

District-scale targeting for gold in the Yilgarn Craton: Part 2 of the Yilgarn Gold Exploration Targeting Atlas (GSWA Report 132)

In Part 2 of the Yilgarn Gold Exploration Targeting Atlas, 22 district-scale targeting criteria for gold in the Yilgarn Craton are described and assessed with GIS spatial analysis (containment and proximity analyses) applied to structural and lithological criteria. Geochemical exploration criteria are evaluated qualitatively. The Targeting Criteria include some that were assessed in Part 1 (e.g. proximity to regional faults and fault intersections; GSWA Report 125) and some that are new to Part 2 (e.g. fold axes, spectral mineralogy, and several geochemical parameters).

Spatial analyses made use of GSWA's 1:500 000 shapefiles, shapefiles made available by industry groups, and two gold deposit databases (MINEDEX and an extraction from Barrick's gold deposit database). Districts investigated include Kalgoorlie – Ora Banda, Laverton, Agnew, Wiluna, and Southern Cross.

The USB contains:

- Report 132 as a PDF document.
- A digital Appendix to Report 132, consisting of a complete set of tabulated results and charts of spatial analyses, supplied as MS Excel spreadsheets

ESRI ArcGIS shapefiles consisting of:

- targeting criteria features
- buffers created for containment and proximity analyses
- gold deposits intersected by buffers

How to use this USB

Data supplied on this USB were used to derive the tabulated and graphed results presented in Report 132. The data are intended to be used in conjunction with the Report, and an initial reading of relevant sections of Report 132 may be required to interpret the structure and contents of the digital package.

The contents of this data package can be accessed by clicking on the 'Access Data' tab at the top of this page. Shapefiles are provided, but have not been presented as a GeoMap project. They can be added to the GeoMap software supplied, or viewed in the user's own GIS software.

Datasets featured:

Targeting criteria:

- 2.1: Host rock composition
- 2.2: Lithological contacts
- 2.3: Unconformities and thrusts
- 2.4: Mafic Group granites, Syenitic Group granites, and lamprophyres
- 2.5: Faults and fault orientation
- 2.6: Faults and intrusions
- 2.7: Fault intersection density
- 2.8: Fault jogs
- 2.9: Fault bends
- 2.10: Fault density
- 2.12: Fold axes
- 2.14: Paleostress models
- 2.22: Geological complexity



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