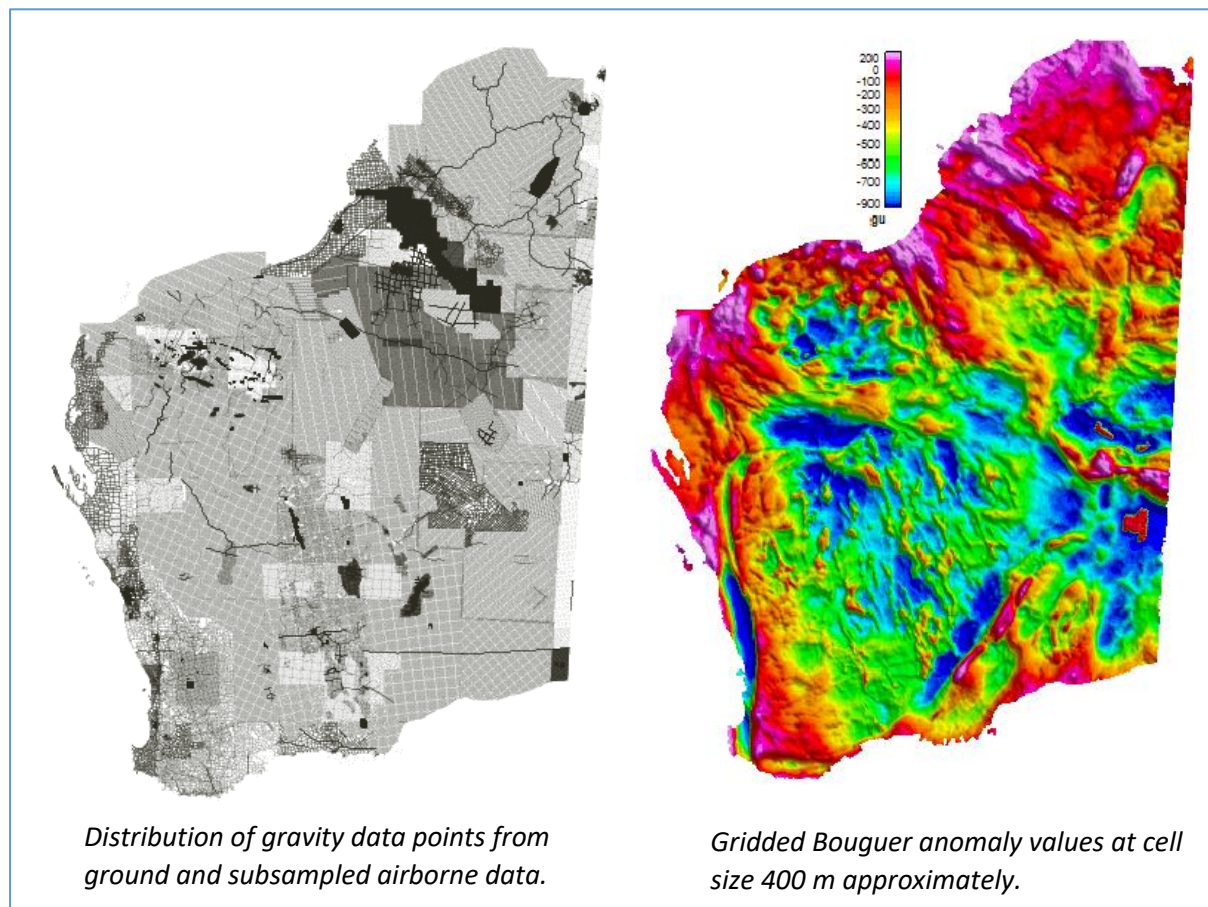# Point Gravity Dataset of Western Australia

The Point Gravity Dataset of Western Australia is an integration of ground gravity data sourced from the Australian National Gravity Database hosted by Geoscience Australia, and subsampled airborne gravity data from surveys flown by GSWA and from selected publicly-available private company surveys.

The airborne gravity data has been subsampled to provide the minimum density of points required to honour the data. For an airborne vertical gravity survey, it is standard practise to filter the data to reduce noise. For example, a 100 second filter results in a minimum effective wavelength of approximately 5 km. This may be represented by one sample every 2.5 km, which corresponds to every 100th data point. For this example, every 100th point will be included in the dataset, with practically no loss of resolution. Subsampling has also been applied to airborne gravity gradiometer surveys; however, they will be represented by a higher density of points to reflect their higher resolution.

No attempt has been made to upward/downward continue data, or edit data. Gridding and imaging of these data will result in some artifacts in areas where the ground and airborne data do not match.



*Distribution of gravity data points from ground and subsampled airborne data.*

*Gridded Bouguer anomaly values at cell size 400 m approximately.*

The dataset is provided in the following formats:

1. ASEG-GDF2

2. Esri shapefile

**Fields:**

| | |
|---|---|
| SURVEY_NUMBER | ANGD for ground, MAGIX R-number for airborne |
| STATION_NUMBER | ANGD for ground, fiducial for airborne |
| LONGITUDE | X, GDA94 |
| LATITUDE | Y, GDA94 |
| CSCBA | Terrain corrected Bouguer gravity |
| ACQ_MODE | 0 = ground, 1 = airborne |

**LICENCE**

JWB May 2021
Geological Survey of Western Australia
geophysics@dmirs.wa.gov.au