

### ASX Code: GBR

### Capital Structure

Ordinary Shares: 357m

Unlisted Options: 27.1m

Current Share Price: 14¢

Market Capitalisation: A\$48m

Cash: A\$3.5m

Debt: Nil

### Board of Directors

Greg Hall

*Non-Executive Chairman*

Andrew Paterson

*Managing Director*

Melanie Leighton

*Non-Executive Director*

Melanie Ross

*Company Secretary*

### Projects

Side Well

Whiteheads

Wellington

## Highlights

- Intensive drilling continued throughout the quarter with almost 15,000m drilled, over 50,000m of drilling completed for the year
- More high-grade results in the central Mulga Bill area highlight the potential of the deposit, while a new intersection 850m south underlines the untested potential along strike
- Recent high grade reverse circulation (RC) results include:
  - 9m @ 24.19g/t Au from 193m to EOH in 21MBRC054, including 1m @ 184.78g/t Au from 193m
  - 3m @ 24.05g/t Au from 117m in 21MBRC051
  - 4m @ 10.11g/t Au from 180m and 8m @ 2.63g/t Au from 189m in 21MBRC046
- Air-core (AC) drilling on the Mulga Bill trend has now extended coverage another 1km further south
- GBR's largest-ever RC program was completed at Mulga Bill during October and November, with assays for both the AC and RC programs yet to be received
- The Yamarna de-merger process was successfully completed, with Cosmo Metals Ltd due to commence trading on the ASX at the end of January
- Strong cash balance with \$3.5M in cash reserves as at 31 December 2021

## Executive Summary

The December quarter was another very busy time for Great Boulder, with almost 15,000m drilling completed on three projects. That brings the full-year drilling total to 51,007m of air-core, RC and diamond drilling – an impressive tally for such a small team.

A small AC program at Whiteheads tested several regional prospects, continuing Great Boulder's program of conventional exploration across the project. Simultaneous AC and RC programs commenced at Side Well in October, with RC drilling continuing well into November. The field season concluded with a six-hole RC program at Mt Venn.

Mulga Bill has quickly developed into the Company's flagship project during 2021. During the December quarter drill coverage continued to move south, with AC coverage extended an additional 1km beyond any previous drilling. RC drilling continues to prioritise the central kilometre of Mulga Bill, but the southern half of this +5km prospect will be a priority for drilling in the first half of 2022.

Assay processing times continue to be a bottleneck for the technical team, with over 100 drill holes awaiting assay at year's end. The Company has plans in place to try and reduce the assay turnaround time from three months to eight weeks or less in 2022.

The Company remains firmly focused on Side Well leading into the new year, with the aim of defining an exploration target at Mulga Bill as soon as there is sufficient drill coverage to do so. This program will be followed in due course by a maiden mineral resource estimate.

At the end of December, the Company had a cash balance of \$3.5 million.



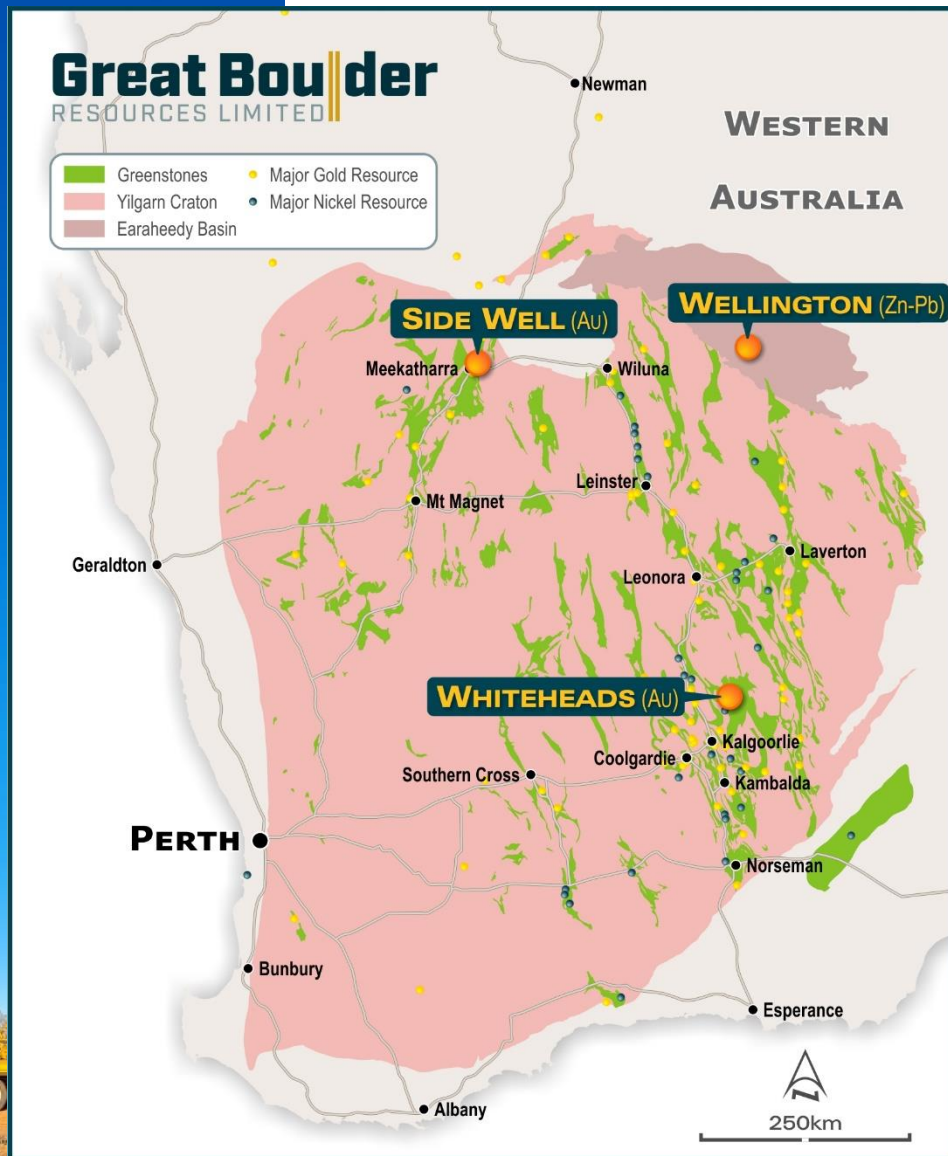


FIGURE 1: GREAT BOULDER RESOURCES' PROJECTS IN WESTERN AUSTRALIA

Project	Program	Holes Drilled	Metres
Side Well	Phase 4 RC	41	7,822
	AC Drilling	65	4,994
Whiteheads	AC Drilling	21	966
Yamarna	Mt Venn RC	6	1,116
All drilling programs		133	14,898

TABLE 1: DECEMBER 2021 QUARTERLY DRILLING SUMMARY

## Side Well Gold Project (GBR 75%)

Side Well is a 75% joint venture with a private company Zebina Minerals Pty Ltd. Side Well consists of a single tenement, E51/1905, which contains approximately 132km<sup>2</sup> of the highly prospective Meekatharra – Wydgee greenstone belt over 25km of strike length.

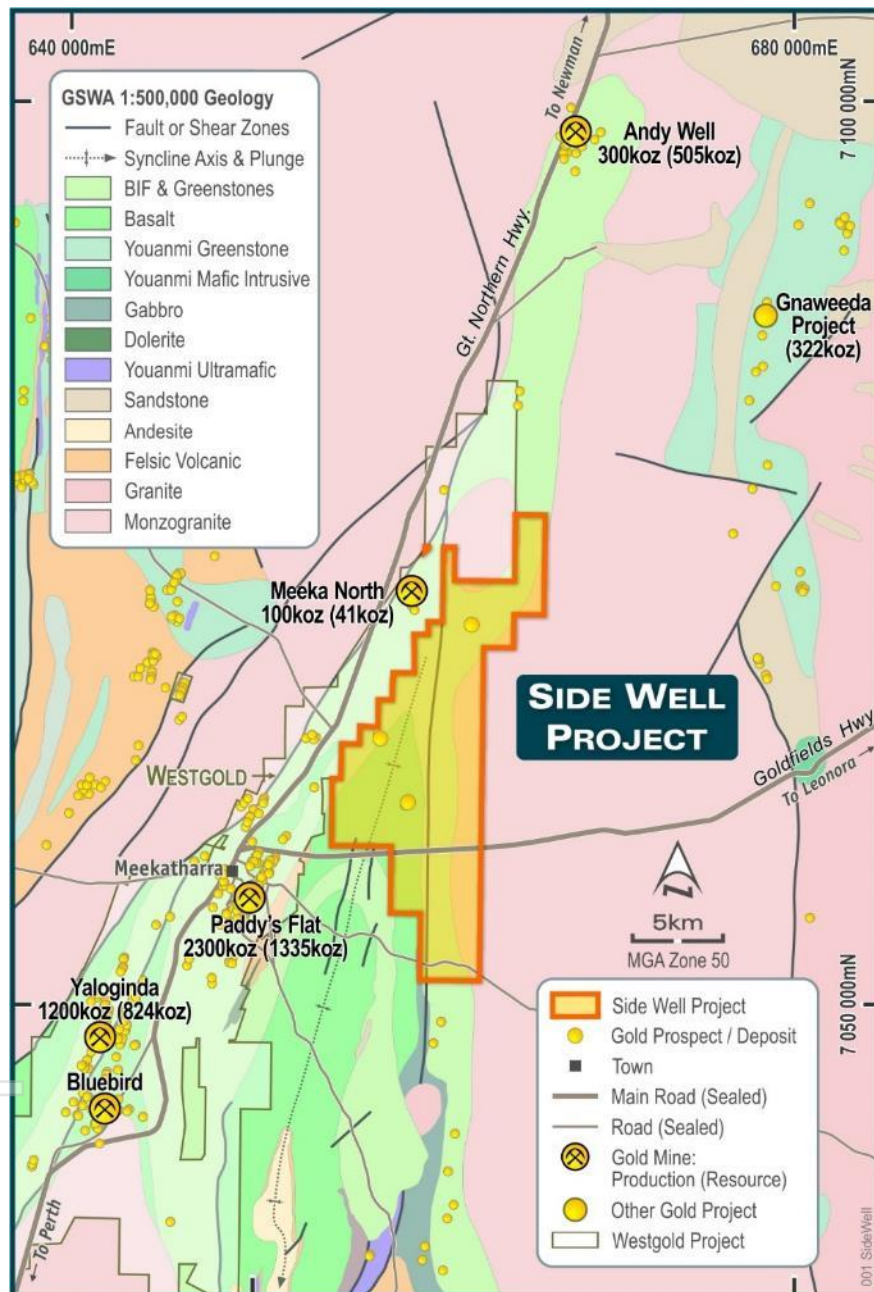


FIGURE 2: SIDE WELL LOCATION

### Drilling

Assay results from the Phase 4 RC program were received in late October and November. Although Phase 4 was only a 10-hole program results included significant high-grade intersections that helped to confirm the flat-lying stacked vein interpretation first recognised in diamond core drilled during the previous quarter. Highlights include:

### Side Well

The Side Well project is centrally located in an area that has produced almost 4 million ounces of gold, with over 2.7 million ounces remaining in resources. Despite this, large areas of the project remain unexplored.

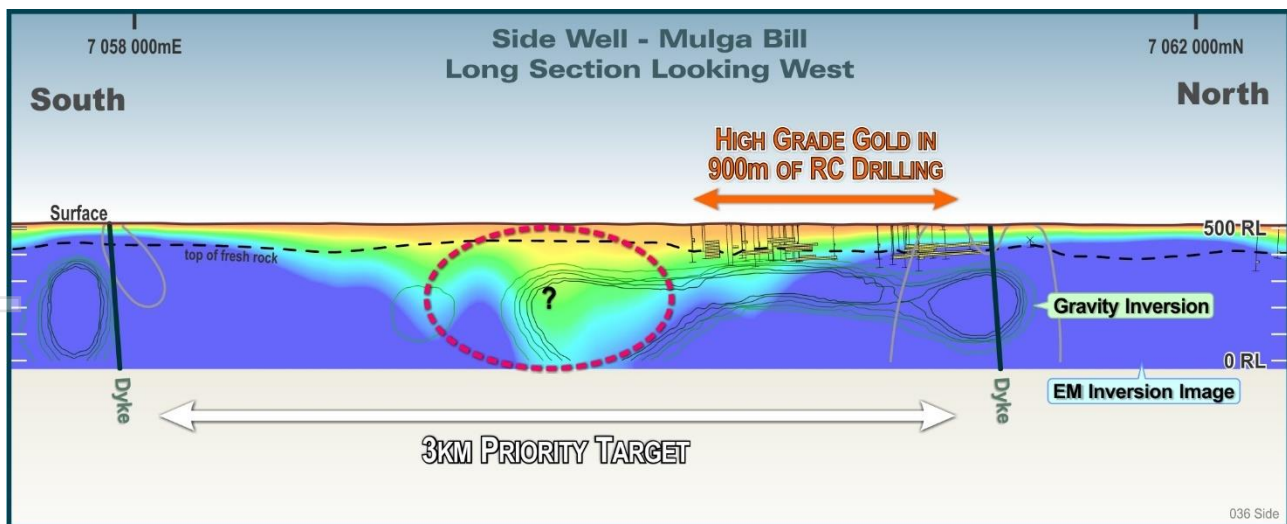
- **3m @ 24.05g/t Au** from 117m in 21MBRC051
- **4m @ 10.11g/t Au** from 180m and 8m @ 2.63g/t Au from 189m in 21MBRC046
- **9m @ 24.19g/t Au** from 193m to EOH in 21MBRC054, including 1m @ 184.78g/t Au from 193m
- **6m @ 39.15g/t Au** from 101m in 21MBRC050 (result received in late October and previously mentioned in the September Quarterly Activities Report).

The 9m @ 24.19g/t in hole 21MBRC054 is significant in the fact that it lies 850m south of previous high-grade intersections such as those in holes 21MBRC050 and 21MBRC051, making it the southern-most high-grade RC intersection to date. This area will be tested by diamond drilling in the current quarter to confirm structural orientations in that area.

41 RC holes were completed at Mulga Bill for 7,822m of drilling during October and November. This program is the largest single drilling campaign in Great Boulder's history to date, demonstrating the Company's confidence in the potential of the prospect.

65 AC holes were completed in October for 4,994m of drilling. This program pushed drill coverage further south over the Mulga Bill – Loaded Dog trend, with two broad-spaced lines testing an additional kilometre of strike. 26 holes were also drilled around previous gold mineralisation at the new Ironbark discovery, looking for extensions to the north and south of previous drilling.

At this stage the Company is awaiting assay results for both programs.



**FIGURE 3: A LONG SECTION THROUGH MULGA BILL WITH A COINCIDENT GRAVITY-EM ANOMALY IMMEDIATELY SOUTH OF CURRENT RC DRILL COVERAGE.**

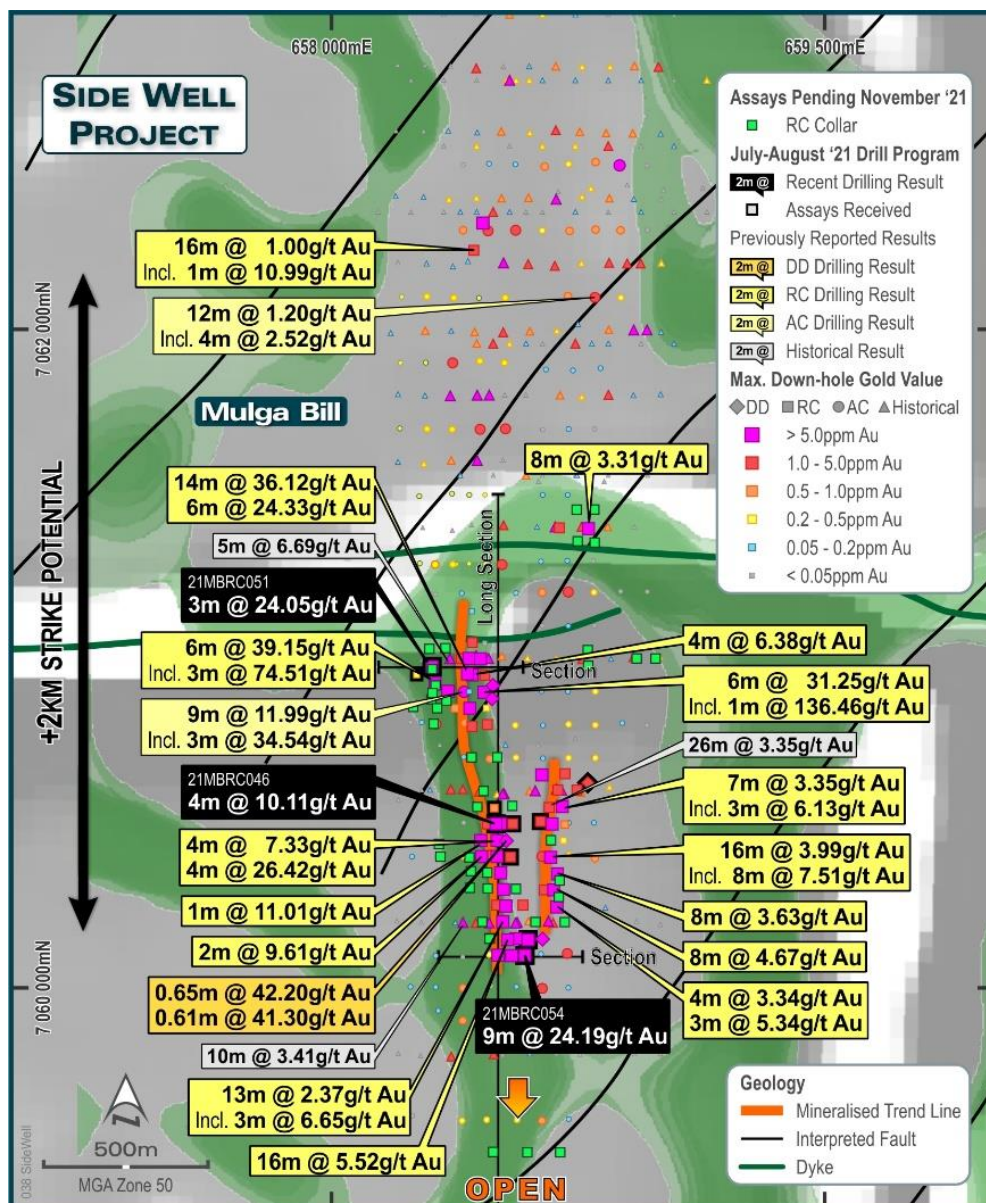


FIGURE 4: RECENT RC DRILL RESULTS AT MULGA BILL

### Soil Sampling – Jones Well

Infill soil sampling was completed during the quarter within first-pass anomalies generated from wide-spaced soil sampling earlier in the year. The Company is still finalising assay data from the latter stages of the sampling program. Initial AC drill testing is planned for the present quarter.

### Metallurgical Testing

A small parcel of high-grade sample was delivered to Independent Metallurgical Operations (IMO) in mid-December for metallurgical test-work. This work will examine gold recoveries from gravity and cyanide leach tests as a first-pass examination of the characteristics of Mulga Bill gold mineralisation.

Because the metallurgical sample was taken from RC drill chips IMO's initial test scope will not include other physical characteristics such as bond work index. These tests will be included in subsequent rounds of metallurgical testing.

### Sample Assay Turnaround Times

Over the Christmas – New Year period the Company's average assay turnaround time has stretched to approximately 100 days from submission to receipt of results. This bottleneck is a constraint on drill planning, as data from each round of drilling is used to plan the next set of targets.

Great Boulder has taken steps to address this problem, with turnaround time expected to drop to eight weeks or less for samples submitted in 2022.

### Next Steps

A diamond drilling program is scheduled to commence in February, with holes planned to test several areas along the strike of the Mulga Bill trend. As with the previous diamond program, the main purpose of the program is to gain important structural data from the core and correlate mineralisation with physical measurements of dip and strike within the deposit.

Diamond drilling is also planned to test the coincident gravity-EM target highlighted in the Company's ASX announcement of 25 October<sup>1</sup>. As well as testing for mineralisation within the target area the core will provide samples for petrophysical testing of density and conductivity.

AC drilling will recommence at Side Well in early February, running in parallel with the diamond program. This will carry on from the target definition drilling completed during 2021, outlining the pathfinder zone striking south through Mulga Bill and Loaded Dog; specifically anomalous bismuth and/or gold in the regolith profile. Initial AC reconnaissance will also test the multi-element soil anomalies at Jones Well – the first drilling in this area since a small number of regional RAB holes were drilled in the 1980's.

The first large program of RC drilling at Mulga Bill for 2022 is expected to commence in March, once all assay data has been received for 2021 drilling and structural measurements have been compiled from the diamond program. Once this data is finalised the Company expects to be in a good position to start a comprehensive RC drill-out of the mineralised zones defined thus far.

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<sup>1</sup> ASX:GBR announcement 25/10/2021: Mulga Bill high grades and geophysics upgrades size potential

## Whiteheads Project (GBR up to 75%)

Whiteheads is located approximately 45km north of Kalgoorlie and north of the nearby Kanowna Belle gold mine. The project covers an area of 488km<sup>2</sup> between the Silver Swan and Carr Boyd nickel projects straddling the boundary between the Kalgoorlie terrane to the west and the Kurnalpi terrane to the east.

Whiteheads comprises two different tenement packages. The western half, consisting of E27/538, E27/582 and E27/584 is a farm-in agreement with Mithril Resources Ltd whereby Great Boulder will earn up to 80% of the project. The eastern half, primarily consisting of tenements E27/544 and E27/588, is a 75% joint venture with Zebina Minerals Pty Ltd.

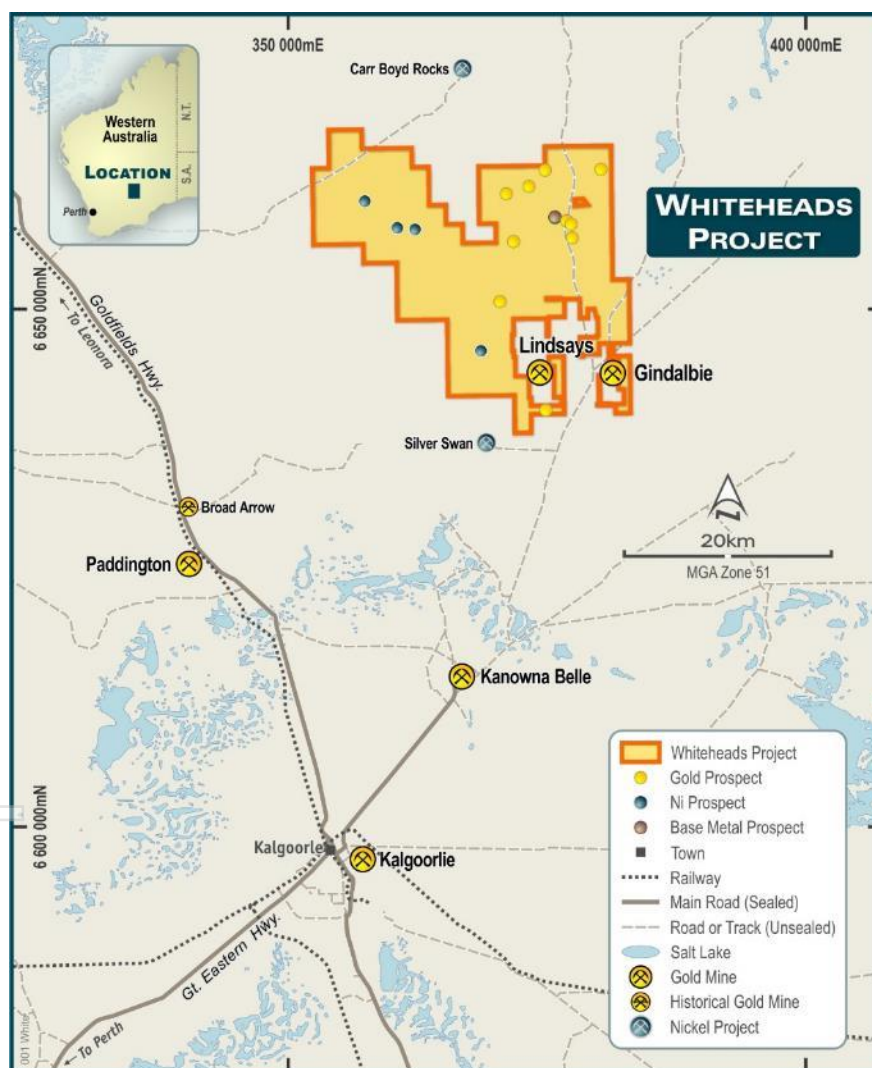


FIGURE 5: WHITEHEADS LOCATION PLAN

### Whiteheads

*At Whiteheads GBR has accumulated a large project footprint over highly prospective geology with a historical focus on gold and nickel exploration.*

*Whiteheads straddles the geological boundary between the Kalgoorlie and Kurnalpi terranes. With several old mine workings, and large, coherent gold-in-soil anomalies Whiteheads has massive potential for significant discoveries.*

There was less activity at Whiteheads during the quarter as the field team were mainly occupied at Side Well.

## AC Drilling

21 AC holes were drilled at Whiteheads for 966m in October, mainly at the Jubilee North prospect, completing a 122-hole, 5,166m program that commenced the previous month.

- 8 holes (439m) at Gunners on the Arsenal Trend
- 23 holes (1,127m) at Tektite, south of Blue Poles on the Arsenal Trend
- 8 holes (518m) on the Arsenal Trend southwest of Tektite
- 6 holes (226m) on a single fence of drilling at Reception Hill
- 57 holes (1,919m) along strike to the northwest and southeast of Seven Leaders
- 20 holes (937m) at Jubilee North.

The program generated a number of anomalous intersections, including 1m @ 2.55g/t Au from 41m in 21WHAC110 at Tektite, 4m @ 0.61g/t Au from 80m in 21WHAC128 at Jubilee North and 12m @ 0.23g/t Au from 67m in WHAC174 at Seven Leaders. Air-core results of this type are encouraging in comparison to early-stage drilling at Blue Poles, where thick zones of gold mineralisation were discovered beneath anomalous bottom-of-hole assays in the initial AC coverage.

## RC Drilling

There was no RC drilling at Whiteheads during the quarter. Deeper extensional drilling is planned at Blue Poles south, however this has not yet been scheduled.

## Geophysical Surveys

The Company is planning an aerial electromagnetic (EM) survey to detect conductive bodies and assist with mapping the project area. Timing and size of this survey are yet to be confirmed.

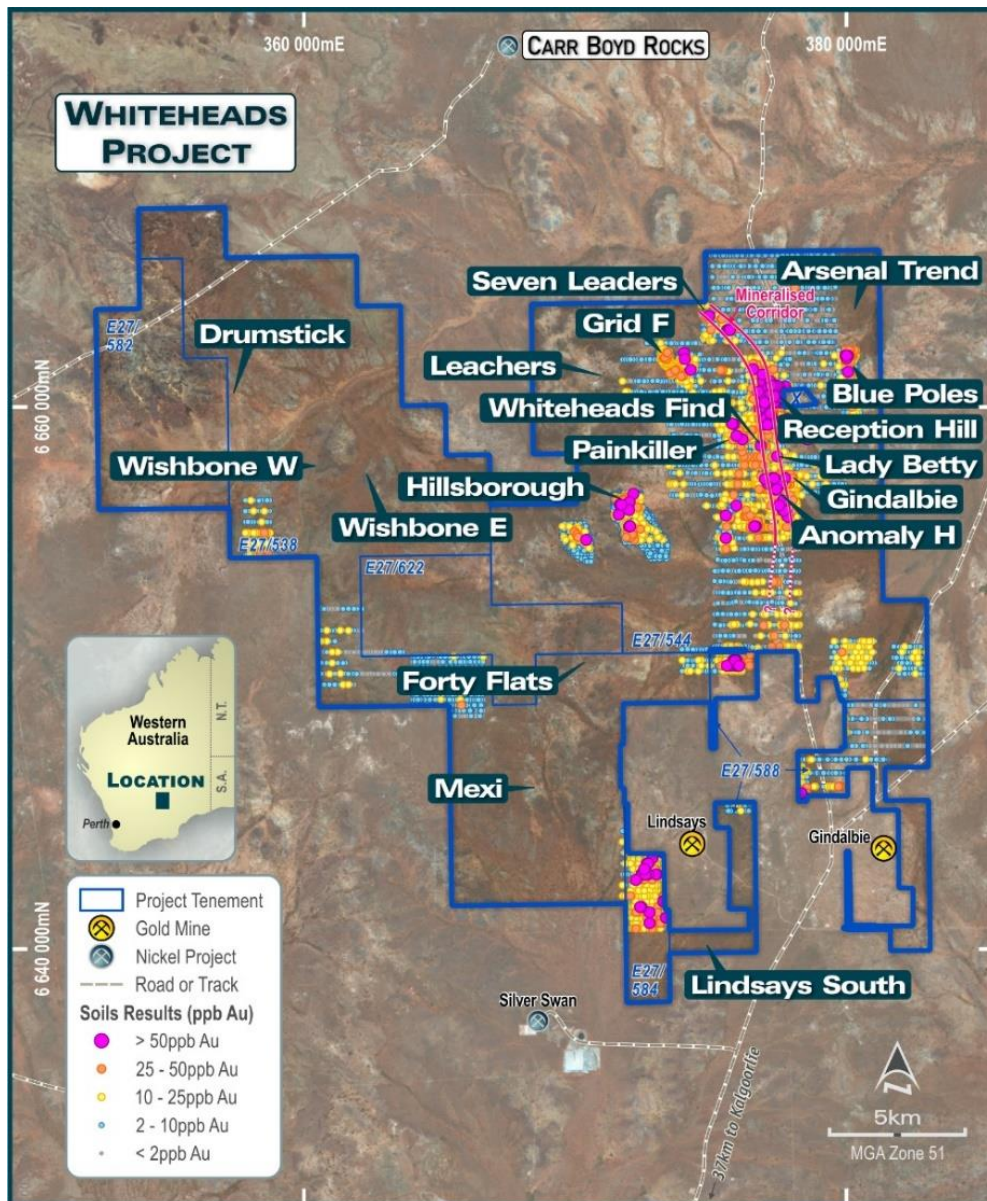


FIGURE 6: WHITEHEADS PROSPECTS SHOWING GOLD IN SOIL GEOCHEMISTRY OVER LANDSAT IMAGE.

### Next Steps

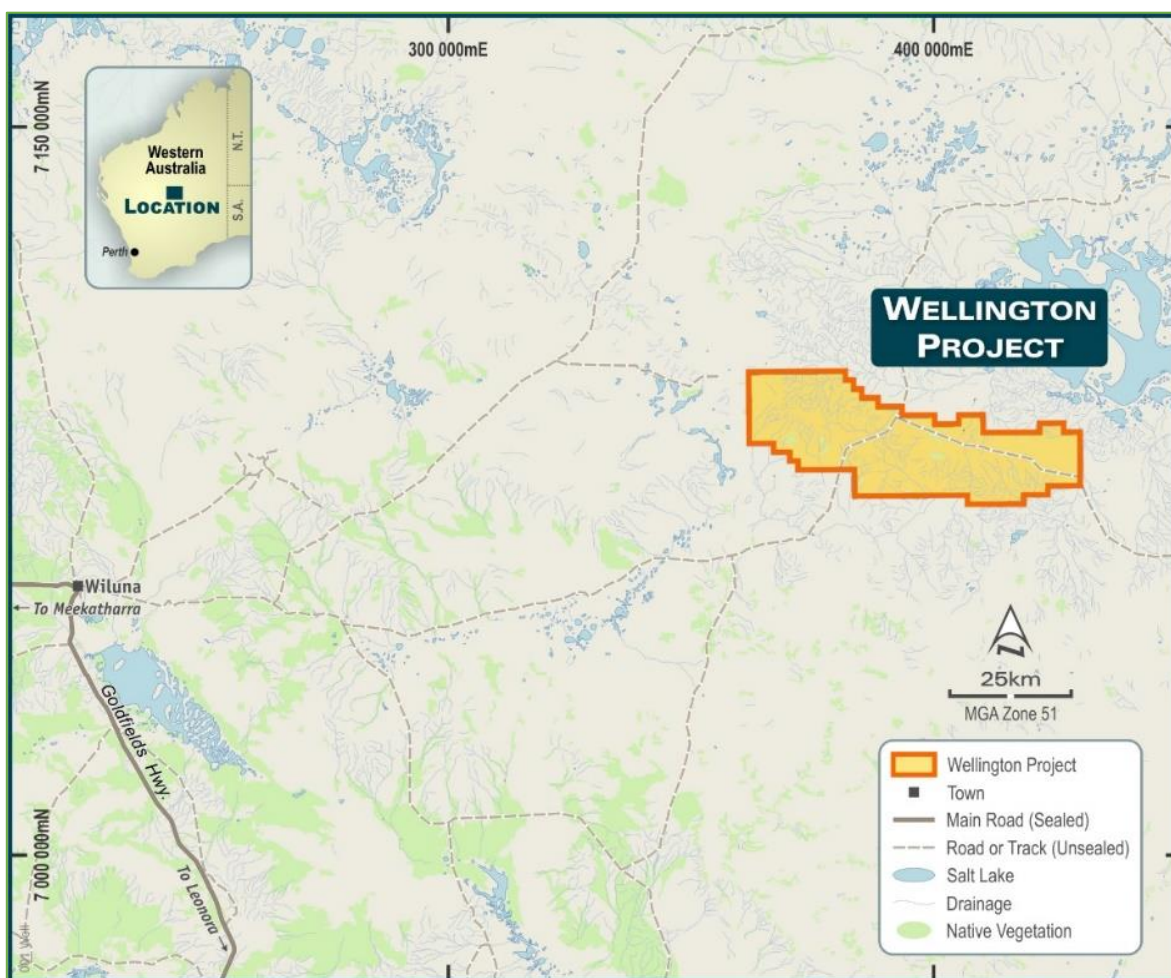
Target generation and drill testing will continue at Whiteheads on a campaign basis. The next round of drilling will build upon results from the recent auger and AC drilling, and will continue testing south along the Arsenal Trend as well as following up recent encouraging results at Jubilee North. Promising soil anomalism at the Eclipse Prospect will also be tested during this next phase of drilling.

The Company also intends to continue target generation on the western half of Whiteheads with a particular focus on the Wishbone area. Despite extensive previous exploration for nickel sulphides in this area there has been very little work done on the gold potential.

## Wellington Zn-Pb Project (GBR 100%)

The Wellington tenements overlie the prospective Frere and Windidda Formations within the Proterozoic Earaheedy Basin. This basin has the potential to become a world-class Mississippi Valley-type (MVT) Zn-Pb province. This potential has been demonstrated by both Rumble Resources' recent exploration success at their Chinook and Magazine discoveries and by Strickland Resources in adjacent tenements. GBR's project covers 1,134km<sup>2</sup> of prospective stratigraphy including more than 60km of strike highlighted by anomalous pathfinder geochemistry.

The three Wellington tenement applications have now finished the mandatory advertising period, and the Company has retained an Aboriginal heritage expert to assist with negotiating an agreement with the Tarlka Matuwa Piarku Aboriginal Corporation (TMPAC) to facilitate access to the tenements as soon as practicable.



**FIGURE 7: THE WELLINGTON PROJECT IS LOCATED 170KM EAST OF WILUNA IN WESTERN AUSTRALIA**

## Cu-Ni Projects Spin-out to Cosmo Metals Ltd

During the quarter the Company completed and lodged the prospectus for Cosmo Metals Ltd (“**Cosmo**”). A two-week priority offer of Cosmo Metals shares opened for existing GBR shareholders on 29 November, and the general offer was held open until Friday, 24 December. Cosmo shares are scheduled to commence trading on the ASX on Monday, 31 January 2022.

The Company also drilled six RC holes at Mt Venn for 1,116m on Cosmo’s behalf. Assay results are expected to be available in early February, shortly after listing.

Cosmo Metals has a high-calibre technical board, with four highly experienced geologists led by Mr Peter Bird as the Non-Executive Chair. With the advanced prospects at Mt Venn, Eastern Mafic and Winchester plus new tenure to the north of Mt Venn the company has many opportunities to demonstrate early-stage success. Great Boulder looks forward to supporting Cosmo as a major shareholder in the years ahead.

- Peter Bird – Non-Executive Chair
- James Merrillees – Managing Director
- Ziggy Lubieniecki – Non-Executive Director
- Andrew Paterson – Non-Executive Director



**FIGURE 8: COSMO METALS LTD TENURE IN THE YAMARNA REGION**

## Corporate

During the quarter, the Company made payments of approximately \$96,000 to related party entities for directors' fees and superannuation (refer to section 6 of the Appendix 5B), of which approximately \$71,000 was allocated to time spent on project management.

During the quarter, the Company paid \$1,382,000 for exploration expenditure which included drilling and associated costs with drilling activities, assay work and various exploration consulting fees.

At the end of the quarter Great Boulder had \$3.5 million in cash.

Class of Securities	Issued Capital
<b>Ordinary fully paid shares</b>	<b>357,235,809</b>
Unlisted Options (exercisable at \$0.20 & expiring 18/3/2022)	250,000
Unlisted Options (exercisable at \$0.10 and expiring 30/6/2022)	4,000,000
Unlisted Options (exercisable at \$0.04 and expiring 30/6/2022)	2,000,000
Unlisted Options (exercisable at \$0.075 and expiring 28/8/2023)	799,000
Unlisted Options (exercisable at \$0.10 and expiring 30/09/2023)	600,000
Unlisted Options (exercisable at \$0.074 and expiring 30/06/2023)	4,000,000
Unlisted Options (exercisable at \$0.0525 and expiring 31/03/2024)	4,565,515
Unlisted Options (exercisable at \$0.0542 and expiring 19/05/2024)	5,714,286
Unlisted Options (exercisable at \$0.12 and expiring 31/05/2024)	3,010,000
Unlisted Options (exercisable at \$0.1108 and expiring 16/07/2024)	2,194,403
Performance Rights (expiring 03/12/2024)	6,000,000
Performance Rights (expiring 03/12/2025)	3,000,000
Performance Rights (expiring 03/12/2026)	10,500,000

This announcement has been approved by the Board

For further information contact:

**Andrew Paterson**

Managing Director

Great Boulder Resources Limited

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**Media**

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**TABLE 2: TENEMENT SCHEDULE**

Tenement ID	Project	Status	Holder	GBR Interest %
<b>E27/538</b>	Whiteheads	Granted	Minex (Aust) Pty Ltd	0%
<b>E27/544</b>	Whiteheads	Granted	Zebina Minerals Pty Ltd	75%
<b>E27/582</b>	Whiteheads	Granted	Minex (Aust) Pty Ltd	0%
<b>E27/584</b>	Whiteheads	Granted	Minex (Aust) Pty Ltd	0%
<b>E27/588</b>	Whiteheads	Granted	Zebina Minerals Pty Ltd	75%
<b>E27/622</b>	Whiteheads	Granted	Zebina Minerals Pty Ltd	75%
<b>E27/644</b>	Whiteheads	Granted	Great Boulder Resources Ltd	75%
<b>E27/645</b>	Whiteheads	Application	Zebina Minerals Pty Ltd	75%
<b>P27/2439</b>	Whiteheads	Granted	Zebina Minerals Pty Ltd	75%
<b>E51/1905</b>	Side Well	Granted	Zebina Minerals Pty Ltd	75%
<b>E51/1974</b>	Mirra Well	Application	Great Boulder Resources Ltd	100%
<b>E53/2172</b>	Wellington	Application	Great Boulder Resources Ltd	100%
<b>E38/3621</b>	Wellington	Application	Great Boulder Resources Ltd	100%
<b>E38/3622</b>	Wellington	Application	Great Boulder Resources Ltd	100%

**COMPETENT PERSON'S STATEMENT**

Exploration information in this Announcement is based upon work undertaken by Mr Andrew Paterson who is a Member of the Australasian Institute of Geoscientists (AIG). Mr Paterson has sufficient experience that 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' (JORC Code). Mr Paterson is an employee of Great Boulder Resources and consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.