

# Quarterly Report

23 January 2023



**Great Western**  
EXPLORATION

## Quarterly Activities Report for the Quarter ended 31 December 2022

### Summary

- The second phase of extensional drilling at Harris' Find commenced at the Yandal West Project and was completed in January 2023.
- Initially seven drill holes were completed at Harris Find with the aim to extend high-grade mineralisation from previously recorded significant intersections.
- The Barwidgee Structure, host to Harris' Find mineralisation, extends three kilometres north from Harris' Find, and remains largely untested.
- Co-Funding of Great Western's Golden Corridor Drilling Programme approved by the Western Australian Government, validating prospectivity of the Golden Corridor Project.
- Golden Corridor programme aims to test extensions of the highly endowed Wiluna-Norseman Greenstone Belt, interpreted to extend below Yerrida Basin cover.
- Infill and extensional Ultrafine soil sampling results received from the Firebird Project subsequent to the December 2022 Quarter, confirming and significantly extending gold anomalism,
- Broad anomaly at Firebird now extends up to 3.7km long and 450m wide.
- Discrete and significantly contrasting high tenor gold zones defined within the broad anomalies at Firebird, coincident with structural and lithological trends.
- Great Western has prioritised exploration at Firebird, including drill testing, in the first half of 2023.
- Fairbairn airborne electromagnetic survey commenced with results expected February 2023.

Great Western Exploration Limited (ASX: GTE) ("the Company", "Great Western") is pleased to provide its Quarterly Activities Report for the Quarter ended 31 December 2022 (December 2022 Quarter).

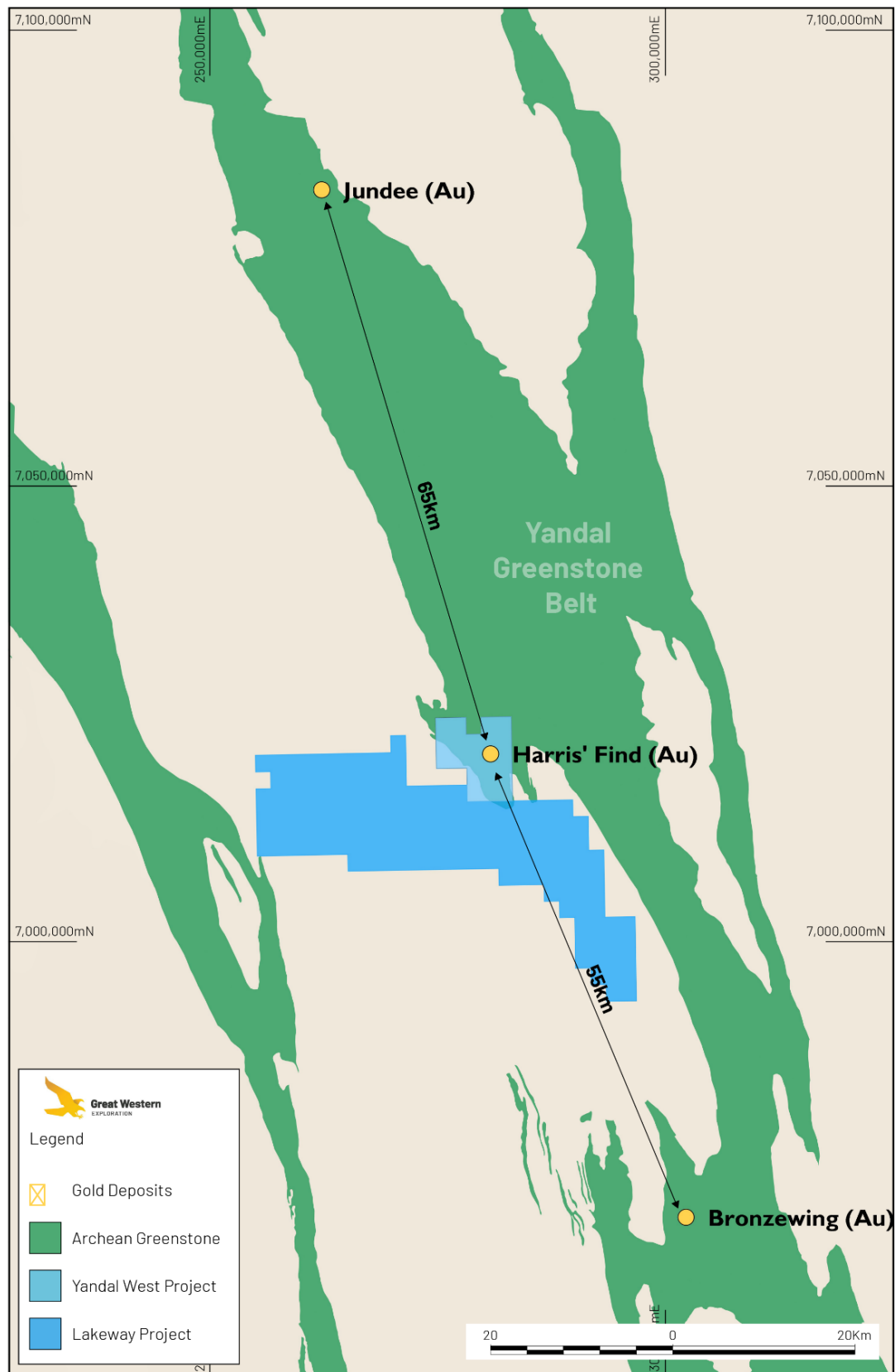
## Yandal West Project

GTE 80% (E53/1612)

The Yandal West Project is located within the world class Yandal Greenstone Belt, approximately 55km north of the Bronzewing Gold Mine and 60km south of the Jundee Gold Mine (Figure 1). Drilling



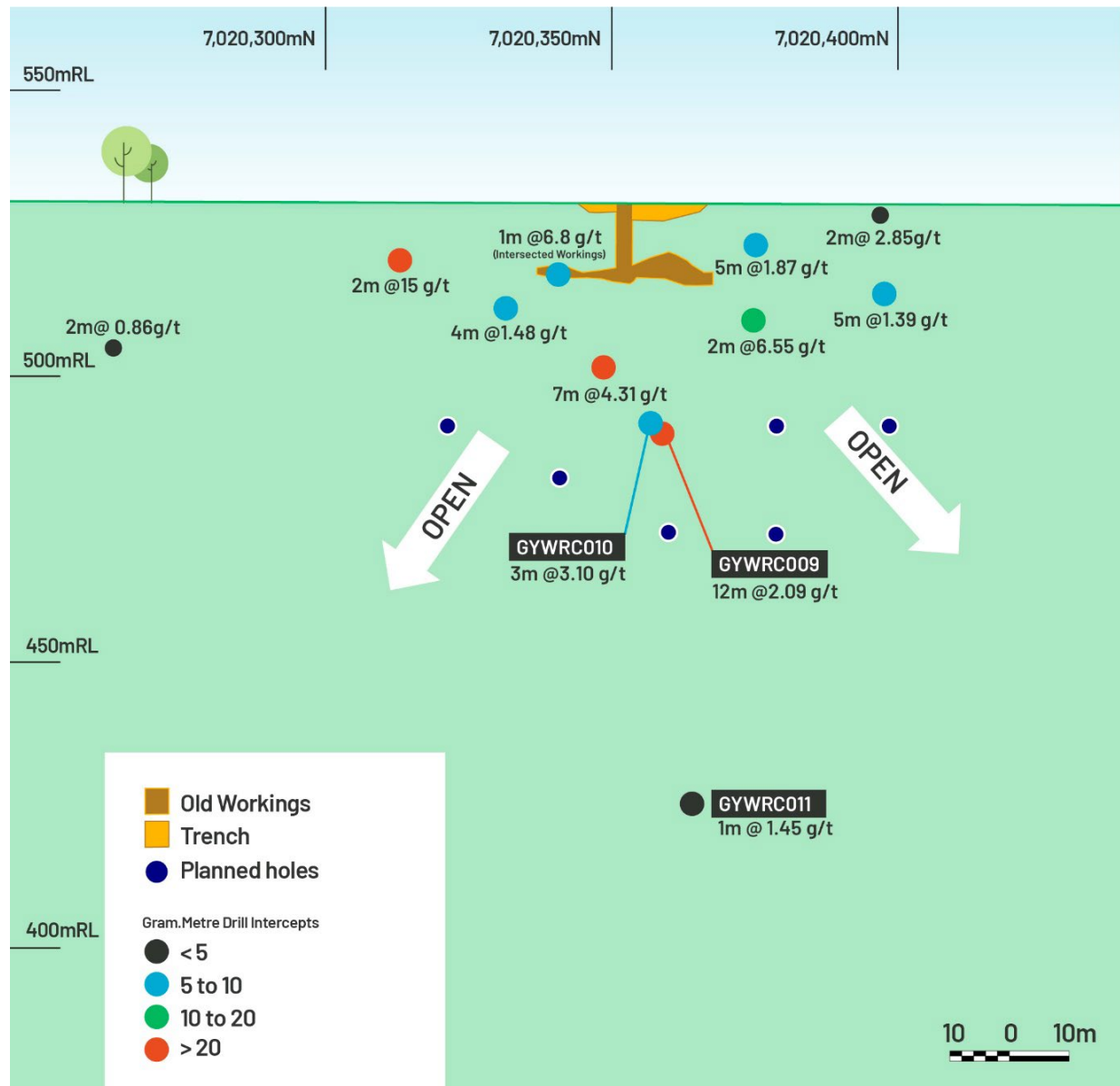
commenced at Harris' Find during the December 2022 Quarter, aiming to extend high-grade mineralisation below and along strike of previously announced significant drill intercepts at this location (GTE ASX Announcement 31 August 2022), shown in Figure 2.



**Figure 1: Location of the Yandal West Project in relation to the Jundee and Bronzewing Gold Deposits.**

One of the seven holes was diamond drilled to allow detailed structural measurements to be undertaken, to provide a better understanding of controls on mineralisation for future effective and drill targeting. The remaining holes were completed by the reverse circulation (RC) drilling method.

This programme aims to extend previously defined shallow mineralisation, that recorded significant gold results to a depth of approximately 45m. Significant results from this programme will give confidence to test north along the Barwidgee Structure, host to the Harris' Find mineralisation. This structure extends three kilometres north from Harris' Find and has previously recorded anomalous results and remains largely untested (GTE ASX Announcement 15 September 2022).



**Figure 2:** Harris' Find longitudinal section, with previously reported drill intercepts displayed, coloured by gold grams x drilled metres (GTE ASX Announcement 31 August 2022).

## Fairbairn Nickel-Copper Project

GTE 100% (E69/3443)

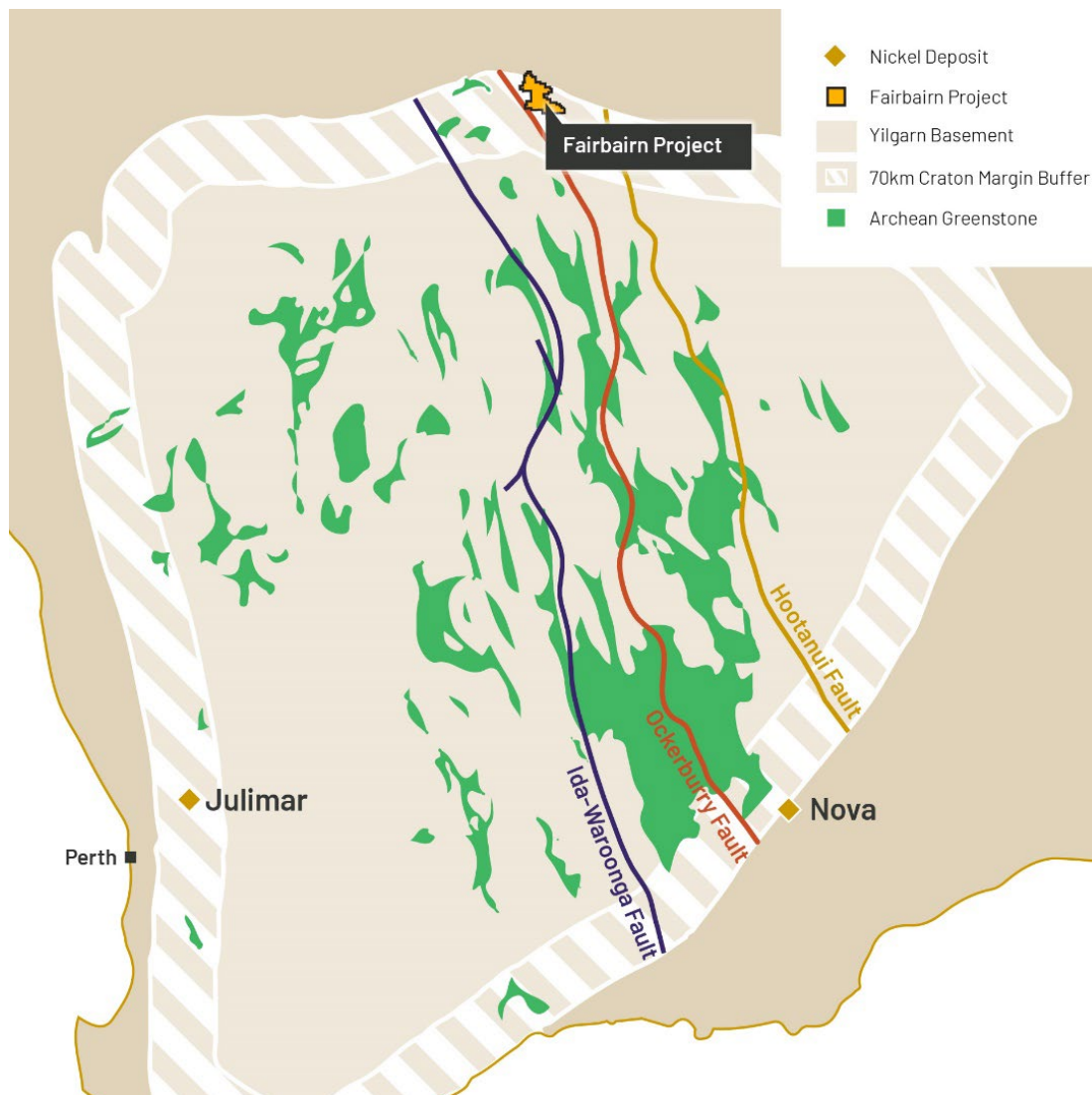
The Fairbairn Nickel-Copper Project is located 900km north-east of Perth, on the northern margin of the Yilgarn Craton and within the Earraheedy Basin. The Craton margin is highly prospective for base

metal deposits, described below and as demonstrated by the discovery of Julimar and Nova, also located on the craton margin (Figure 3).

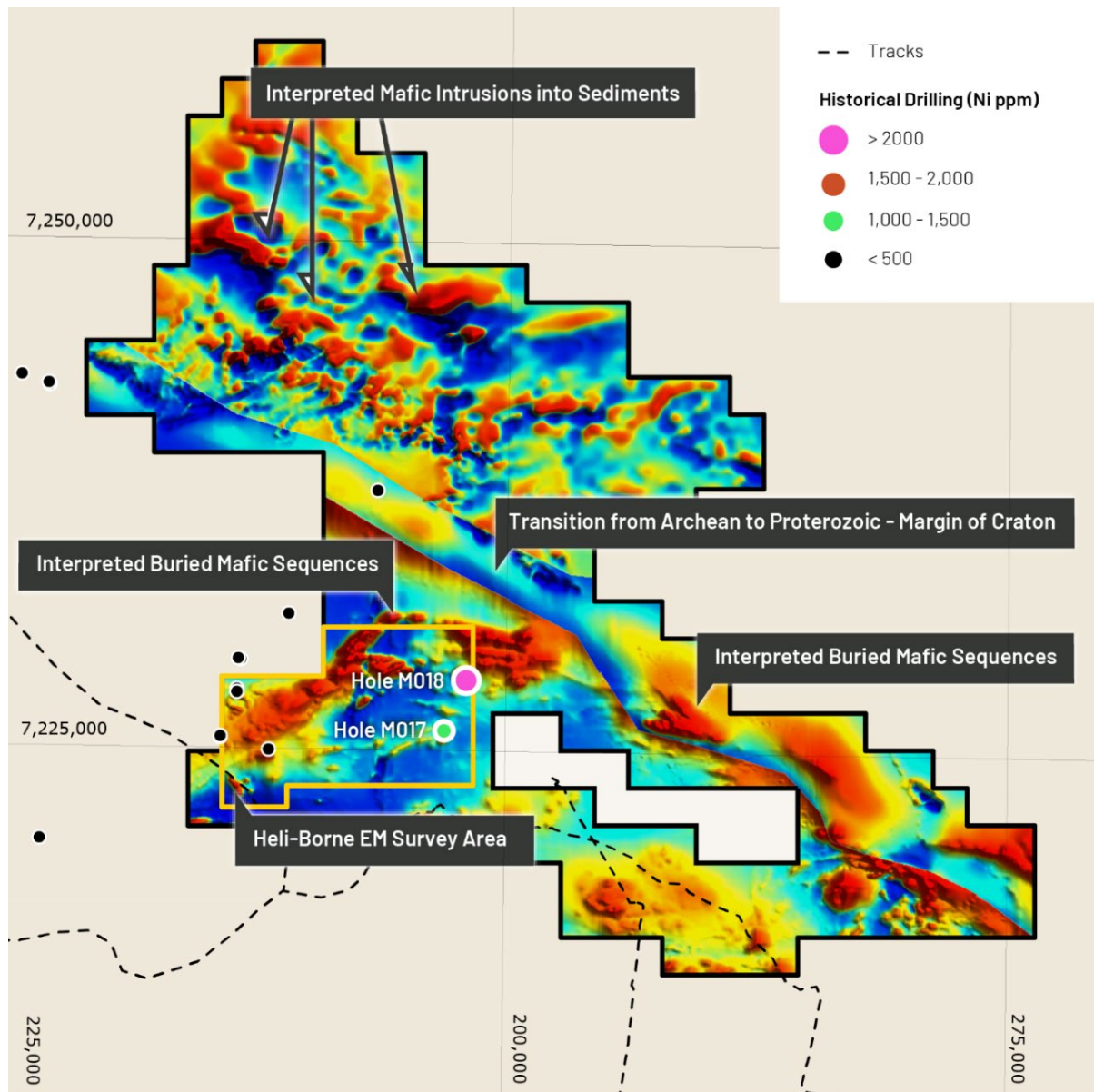
Little previous exploration has been completed at Fairbairn with work completed during the 1980s and early-1990s focussed on diamond exploration, with limited assaying for base and precious metals previously completed. The Company reviewed the assay results available and found two anomalous holes coincident with magnetic highs recorded (Figure 4). These were previously reported (GTE ASX Announcement 21 March 2022) and included:

- 12m @ 1,835ppm Ni from 22m (M018), including a maximum assay of 2,130ppm Ni, and
- 20m @ 1,214ppm Ni from 28m (M017).

The Company interprets the magnetic highs represent mafic-ultramafic sequences below shallow cover, representing highly prospective targets for Julimar and Nova style magmatic Ni-Cu deposits. The Company had planned to undertake a helicopter-borne VTEM electromagnetic (EM) geophysics survey over these areas of magnetic highs (Figure 4) during the December 2022 Quarter. However, due to various delays the survey was postponed and commenced subsequent to the end of the quarter in mid-January. An interpretation of these results is expected in February 2023.



**Figure 3:** Location of the Fairbairn Base Metal Project on the margin of the Yilgarn Craton, and the interpreted “mantle tapping” Ockerburry Fault, a potential conduit for metal deposit formation.



**Figure 4:** Previously drilled exploration holes assayed for nickel, overlaid on 40m State aeromagnetic data. Red magnetic highs are interpreted to be shallowly covered Archean mafic and ultramafic units, prospective for magmatic Ni-Cu-PGE deposits. Orange polygon is the upcoming electromagnetic survey covering anomalous drill-holes and coincident magnetic highs.

## Golden Corridor Project

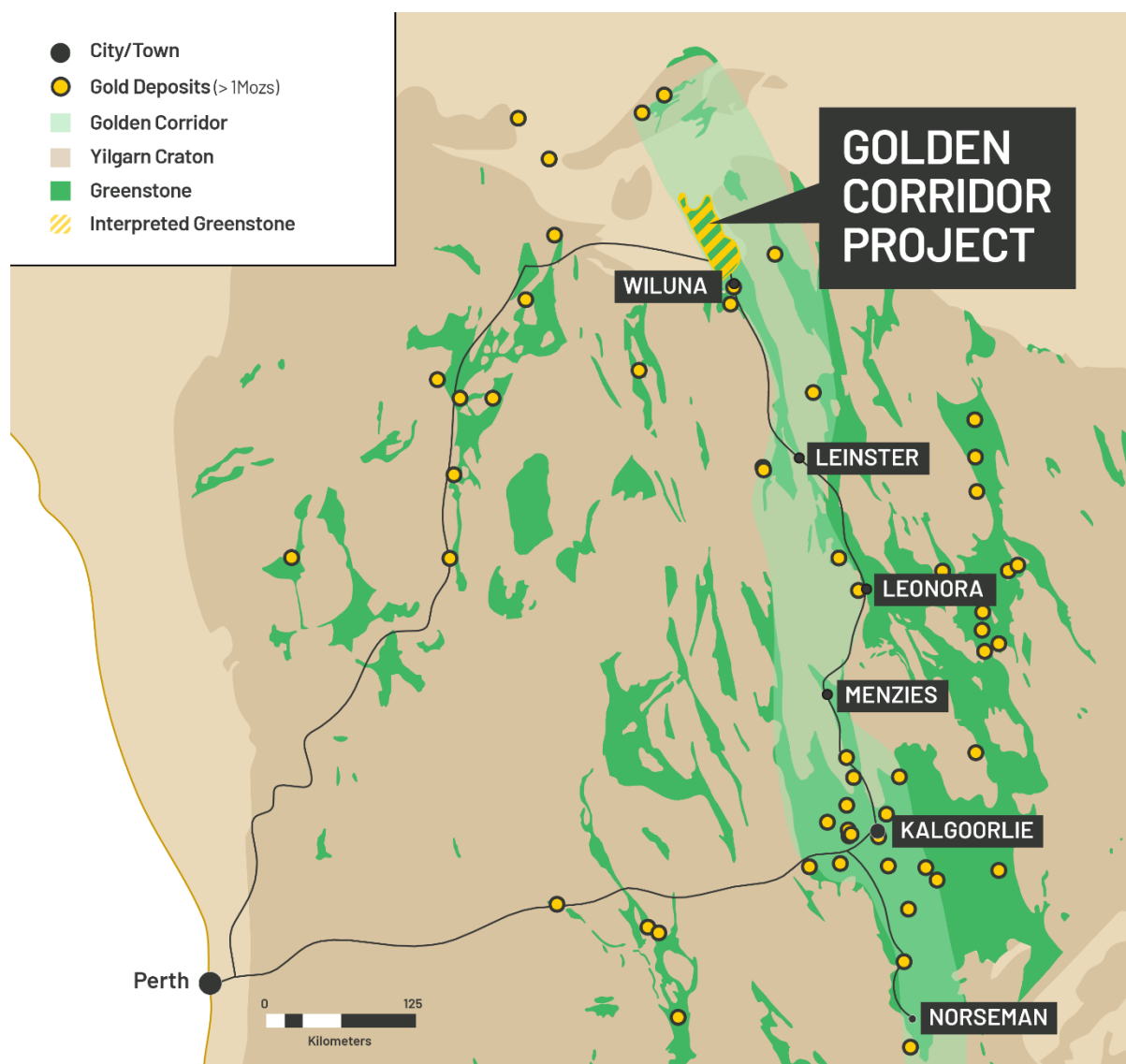
GTE 100%

The Archean Wiluna-Norsemen Greenstone belt is one of Australia's most prolific mineral terrains, host to several multi-million-ounce gold and base metal deposits. The belt is interpreted to extend north-west from Wiluna and below Proterozoic Yerrida Basin cover. Great Western's Golden Corridor project is located along this projected trend, on the eastern margin of the basin shown in Figure 5.



Several Ultrafine+ soil anomalies have been defined at this location (GTE ASX Announcement 3 March 2022, Figure 6), which the Company interprets are zones of potential leakage from mineralised Archean Greenstone below basin cover.

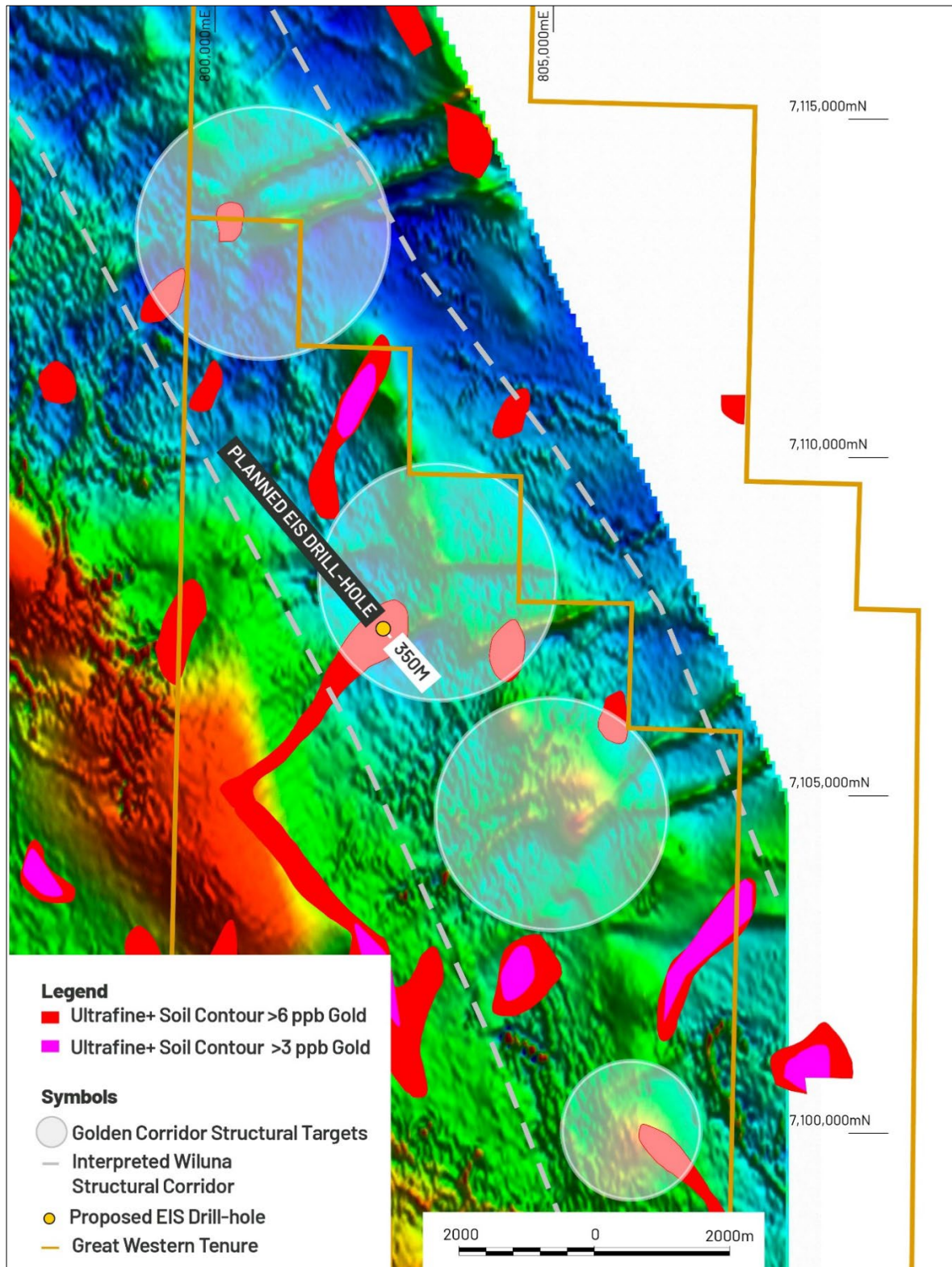
Great Western was recently notified by the Western Australian Department of Mines that the Company's Co-Funded Exploration Drilling Application was approved. The Department will co-fund up to 50% of drilling costs to a maximum of \$110,000, with a maximum of \$5,000 for rig mobilisation also available to be used to drill test the Company's basement model (ASX announcement dated 25 October 2022).



**Figure 5:** The Golden Corridor is Australia's most important gold terrane and host to many of Australia's largest gold deposits.

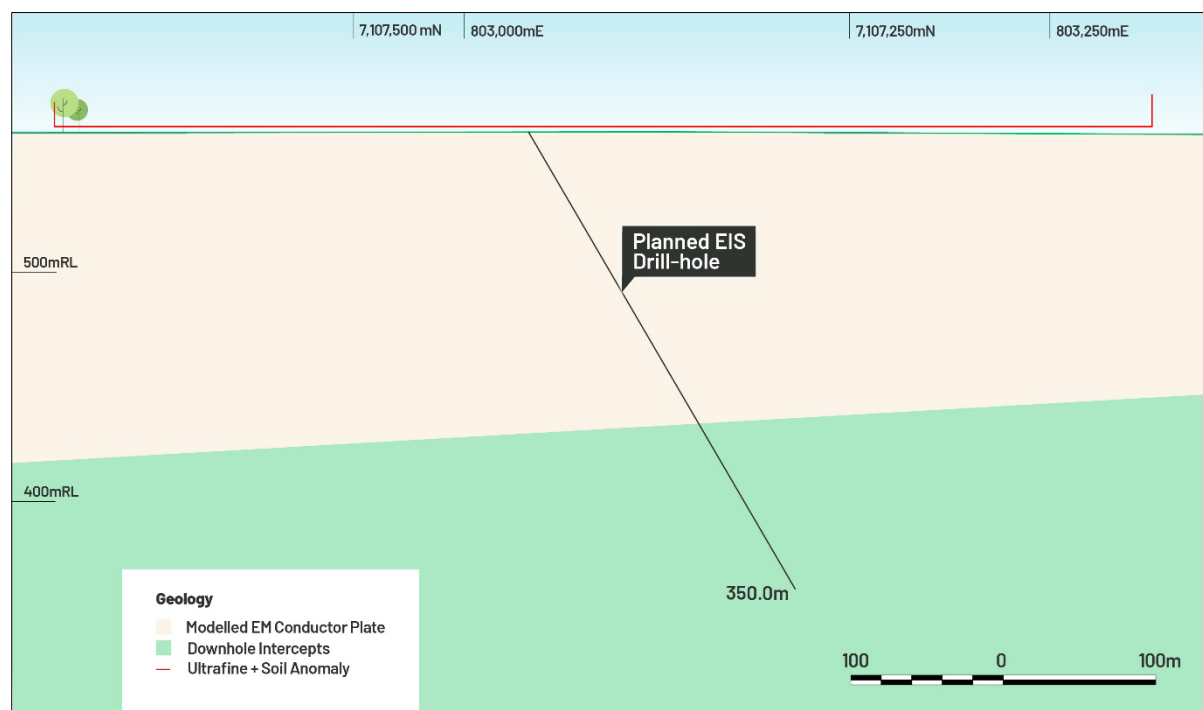
The Company's Archean Greenstone basement model was generated by the compilation of previously completed basement interpretation within the interpreted Wiluna Greenstone extension, with a 3D basement surface created. The model utilised previously completed gravity and magnetic inversion geophysical models, passive seismic data, geology logs from the limited drilling in the north-east of the basin margin, and government geological mapping and associated cross-sectional interpretation.

The model defined the depth to basement along the eastern margin was significantly less than government mapping predictions, with gravity data suggesting the basement is composed of Archean Greenstone (Wiluna-Norsemen Greenstones) rather than granitic terrain from government interpretation. No drilling had been completed at this location to an adequate depth to test the basement and, as a result, presents a compelling target.



**Figure 6:** GC1 to GC4 aeromagnetic structural targets in relation to the anomalous gold contours (modified after GTE ASX Announcement 3 March 2022).

Great Western Exploration intends to drill a diamond hole from surface (Figure 6 and Figure 7), allowing detailed logging of the Yerrida Basin units, the basement contact, and the interpreted underlying Archean Wiluna Greenstone rocks. The proposed diamond drill hole will be located within a north-east trending Ultrafine+ Soil anomaly, interpreted as a structural trend allowing leakage of underlying mineralised greenstone. This trend may be a fault uplift zone, where the basement is potentially closer to the surface than currently modelled.



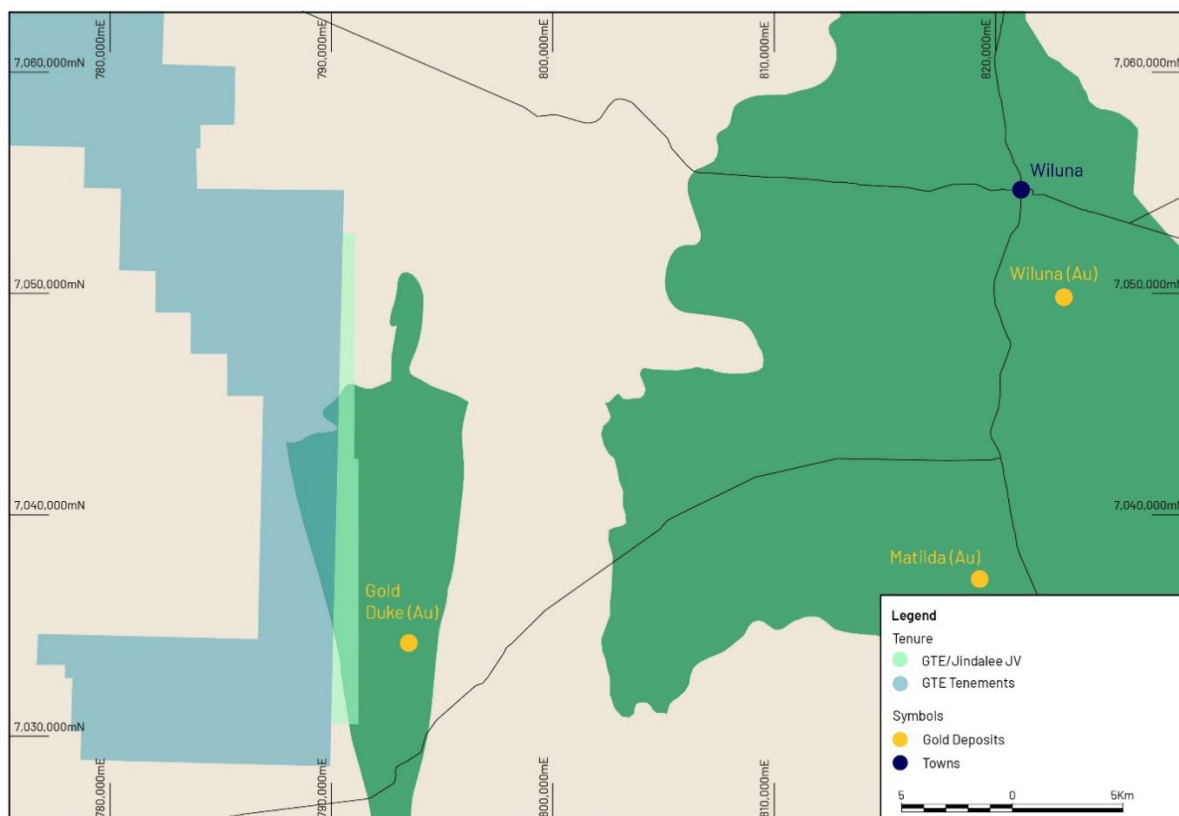
**Figure 7:** Cross section of Co-Funded drill-hole, with interpreted Yerrida Basin contact with Archean Wiluna-Norseman Greenstone.

## Firebird Gold Project

GTE 100% (E53/1894, E53/2027) and GTE Earning up to 80% (E53/2129)

Subsequent to the end of the December 2022 Quarter, the Company announced broad gold anomalies confirmed and significantly extended at the Firebird Gold Project (GTE ASX Announcement 12 January 2023).





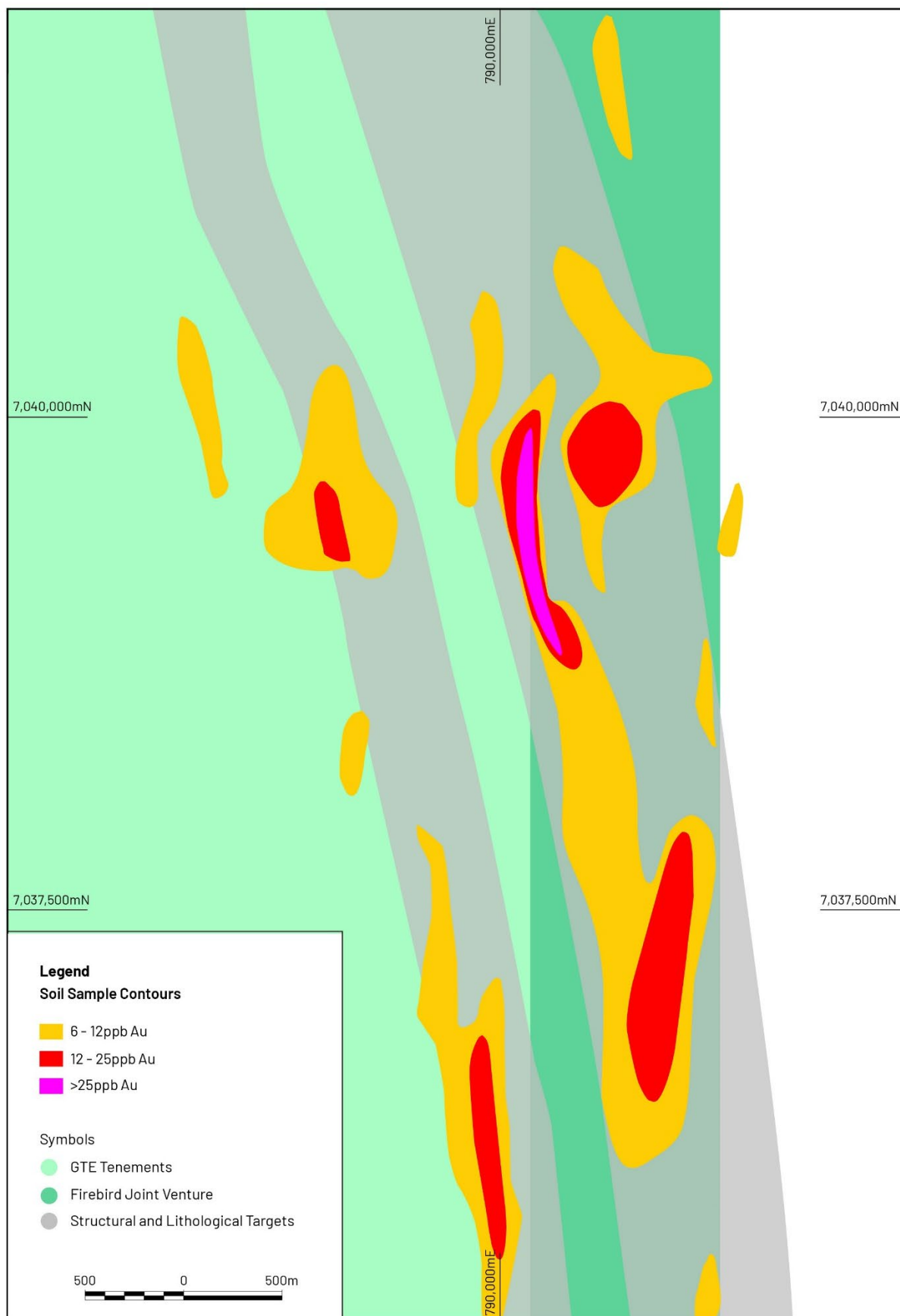
**Figure 8: Location of the Firebird Project in relation to Western Gold's Wiluna West Gold Project.**

The Firebird Gold Project is located within the Youanmi Greenstone Belt and 2.5km west of Western Gold's Gold Duke Project, which contains several Mineral Resources reported to JORC 2012 Standard (Figure 8). The Firebird Gold Project comprises 100% owned GTE ground and the adjacent Joyner's Project JV, a joint venture held by Jindalee Resources where Great Western can earn 80% of the project.

Soil sampling completed prior to Great Western's project interest defined a large zone of gold anomalism measuring 2.1km x 350m wide (GTE ASX Announcement 23 August 2021). The Company recently completed Ultrafine+ soil sampling to confirm and extend this anomalism.

Results from this programme confirmed and significantly extended gold anomalism, with broad gold anomalous gold zones now up to 3.7km long and 450m wide. Further, several strong contrasting and discrete higher tenor anomalies within the broader anomalism were delineated that were not evident in the initial sampling (Figure 9). The higher tenor anomalies are coincident with NNW-SSE structural trends, consistent with Archean Gold Lode Deposits of the region and are priority areas of interest.

Great Western has prioritised exploration at this compelling project, which will include geological and structural modelling plus drill testing of these gold anomalous zones.



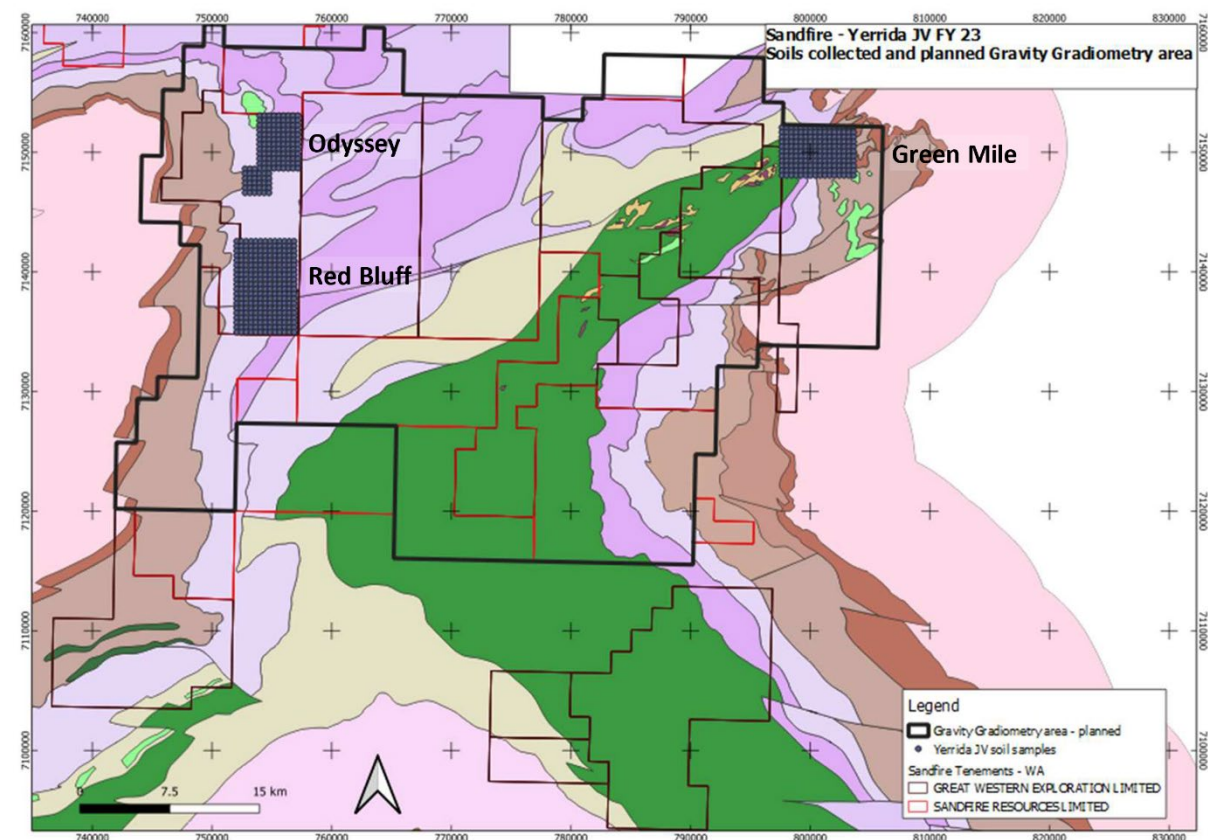
**Figure 9: Interpreted Ultrafine+ soil sample anomalism contours of the Firebird Project.**

## Yerrida North Joint Venture (Sandfire Resources ASX:SFR earning 70%)

Reconnaissance geological mapping and soil sampling was completed over the Odyssey, Red Bluff, and Green Mile targets within the Yerrida North Joint Venture (JV), shown in Figure 10. A total of 577 soil samples were collected, with results expected to be returned late-January 2023. These targets were generated from a stratigraphic and structural model of the Yerrida Basin completed in the September Quarter 2022.

To further define these targets and enhance the basin model for further target generation, an airborne gravity gradiometry survey was completed late-December 2022. The survey covered the majority of the Yerrida North J, shown in Figure 10. It is anticipated that processing and interpretation of this data and subsequent update of the basin model will be completed in February 2023.

During the December 2022 Quarter the Company was advised by Sandfire Resources that the plaintiff action brought during the September 2021 Quarter has now been settled and no further action is to be taken.



**Figure 10:** Gavin Daneel's regional geological map overlain with soil samples taken during the quarter in blue.

## Fieldwork Summary

Great Western is currently progressing several field work programmes across areas of the Company's substantial tenure, that the Company expects will result in some prospects evolving into drill ready targets. This work includes:

- Soil sampling at a number of areas considered prospective for copper, nickel and/or gold;
- Follow up drilling at the Yandal West Project, testing Harris Find which commenced in December 2022, and the Barwidgee Structure once approvals are completed (refer ASX announcement 15/09/2022);
- Airborne EM survey at the Fairbairn Nickel-Copper Project targeting magmatic nickel-copper sulphides (refer ASX announcement 28 September 2022);
- Exploration at the Firebird Gold Project has been prioritised with further work which will include drill testing to be completed in the first half of 2023; and
- Golden Corridor diamond drilling programme, testing gold in soil anomalies and modelled basement targets (refer ASX announcement 25 September 2022).

Great Western looks forward to keeping the market updated and providing results of the exploration programmes in due course.

# Corporate

## Annual General Meeting

During the December 2022 Quarter the Company sent to shareholders the Notice of Annual General Meeting and held the Company's Annual General Meeting on 30 November 2022. All resolutions included in the Notice of Annual General Meeting were passed on a poll, as notified to the market on 30 November 2022.

## ASX Additional Information

- ASX Listing Rule 5.3.1: Exploration & Evaluation Expenditure during the December 2022 Quarter was \$960,000. Full details of exploration activity during the December 2022 Quarter are in this report.
- ASX Listing Rule 5.3.2: There were no substantive mining production and development activities during the December 2022 Quarter.
- ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the December 2022 Quarter: \$89,000 in aggregate is for executive directors' salaries only.

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

Tony Walsh  
Company Secretary  
Great Western Exploration Limited  
Tel: 08 6311 2852  
Email: [enquiries@greatwestex.com.au](mailto:enquiries@greatwestex.com.au)

## 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 (23 August 2021, 3 March 2022, 21 March 2022, 31 August 2022, 15 September 2022, and 12 January 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.*

## Appendix 1: Tenement Schedule at 31 December 2022

| Project           | Tenement  | Status  | Holder                             | Ownership | Comments   |
|-------------------|-----------|---------|------------------------------------|-----------|--|
| Atley             | E 57/1130 | Live    | Great Western Exploration Limited  | 100%      |  |
| Atley             | E 57/1131 | Live    | Great Western Exploration Limited  | 100%      |  |
| Atley             | E 57/1160 | Live    | Great Western Exploration Limited  | 100%      |  |
| Atley             | E 57/1161 | Live    | Great Western Exploration Limited  | 100%      |  |
| Atley             | E 57/1162 | Live    | Great Western Exploration Limited  | 100%      |  |
| Atley             | E 57/1164 | Live    | Great Western Exploration Limited  | 100%      |  |
| Atley             | E 57/1165 | Live    | Great Western Exploration Limited  | 100%      |  |
| Atley             | E 57/1166 | Live    | Great Western Exploration Limited  | 100%      |  |
| Atley             | E 57/1204 | Live    | Great Western Exploration Limited  | 100%      |  |
|                   |           |         |                                    |           |  |
| Fairbairn         | E 69/3443 | Live    | Vanguard Exploration Ltd           | 100%      | 100% Owned Subsidiary                            |
| Fairbairn         | E 69/3810 | Pending | Great Western Exploration Limited  | 100%      |  |
| Fairbairn         | E 69/3899 | Live    | Great Western Exploration Limited  | 100%      |  |
| Fairbairn         | E 69/3903 | Pending | Great Western Exploration Limited  | 100%      |  |
| Fairbairn         | E 69/3906 | Live    | Great Western Exploration Limited  | 100%      |  |
| Fairbairn         | E 69/4065 | Pending | Great Western Exploration Limited  | 100%      | Reapplication of E 69/3903                       |
|                   |           |         |                                    |           |  |
| Forrestania South | E 74/603  | Live    | Western Areas Ltd                  | 10%       | Free Carried To PFS                              |
|                   |           |         |                                    |           |  |
| Firebird          | E 53/2129 | Live    | Jindalee Resources Limited         | 0%        | JV with Jindalee Resource Ltd, GTE Earning 80%   |
|                   |           |         |                                    |           |  |
| Golden Corridor   | E 51/1855 | Live    | Great Western Exploration Limited  | 100%      |  |
| Golden Corridor   | E 51/2046 | Live    | Great Western Exploration Limited  | 100%      |  |
| Golden Corridor   | E51/2010  | Live    | Great Western Exploration Limited  | 90%       | Westex Resources Free Carried to BFS             |
| Golden Corridor   | E 53/1983 | Live    | Great Western Exploration Limited  | 100%      |  |
| Golden Corridor   | E 53/2124 | Live    | Great Western Exploration Limited  | 100%      |  |
| Golden Corridor   | E 53/2138 | Live    | Great Western Exploration Limited  | 100%      |  |
| Golden Corridor   | E 53/2139 | Live    | Great Western Exploration Limited  | 100%      |  |
| Golden Corridor   | E 53/2141 | Live    | Great Western Exploration Limited  | 100%      |  |
| Golden Corridor   | E 53/2142 | Live    | Great Western Exploration Limited  | 100%      |  |
|                   |           |         |                                    |           |  |
| Lake Way Potash   | E 53/1949 | Live    | Great Western Exploration Limited  | 100%      |  |
| Lake Way Potash   | E 53/2017 | Live    | Great Western Exploration Limited  | 100%      |  |
| Lake Way Potash   | E 53/2026 | Live    | Great Western Exploration Limited  | 100%      |  |
| Lake Way Potash   | E 53/2146 | Live    | Great Western Exploration Limited  | 100%      |  |
|                   |           |         |                                    |           |  |
| Yandal West       | E 53/1369 | Live    | Vanguard Exploration Ltd           | 100%      | 100% Owned Subsidiary, Extension of Term pending |
| Yandal West       | E 53/1612 | Live    | Diversified Asset Holdings Pty Ltd | 80%       | Diversified Free Carried To BFS,                 |
| Yandal West       | E 53/1816 | Live    | Diversified Asset Holdings Pty Ltd | 80%       | Diversified Free Carried To BFS                  |

| Project  | Tenement  | Status  | Holder                            | Ownership | Comments  |
|--|-----------|---------|-----------------------------------|-----------|---|
| Yandal West  | E 53/2206 | Pending | Great Western Exploration Limited | 100%      | Competing Application, second drawn in ballot   |
|  |           |         |                                   |           |   |
| Copper Ridge   | E 51/1727 | Live    | Great Western Exploration Limited | 100%      | Extension of Term pending                       |
| Copper Ridge   | E 51/1734 | Live    | Great Western Exploration Limited | 100%      |   |
| Copper Ridge   | E 51/1856 | Live    | Great Western Exploration Limited | 100%      |   |
| Copper Ridge   | E 53/1894 | Live    | Great Western Exploration Limited | 100%      |   |
| Copper Ridge   | E53/2156  | Live    | Great Western Exploration Limited | 100%      |   |
|  |           |         |                                   |           |   |
| Yerrida South  | E 51/1732 | Live    | Great Western Exploration Limited | 100%      |   |
| Yerrida South  | E 51/1733 | Live    | Great Western Exploration Limited | 100%      |   |
| Yerrida South  | E 51/1993 | Live    | Great Western Exploration Limited | 100       |   |
| Yerrida South  | E51/2062  | Live    | Great Western Exploration Limited | 100%      |   |
| Yerrida South  | E51/2063  | Live    | Great Western Exploration Limited | 100%      |   |
| Yerrida South  | E 53/2027 | Live    | Great Western Exploration Limited | 100%      |   |
| Yerrida South  | E 53/2077 | Live    | Great Western Exploration Limited | 100%      |   |
| Yerrida South  | E 53/2196 | Live    | Great Western Exploration Limited | 100%      |   |
| Yerrida South  | E 51/2078 | Live    | Great Western Exploration Limited | 100%      |   |
|  |           |         |                                   |           |   |
| Yerrida North  | E 51/2127 | Pending | Great Western Exploration Limited | 100%      |   |
| Yerrida North  | E 51/2128 | Pending | Great Western Exploration Limited | 100%      |   |
| Yerrida North  | E 51/2129 | Pending | Great Western Exploration Limited | 100%      |   |
|  |           |         |                                   |           |   |
| Calyerup   | E 70/6032 | Live    | Great Western Exploration Limited | 100%      |   |
|  |           |         |                                   |           |   |
| Weld Spring  | E 69/4021 | Pending | Great Western Exploration Limited | 100%      |   |
| Weld Spring  | E 69/4022 | Pending | Great Western Exploration Limited | 100%      |   |
| Weld Spring  | E 69/4023 | Pending | Great Western Exploration Limited | 100%      |   |
| Weld Spring  | E 69/4024 | Pending | Great Western Exploration Limited | 100%      |   |
| Weld Spring  | E 69/4025 | Pending | Great Western Exploration Limited | 100%      |   |
| Weld Spring  | E 69/4026 | Pending | Great Western Exploration Limited | 100%      |   |
| Weld Spring  | E 69/4027 | Pending | Great Western Exploration Limited | 100%      |   |
|  |           |         |                                   |           |   |
| <b>Joint Venture with Sandfire Resources Limited (1)</b> |           |         |                                   |           |   |
| Yerrida North JV   | E 51/1324 | Live    | Great Western Exploration Limited | 100%      | Sandfire Earning 70%, Extension of Term pending |
| Yerrida North JV   | E 51/1330 | Live    | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |
| Yerrida North JV   | E 51/1560 | Live    | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |
| Yerrida North JV   | E 51/1712 | Live    | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |
| Yerrida North JV   | E 51/1723 | Live    | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |
| Yerrida North JV   | E 51/1724 | Live    | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |

| Project          | Tenement  | Status | Holder                            | Ownership | Comments  |
|------------------|-----------|--------|-----------------------------------|-----------|---|
| Yerrida North JV | E 51/1728 | Live   | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |
| Yerrida North JV | E 51/1746 | Live   | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |
| Yerrida North JV | E 51/1747 | Live   | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |
| Yerrida North JV | E 51/1819 | Live   | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |
| Yerrida North JV | E 51/1827 | Live   | Great Western Exploration Limited | 100%      | Sandfire Earning 70%, Extension of Term pending |
| Yerrida North JV | E 51/2033 | Live   | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |
| Yerrida North JV | E 51/2068 | Live   | Great Western Exploration Limited | 100%      | Sandfire Earning 70%                            |