

# MULTI-ELEMENT ASSAYS IDENTIFY COPPER & SILVER-RICH ZONE AT MULGA BILL

# **HIGHLIGHTS**

- New multi-element assays from the recent diamond program plus retrospective assays from earlier RC holes highlight a broad, tabular zone of copper and silver mineralisation adjacent to high-grade gold mineralisation already defined at Mulga Bill
- Highlights from the copper zone include:
  - 14.5m @ 0.59% Cu, 1.17g/t Au, and 10.74g/t Ag from 189.5m including 0.7m @ 2.25% Cu, 1.48g/t Au and 27.10g/t Ag in 22MBDD001
  - 17m @ 1.21% Cu, 0.35g/t Au and 8.92g/t Ag from 83m in 21MBRC046
  - 24m @ 0.49% Cu, 0.25g/t Au and 3.65g/t Ag from 94m in 21MBRCD093
  - 4m @ 1.30% Cu, 0.18g/t Au and 68.68g/t Ag from 100m including 1m @ 3.44% Cu, 0.15g/t Au and 171.38g/t Ag in 21MBRC051
- Data evaluation and target planning underway for follow up drilling of the copper zone
- > AC drilling has now commenced, concentrating on infill drilling within the southern half of the Mulga Bill Loaded Dog corridor

Great Boulder Resources ("Great Boulder" or the "Company") (ASX: GBR) is pleased to provide an update on recent exploration activity at the Mulga Bill prospect in the Side Well Gold Project ("Side Well") in Western Australia.

Additional assays from the recent seven-hole diamond drilling campaign combined with retrospective multi-element assays from earlier RC holes have highlighted the continuity of a broad zone of elevated copper, gold and silver. This tabular, sulphide-rich zone had previously been recognised in Great Boulder's drilling, but a lack of continuous base metal assays hampered interpretation.

The sulphide zone contains disseminated chalcopyrite and pyrite, making it a visible feature in the 3D-IP and gravity data. It is commonly located on the eastern margin of the IP anomaly, with the high-grade gold-only intersections to the west. Better copper intersections from the new assays include:

- 14.5m @ 0.59% Cu, 1.17g/t Au and 10.74g/t Ag from 189.5m including 0.7m @ 2.25% Cu, 1.48g/t Au and 27.10g/t Ag in 22MBDD001
- 17m @ 1.21% Cu, 0.35g/t Au and 8.92g/t Ag from 83m in 21MBRC046
- 24m @ 0.49% Cu, 0.25g/t Au and 3.65g/t Ag from 94m in 21MBRCD093

- 4m @ 1.30% Cu, 0.18g/t Au and 68.68g/t Ag from 100m including 1m @ 3.44% Cu, 0.15g/t Au and 171.38g/t Ag in 21MBRC051
- 10m @ 0.40% Cu, 0.04g/t Au and 5.37g/t Ag from 96m in 21MBRC047

The sulphide intersection in 22MBDD001 sits within a 74.6m-wide zone averaging 5.76ppm Bismuth, which suggests it sits within the centre of the alteration system.

# **Great Boulder's Managing Director, Andrew Paterson commented:**

"After recognising the chalcopyrite-rich copper zone in our initial RC programs last year we recently started retrospectively assaying RC samples for a 48-element suite including silver and base metals. It's exciting to see this zone now appears to be a large tabular zone of elevated copper and silver with low-grade gold mineralisation."

"This doesn't change our focus on drilling high-grade gold intersections at Mulga Bill but it helps us understand the project's full potential. There may be scope for recovering copper as part of a potential mining scenario."

"The fact that we see individual samples with copper as high as 3.44% and silver at 171.38g/t indicates this zone could host a significant amount of metal."

"Our field program is progressing well with a focus on defining high-grade gold as we continue drilling the 6km footprint of Mulga Bill. An air-core program is currently underway, which will be followed by RC drilling running continuously to the end of the year as we move towards an exploration target and mineral resource as quickly as possible."

RC intervals from last year's drilling were selected for multi-element assay based on portable XRF (pXRF) data, with the sample pulps extracted and assayed by Intertek Genalysis in Perth. This process is ongoing, and more data is expected in the coming weeks.

All samples for 2022 drilling programs are being analysed by Australian Laboratory Services (ALS) in Perth. Assaying samples for the 48-element assay suite as well as gold has slowed the Company's assay turnaround time, which is currently averaging approximately 60 days. Remaining assays for the balance of the diamond program are expected to be received in the coming weeks.

As each drilling program is completed the geological team is learning more about the style and spatial distribution of mineralisation at Mulga Bill, adding confidence to the Company's drill planning as it moves towards continuous drilling operations in in the second half of the year.

### **Next Steps**

Following completion of recent RC drilling at Mulga Bill, Loaded Dog and Ironbark an AC drilling program commenced on May 20<sup>th</sup>. This will complete infill drilling in the southern half of the Mulga Bill corridor where previous coverage is still sparse, with AC lines up to 500m apart.

The AC rig is scheduled to move to Whiteheads later in the month to test several geochemical targets as well as some follow-up drilling from previous AC programs.

An RC rig is scheduled to mobilise to Side Well in late June with drilling planned to continue for the remainder of the year.

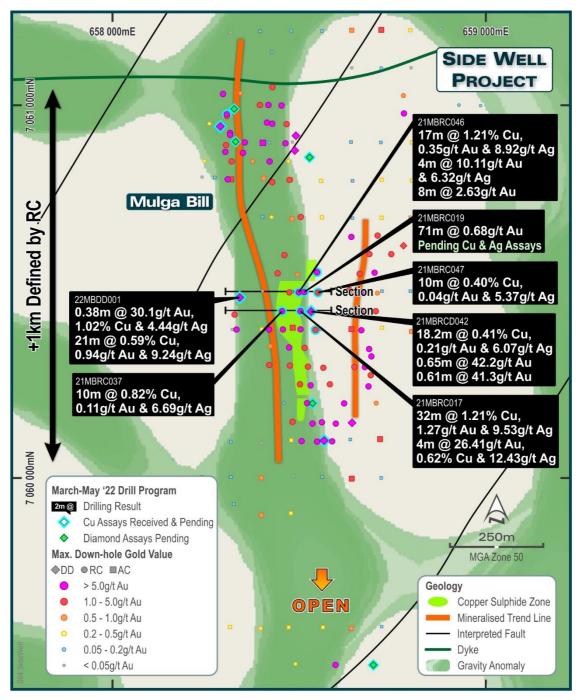


FIGURE 1: PLAN VIEW OF THE CENTRAL AREA OF MULGA BILL SHOWING THE SULPHIDE ZONE IN THE CONTEXT OF SURROUNDING DRILL COLLARS. THE SULPHIDE ZONE INTERPRETATION IS BASED UPON VISUAL LOGGING, PXRF DATA AND MULTI-ELEMENT ASSAY DATA.

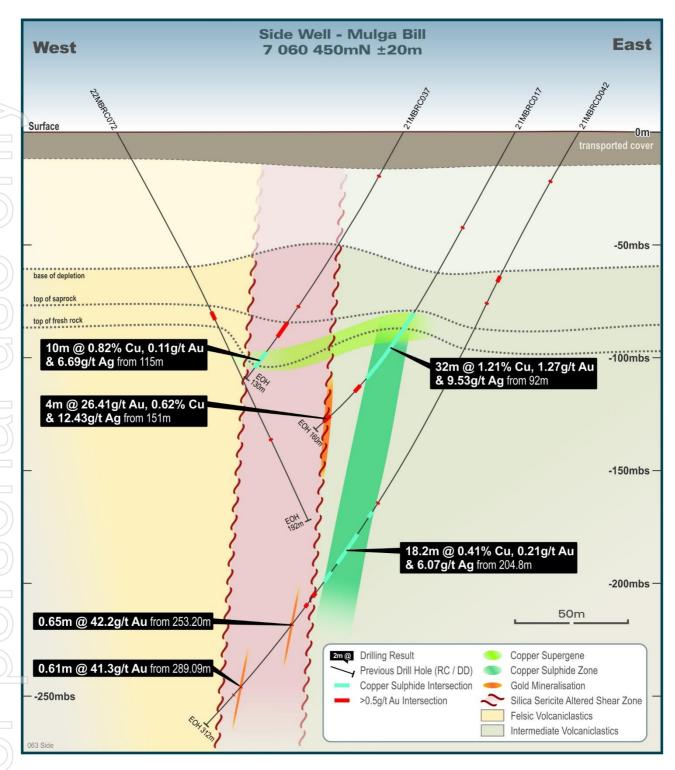


FIGURE 2: CROSS SECTION 7060450N. THE COPPER-RICH SULPHIDE ZONE SITS ON THE EASTERN SIDE OF THE MINERALISED SHEAR.

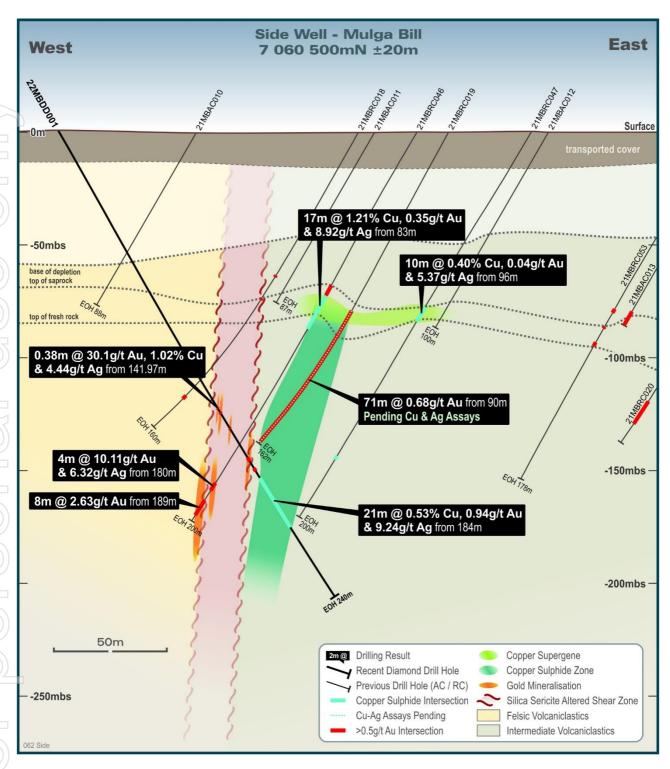


FIGURE 3: CROSS SECTION 7060500N.

## This announcement has been approved by the Great Boulder Board.

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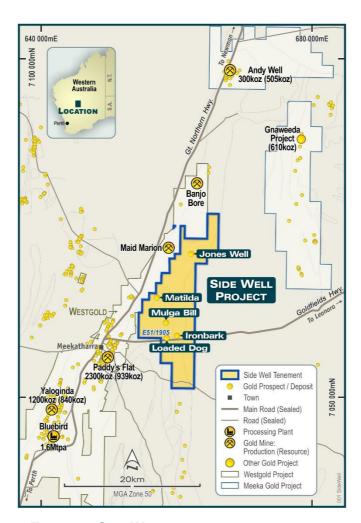


FIGURE 4: SIDE WELL PROJECT LOCATION PLAN.

### **About Great Boulder Resources**

Great Boulder is a mineral exploration company with a portfolio of highly prospective gold and base metals assets ranging from greenfields through to advanced exploration located in Western Australia. The Company's core focus is advancing the Whiteheads and Side Well gold projects while progressing initial exploration at the earlier stage Wellington Base Metal Project located in an emerging MVT province. With a portfolio of highly prospective assets plus the backing of a strong technical team, the Company is well positioned for future success.

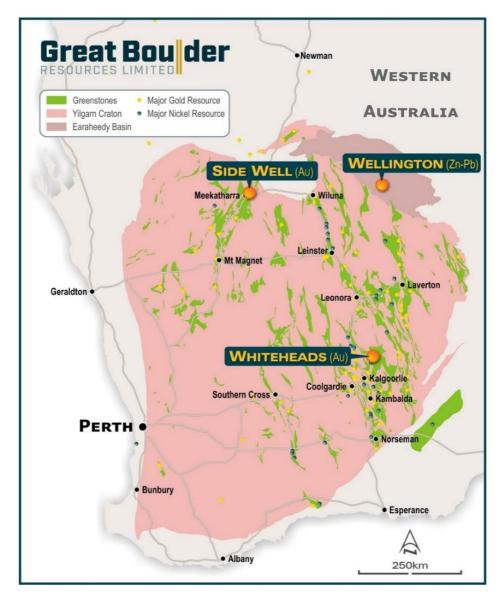


FIGURE 5: GREAT BOULDER'S PROJECTS

# **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.

**TABLE 1: SIGNIFICANT INTERSECTIONS** 

Hole ID	From	То	Width	Au	Ag	Cu %	Comments
22MBDD001	87	88	1.00	1.55	1.27	0.01	
	141.97	145.05	3.08	4.57	3.57	0.26	
Including	141.97	142.35	0.38	30.10	4.44	1.02	
And	144.25	145.05	0.80	3.27	11.20	0.51	
	152.6	153	0.40	7.80	2.07	0.05	Draviously appayment
	167.7	169.4	1.70	6.52	1.97	0.05	Previously announced
Including	167.7	168.15	0.45	16.55	2.96	0.08	
And	168.9	169.4	0.50	6.85	3.46	0.06	
	173.2	174	0.80	1.15	1.08	0.12	
	178.25	179	0.75	1.22	14.65	0.45	
	181.65	183.2	1.55	6.02	4.33	0.03	
	186	187	1.00	1.30	11.35	0.47	
	189.5	204	14.50	1.17	10.74	0.59	
Including	189.5	190.2	0.70	1.48	27.10	2.25	
And	203	204	1.00	9.46	15.35	0.88	
Within	184	205	21.00	0.94	9.24	0.53	
Note: the low	er portion (	of hole 22N	1BDD001 ir	ncludes 74	.6m @ 5.76	Sppm Bi fro	om 165.8m
22MBDD002	94.9	97.3	2.40	6.29	0.45	0.01	
	127.2	128.3	1.10	2.85	0.25	0.02	Previously announced
	129.3	130.3	1.00	38.40	3.87	0.05	
22MBDD003	0	195			Final	assays pen	ding
	199	199.96	0.96	12.99	1.25	0.02	Previously announced
Including	199	199.2	0.20	42.00	0.95	0.03	
	236	249.6			Final	assays pen	ding

TABLE 2: SIGNIFICANT INTERSECTIONS FROM RETROSPECTIVE MULTI-ELEMENT ASSAYING OF RC HOLES

Hole ID	From	То	Width	Au	Ag	Cu %	Comments
21MBRC093	94	118	24	0.25	3.65	0.49	Includes composite samples
21MBRC046	83	100	17	0.35	8.92	1.21	
Including	84	89	5	0.21	6.47	1.61	
And	92	97	5	0.66	12.98	1.48	
21MBRC047	96	106	10	0.04	5.37	0.40	
	169	172	3	0.31	13.73	1.01	
21MBRC051	100	104	4	0.18	68.68	1.30	
Including	100	101	1	0.15	171.38	3.44	

TABLE 3: DRILL-HOLE COLLAR INFORMATION AND ASSOCIATED JORC TABLE 1 DATA HAS PREVIOUSLY BEEN RELEASED IN THE FOLLOWING ASX ANNOUNCEMENTS

Hole ID	Date	Title
21MBRC045 to 055	1/12/2021	More high-grade gold in Mulga Bill Phase 4 RC drilling
21MBRC093*	31/1/2022	Bonanza gold grades in Mulga Bill Phase 5 RC drilling
21MBRCD093* 22MBDD001 to 007	26/4/2022	High gold grades in first diamond holes at Mulga Bill

# Appendix 1 - JORC Code, 2012 Edition Table 1

**Section 1 Sampling Techniques and Data** 

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary	
Sampling techniques	Core sample intervals were selected based on geological logging, cut and collected in calico bags.	
	The sampling techniques used are deemed appropriate for the style of exploration.	
Drilling techniques	Diamond drilling was completed by Frontline Drilling. Industry standard drilling methods and	
	equipment were utilised.	
Drill sample recovery	Core recovery data is noted in geological comments as part of the logging process. Sample condition	
	has been logged for every geological interval as part of the logging process.	
	No quantitative twinned drilling analysis has been undertaken.	
Logging	Geological logging of drilling followed established company procedures. Qualitative logging of	
	samples includes lithology, mineralogy, alteration, veining and weathering. Abundant geological	
	comments supplement logged intervals.	
	Bulk density measurements were taken on representative samples of selected lithologies from the	
	diamond core using the wet & dry method.	
Sub-sampling techniques	Samples are being prepared and analysed at ALS in Perth. Samples were pulverized so that each	
and sample preparation	samples had a nominal 85% passing 75 microns. Au analysis is undertaken using FA50/OE involving	
	50g lead collection fire assay and Inductively Coupled Plasma Optical Emission Spectrometry (ICP-	
	OES) finish. Multi-element analysis utilises a four-acid digest followed by ICP-MS finish.	
Quality of assay data	All samples were assayed by industry standard techniques. Gold is determined by fire assay, and	
and laboratory tests	other elements are analysed using a 4-acid digest with ICP-MS.	
Verification of sampling	The standard GBR protocol was followed for insertion of standards and blanks with a blank and	
and assaying	standard inserted per 40 samples. No QAQC problems were identified in the results. No twinned	
	drilling has been undertaken.	
Data spacing and	The spacing and location of the majority of drilling in the projects is, by the nature of early	
distribution	exploration, variable.	
	The spacing and location of data is currently only being considered for exploration purposes.	
Orientation of data in	Drilling is dominantly perpendicular to regional geological trends where interpreted and practical.	
relation to geological	True width and orientation of intersected mineralisation is currently unknown or not clear.	
structure	The specing and location of the data is surroutly only being considered for surlamation and	
	The spacing and location of the data is currently only being considered for exploration purposes.	
Sample security	GBR personnel were responsible for delivery of samples from the drill site to the courier companies	
	dispatch center in Meekatharra. Samples were transported by Toll Intermodal from Meekatharra to	
	the laboratory in Perth.	
Audits or reviews	Data review and interpretation by independent consultants.	

#### **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and	Side Well tenement E51/1905 is a 48-block exploration license covering an area of 131.8km2
land tenure status	immediately east and northeast of Meekatharra in the Murchison province. The tenement is a 75:25
	joint venture between Great Boulder and Zebina Minerals Pty Ltd.
Exploration done by	Tenement E51/1905 has a protracted exploration history but is relatively unexplored compared to
other parties	other regions surrounding Meekathara. The Explroation history by previous explorers has been
	described in the technical section of the announcement.
Geology	The Side Well tenement group covers a portion of the Meekatharra-Wydgee Greenstone Belt north
	of Meekatharra, WA. The north-north-easterly trending Archaean Meekatharra-Wydgee Greenstone

	Belt, comprises a succession of metamorphosed mafic to ultramafic and felsic and sedimentary rocks
	belonging to the Luke Creek and Mount Farmer Groups.
	Over the northern extensions of the belt, sediments belonging to the Proterozoic Yerrida Basin
	unconformably overlie Archaean granite-greenstone terrain. Structurally, the belt takes the form of
	a syncline known as the Polelle syncline. Younger Archaean granitoids have intrusive contacts with
	the greenstone succession and have intersected several zones particularly in the Side Well area.
	Within the Side Well tenement group, a largely concealed portion of the north-north-easterly
	trending Greenstone Belt is defined, on the basis of drilling and airborne magnetic data, to underlie
	the area. The greenstone succession is interpreted to be tightly folded into a south plunging syncline
	and is cut by easterly trending Proterozoic dolerite dykes.
	There is little to no rock exposure at the Side Well prospect. This area is covered by alluvium and
	lacustrine clays, commonly up to 60 metres thick.
Drill hole Information	A list of the drill hole coordinates, orientations and intersections reported in this announcement are
	provided as an appended table.
	provided as an appended table.
Data aggregation	Results were reported using cut-off levels relevant to the sample type. For composited samples
methods	significant intercepts were reported for grades greater than 0.1g/t Au with a maximum dilution of
	4m. For single metre splits, significant intercepts were reported for grades greater than 0.8g/t Au
	with a maximum dilution of 2m.
	A weighted average calculation was used to allow for bottom of hole composites that were less than
	the standard 4m and when intervals contain composited samples plus 1m split samples.
	No metal equivalents are used.
Relationship between	The orientation of structures and mineralisation is not known with certainty, but majority of the
mineralisation widths	drilling drilling was conducted using appropriate perpendicular orientations for interpreted
and intercept lengths	mineralisation. Diamond drilling has confirmed a mineralised intrusive body at Side Well has a near
	vertical dip and trends broadly north-south. Due to the wide spacing of drill lines exact orientation is
	not clear.
Diagrams	Refer to figures in announcement.
Balanced reporting	It is not practical to report all historical exploration results from the Side Well project. Selected
	historical intercepts have been re-reported by GBR to highlight the prospectivity of the region. Full
	drillhole details can be found in publicly available historical annual reports.
Other substantive	Subsequent to Doray Minerals Limited exiting the project in 2015, private companies have held the
exploration data	ground with no significant work being undertaken.
Further work	Further work is discussed in the document.
1	