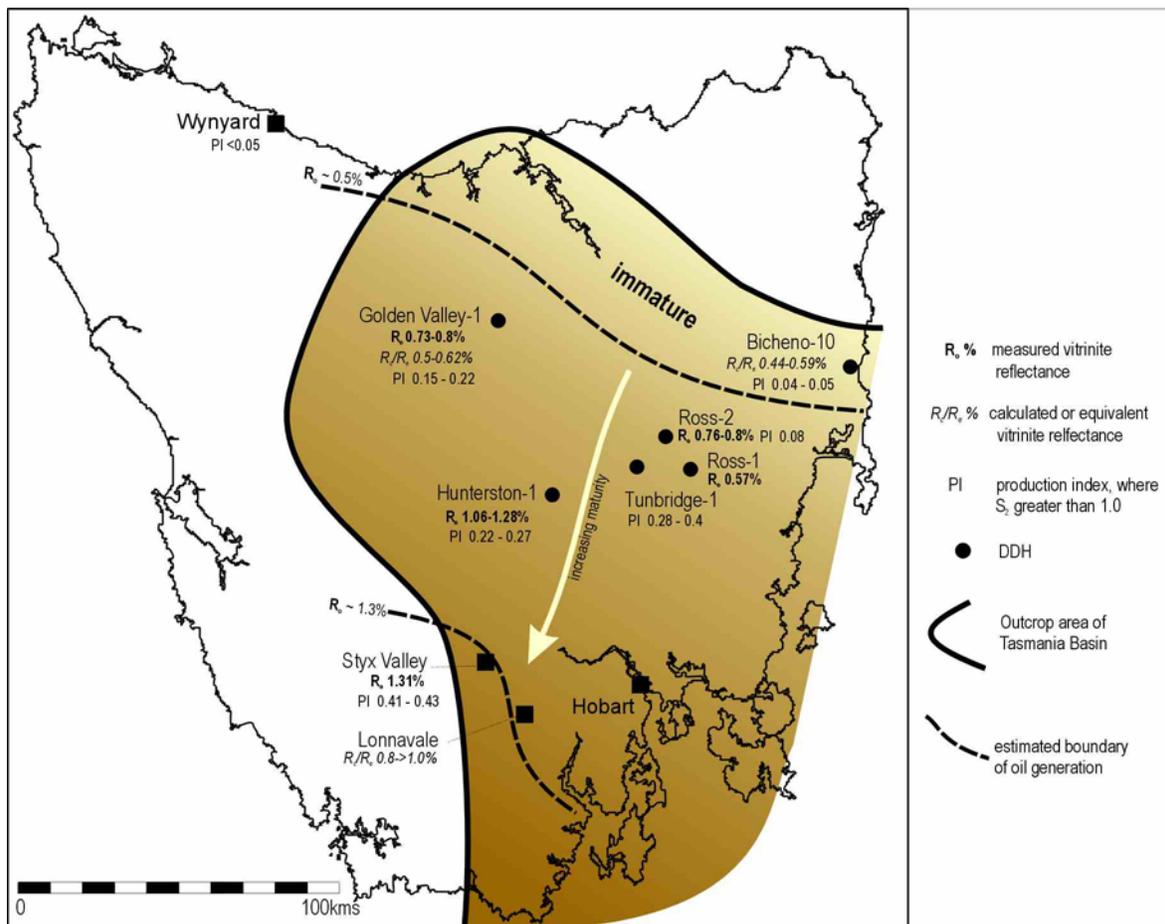


Fig 7 – Maturity of Tasmania Basin source rocks, increasing towards the southwest. Measured vitrinite reflectance from Liffey Group and Woody Island Formation (Cook 2003) and equivalent reflectance data from Bacon et al (2000).

Figure 8

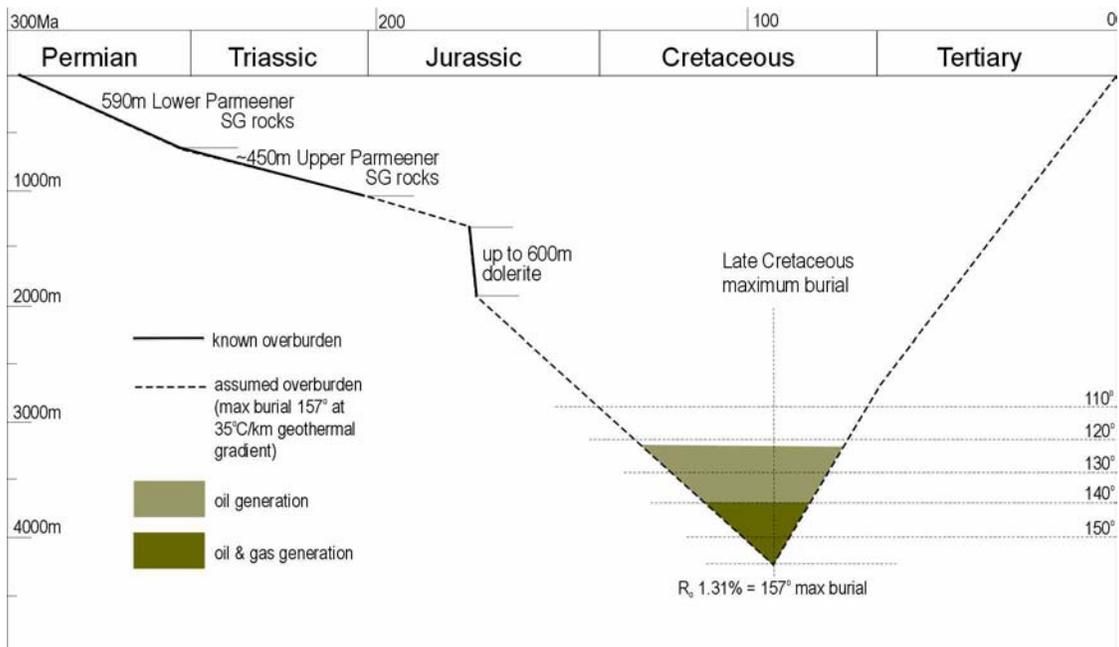


Fig 8 – Theoretical burial profile for Woody Island Formation siltstone and Tasmanite Oil Shale in the Styx Valley region. Late Cretaceous maximum burial indicated from apatite fission track data (O’Sullivan & Kohn 1997; Kohn et al 2002). Maximum burial temperature from comparative charts of Barker & Pawlewicz (1994). Maximum burial temperature and assumed 35°C/km geothermal gradient define total burial depth, actual Jurassic to Cretaceous overburden unknown.

Figure
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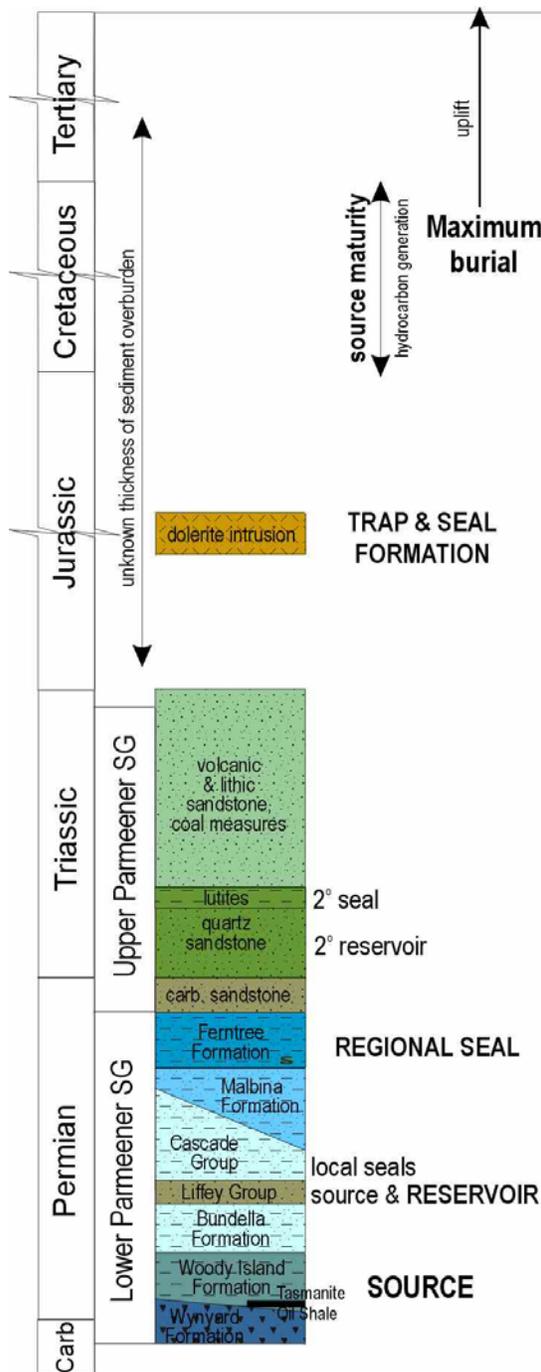


Fig 9 – Stratigraphic events chart for the Gondwana 1 petroleum system. Source rocks are marked in the Woody Island Formation and Liffey Group, reservoir in the Liffey Group, and seals in the Cascade and Ferntree Formation and Jurassic dolerite.