



Regional Geology of the Bight Basin

Figure captions

- Figure 1** Map of the Bight Basin showing bathymetry and well distribution.
- Figure 2** Tectonic elements map of the Bight Basin showing bathymetry, major faults, well distribution and location of cross-sections.
- Figure 3** Tectonic elements map of the Bight Basin showing depocentre age.
- Figure 4** Stratigraphic chart for the Bremer, Ceduna Duntroon and Eyre sub-basins. Based on the Bight Basin Biozonation and Stratigraphy Chart 35 (Totterdell et al, 2013). Geologic time scale after Ogg et al. (2016); sea-level curve of Haq et al (1988) calibrated to the time scale.
- Figure 5** Seismic cross-section across northern Ceduna Sub-basin, showing structural and stratigraphic relationships. Location of the cross-section shown in Figure 2, refer to Figure 4 for Supersequence ages.
- Figure 6** Cross-section through the Eyre Sub-basin, Madura Shelf and Ceduna Sub-basin, showing structural and stratigraphic relationships. Location of the cross-section shown in Figure 2, refer to Figure 4 for Supersequence ages.
- Figure 7** Cross-section through the Duntroon and Ceduna sub-basins, showing structural and stratigraphic relationships. Location of the cross-section shown in Figure 2, refer to Figure 4 for Supersequence ages.
- Figure 8** Cross-section through the central Bremer Sub-basin, showing structural and stratigraphic relationships; based on the extensional basin model of Nicholson & Ryan (2005). Location of the cross-section shown in Figure 2, refer to Figure 4 for Supersequence ages.
- Figure 9** Map of the Bight Basin showing current petroleum licences and operators.
- Figure 10** Stratigraphy and potential petroleum systems, Ceduna Sub-basin. Geologic time scale after Ogg et al. (2016); sea-level curve of Haq et al (1988) calibrated to the time scale.
- Figure 11** Profiles showing petroleum systems modelling results for the Ceduna Sub-basin.
- Upper:** 2D transect across central Ceduna Sub-basin showing the modelled stratigraphic units and potential source rock layers.
- Middle:** 2D transect across central Ceduna Sub-basin showing modelled present-day maturity zones (% Ro). Supersequences are labelled.
- Lower:** 2D transect across central Ceduna Sub-basin showing modelled present-day transformation ratios (%) of three potential source rock units within the Blue Whale, upper White Pointer and Tiger supersequences.
- Location of the profile is shown in Figure 2. After Totterdell et al, 2008.
- Figure 12** Schematic cross-section and indicative play types in the Ceduna Sub-basin. After Klauser-Baumgärtner et al, 2019.
- Figure 13** Map showing marine reserves, marine parks, multiple use zones and ecological features in the Bight Basin.