

ASX Announcement

18 December 2023



Great Western
EXPLORATION

Growth Fault Further Enhances Giant Oval Targets

Highlights

- Further interpretation of geophysical data has been completed on the giant Oval and Oval South Targets.
- The interpretation has further enhanced prospectivity of these two potentially transformational Winu style intrusive related copper-gold targets.
- Oval and Oval South were originally defined by Rio Tinto in the late-1990s, and further defined by Sandfire Resources.
- Great Western's interpretation has defined a significant north-east trending feature that aligns with a Geological Survey of Western Australia's (GSWA) interpreted "growth fault" at the Oval and Oval South Targets.
- Great Western interprets that Oval and Oval South's coincident geophysics anomalism, location on a major crustal mantle tapping fault, newly interpreted intersection with a basin defining growth fault, and within favourable stratigraphy creates the potential for a colossal discovery to be made.
- Great Western in the process of negotiating access agreements for drill testing, anticipated to be completed early-2024.

Great Western Exploration Limited (ASX: GTE) ("Great Western" or "the Company") is pleased to announce further increased prospectivity following data interpretation at Oval and Oval South, where the Company is exploring for giant Winu style (2.88Mt copper-7.88Moz gold, Rio Tinto 2023) intrusive related copper-gold targets.

Giant Oval & Oval South Targets

GTE 100% (E51/1746)

The giant Oval and Oval South targets are within the Company's Yerrida North Project, located on the northern and western portions of the Yerrida Basin, approximately 800km north-east of Perth and adjacent to the DeGrussa and Monty Cu-Au Volcanic Hosted Massive Sulphide deposits (VHMS), shown in Figure 1.

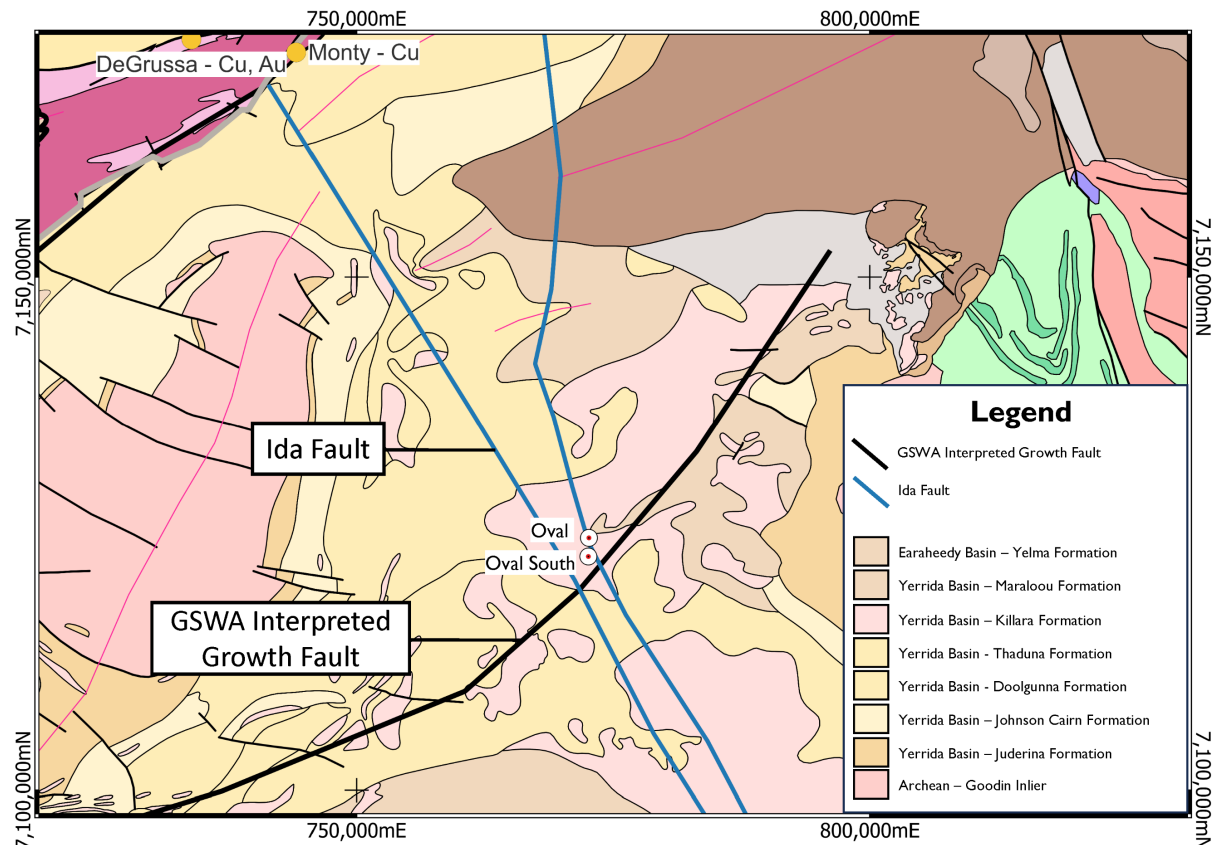


Figure 1: Location of the Oval and Oval South Targets and Great Western Tenements within the Yerrida Basin, with the location of the Ida and GSWA Growth Faults that potentially focused fluids at these two targets.

Rio Tinto & Sandfire's Work

The Oval and Oval South Targets were originally defined by Rio Tinto Tempest airborne EM survey in the late 1990s. Rio Tinto drill tested the Oval target, drilling a hole to a depth of 232m and terminating the hole within black shale with disseminated pyrite, considered at the time to be the source of the conductor (GTE ASX Announcement 4 October 2023).

In 2010 a VTEM survey was completed by Great Western over an area that encompassed both Oval and Oval South. This geophysical method can penetrate deeper into highly conductive terrains such as shales at this location than the Tempest technique utilised by Rio Tinto. The VTEM data defined the conductor at a depth of 300m, below the shale surface where OVR001 was terminated (Figure 2); **hole OVR001 did not intersect the conductor.**

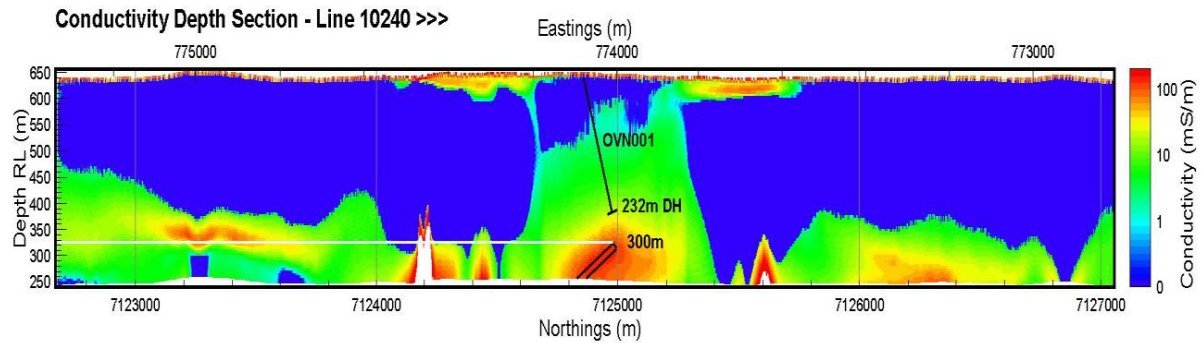


Figure 2: Position of Rio Tinto drilled hole at Oval overlaid on VTEM data. Note position of conductor below termination of OVN001.

Further definition of the Oval and Oval South targets was completed by a joint venture between Great Western and Sandfire (ASX: SFR), where Sandfire spent \$4.5M on exploration on the project from 2017 before withdrawing (GTE ASX Announcement 17 August 2023). Great Western assumed 100% ownership of the Yerrida North Project, with all associated exploration data compiled and completed by Sandfire during the joint venture.

Sandfire completed an Airborne Gravity Gradiometry (AGG) in 2022, with the AGG survey defining discrete gravity highs at Oval and Oval South, that overlaid near perfectly with the VTEM anomalies (Figure 3). The coincident gravity and EM anomalies were interpreted as potential buried bodies of metal rich sulphide mineralisation (GTE ASX Announcement 4 October 2023).

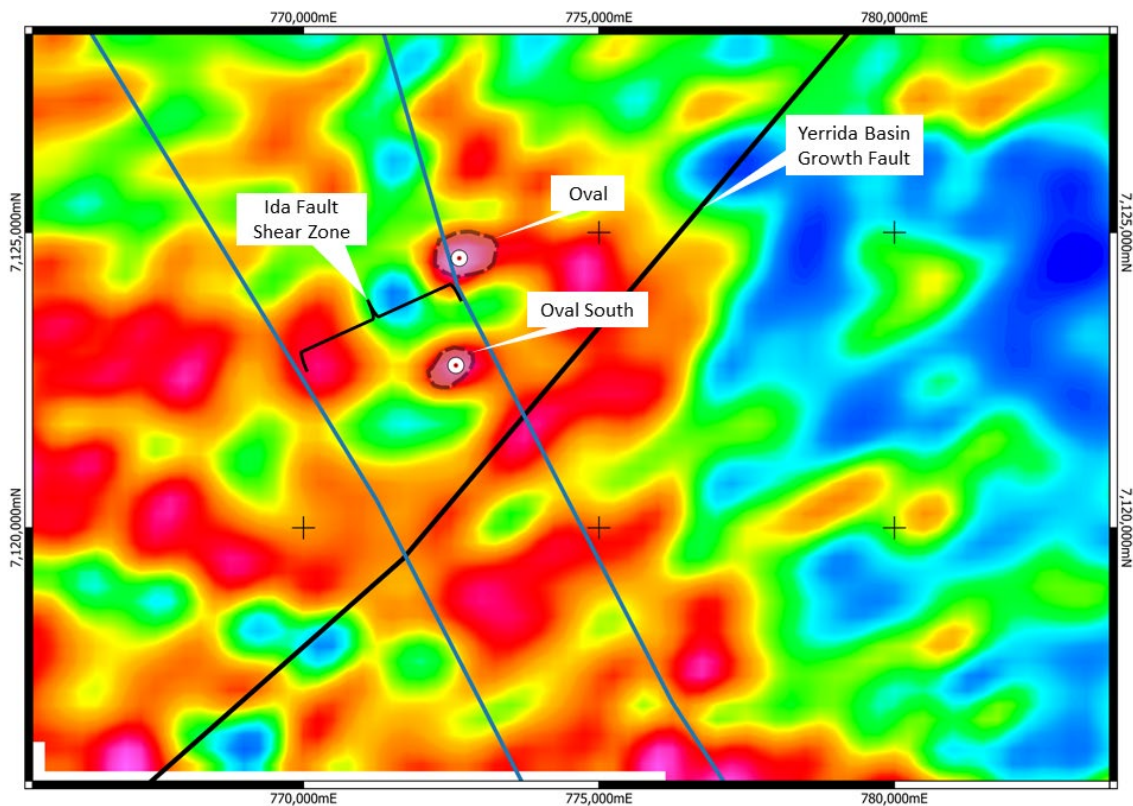


Figure 3: Oval and Oval EM anomalies, overlaid on gravity gradiometry data. Note the location of the Ida Fault Shear Zone and Yerrida Basin Growth Fault, focusing potential metal rich fluids (GTE ASX Announcement 4 October 2023).

The geophysical signatures are interpreted by Great Western as sharing similarities with the colossal intrusive related copper-gold Winu ((2.88Mt Cu – 7.88Moz Au, Rio Tinto 2023) and Haverion (2.9Moz Au – 140Kt Cu, Newcrest 2023).

Further Interpretation Defines “Growth Fault”

Further interpretation of geophysical data (gravity and magnetics) by Great Western defined a north-east trending feature. The Company’s independent interpretation was found to align perfectly with Geological Survey Western Australia’s (GSWA) major basin defining “growth fault” of the Yerrida Basin (Figure 1) interpretation completed in 2000, undertaken without the extensive geophysical dataset Great Western now has. According to the GSWA in their report on the Yerrida Basin, this fault played a crucial role in development of the Basin (Pirajno and Adamides, 2000).

The Yerrida Basin Growth Fault is a long-lived structure, likely to have penetrated Archean Basement below the Yerrida Basin. Crucially for Oval and Oval South, this feature intersects the crustal scale mantle tapping Ida Fault (Figure 1). The Company interprets these two faults in conjunction provided the plumbing to focus metal rich fluids from the mantle in favourable trap sites and Yerrida Basin stratigraphy (shales, carbonates, and siltstones).

This identification of the Yerrida Basin growth fault significantly increases the potential for a giant Winu-Haverion style intrusive related copper-gold discovery to be made.

New Interpretation Adds to Oval & Oval South’s Impressive Key Ingredients

Discovery of giant deposits often involve the identification of at least three key ingredients that may define a potential major mineralisation system. The interpretation of the Yerrida Basin Growth Fault adds to the very significant key ingredients of Oval and Oval South already identified, which greatly enhances the discovery of a giant Winu Style intrusive related copper-gold system, which now include:

- ✓ Co-incident gravity and EM anomalies – zones of dense rocks that are conductive interpreted to represent obscured metal rich sulphide mineralisation;
- ✓ Co-incident magnetic anomalism potentially representing a deep intrusive providing mineralised fluids and heat source to drive a mineralised system;
- ✓ Proximity to the crustal scale Ida Fault a proven fertile conduit for metal rich mantle fluids;
- ✓ Intersection of the Ida Fault by a basin defining “growth structure”, allow mineralised fluids to ascend and focus within suitable trap site/stratigraphy;
- ✓ Favourable Yerrida Basin stratigraphy of the Johnson Cairn Formation for mineralised fluids to deposit copper-gold (shales, dolomites, siltstones); and
- ✓ Position of both Oval and Oval South within an east-west intrusive corridor, a potential zone of weakened crust which in conjunction with the Ida Fault and GSWA growth Fault makes an ideal trap site for metal accumulation.

Great Western interprets that Oval and Oval South's coincident geophysics anomalism, location on a major crustal mantle tapping fault, newly interpreted intersection with a basin defining growth fault, and within favourable stratigraphy creates the potential for a colossal discovery to be made.

Access Agreements in Process

Great Western is now in the process of negotiating access agreements for drilling of Oval and Oval South, which the company anticipates will be completed in early-2024. Great Western looks forward to updating shareholders with further developments of these highly prospective targets.

References:

Piragno, F., and Adamides, N.G., 2000, *Geology and Mineralization of the Paleoproterozoic Yerrida Basin, Western Australia*, Western Australia Geological Survey, Report 60, pp. 37-38.

Newcrest Mining 2023, *Annual Mineral Resource and Ore Reserves Statement*, ASX Announcement, Newcrest Mining Limited, 11 August 2023, pp. 8.

Rio Tinto 2023, *Changes to Ore Reserves and Mineral Resources*, ASX/LSE Announcement, Rio Tinto, 22 February 2023, pp. 4.

About Great Western Exploration

Great Western Exploration (GTE.ASX) is a copper, gold and nickel explorer with a world class, large land position in prolific regions of Western Australia. Great Western's tenements have been under or virtually unexplored (Figure 4).

Numerous field work programmes across multiple projects are currently underway and the Company is well-funded with a tight capital structure, providing leverage upon exploration success.



Figure 4: Location of Great Western's Exploration Tenure.

Authorised for release by the board of directors of Great Western Exploration Limited.

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Previous ASX Releases – GTE.ASX

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| 1. | 17 August 2023 | Great Western Assumes 100% of Yerrida North. |
| 2. | 21 July 2023 | June 2023 Quarterly Activities Report. |
| 3. | 4 October 2023 | Giant Copper Targets at Oval and Oval South. |

Competent Person Statement

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr. Shane Pike who is a member of the Australian Institute of Mining and Metallurgy. Mr. Pike is an employee of Great Western Exploration Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Pike consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Company's Exploration Results is a compilation of Results previously released to ASX by Great Western Exploration (17/08/2023, 21/07/2023, and 4/10/2023) Mr. Shane Pike consents to the inclusion of these Results in this report. Mr. Pike has advised that this consent remains in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters in the market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.