

# Quarterly Report

16 July 2021



**Great Western**  
EXPLORATION

## Quarterly Activities Report for the Quarter ended 30 June 2021

### Summary

- RC drilling completed at the Copper Ridge Cu-Au+Mo Target, located 40km west of Wiluna
- Thunder Cu-Au Target: Ultrafine + geochemistry has delineated a large area (~4km<sup>2</sup>) of anomalous copper, with a core zone >160ppm Cu of approximately 1.7km strike length
- Lake Way Potash Project: Exploration licenses and 26D water license granted and passive seismic survey commenced subsequent to the end of the June 2021 Quarter
- Assays received from Finlayson and Golden Bullock drilling
- Geological review, planning and field work activity continues in respect of a number of Great Western's other projects

Great Western Exploration Limited (ASX: GTE) ("the Company", "Great Western") is pleased to provide its Quarterly Activities Report for the Quarter ended 30 June 2021 (June 2021 Quarter).

### Thunder (100% Great Western)

Great Western's fieldwork programme during the June 2021 Quarter has identified a very exciting, large scale copper-gold target ("Thunder"). A regional Ultrafine + soil sampling programme has defined the Thunder copper-gold target which is situated 112kms south east of Sandfire's (ASX:SFR) DeGrussa copper-gold operation. This large scale copper-gold target sits within the southern portion of the Yerrida basin which is currently being actively explored by Sandfire Resources on their 100% owned tenure, and on SFR-GTE Yerrida North JV ground, and also by DGO Gold (ASX:DGO) (**Figure 1**). Follow up fieldwork will be undertaken early in the September 2021 Quarter.

At the Thunder copper-gold target, Ultrafine + geochemistry has delineated a large area (~4km<sup>2</sup>) of anomalous copper, with a core zone >160ppm Cu of approximately 1.7km strike length (**Figure 2**).

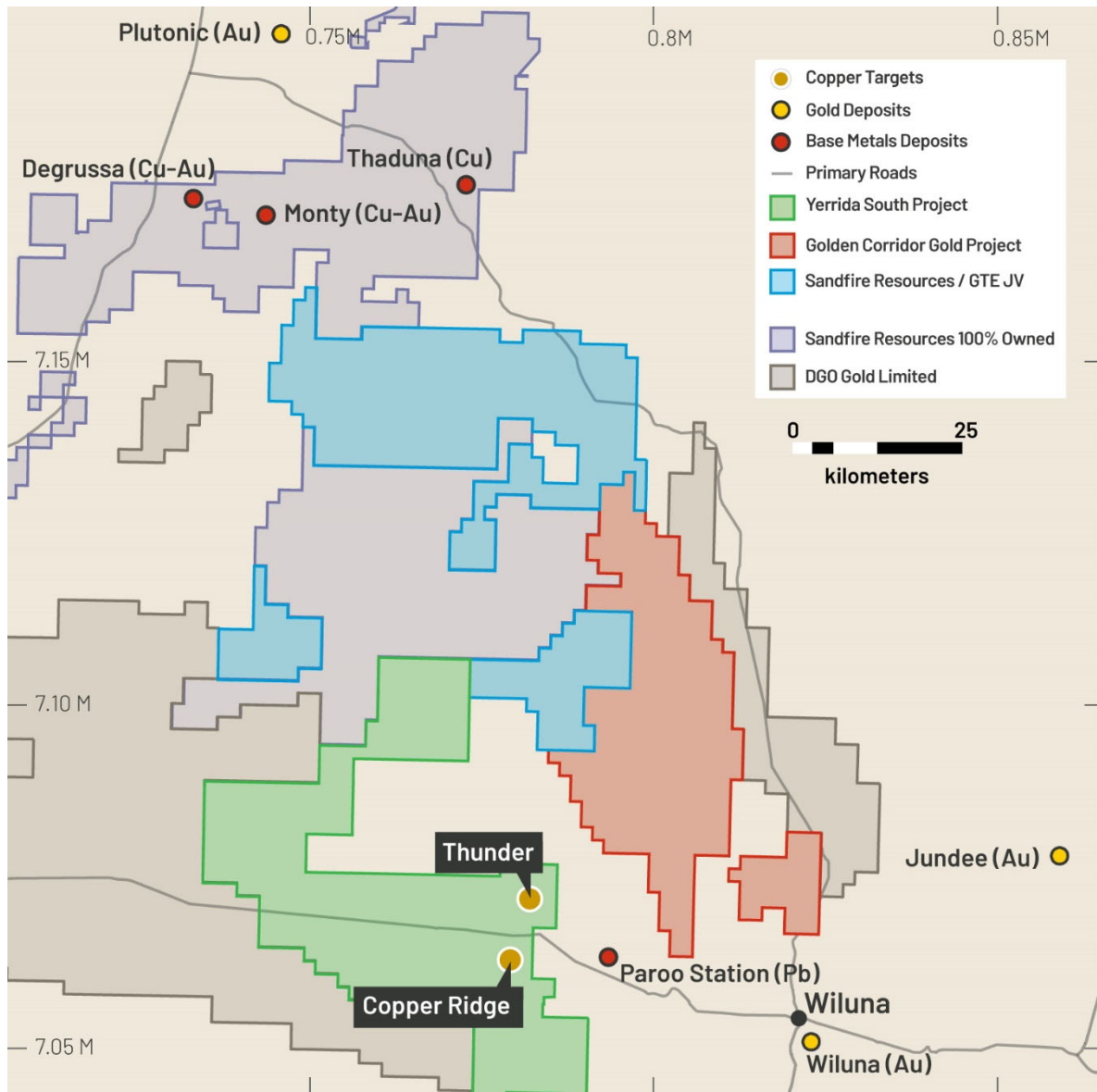
The anomalous area occurs co-incident with a number of dolerite dykes intruding the Yerrida Proterozoic rocks which consist of siltstones and shales of the Maraloou formation. The base of the Maraloou formation is intercalated with basalts which is the ideal setting for DeGrussa style VMS mineralisation.



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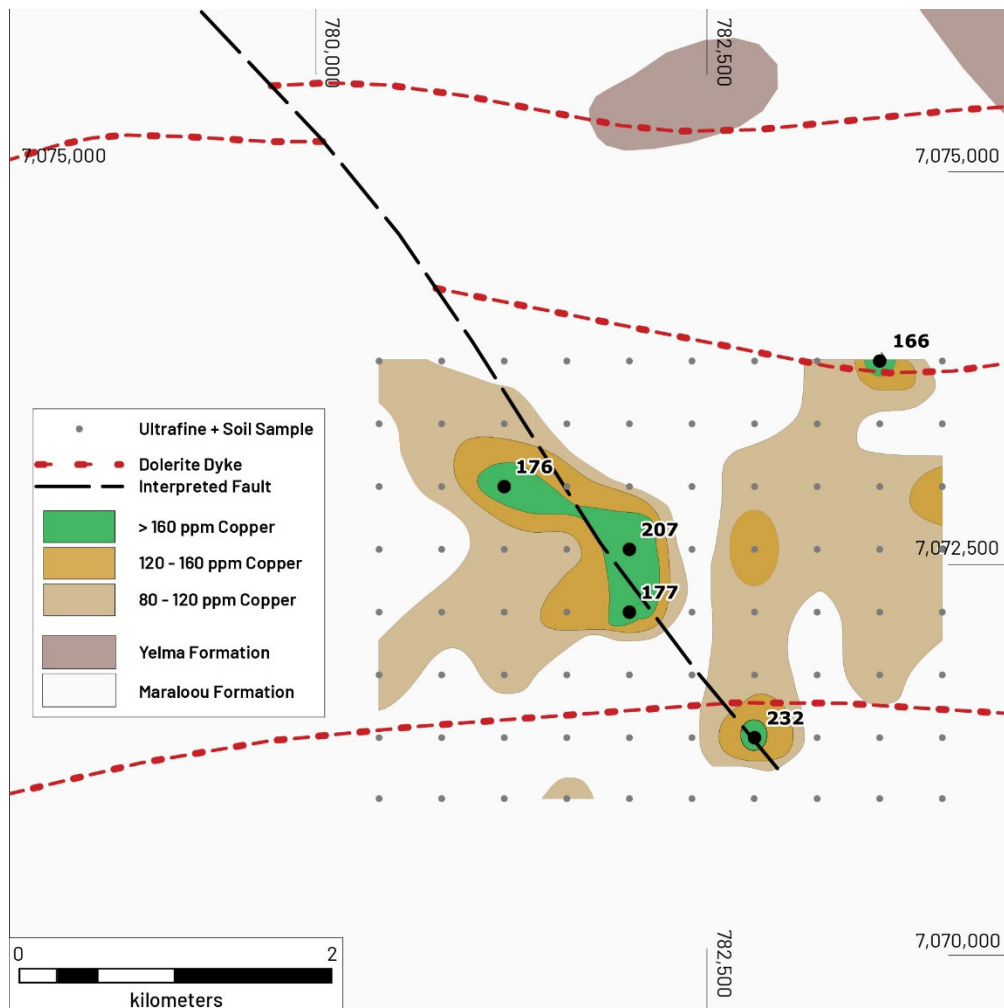
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**Figure 1.** Location of Thunder copper-gold target

Great Western believes that this geological setting is highly prospective for VMS copper-gold mineralisation, similar to Sandfire's DeGrussa mine. DeGrussa is thought to have formed from the intrusion of dolerite and basalts into poorly consolidated and saturated Proterozoic sediments, similar to those found at the Thunder copper-gold target.



**Figure 2.** Copper anomalies across the Thunder copper-gold target

## The Golden Corridor Project (100% Great Western)

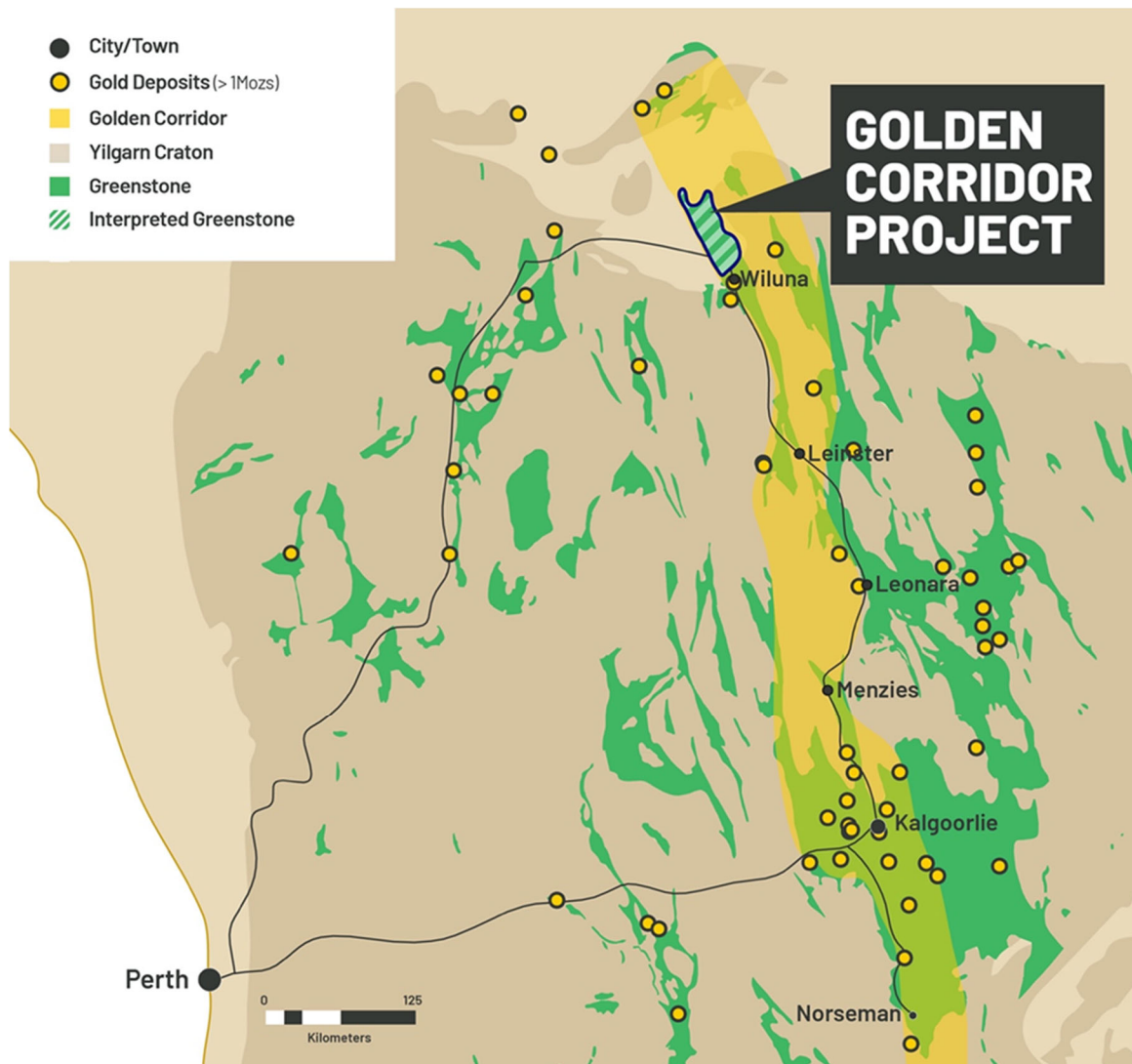
The Golden Corridor Project comprises some 60km strike of the Agnew-Wiluna greenstone belt, located in the northwest of the Kalgoorlie Terrane and along strike to the north of the Wiluna Mining Centre. The Kalgoorlie Terrane or “Golden Corridor” extends from as far south as Kambalda, through Kalgoorlie to as far north as Plutonic (see **Figure 3** below) and is host to many of the largest gold deposits in Australia and the majority of Western Australia’s past and present gold production. While the vast majority of the Golden Corridor’s greenstone belts have been extensively drill tested, Great Western’s 60km strike length of interpreted greenstone belt, including granted leases and leases under application, is practically untested.

The prospectivity of the region north of Wiluna where Great Western’s Golden Corridor Project was also identified by pmd\*CRG research into the 3D architecture of the Yilgarn Craton<sup>1</sup> that noted, “*The architecture of the Golden Corridor may partly explain why the Kalgoorlie Terrane is so well endowed. The unifying theme appears to be the relationship between major faults and regional anticlinoria, with periodic undulations or perturbations resulting in elongate domes. The Golden Corridor stretches from Kambalda possibly to Plutonic, with locations under thin cover providing new opportunities for exploration (i.e. north of Wiluna).*”

During the June 2021 Quarter, the Company received the assay results from RC drilling that was completed at its Finlayson Gold Target which sits 70km North of Wiluna, at the northern end of the Golden Corridor Project.

The drilling intersected a sequence of dolerite and ultramafic with wide zones of shearing and strong alteration that includes sulphides. This greenstone package of rocks was intersected under shallow cover. While gold was intersected at only immaterial gold grade, the broad zones of favourable host rock and alteration indicate that these structures are large and are prospective for gold along strike.

Since the end of the March 2021 Quarter, a number of tenements at the Golden Corridor Project have been granted. A regional exploration programme is planned to begin across the Golden Corridor Project in the September 2021 Quarter.



**Figure 3.** The Golden Corridor Project is located within the Kalgoorlie Terrane (“Golden Corridor”), Australia’s most prolific gold belt

## Lake Way Potash Project (100% Great Western)

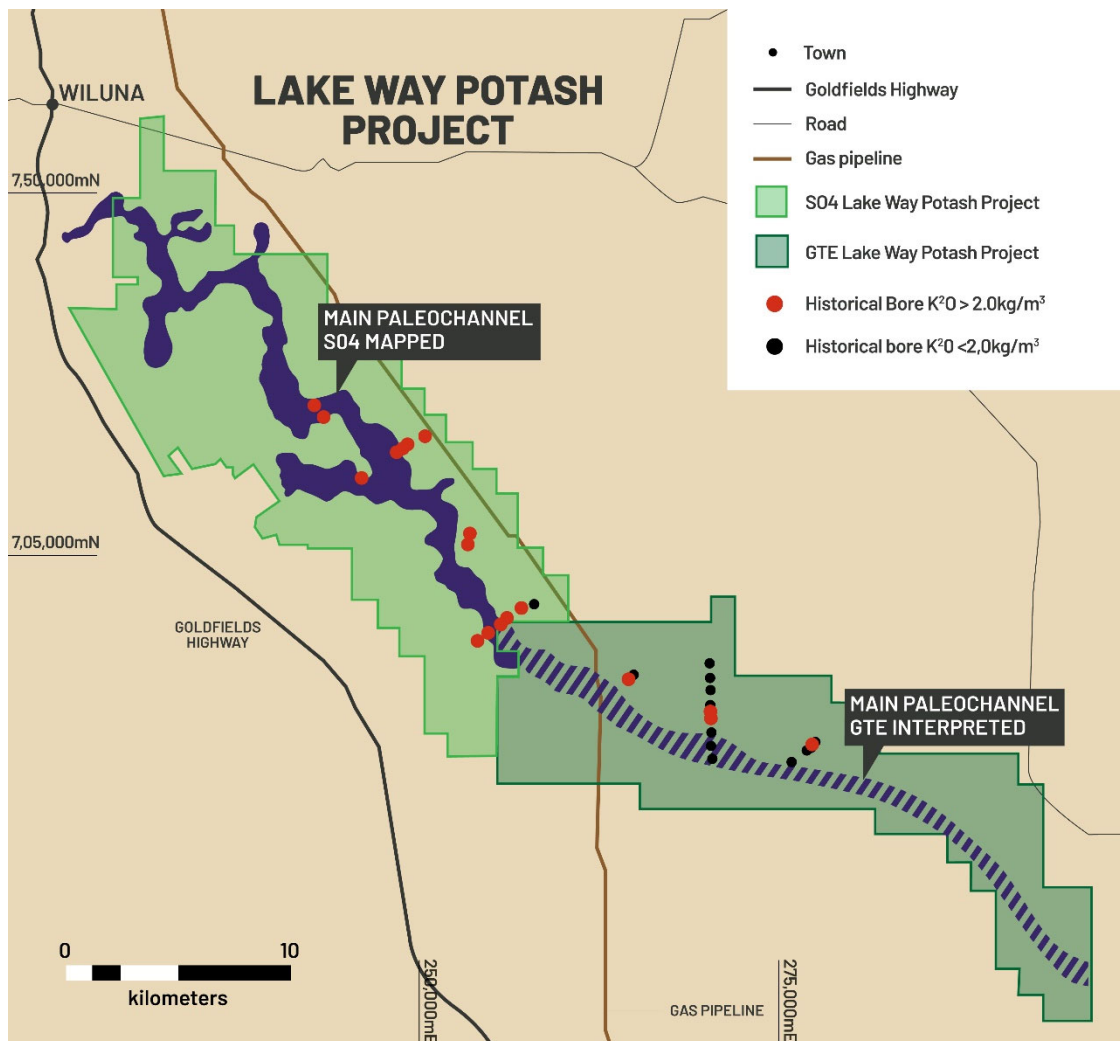
Great Western’s 100% owned Lake Way Potash Project includes the directly adjoining downstream continuation of the main basal channel that Salt Lake Potash Limited (ASX: SO4) is currently developing (see **Figure 4** below).

During the June 2021 Quarter Great Western was granted a 26D license by the Department of Water for ‘Construction of a Bore’ across the Company’s Lake Way Potash Project area. This license permits the Company to construct a network of up to 40 exploratory bores, 20 monitoring bores and 10 production bores across the Project footprint.

Great Western has been working with highly regarded industry veteran hydrogeologist Mr Kevin Morgan of KH Morgan and Associates to assist the Company in preparing work programmes to advance the Project.

In early July 2021, a passive seismic survey commenced on the Lake Way Potash Project (see ASX announcement dated 8 July 2021).

The Company looks forward to updating the market on progress of the work programme on the Lake Way Potash Project.



**Figure 4.** Interpreted continuation of the Lake Way high grade potassium brine paleochannel into GTE's Lake Way Potash Project

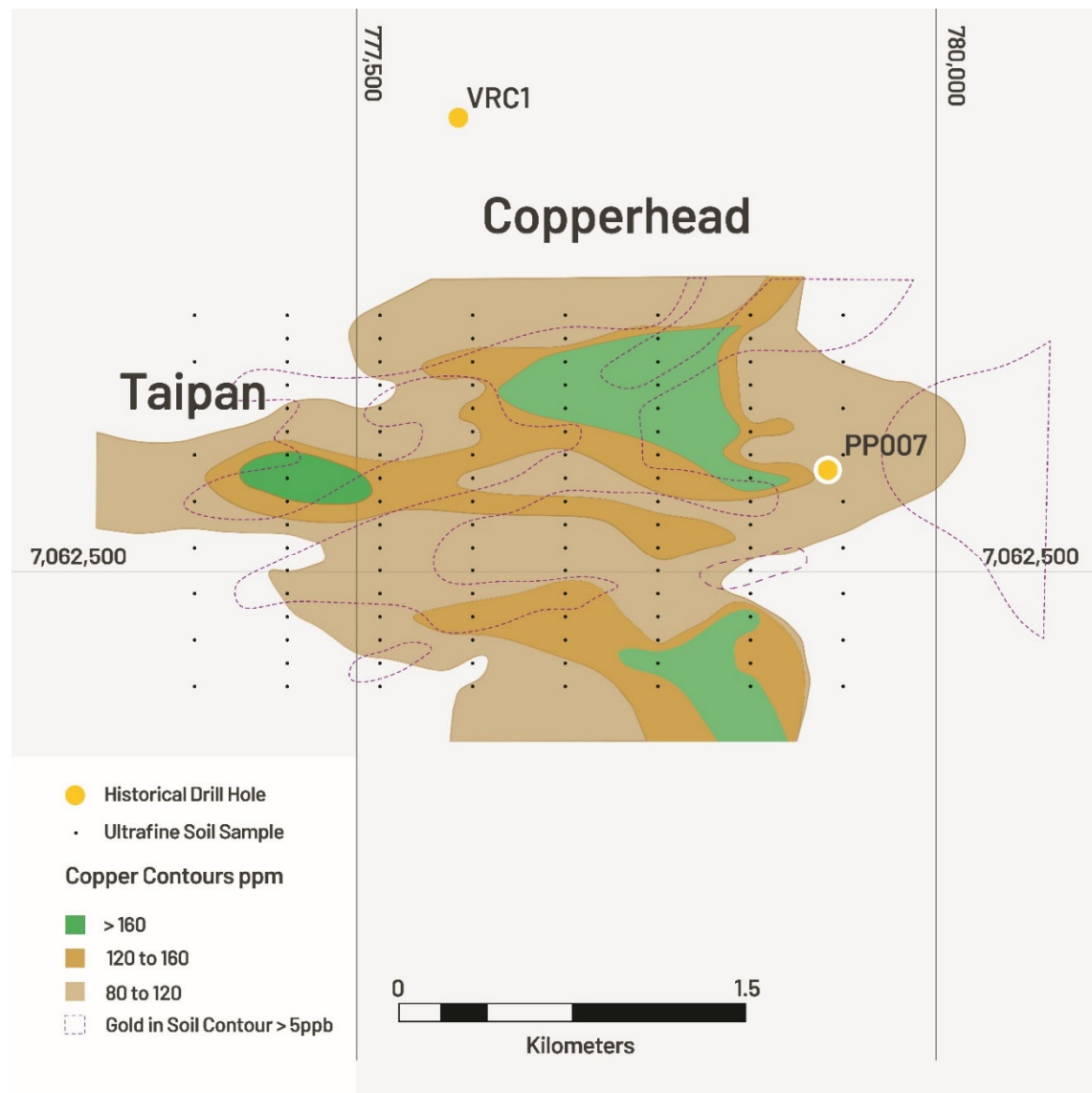
## Copper Ridge Project (100% Great Western)

The copper-gold targets, Copperhead and Taipan that form part of the Company's 100% owned Copper Ridge Project, are within a mineralised zone including a number of Cu-Au + Mo anomalies over some 4.7km strike length (east – west) and 1.5km width (north – south).

During the June 2021 Quarter, results received from the infill and extensional Ultrafine+ soil sampling at the Copper Ridge area better defined the Copperhead and Taipan drill targets at Copper Ridge<sup>2</sup>.

The maiden RC drill programme for Copper Ridge was completed during the June 2021 Quarter (**Figure 5**). The RC drill programme tested both the Copperhead and Taipan copper-gold targets located 40km west of Wiluna, in Western Australia.

The Company is now compiling data from these field activities and expects assays to be received in late July 2021.

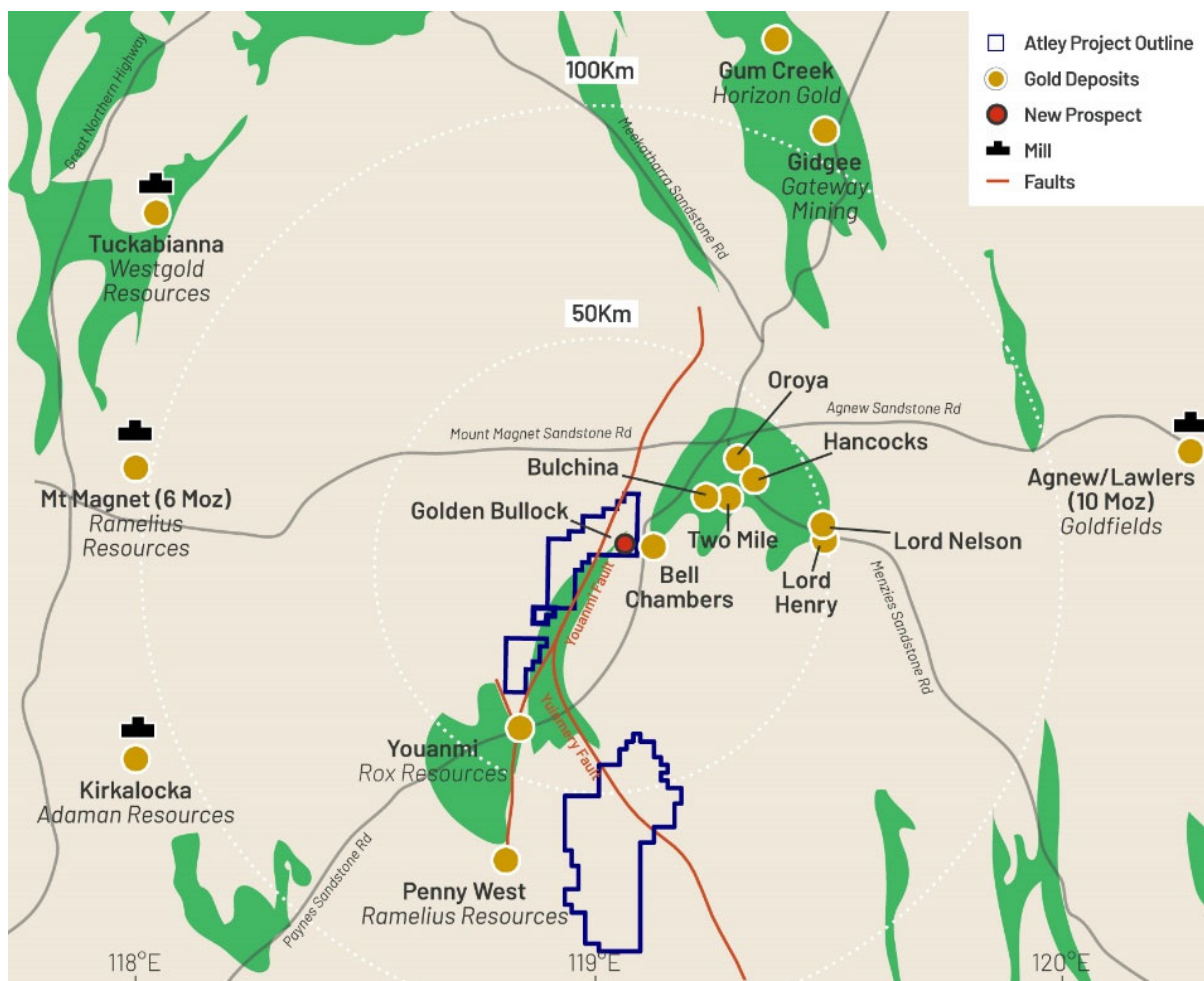


**Figure 5.** Copper and Gold Anomalies at Copperhead and Taipan Prospects

## Atley Gold Project (100% Great Western)

The Atley Gold Project is located in the Youanmi district of Western Australia, 30km south west of Sandstone. The Project areas were accumulated by application between June 2019 and August 2020 (see **Figure 6**).





**Figure 6.** Location of the Atley Gold Project within the Youanmi District, WA

The Golden Bullock gold target is a large gold surface geochemical anomaly with a strike length of 2.5km and width of 1.5km that sits within the Company's Atley North Gold Project (**Figure 7**).

Assay results from the first round of RC drilling to test the western side of the large gold-in-soil geochemical anomaly at the Golden Bullock target were received during the June 2021 Quarter. This drilling tested the western side of the gold target where surface geochemical sampling was completed during the phase 1 sampling programme of sufficient density to proceed with drilling.

The drilling intersected granodiorite that is strongly foliated in places. The majority of the low-level anomalous gold encountered (up to 0.77g/t in GBRC001) was within the laterite profile that is overlying the granodiorite.

During the June 2021 Quarter, the Company received positive results of an infill soil sampling programme on the eastern side of Golden Bullock, that have identified seven new drill targets with a max Au of 409.7ppb (**Figure7**)<sup>3</sup>. The structures and low-level anomalous gold intersected in the current drilling provides encouragement to test these seven newly defined drill targets on the eastern side of Golden Bullock.

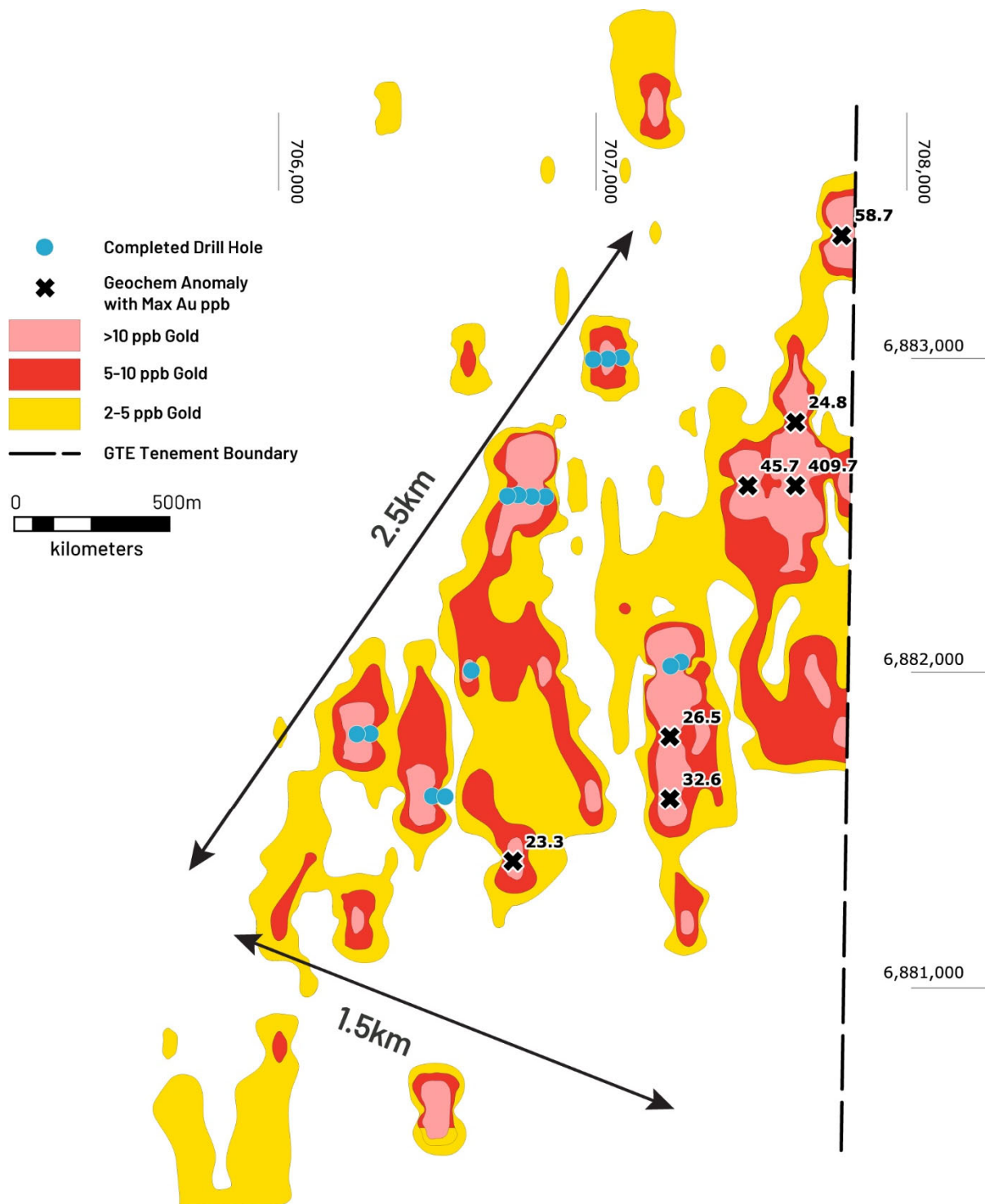


Figure 7. Drill holes completed at the Golden Bullock Gold Target

## Yerrida North JV (Sandfire earning 70%)

During the June 2021 Quarter, Sandfire Resources Limited (ASX: SFR) ("Sandfire") collected a total of 461 lag samples within the Yerrida North JV tenements. The samples consisted of 97 non-magnetic lag and 364 magnetic lag samples (see **Figure 8** below).

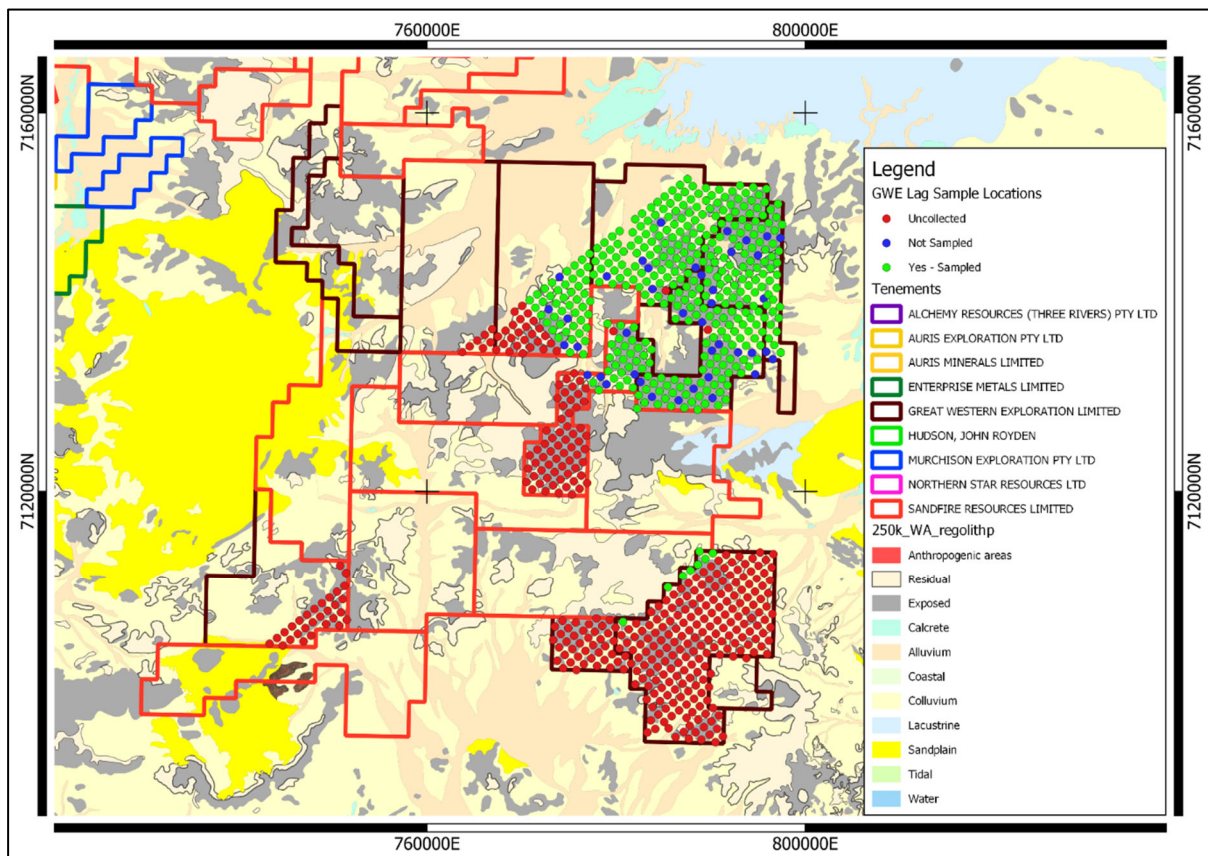


These samples are part of a 1,000m x 1,000m grid pattern aimed at providing a wide-scale, first-pass overview of regolith geochemistry overlying the historically underexplored Killara Volcanics of the Yerrida Basin

Approximately 300 lag samples remain to be collected as part of the overall 1,000m x 1,000m spaced programme, across the Yerrida North JV tenure. Sample collection will be completed during the September Quarter 2021. Once all assays have been received, a program of closer-spaced soil sampling will be designed to follow-up any anomalies identified.

As previously advised, Sandfire reached its minimum expenditure commitment during the December 2019 Quarter, by spending \$1.7 million over three years. Great Western looks forward to the continued exploration being undertaken by Sandfire under the JV, where field works continue prior to potential drill testing.

Under the terms of the JV, Sandfire can earn a 70% interest by sole funding exploration to define a mineral resource of at least 50,000 tonnes of contained copper or copper equivalent under the JORC 2012 code. Great Western is free carried until that time. Sandfire can then choose to earn a further 10% by sole funding the completion of a Feasibility Study (as that term is defined in the JORC Code 2012 Edition) sufficient to justify a decision to mine.



**Figure 8.** Lag samples collected within the Yerrida North JV tenure during June Quarter 2021 (Sandfire earning 70%)

# Corporate

## ASX Additional Information

- ASX Listing Rule 5.3.1: Exploration & Evaluation Expenditure during the June 2021 Quarter was \$915,000. Full details of exploration activity during the June 2021 Quarter are in this report.
- ASX Listing Rule 5.3.2: There were no substantive mining production and development activities during the June 2021 Quarter.
- ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the June 2021 Quarter: \$72,000 in aggregate is for the Managing Director's salary as per the remuneration package disclosed when the Managing Director was appointed in 2020.

At the end of the June 2021 Quarter, 4,791,733 quoted options (GTEOA) exercisable at A\$0.60 lapsed unexercised and 56 options were exercised by one option holder in consideration for \$33.60.

**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

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## References

- 1 3D Geological models of the Eastern Yilgarn Craton, Project Y2. Predictive Mineral Discovery Cooperative Research Centre ("pmd\*CRC") 2004 (A collaborative research initiative involving CSIRO, Geoscience Australia, AMIRA and Universities)
- 2 Drilling at Copper Ridge Project to Commence – ASX Announcement - GTE.ASX – 26/05/2021
- 3 Golden Bullock Assays Received, New Drill Targets Identified – ASX Announcement – GTE.ASX – 17/04/2021

## 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. Thomas Ridges who is a member of the Australian Institute of Mining and Metallurgy. Mr. Thomas Ridges 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. Ridges consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

# Appendix 1:

## Tenement Schedule at 30 June 2021

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	Pending	Great Western Exploration Limited	100%	
Atley	E 57/1164	Pending	Great Western Exploration Limited	100%	
Atley	E 57/1165	Live	Great Western Exploration Limited	100%	
Atley	E 57/1166	Pending	Great Western Exploration Limited	100%	
Atley	E 57/1167	Pending	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	Pending	Great Western Exploration Limited	100%	
Fairbairn	E 69/3903	Pending	Great Western Exploration Limited	100%	
Fairbairn	E 69/3906	Pending	Great Western Exploration Limited	100%	
Forrestania South	E 74/603	Live	Western Areas Ltd	10%	Free Carried To PFS
Golden Corridor	E 51/1855	Live	Great Western Exploration Limited	100%	
Golden Corridor	E 51/2033	Pending	Great Western Exploration Limited	100%	
Golden Corridor	E 51/2046	Pending	Great Western Exploration Limited	100%	
Golden Corridor	E 53/1983	Live	Great Western Exploration Limited	100%	
Golden Corridor	E 53/2124	Pending	Great Western Exploration Limited	100%	
Golden Corridor	E 53/2138	Pending	Great Western Exploration Limited	100%	
Golden Corridor	E 53/2139	Pending	Great Western Exploration Limited	100%	
Golden Corridor	E 53/2141	Live	Great Western Exploration Limited	100%	
Golden Corridor	E 53/2142	Pending	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%	

Project	Tenement	Status	Holder	Ownership	Comments
Yandal West	E 53/1369	Live	Vanguard Exploration Ltd	100%	100% Owned Subsidiary
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
Copper Ridge	E 51/1727	Live	Great Western Exploration Limited	100%	
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	E 53/1917	Live	Great Western Exploration Limited	100%	Voluntary Surrender Actioned 1 <sup>st</sup> July 2021
Copper Ridge	E53/2156	Pending	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	E 53/2027	Live	Great Western Exploration Limited	100%	
Yerrida South	E 53/2077	Live	Great Western Exploration Limited	100%	
Yerrida North JV	E 51/1324	Live	Great Western Exploration Limited	100%	Sandfire Earning 70%
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%
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%