

Characterisation of Bathonian-Kimmeridgian (Middle-Late Jurassic) Palynological Assemblages of the Laminaria High and Vulcan Sub-basin, Bonaparte Basin, Australia

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ABSTRACT

This project aims to characterise Middle-Late Jurassic palynological successions from the Bonaparte Basin, relate them to existing or inferred depositional systems and to refine the current biostratigraphic zonation of the North West Shelf for this time interval.

To attain these main objectives, a detailed analysis of the microfloral assemblages from cuttings, side wall core and conventional core samples from several wells drilled on the Laminaria High and Vulcan Sub-basin will be performed. More specifically, this study will focus on assemblages from the *W. indotata*, *T. balmei*, *V. tabulata*, *C. ancorum*, *W. spectabilis*, *W. clathrata* and *D. swanense* dinoflagellate cyst zones as defined for the study area.

The characterisation of the microfloral successions will enable the identification of palynological assemblages according to their composition in order to relate them to specific depositional settings and paleoenvironments. The description of new elements will be undertaken in order to stabilise the taxonomy of Australian Mesozoic palynomorphs.

In a further step, the analysis will involve the identification of previously described and/or newly defined biostratigraphic markers/events with local or regional significance and their correlation with pre-established sequences.

Finally, this project aims to offer a revision of the sequence stratigraphic framework for the study area.