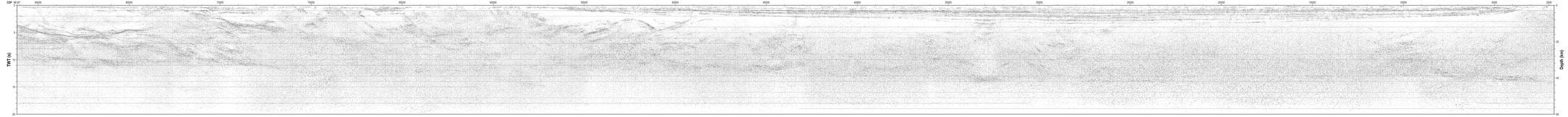
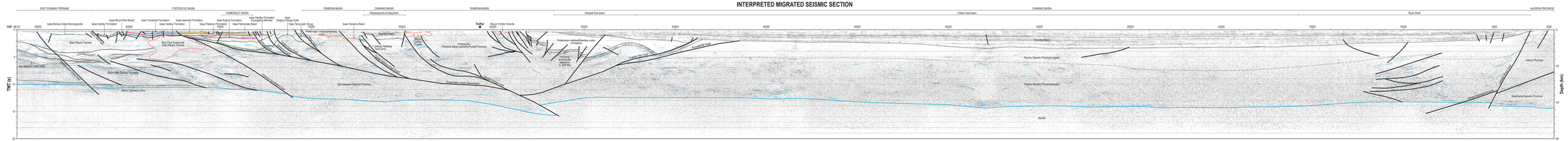
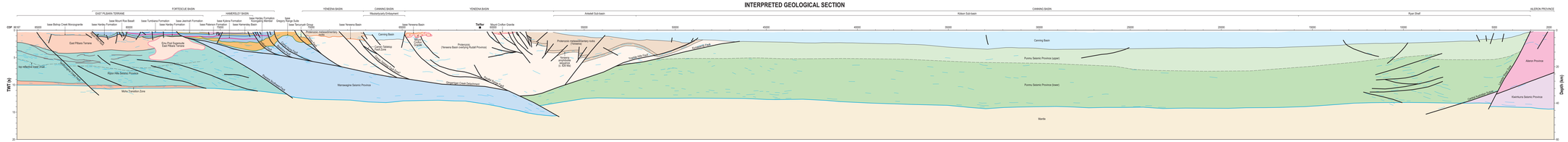
SEISMIC SECTION



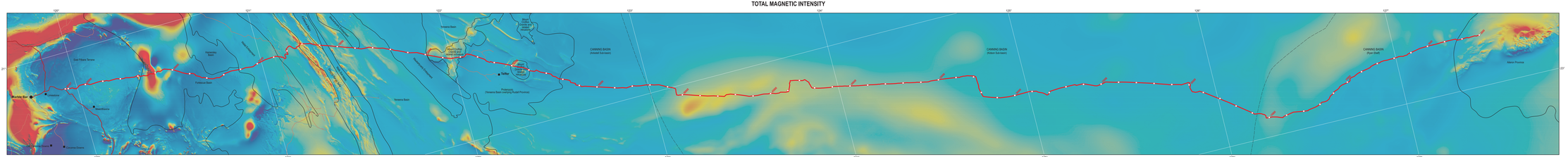
INTERPRETED MIGRATED SEISMIC SECTION



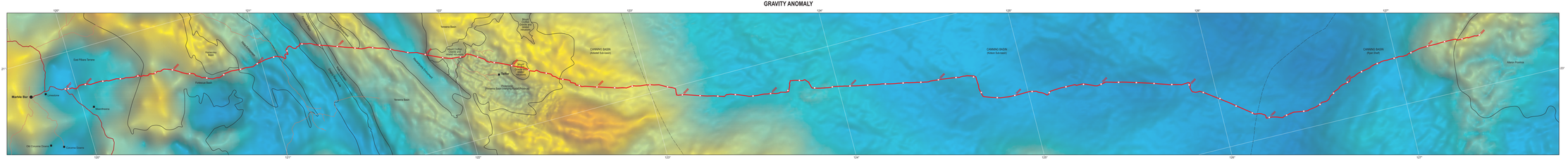
INTERPRETED GEOLOGICAL SECTION

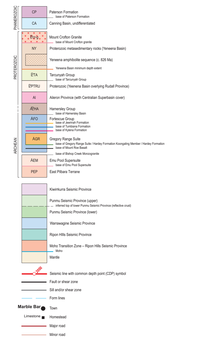


TOTAL MAGNETIC INTENSITY



GRAVITY ANOMALY





SHEET INDEX

Source for GDA94 map accuracy varies in mountainous and ground truthing areas

Interpretation by M P Doublier, K Sessions, DP Johnson, DS Kelley, P Hollis, H Howard, R J Occleppig, RH Smithies, **Contributions by** M Pawley, M Wingate, M Lindsay, RL Hocking, ML Hocking, AJ Calver, M Sircombe, P Mahoney, P Morris, R Lindeberg, T Frankcombe, R Hyam and RJ Rosenthal

Collaborative interpretation

The basement interpretation of deep seismic reflection survey 18GA-KB1 is the result of a collaboration between the Geological Survey of Western Australia, Geoscience Australia and the Centre for Exploration Targeting at The University of Western Australia. The interpretation is the result of two interpretation workshops held in Canberra (April 2018) and Perth (June 2018), and ongoing interpretation between and after these workshops.

Data processing

The seismic data were processed through multiple processing streams including standard wedtherless beam and deep crustal processing procedures. Pre-stack time migration streams both true amplitude and relative amplitude, as well as a pre-stack depth migration stream and a post-stack depth migration stream were applied. The interpretation was carried out on the pre-stack depth migrated stream and the post-stack depth migrated stream. The pre-stack depth migrated stream is the preferred stream for interpretation. A P-wave velocity of 6000 m/s was used for basement, down to 7 s TWT corresponding to approximately 20 km depth. A constant velocity of 6000 m/s was used for the mantle, down to 12 s TWT corresponding to approximately 40 km depth. The resulting CDG has been exported, including the 12 km depth to TWT.

Cartography by M Prause

Edited by D Gay

Published by the Geological Survey of Western Australia

This map is published in digital format (PDF) and is available online at www.dmirs.wa.gov.au/GSWApublications

Copies are available from: Information Centre, Department of Mines, Industry Regulation and Safety, 100 Plain Street, East Perth, Western Australia 6004

Phone: +61 8 9222 3459 Fax: +61 8 9222 3444

Website: www.dmirs.wa.gov.au/gswa Email: geological.survey@dmirs.wa.gov.au

The recommended reference for this map is: Doublier, MP, Sessions, K, Johnson, DP, Kelley, DS, Hollis, PH, Howard, H, Occleppig, RJ, Smithies, RH, Pawley, M, Wingate, M, Lindsay, M, Hocking, RL, Hocking, ML, Calver, AJ, Sircombe, M, Mahoney, P, Morris, P, Lindeberg, R, Frankcombe, T, Hyam, R and Rosenthal, RJ, 2020, Basement interpretation of the Kidson seismic line 18GA-KB1: Geological Survey of Western Australia, one sheet map.

GEOLOGICAL SURVEY OF WESTERN AUSTRALIA

BASEMENT INTERPRETATION OF THE KIDSON SEISMIC LINE 18GA-KB1

March 2020

© Geoscience Australia 2020