Great Boulder
RESOURCES LIMITED

ASX Announcement
27 April 2022

Quarterly Report to 31 March 2022

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ASX Code: GBR

Capital Structure

Ordinary Shares: 422m

Unlisted Options: 29.6m

Current Share Price: 10.5¢

Market Capitalisation: A$53m

Cash: A$2.1m

Debt: Nil

Board of Directors

Greg Hall
Non-Executive Chairman

Andrew Paterson
Managing Director

Melanie Leighton
Non-Executive Director

Karen O'Neill
Non-Executive Director

Melanie Ross
Company Secretary

Projects

Side Well (Au)

Whiteheads (Au)

Wellington (Zn-Pb)

Highlights

- **Over 16,000m of drilling completed for the Quarter**
- **High-grade air core (AC) results extend Mulga Bill to 6km strike length, with potential for further growth**
- **Recent high grade drilling results include:**
  - **9m @ 21.21g/t Au from 207m in 21MBRC062, including 4m @ 40.68g/t Au from 210m**
  - **1m @ 97.97g/t Au from 117m in 21MBRC076**
  - **6m @ 5.99g/t Au from 88m in 21MBRC061, including 1m @ 28.48g/t Au from 92m**
  - **3m @ 8.56g/t Au from 147m to EOH in 21SWAC119, including 1m @ 23.78g/t Au from 149m to EOH**
- **Initial metallurgical testing at Mulga Bill indicates overall gold recovery of 99.7%**
- **An induced polarisation (IP) survey has successfully identified deep zones of disseminated sulphide coincident with mineralisation at Mulga Bill**
- **Cosmo Metals Ltd successfully listed on the ASX in late January and commenced drilling at Yamarna in late March**
- **Strong cash balance with $2.1M in cash reserves as at 31 March 2022 followed by $7M placement in April**

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Executive Summary

Great Boulder commenced the 2022 field season with a small AC program at Whiteheads in January, rolling into a larger regional AC program at Side Well in February. The Side Well AC program extended coverage 2km further south from previous drilling at Mulga Bill, after which the rig completed the first reconnaissance drilling on a range of geochemical targets in the Jones Well area.

A diamond drilling program during March saw seven holes completed along the Mulga Bill corridor before drilling was brought to a halt by bad weather toward the end of the month. The rig is expected to return to site in the coming quarter to continue drilling.

During February and March a pole-dipole IP survey was completed on east-west lines over selected areas of Mulga Bill. The geophysical team commenced a 3D IP survey along the strike of Mulga Bill, and this is expected to be completed by mid-April.

The Company's decision to change assay laboratories at the start of the year has dramatically reduced assay turnaround times to as low as three weeks. Despite this, the significant volume of samples from late 2021 drilling programs took up to 16 weeks to be processed by the Company's previous assay provider, meaning final RC and AC results from Side Well were not received until March.

By the end of March the Company was well advanced on its goal of drilling 100,000m during 2022, with the primary objective being ongoing discovery and definition of the Mulga Bill deposit.

At the end of March the Company had a cash balance of $2.1 million.

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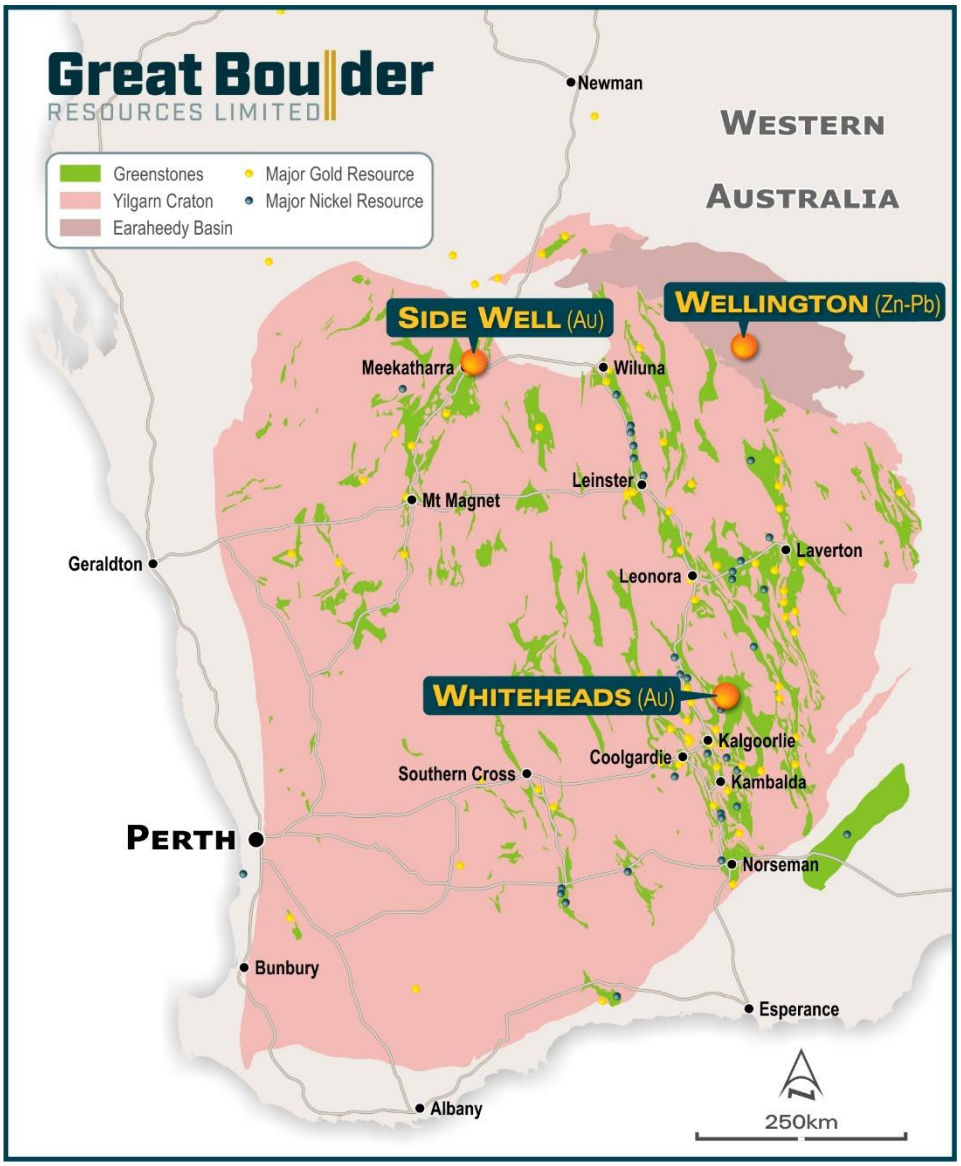

FIGURE 1: GREAT BOULDER RESOURCES' PROJECTS IN WESTERN AUSTRALIA

Project	Program	Holes Drilled	Metres
Side Well	AC Drilling	151	10,396
	Mulga Bill DD	7	1,925
Whiteheads	AC Drilling	79	3,739
	All drilling programs	**133**	**16,060**

TABLE 1: QUARTERLY DRILLING SUMMARY

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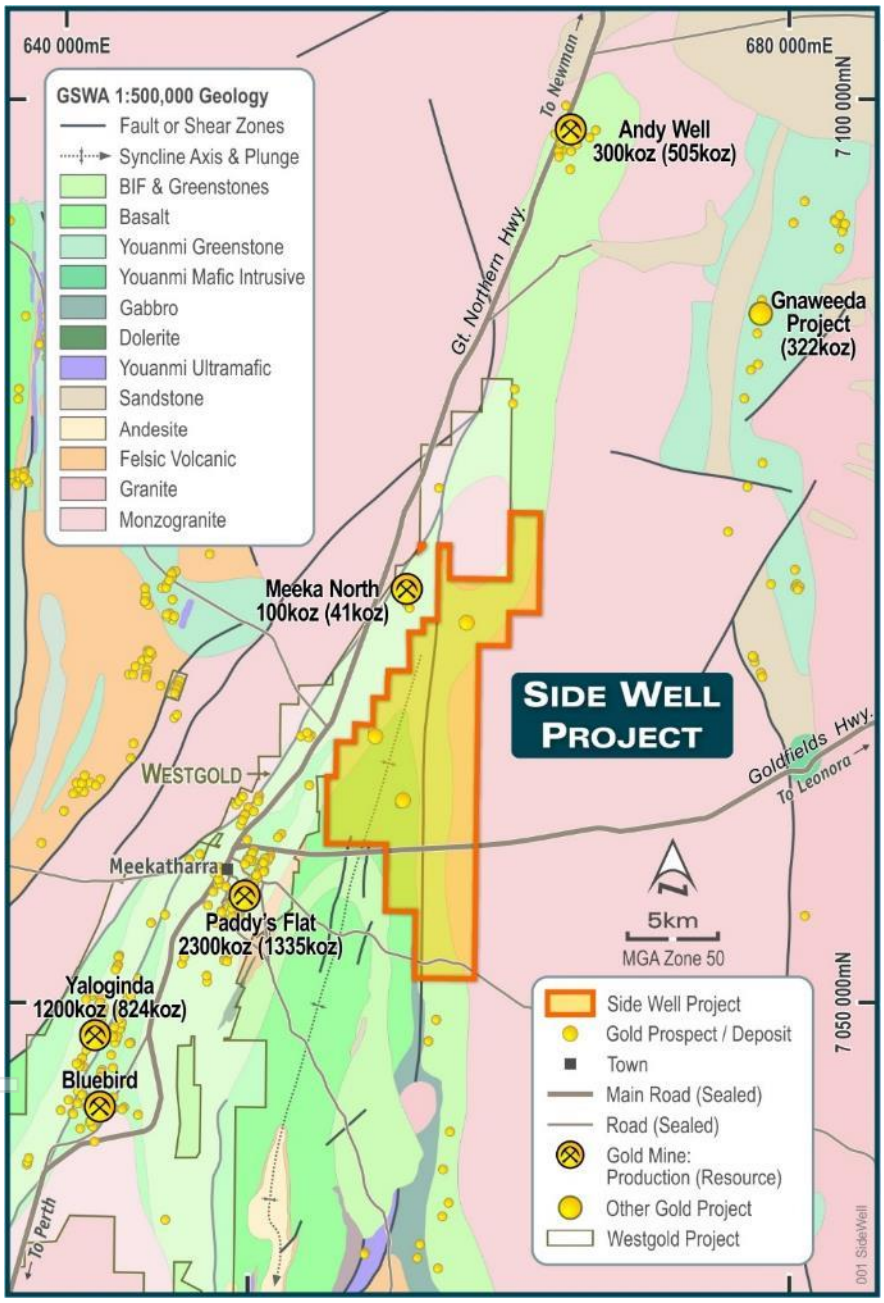
Side Well Gold Project (GBR 75%)

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^2 of the highly prospective Meekatharra – Wydgee greenstone belt over 25km of strike length.



Side Well

The Side Well project is centrally located in an area that has produced almost 4 million ounces of gold, with over 2.9 million ounces remaining in resources. Despite this, large areas of the project remain unexplored.

FIGURE 2: SIDE WELL LOCATION

Drilling

Assay results from the Phase 5 RC and AC programs were received in batches from late January through to March, with total turnaround times blowing out to 16 weeks for the latter half of both programs. As all initial assay results from 2021 drilling have now been received, this bottleneck

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should not be an issue in future with the new assay laboratory consistently delivering results in four to six weeks and occasionally less.

Highlighted drilling results received during the quarter include:

- **9m @ 21.21g/t Au** from 207m in 21MBRC062, including **4m @ 40.68g/t Au** from 210m
- **6m @ 5.99g/t Au** from 88m in 21MBRC061, including 1m @ 28.48g/t Au from 92m
- **14m @ 4.25g/t Au** from 80m in 21MBRC093, including 1m @ 21.18g/t from 83m
- **1m @ 97.97g/t Au** from 117m in 21MBRC076
- **25m @ 1.85g/t Au** from 84m in 21MBRC065, including 1m @ 25.78g/t Au from 108m
- **12m @ 3.23g/t Au** from 93m in 21MBRC083

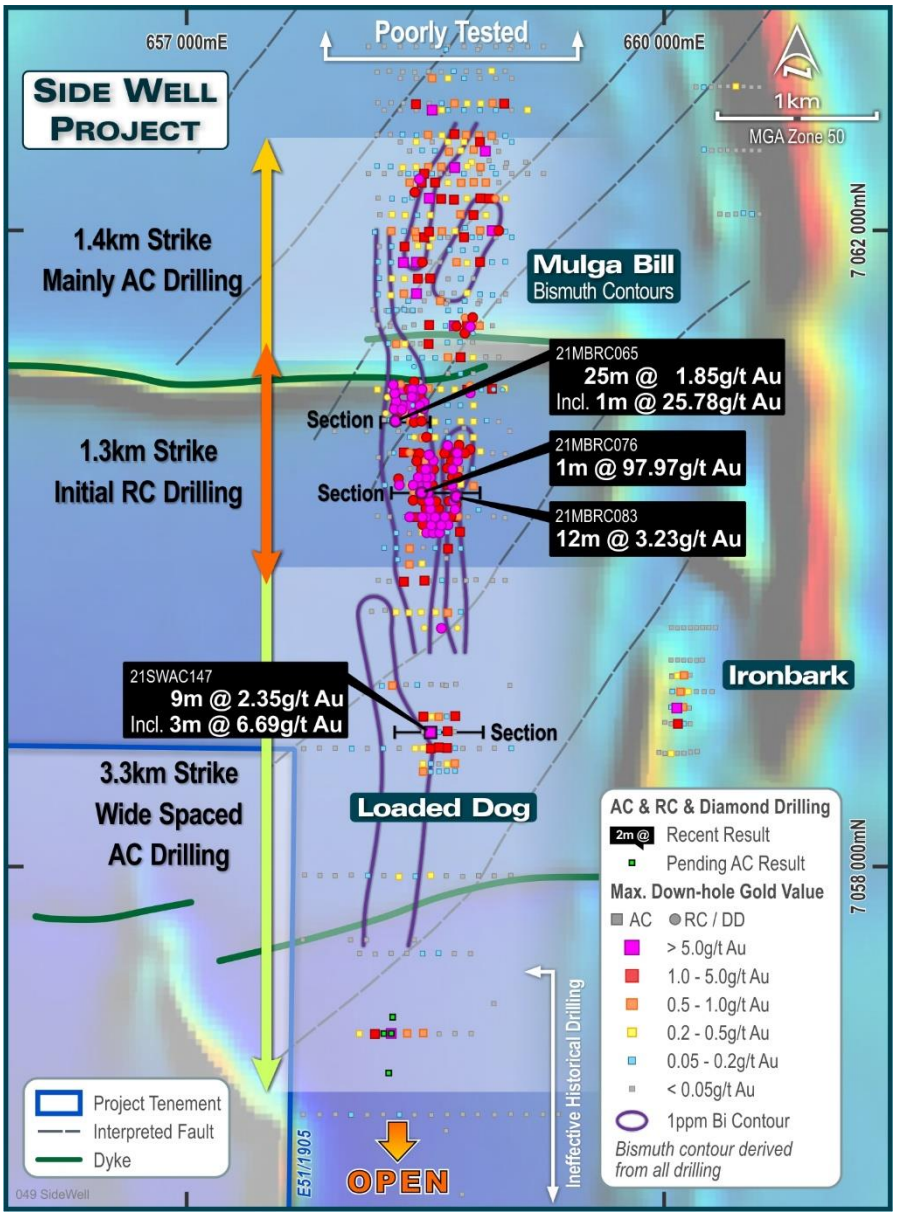

FIGURE 3: RECENT DRILL RESULTS AT MULGA BILL. HOLE 21SWAC119 (NOT LABELLED) IS SHOWN ON THE THIRD LINE SOUTH OF LOADED DOG.

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An area of follow-up AC drilling at Loaded Dog within the southern Mulga Bill corridor provided further encouragement, with results such as 9m @ 2.35g/t Au including **3m @ 6.69g/t Au** from 45m in 21SWAC147. This result sits on the eastern edge of a coherent bismuth pathfinder trend which suggests further potential to the south of this area.

As announced in February, AC hole 21SWAC119 intersected 3m @ 8.56g/t Au from 147m to end of hole (EOH), including 1m @ 23.78g/t Au at EOH. This result in an area with no previous drilling extended the overall strike footprint of Mulga Bill to 6km. Recent analysis of the multi-element geochemistry indicates the end-of-hole mineralisation in 21SWAC119 has the same alteration signature as the core of the high-grade area defined by drilling to the north.

Two lines of AC drilling south of this result in February tested the Mulga Bill trend an additional 500m and 1.9km further south respectively. The line 500m south did not intersect significant gold mineralisation; gold assays for the southern-most line are still pending and no multi-element assays are yet available.

Metallurgical Testing

During February Independent Metallurgical Operations (IMO) conducted a series of three leach tests on a parcel of high-grade RC chips from Mulga Bill. These tests looked at the effect of various grind sizes using consistent cyanide concentration over a 48-hour period, using a grind of P_{80} 150 µm, P_{80} 106 µm and P_{80} 75 µm with NaCN concentration maintained at 300ppm in each case.

The three tests showed consistently high gravity recoveries ranging from 62.3% to 62.7%. Overall gold recovery was also consistent, ranging from 87.2% to 88.0%, suggesting the leach characteristics are not related to grind size.

A fourth leach test was conducted in March, using the coarser grind of P_{80} 150 µm and an increased NaCN concentration maintained at 400ppm for 48 hours. This resulted in dramatically increased recovery of 99.7%, a 12% improvement over the previous test at the same grind size. Gravity recovery was similar to the other tests at 62.1%.

Additional metallurgical testing will be completed in phases during the year to examine the recovery characteristics of other mineralisation styles from Mulga Bill.

Geophysics – IP Surveys

During February and March the Company commenced an induced polarisation (IP) survey at Mulga Bill to test whether disseminated sulphides were sufficiently widespread to generate a significant chargeable response. The survey was designed in two stages:

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- Initially four east-west pole-dipole IP lines were run east across the strike of Mulga Bill; three over known mineralisation defined in RC drilling and a fourth line further to the south, crossing the recent AC intersection in 21SWAC119. These were designed as a proof of concept, to test the IP response in areas where the Mulga Bill corridor is well defined by drilling and geochemistry.
- Having successfully generated a chargeable response, three lines of transmitters were set up in a north-south array covering the known strike of Mulga Bill in order to generate a 3D IP inversion model of sulphide distribution within the deposit.

Results from the initial IP lines were announced on 11 March 2022. Data acquisition from the 3D IP survey was delayed by thunderstorms and heavy rain towards the end of March, and the program is expected to be completed during April.

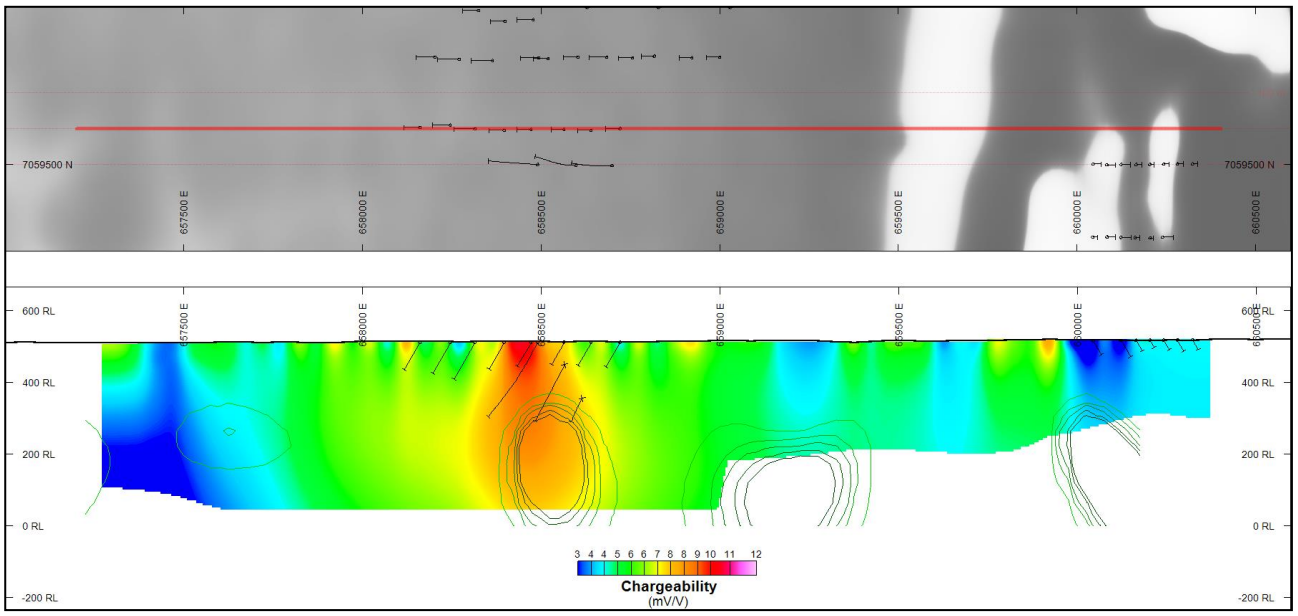

FIGURE 4: (7059600N) CROSS-SECTION OF 2D IP CHARGEABILITY WITH GRAVITY INVERSION ISO-SURFACES. THE DEPTH SLICE ON THIS SECTION IS APPROXIMATELY 500M VERTICAL. YELLOW AND RED SHADES CORRELATE TO SULPHIDE ABUNDANCE.

Great Boulder's geochemistry data has previously established a spatial correlation between gold and bismuth at Mulga Bill, with bismuth being used as a key pathfinder in AC drilling. The data also reveals a strong correlation between bismuth and sulphur. The significance of these relationships is that the IP data is highlighting accumulations of disseminated sulphide along strike and at depth at Mulga Bill, and the Company now intends to test these areas to see whether they are also mineralised.

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Ironbark Prospect

Assays from the second round of AC drilling at Ironbark in 2021 were received during March, highlighting a north-northeast trending zone of mineralisation 500m long that remains open to the south. RC drilling will test fresh mineralisation beneath this zone during the next program.

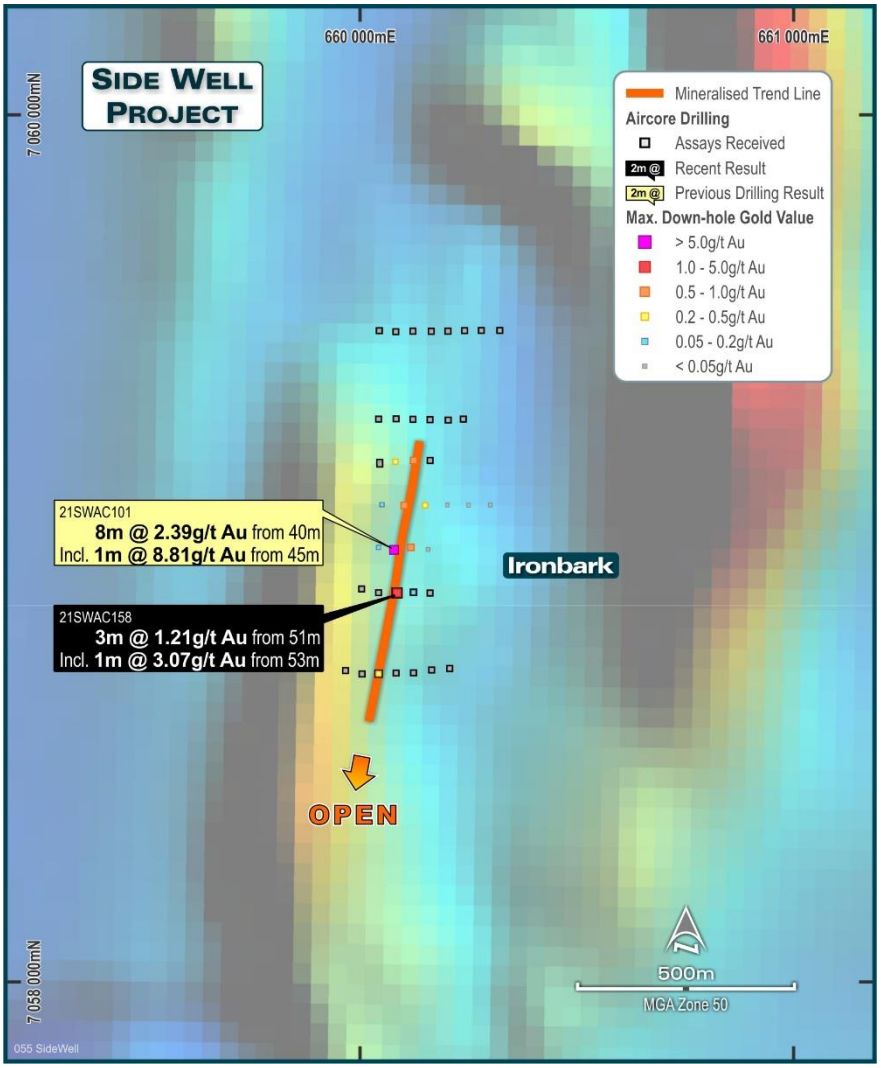

FIGURE 5: IRONBARK PROSPECT IS SITUATED APPROXIMATELY 1.5KM EAST OF MULGA BILL.

Jones Well

Results from the first 19 AC holes drilled over geochemical targets at Jones Well during February were received in March. These highlight anomalous mineralisation in the first target including bottom-of-hole anomalism such as 6m @ 0.38g/t from 60m to EOH (including 2m @ 0.59g/t Au from 64m) in 22SWAC054. The majority of assays from this program are still pending.

Next Steps

RC drilling is scheduled to resume at Mulga Bill in early April, with 5,000m planned. This is expected to be the last campaign-style program before continuous drilling commences later in the June quarter.

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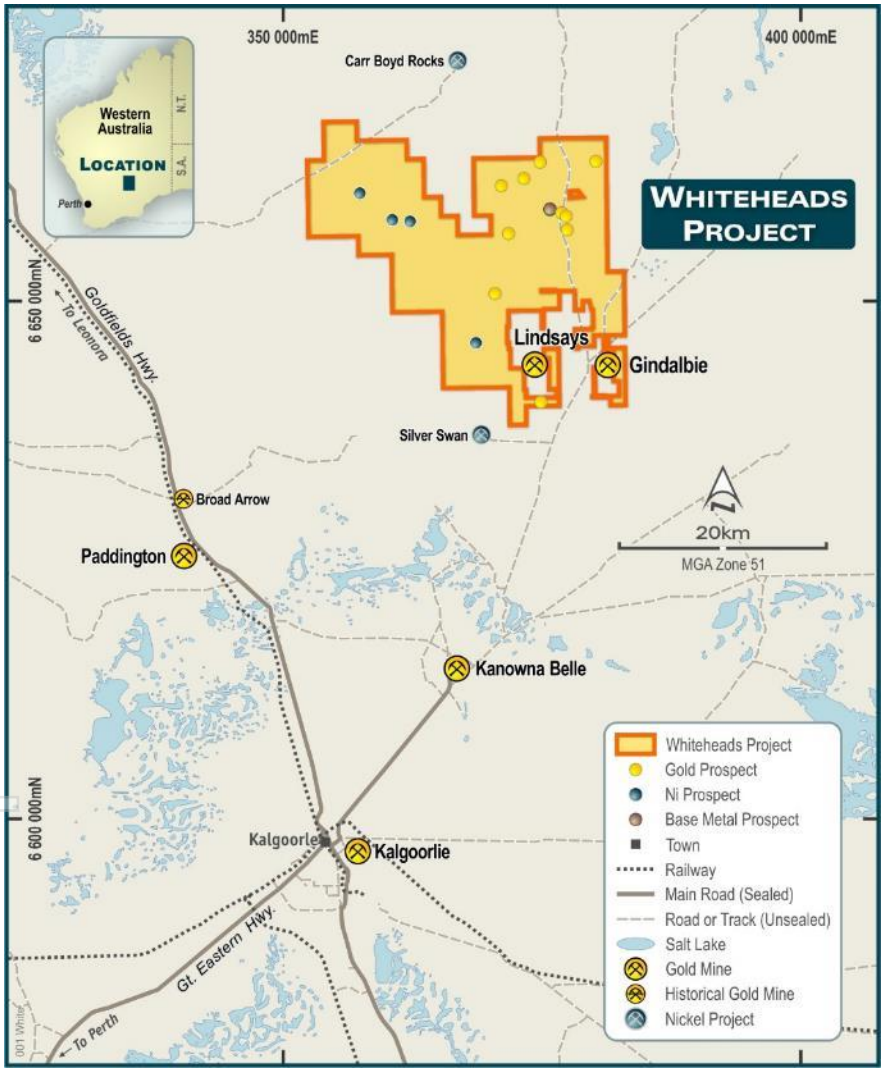
Whiteheads Project (GBR up to 75%)

Whiteheads is located approximately 45km north of Kalgoorlie and north of the nearby Kanowna Belle gold mine. The project covers an area of 488km^2 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.



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.

FIGURE 6: WHITEHEADS LOCATION PLAN

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

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AC Drilling

79 AC holes were drilled at Whiteheads for 3,739m during January, with holes at a number of targets following up earlier auger and AC results. These included:

- 8 holes (464m) at Lindsays South, looking for strike continuations of the Lindsays mineralisation
- 36 holes (1,832m) at Eclipse
- 14 holes (607m) at Jubilee North
- 8 holes (344m) at Highbury, a recently named prospect on the Arsenal Trend
- 5 holes (179m) at Tektite
- 8 holes (295m) at the southern end of Blue Poles.

TABLE 2: WHITEHEADS AC SIGNIFICANT INTERSECTIONS

Hole ID	Prospect	From	To	Width (m)	Grade (g/t Au)	Comment
22WHAC002	Lindsays South	48	52	4	0.33	
22WHAC007	Lindsays South	48	55	7	0.14	To EOH
22WHAC013	Eclipse	48	52	4	0.10	To EOH
22WHAC026	Eclipse	68	69	1	0.28	To EOH
22WHAC032	Eclipse	48	52	4	0.91	
22WHAC050	Jubilee North	0	4	4	0.20	
22WHAC051	Jubilee North	24	28	4	0.13	
22WHAC073	Blue Poles South	32	36	4	0.14	To EOH
22WHAC075	Blue Poles South	32	36	4	0.77	To EOH

The two end-of-hole intersections south of Blue Poles are interesting in that they are of a similar tenor to the intersections that initially highlighted Blue Poles' potential in late 2020. This line of drilling is approximately 380m south of the southern-most RC holes. The southern end of Blue Poles is a priority target for RC drilling, with the higher-grade and deeper intersection of 3m @ 5.51g/t Au in 21BPRC026 from 181m indicating potential for a southerly plunge to the deposit.

The drilling at Highbury returned no significant intersections. A single line of holes at the southern end of Tektite also failed to intersect mineralisation, suggesting mineralisation in this area may be closed off to the south.

Auger Geochemistry

During March 908 auger holes were completed across prospective areas at Wishbone, Hillsborough and Forty Flats. The auger samples have been submitted for multi-element analysis in Perth, with results expected shortly.

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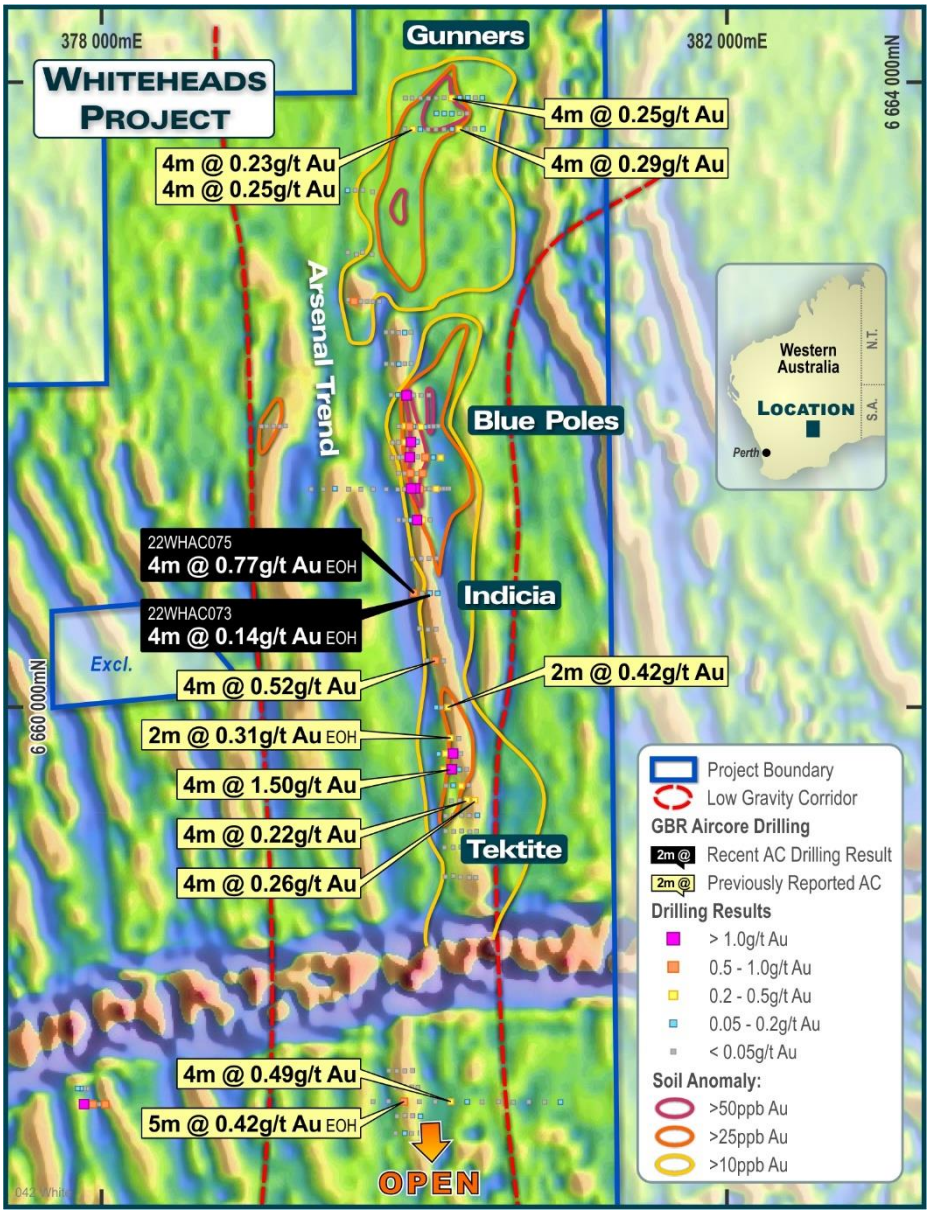

FIGURE 7: RECENT AC RESULTS ON THE NORTHERN ARSENAL TREND SOUTH OF BLUE POLES.

Next Steps

Target generation and drill testing will continue at Whiteheads on a campaign basis. The timing and duration of field programs will depend on windows of opportunity during the year, as Whiteheads will remain a lower priority than Side Well for the remainder of 2022 and into 2023.

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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 Zn-Pb province, the potential of which has been demonstrated by the recent success of Rumble Resources and Strickland Resources at their projects to the northwest of Wellington. GBR's project covers 1,134km^2 of prospective stratigraphy including more than 60km of strike highlighted by anomalous pathfinder geochemistry.

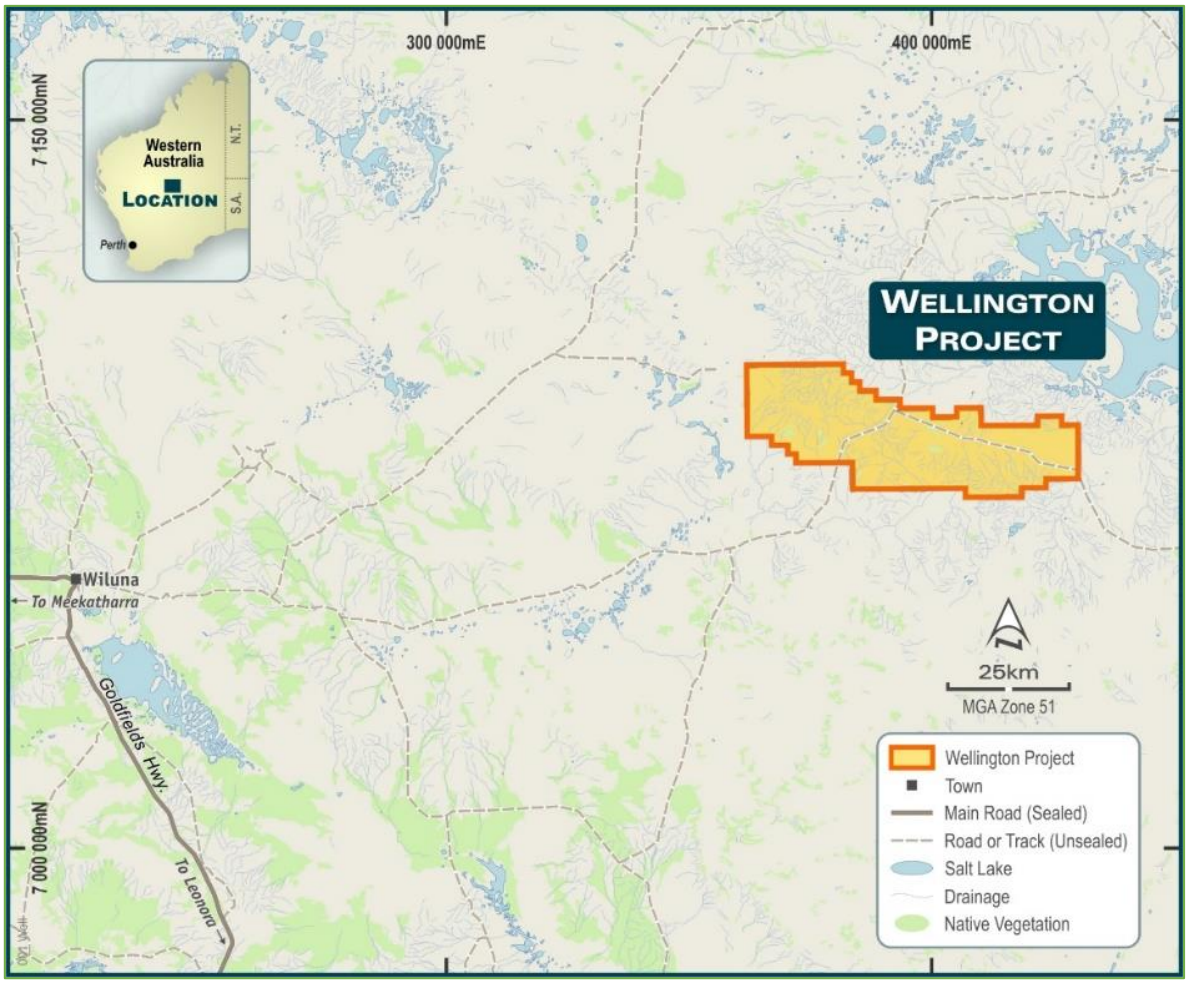

FIGURE 8: THE WELLINGTON PROJECT IS LOCATED 170KM EAST OF WILUNA IN WESTERN AUSTRALIA

During February the Company commenced negotiation of an Aboriginal heritage agreement with the Native Title group Tarlka Matuwa Piarku Aboriginal Corporation (TMPAC). Discussions are ongoing and progressing well.

Tenement applications E38/3621 and E38/3622 have been withdrawn from the expedited procedure process by the State Government. Once heritage negotiations are complete the Company is hoping to have the western application E53/2172 granted as soon as possible, with the expectation that the

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remaining two applications will be granted once the members of TMPAC have held a General Meeting to vote on the agreement in respect of those applications.

The Company is currently planning its exploration work programs in anticipation of the grant of these tenements.

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 $72,000 was allocated to time spent on project management.

During the quarter, the Company paid $1,253,000 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 $2.1 million in cash. Subsequent to the end of the quarter, on 6 April 2022, the Company completed a $7M placement at $0.11 per share to sophisticated and professional investors.

Class of Securities	Issued Capital
Ordinary fully paid shares	**421,872,173**
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
Unlisted Options (exercisable at $0.2033 and expiring 01/02/2025)	1,250,000
Unlisted Options (exercisable at $0.165 and expiring 31/03/2025)	2,500,000
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:

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lucas@corporatestorytime.com

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TABLE 3: TENEMENT SCHEDULE

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

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