3D structural and stratigraphic model of the Perth Basin, Western Australia: Implications for sub-basin evolution

H. K. H. OLIEROOK¹,²*, N. E. TIMMS¹, J. F. WELLMANN³, S. CORBEL⁴,⁵ AND P. G. WILKES⁴

¹ Department of Applied Geology, Curtin University, GPO Box U1987, Perth, WA 6845, Australia
² Now at: Department of Earth, Ocean and Ecological Sciences, University of Liverpool, 4 Brownlow Street, Liverpool, L69 3GP, UK
³ Aachen Institute for Advanced Study in Computational Engineering Science, RWTH Aachen University, Schinkelstraße 2, 52062 Aachen, Germany
⁴ CSIRO, PO Box 1130, Bentley WA 6102, Australia
⁵ Now at: BRGM, Mine Safety and Risk Prevention Department, UTAM Est, BP 30006, 57801 Freyming-Merlebach Cedex, France

*Corresponding author: h.olierook@liverpool.ac.uk

SUPPLEMENTARY PAPERS

http://dx.doi.org/10.1080/08120099.2015.1054882


SUPPLEMENTARY PAPERS

Instructions for the interactive 3D model of the Perth Basin.
Well data for the Perth Basin. (Excel files)
Formation thicknesses XYZ data
Formation depth-to-tops XYZ data
3D model of the Perth Basin.
INTERACTIVE 3D MODEL OF THE PERTH BASIN

This 3D Model of the Perth Basin allows the user to change views, toggling layers and querying elevation and XY/Lat–Long coordinates. This page provides information on how to use the model; for information on how it was created, please refer to the main journal article. Note that due to the relatively large grid spacing (1500 x 1500 m), some pixilation has occurred, and this has occasionally created ‘gaps’ adjacent to faults, particularly adjacent to the Darling Fault.

To zoom-in, rotate and pan the model

By using the toolbars directly above the 3D model, the left icon allows you to change what viewing mode to use. Alternatively, pressing and holding Ctrl or Alt, and pressing and holding the left mouse button allows you to pan, and using the mouse wheel allows you to zoom.

To toggle layers on and off

Layers may be found in the model tree. Adobe Reader or Acrobat has the model tree closed by default. To open it, click on the model tree icon in the model toolbar, which will open the model tree. Expand the model to the view below, and then use the tick icons on each layer to turn it on or off. Unfortunately the horizons could not be renamed.

- Horizon = Top Basement
- Horizon-2 = Top Permian stratigraphy
- Horizon-3 = Top Kockatea Shale/Sabina Sandstone
- Horizon-4 = Top Lesueur Sandstone
- Horizon-5 = Top Cattamarra Coal Measures/Eneabba Fm.
- Horizon-6 = Top Yarragadee Formation/Cadda Formation
- Horizon-7 = Top Parmelia Group
- Horizon-8 = Top Gage Sandstone
- Horizon-9 = Top South Perth Shale
- Horizon-10 = Top Leederville Formation
- Horizon-11 = Top Coolyena Group
- Horizon-12 = Top Undifferentiated Cenozoic

Quering elevation and position

Unfortunately, PDF’s are not in-built with an identify tool. As such, querying will have to be done visually, by contrasting elevation colours to the legend on this page, and estimating its XY coordinates using the 2D depth to top images in the main journal article.