

# Multi-scale edges for Western Australia from gravity and magnetics

by

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## Abstract

Multi-scale edges have been generated from Bouguer gravity and Reduced-to-Pole magnetic data.

The Intrepid v5.6.3 Multi-scale edge detection module uses potential field geophysical data to provide a starting point for an interpretation of structural geology. Detection of multi-scale edges proceeds by finding local maxima points of the total horizontal derivative for many upward continuations of data. Neighbouring points are then joined together to create strings (also referred to as ‘worms’) that define the edges of features.

Upward continuation levels used are as follows:

**gravity** (11 levels): 6.2, 8.3, 11, 15, 21, 28, 38, 50, 68, 92, 124 km

**magnetics** (10 levels): 6.2, 8.3, 11, 15, 21, 28, 38, 50, 68, 92 km

The gravity data used to generate the multi-scale edges is the Gravity anomaly grid (400 m) of Western Australia (Brett, 2020a). The magnetic data used to generate the multi-scale edges is the Magnetic anomaly RTP grid (80 m) of Western Australia (Brett, 2020b).

The following products have been generated:

- Image files of worms in JP2 format

## How to access

The data layer is best accessed using [GeoVIEW.WA](#). This online interactive mapping system allows data to be viewed and searched together with other datasets, including Geological Survey of Western Australia and Geoscience Australia geochronology data, geological maps and mineral exploration datasets.

## References

Brett, JW 2020a, 400 m Bouguer gravity merged grid of Western Australia 2020 – version 1: Geological Survey of Western Australia, <[www.dmirs.wa.gov.au/geophysics](http://www.dmirs.wa.gov.au/geophysics)>.

Brett, JW 2020b, 80 m magnetic RTP merged grid of Western Australia 2020 – version 1: Geological Survey of Western Australia, <[www.dmirs.wa.gov.au/geophysics](http://www.dmirs.wa.gov.au/geophysics)>.

## Recommended references

Brett, JW 2020, Multi-scale edges for Western Australia from gravity and magnetics: Geological Survey of Western Australia, digital data layer.

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