

# SIDE WELL MINERAL RESOURCE INCREASES TO 668Koz Au

#### **HIGHLIGHTS**

- Mineral Resource Estimate (MRE) substantially increased for the Mulga Bill and Ironbark deposits at Side Well
- The total resource has grown by 29% to a total of 668,000 ounces gold @ 2.8g/t Au

Deposit	Category	Tonnes	Grade (g/t Au)	Oz Au
Mulga Bill	All	6,511,000	2.7	568,000
Ironbark	All	938,000	3.3	100,000
Global Resource	Total	7,450,000	2.8	668,000
Reported at a cut-off grade of 0.5q/t gold for open pit and 1.0q/t for underground. See detail below. Rounding errors may occur				

- 51% of ounces are now in the Indicated JORC category, an important step in enhancing the geological understanding of Side Well and de-risking the project as it moves towards development
- The global resource contains a significant higher-grade core of 496,000oz @ 5.3g/t Au when reported at a 2g/t cut-off (Mulga Bill 410koz @ 5.4g/t, Ironbark 85koz @ 4.9g/t)
- Resources are shallow, delineated from ~10m to 300m at Mulga Bill and from surface to 150m at Ironbark – 68% of resource ounces have open pit mining potential (less than 150m from surface)
- Resource additions at Mulga Bill include extensions to the high-grade Cervelo lodes and new mineralisation linking the HGV and Central Zones, with high-grade results returned from infill drilling also boosting the overall gold grade
- Mulga Bill North is displaying potential as a significant northern extension to the existing resource with mineralisation now defined over 700m of strike and open in all directions
- Side Well is strategically located neighbouring multiple resources, mines and processing infrastructure – the closest operating mill is located c.25km southwest by road
- Great Boulder's strategy is to delineate a significant gold camp at Side Well through advancing an extensive exploration prospect pipeline spanning advanced resource to greenfield discovery targets
- Heritage surveys have been completed within the Ironbark Corridor, with drilling expected to recommence shortly on high priority targets

Great Boulder Resources ("**Great Boulder**" or the "**Company**") (ASX: **GBR**) is pleased to announce an updated Mineral Resource Estimate (MRE) for the Company's flagship Side Well Gold Project ("**Side Well**") near Meekatharra in Western Australia.

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

"This is an important step for Great Boulder, with a significant increase in contained ounces at Mulga Bill and Ironbark as well as the conversion of a large proportion of both deposits from the Inferred to Indicated JORC category. That means both deposits are defined with sufficient confidence to commence economic studies once the current inflationary cycle peaks and we can confidently predict future cost inputs."

"All our infill drilling at Mulga Bill this year has confirmed the geological model we used for the initial resource, which reflects the excellent technical work involved in understanding this exceptional orebody. Side Well sets itself apart as a shallow, high-grade greenfields deposit on the outskirts of an historic, operating gold field, which is almost unprecedented in the junior gold sector."

"We are now looking forward to commencing the first exploration on new targets within the Ironbark Corridor, starting with Saltbush. This is another important step towards our goal of defining the first of what could be several million ounces of gold in resource at Side Well."

Table 1: Side Well Mineral Resource Summary, November 2023

Deposit	Туре	Category	Tonnes	Grade g/t Au	Oz Au
Mulga Bill	Open Pit	Indicated	1,667,000	3.1	169,000
		Inferred	2,982,000	1.9	183,000
	Underground	Indicated	733,000	3.5	83,000
		Inferred	1,130,000	3.6	132,000
	Subtotal In	dicated	2,399,000	3.3	252,000
	Subtotal Ir	ıferred	4,112,000	2.4	316,000
Ironbark	Open Pit	Indicated	753,000	3.7	88,000
		Inferred	186,000	1.9	11,000
Total			7,450,000	2.8	668,000

Reported at a cut-off grade of 0.5g/t gold for open pit and 1.0g/t for underground. Rounding errors may occur. There is no underground component (+150mbs) for Ironbark.

This Mineral Resource Estimate was prepared by an independent consultant using geological and mineralisation interpretations prepared by GBR using all available AC, RC and diamond data.

The updated Side Well MRE incorporates all drilling completed and assayed up to 30 September 2023. Since the maiden resource estimate, GBR's exploration team has completed an additional 21,299m of RC and diamond drilling and 14,111m of AC drilling.

Drilling during the year has largely confirmed and validated the interpreted lode shapes used for the maiden mineral resource announced in February 2023. Variations to the initial resource mainly involved additional mineralisation: in strike and/or down-dip extensions to existing lodes; new mineralised positions such as the poorly tested "gap" area at Mulga Bill; and significant extensions to the high-grade Cervelo veins immediately east of, and at depth below, Mulga Bill. Infill drilling has

also helped boost the overall grade at Mulga Bill in several areas where greater drill density delivered multiple new high-grade intersections within existing resource areas.

Mulga Bill North has not been included in this resource estimate. Despite recent success at the 700m-long prospect there is still insufficient drilling to define an Inferred mineral resource. This will be a target for ongoing drilling and subsequent resource estimation during 2024.

TABLE 2: GBR DRILLING SUMMARY FOR SIDE WELL

Side Well	AC (holes)	AC (m)	RC & DD (holes)	RC & DD (m)
2023 Drilling	157	14,111	114	21,298.96
Pre-2023 GBR Drilling	606	47,420	271	49,381.54
All GBR drilling	763	61,531	385	70,680.50

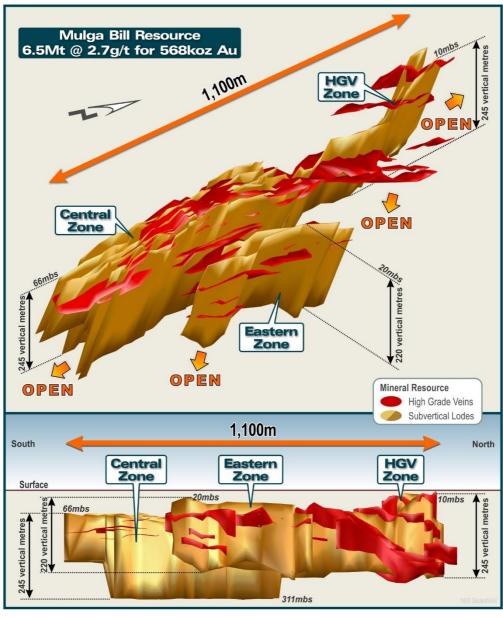


FIGURE 1: PERSPECTIVE VIEW OF MULGA BILL LOOKING NORTHWEST (TOP) AND IN LONG SECTION (BOTTOM) SHOWING THE WEST-DIPPING VEINS IN RED AND SUBVERTICAL LODES IN BROWN

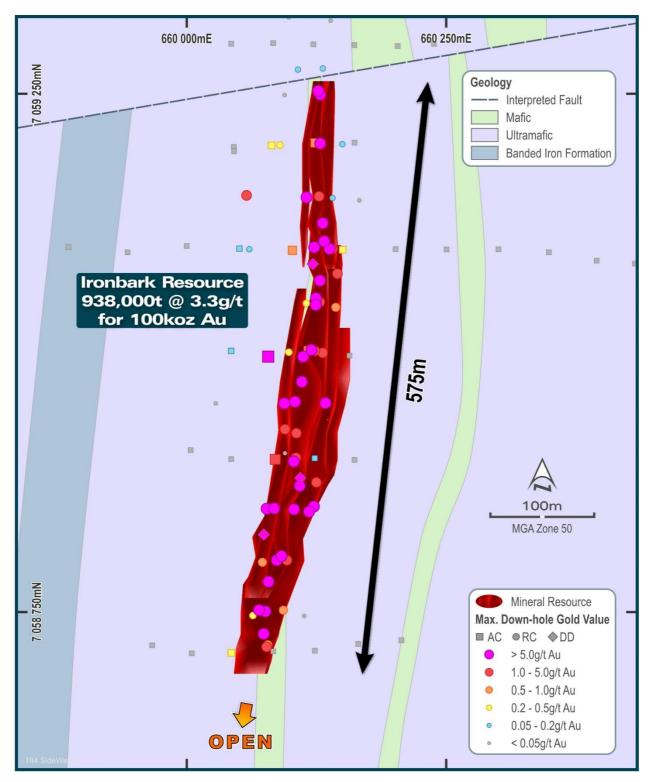


FIGURE 2: A PLAN VIEW OF THE IRONBARK LODES OVER LOCAL GEOLOGY

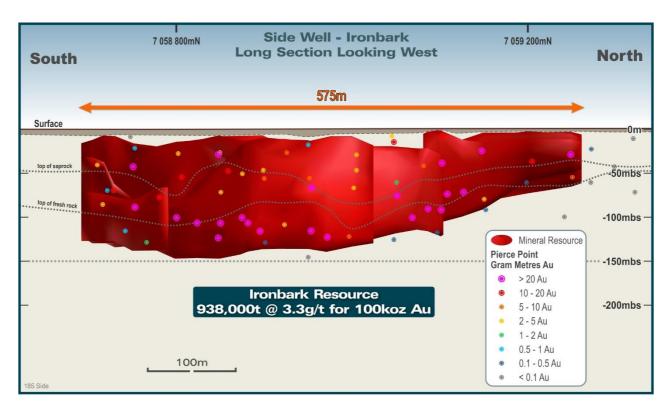


FIGURE 3: LONG SECTION VIEW OF THE IRONBARK LODES AND PROJECTED DRILLING INTERSECTIONS

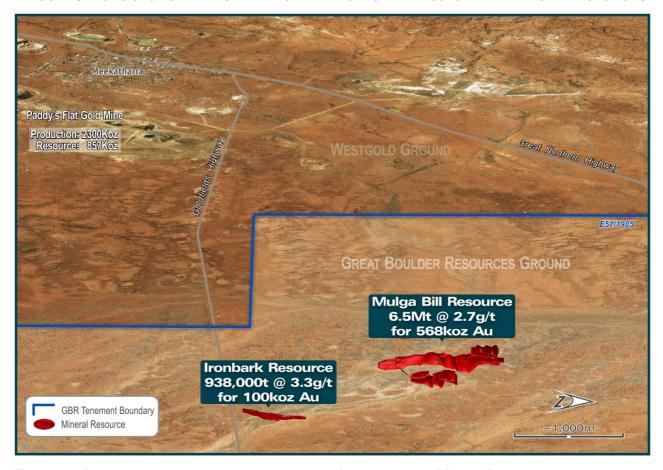


FIGURE 4: A REGIONAL PERSPECTIVE SHOWING THE IRONBARK AND MULGA BILL RESOURCES IN RELATION TO MEEKATHARRA AND THE GREAT NORTHERN HIGHWAY, LOOKING WEST

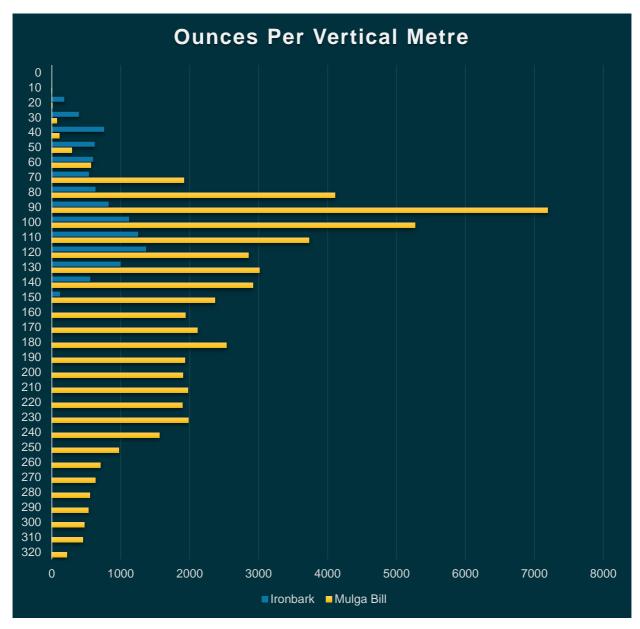


FIGURE 5: PLOT OF TOTAL RESOURCE OUNCES PER VERTICAL METRE, REPORTED IN 10M SLICES BELOW SURFACE FOR IRONBARK AND MULGA BILL

#### **Next Steps**

With initial heritage surveys completed over the 14km Ironbark corridor in October the Company is now awaiting final approvals before commencing initial drill testing on priority targets in the area. The first target to be drilled will be Saltbush, where rock chip sampling around old workings has returned assays up to 14.85g/t Au and three RC holes drilled in 1987 included an intersection of 3m @ 7.42g/t Au from 14m (ASX announcement 23 February 2023). This drilling has never been followed up.

Targets within the Ironbark corridor have potential to deliver significant resource growth over the next 12 months, and as such this is an important step towards Great Boulder's 1Moz target at Side Well. Exploration will begin with drilling on 200m-spaced lines to cover targets as efficiently as possible using AC drilling, followed by infill and RC drilling on new discoveries.

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

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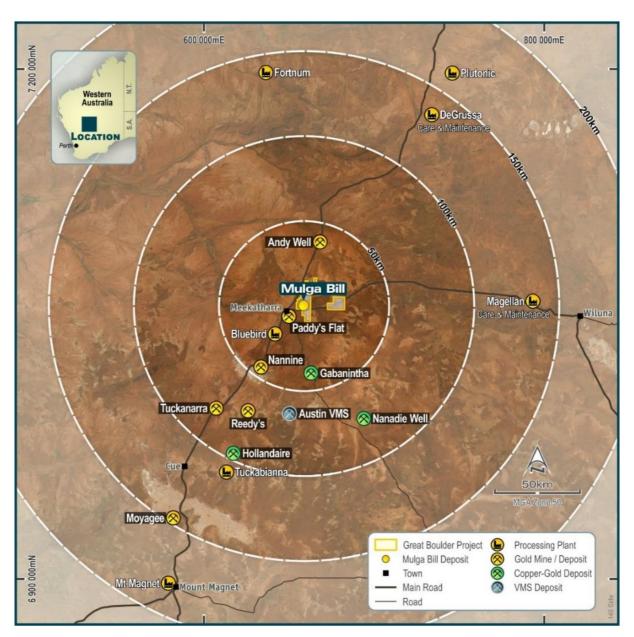


FIGURE 6: SIDE WELL IS STRATEGICALLY LOCATED CLOSE TO EXISTING MINES AND INFRASTRUCTURE

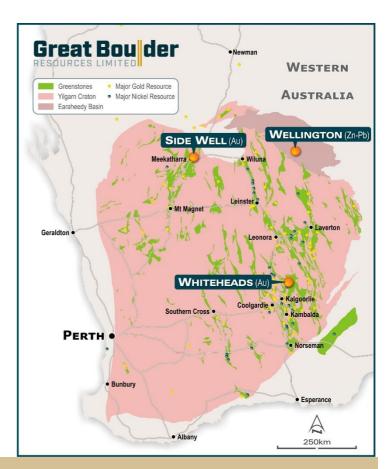
#### **COMPETENT PERSON'S STATEMENTS**

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.

The information in this report that relates to the Side Well mineral resource is based upon information compiled by Ms Elizabeth Haren, a Competent Person who is a Chartered Professional member of the Australasian Institute of Mining and Metallurgy (AusIMM) and Member of the Australian Institute of Geoscientists (AIG). Ms Haren is an employee of Haren Consulting Pty Ltd and an independent consultant to the Company. Ms Haren has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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). Ms Haren consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

# ABOUT GREAT BOULDER RESOURCES

Great Boulder is a mineral exploration company with a portfolio of highly prospective gold and base metals assets in Western Australia ranging from greenfields through advanced to exploration. The Company's core focus is Side Well Gold Project Meekatharra in the Murchison gold field, where exploration has defined Inferred Mineral Resource of 6.192Mt @ 2.6g/t Au for 518,000oz Au. The Company is also progressing early-stage exploration at 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.



#### **CAPITAL STRUCTURE**

**508M** 

SHARES ON ISSUE

\$31.4M

MARKET CAP At \$0.059/sh \$2.5M

CASH

As at 30 June 2023

Nil

DEBT
As at 30 Jun 2023

\$1.3M

LISTED INVESTMENT

Cosmo Metals (ASX:CMO)

25.3M

**UNLISTED OPTIONS** 

\$35k

**DAILY LIQUIDITY**Average 30-day value traded

30.7%

**TOP 20 OWNERSHIP** 



Exploring WA Gold & Base Metal assets, located in proximity to operating mines & infrastructure



Developing a significant high grade, large scale gold system at Side Well



Technically focused exploration team with a strong track record of discovery



Undertaking smart, innovative & systematic exploration



Ongoing drilling at multiple projects providing consistent, material newsflow An ASX Listing Rule 5.8.1 summary of technical information pertaining to the Mineral Resource Estimate is detailed below.

# **Material Information Summary – Mineral Resources**

#### **Mulga Bill and Ironbark Deposits**

The Mulga Bill deposit lies approximately 10km east of the township of Meekatharra. Mineralisation has been modelled over a 1.15km strike and is concentrated within two main areas: the main Mulga Bill zones from the Central zone to the HGV area; and the Eastern Trend. Within these areas lodes can be grouped broadly into three main categories: Steep shear structures, flat to shallow dipping vein sets and supergene related mineralisation. The lodes follow and cross-cut a 50m wide zone of dacitic to rhyolitic volcaniclastics and shallow intrusives, with preferential development of structures at lithological contacts. Mineralisation remains open down dip and to the north and south of the current model.

It is worth noting that an east-west Proterozoic dyke marks the northern end of the HGV area. This is purely a useful geographic marker, and there is a high likelihood that the HGV mineralisation extends further north on the other side of this dyke.

A maiden resource estimate was undertaken by external resource consultant Haren Consulting in January 2023 and updated with new drilling in October-November 2023. The resource estimate is mainly based on drilling completed by Great Boulder between 2020 and 2023, with minor historical drilling included. A summary of the Mineral Resource Estimate is provided above in Table 1.

#### **Geology and Geological Interpretation**

The Side Well Project is located within the northern Murchison Terrane of the Yilgarn Craton in Western Australia. The project occupies a strategic and highly prospective position over the richly endowed Wydgee-Meekatharra greenstone belt between the Paddy's Flat area to the west and the Andy Well gold mine to the north.

Within the tenement area the regional stratigraphy is folded into a broad, south-plunging syncline. A mafic-ultramafic sequence hosting the Paddy's Flat mining operation wraps through Side Well and runs down the eastern flank of the project, striking south-southeast towards the historic Gabanintha mining area. Prior to GBR's tenure the majority of this sequence had not been previously explored, making it an excellent target for greenfields exploration. In the centre of the syncline a broad package of felsic to intermediate volcaniclastics is covered by a thin layer of alluvial material, screening any underlying mineralisation from conventional geochemical techniques. This area hosts the Mulga Bill deposit.

The Mulga Bill deposit is hosted by a package of intermediate to felsic volcanic and volcaniclastic rocks that trend broadly north-south and are subvertical in dip. In the core of the Mulga Bill deposit is a sequence of dacitic and rhyolitic shallow intrusives and volcaniclastics approximately 50m wide, flanked on both sides by units of more andesitic composition. This central more felsic package is

preferentially sheared by a large north-south trending orogenic zone that is interpreted to possibly represent a splay off the regional Albury-Heath fault zone located to the south of the tenement.

At Mulga Bill three broad lode styles have been recognised: sub-vertical, north south orientated shear lodes, flat to shallow dipping quartz and sulphide vein sets and palaeowater table related supergene lodes. The sub-vertical lodes are relatively more continuous but of moderate grade, while the generally west dipping shallow vein sets are of a higher grade but limited dimensions. The flat structures occur in regular sets with spacings of 20-40m between veins. Highest gold grades over thick interval at Mulga Bill occur at intersection of these two lode sets cause structural blowouts.

Mulga Bill is overlain by approximately 10-15m of transported cover. Beneath this cover a well-developed depleted zone consisting of kaolonitic clays extends on average to 60-80m below surface. Gold lodes have been intersected within this depleted layer in some areas however significant remobilisation of gold has occurred resulting in two main supergene layers forming in the saprolite. The supergene layer is generally low to medium grade however can have some significant high-grade gold where a flat dipping set has intersected the zone and undergone enrichment. The top of fresh rock lies on average between 100-120m below surface but can be as deep as 140m.

The Ironbark deposit lies on the eastern limb of the regional Polelle Syncline, approximately in the same stratigraphic location as the Paddy's Flat gold camp. It is hosted in the mafic-ultramafic sequence that dips at approximately 75 degrees to the west. A mafic unit of 10-30m thickness lies within dominantly ultramafic flow units and this unit has provided the focal point for mineralising fluids. Four main west-dipping lodes at Ironbark are related to veining and increased pyrite and are located along contacts of the mafic unit but also crosscut the mafic in places. These west-dipping lodes are interpreted to be consistent through the regolith profile with a small supergene zone developed 10-20m below surface. The weathered representations of the primary lodes are thought to come close or to the surface in several areas.

Ironbark's regolith profile consists of 1-4m of proximal colluvium that carries gold mineralisation overlying a 20-70m thick saprolite layer. Weathering is strongly controlled by the mineralised zone with fresh rock intersected between 40-100m below surface. In contrast to Mulga Bill, there is no major depletion layer present at Ironbark.

# **Drilling Techniques**

A total of 173 AC holes, 257 RC holes and 16 RCDD or DD holes have been completed within the Mulga Bill resource area. Of these, 44 AC, 10 RC holes and 2 DD holes were drilled by Doray Minerals between 2011 and 2012. The remainder were drilled by Great Boulder between 2020 and 2023.

Drillholes are drilled towards either 270° or 090° depending on the lode being targeted. Drillholes are mainly drilled at -55° to -60° dip. Some exceptions to this standard were done to test for alternative lode orientations in some areas and to assist with geological interpretation.

Drill spacing was generally completed on 50m sections with some lines infilled to 25m in certain areas. Drill hole spacing on section is 40-50m, with some sections infilled to 25m. Some areas have

tighter drill spacing due to holes being drilled from the opposite direction to hit lodes of differing orientations.

A total of 3 RCDD or DD holes, 65 RC and 69 AC holes were used for the Ironbark resource model. These were completed by Great Boulder in 2022-23. Drill holes at Ironbark are drilled on 50m sections with 50m spacing on section between holes. This spacing is reduced to 25m x 25m spacing in some areas. Holes were generally drilled at -60° towards 090°.

Drillholes at both Mulga Bill and Ironbark were surveyed using north-seeking gyroscopic survey equipment. All collar points were surveyed using DGPS in the GDA94 coordinate system.

# Sampling and Sub-sampling Techniques

RC samples were collected using a cone splitter over 1m intervals at the rig. 4m composites of these samples were collected by GBR staff where visually unmineralised rock was encountered; any visually interesting intervals of alteration or mineralisation were sampled using the 1m split bags.

Any 4m composites assaying greater than 0.1g/t Au were re-sent for analysis using the 1m split samples. Sample dryness and recovery were evaluated at this point and geological logging was completed on every metre.

Magnetic susceptibility was recorded for every metre drilled at Ironbark. This was not done at Mulga Bill due to the consistent lack of magnetic minerals at that deposit.

Diamond drilling was completed using HQ barrels to the top of fresh rock then NQ2 for the remainder of the drillhole. Geological and geotechnical logging was completed on every metre and core was

selected for sampling using a 0.2m minimum and 1.2 maximum sample interval. Core was cut in half for sampling with half core being sent to the lab for analysis.

#### **Historical Sampling**

Holes completed by Doray Minerals were split with a cone splitter at the rig to 1m intervals. 4m composites of these samples were collected by field staff where visually unmineralised rock was encountered; any intervals of visible alteration or mineralisation were assayed in 1m samples.

Any 4m composites assaying greater than 0.1g/t Au were re-sent for analysis using the 1m split samples.

#### **Sample Analysis Method**

Samples were analysed at either ALS or Intertek Laboratories using a 50g fire assay (FA) technique. Samples were pulverised to a nominal 85% passing 75 microns. Au analysis was undertaken using Au-AA26 involving 50g lead collection fire assay and Atomic Adsorption Spectrometry (AAS) finish.

A number of samples were checked using screen fire assay (SFA) or photon assay (PA) to evaluate the effect of nuggetty gold.

QAQC procedures included using field blanks, certified standards and duplicates to evaluate analysis performance. The QAQC data indicates that results are of a suitable standard for resource estimation.

#### **Historical Analyses**

4m composites were analysed by Doray using a 25g Aqua Regia method at SGS Laboratories. 1m splits from anomalous composites were sent for a 30g fire assay.

Certified standards were inserted to test for confidence with no issues in the dataset used for resource estimation.

#### **Estimation Methodology**

Samples were flagged with the individual mineralisation domains and composited to 1m lengths honouring the domain boundaries. Statistical and geostatistical analysis was used to understand the characteristics of the mineralisation. Statistical analysis showed the populations in each domain to have approximately log-normal distribution shapes. Where outlier gold grades were identified appropriate top-cuts were applied. Top-cuts were generally not severe with relatively few composites affected.

Continuity analysis was performed on individual domains where a robust variogram model was able to be interpreted. In other cases domains were grouped by genetic, statistical and orientation

characteristics to interpret robust variogram models. Poorly informed domains borrowed parameters from generally statistically and genetically similar domains or groups.

The model for the Mulga Bill deposit was constructed using a parent block size of 10mE by 10mN by 5mRL; with sub-cells down to 0.25mE by 0.50mN by 0.50mRL.

The model for the Ironbark deposit was constructed using a parent block size of 10mE by 10mN by 5mRL; with sub-cells down to 0.50mE by 0.50mN by 0.25mRL.

The sub-cell size was selected to accurately represent the geometry and volumes of the mineralisation, geology and weathering domains. The parent cell size was selected based on the drill hole data spacing and its relationship to the complexity of mineralisation and continuity with the parent block size used for estimation of gold grade.

Ordinary Kriging was used to estimate grades in all domains, with estimation searches and number of samples used determined by iterative testing and validation of the estimates. Dynamic anisotropy was utilised to allow the estimation to follow the geometry of the mineralisation. Hard boundary conditions were applied for grade estimation into each of the mineralised domains so that grade estimation for each domain used only the data that is contained within that domain.

For Mulga Bill and Ironbark bulk density was assigned by oxidation state based on measurements from drill hole samples.

# **Specific Gravity**

A total of 146 density measurements were taken from Mulga Bill diamond core. These were grouped based on regolith layer to obtain common values for extrapolation across the deposit. The measurements were used to obtain the density values below:

 Material
 Measurements
 Density

 Transported and Upper Saprolite
 12
 1.86

 Lower Saprolite
 13
 2.10

 Saprock
 11
 2.57

 Fresh
 110
 2.71

TABLE 3: MULGA BILL SPECIFIC GRAVITY VALUES

A total of 99 density measurements taken from diamond core drilled during 2023 informs the Ironbark densities. As holes were drilled with RC to the saprock, no density measurements exist for the transported and saprolite zones. The transported and upper saprolite density is taken from the Mulga Bill data set, however this may under-represent the true density of the upper saprolite. The lower

saprolite density is conservatively extrapolated as a factor of the saprock density and again may under-represent the true value density of this material.

**TABLE 4: IRONBARK SPECIFIC GRAVITY VALUES** 

Material	Measurements	Density
Transported and Upper Saprolite	Estimated	1.86
Lower Saprolite	Estimated	2.20
Saprock	32	2.72
Fresh	67	2.80

# **Mineral Resource Classification Criteria**

The Mineral Resource has been classified as Indicated and Inferred based on confidence in the geological model, continuity of mineralised zones, drilling density, confidence in the underlying database and bulk density information. The infill drilling completed by Great Boulder has largely confirmed the previous interpretations allowing a significant improvement in the confidence of both geological and grade continuity. This has led to the upgrade of a significant amount of material from Inferred to Indicated Mineral Resources. Mineralisation domains with isolated and/or very few drill hole intercepts remain unclassified until increased confidence in their volume, orientation and grade tenor is established with further drilling.

#### **Cut-off Grades**

A 0.5 g/t Au gold cut-off was used to report the upper zones less than 150m depth with open pit potential while a 1.0 g/t Au cut-off was used where the mineralisation is deeper with underground mining potential.

#### Metallurgy

There has been no change to metallurgical assumptions since the initial mineral resource was announced in February 2023.

#### **Modifying Factors**

No factors were applied to the estimated block values.

#### Mining and metallurgical methods and parameters

Detailed open pit and underground mining studies have not yet commenced by Great Boulder however this will be evaluated as soon as further exploration enables the reporting of Indicated and Measured Mineral Resources suitable for economic assessment. In the Competent Person's opinion, the Meekatharra regional is a successful mining hub for several mining companies extracting gold in both open pit and underground mining scenarios therefore the assumption for potential successful processing of Side Well ore is reasonable. Mining factors such as dilution and ore loss have not been applied.

No metallurgical assumptions have been made in estimating Mineral Resources.

#### **Tonnage-Grade Curves**

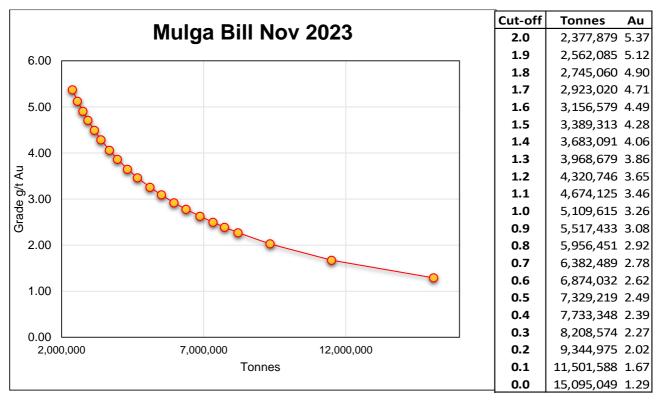


FIGURE 7: TONNAGE-GRADE CURVE FOR MULGA BILL

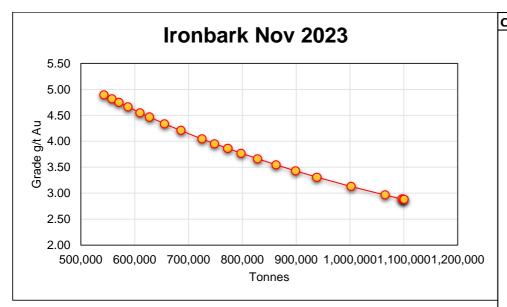


FIGURE 8: TONNAGE-GRADE CURVE FOR IRONBARK

Cut-off	Tonnes	Au
2.0	543,114	4.89
1.9	557,911	4.81
1.8	570,842	4.75
1.7	587,833	4.66
1.6	609,775	4.55
1.5	627,877	4.47
1.4	655,693	4.34
1.3	685,734	4.21
1.2	725,229	4.04
1.1	748,323	3.96
1.0	773,120	3.86
0.9	797,797	3.77
0.8	828,205	3.66
0.7	862,654	3.55
0.6	899,121	3.43
0.5	938,496	3.31
0.4	1,002,290	3.13
0.3	1,065,485	2.96
0.2	1,096,745	2.89
0.1	1,099,249	2.88
0.0	1,100,542	2.88

# Appendix 1 - JORC Code, 2012 Edition Table 1 (Side Well Project)

#### **Section 1 Sampling Techniques and Data**

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

Criteria	Commentary
Sampling techniques	RC samples were collected into calico bags over 1m intervals using a cyclone splitter. The residual bulk samples are placed in lines of piles on the ground. 2 cone splits are taken off the rig splitter for RC drilling. Visually prospective zones were sampled over 1m intervals and sent for analysis while the rest of the hole was composited over 4m intervals by taking a scoop sample from each 1m bag.
	Core samples are selected visually based on observations of alteration and mineralisation and sampled to contacts or metre intervals as appropriate. Once samples are marked the core is cut in half longitudinally with one half taken for assay and the other half returned to the core tray.
	AC samples were placed in piles on the ground with 4m composite samples taken using a scoop.
	Auger samples are recovered from the auger at blade refusal depth. Auger drilling is an open-hole technique.
Drilling techniques	Industry standard drilling methods and equipment were utilised.
	Auger drilling was completed using a petrol-powered hand-held auger.
Drill sample recovery	Sample 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. Water was encountered during drilling resulting in minor wet and moist samples with the majority being dry.
	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.
Sub-sampling techniques and sample preparation	1m cyclone splits and 4m speared composite samples were taken in the field. Samples were prepared and analysed at ALS Laboratories Perth for the RC drilling and Intertek Laboratories for the AC drilling. Samples were pulverized so that each samples had a nominal 85% passing 75 microns. Au analysis was undertaken using Au-AA26 involving 50g lead collection fire assay and Atomic Adsorption Spectrometry (AAS) finish. For AC drilling, Au analysis was undertaken using a 50g lead collection fire assay with ICP-OES finish.
	Multi-element analysis was completed at both ALS and Intertek Laboratories. Digestion was completed using both 4 Acid and Aqua-regia and analysed by ICP-AES and ICP-MS (Intertek code 4A/MS48, ALS codes ME-MS61, ME-ICP41-ABC).
Quality of assay data and laboratory tests	All samples were assayed by industry standard techniques.
Verification of sampling and assaying	The standard GBR protocol was followed for insertion of standards and blanks with a blank and standard inserted per 25 for RC drilling and 40 samples for AC drilling. Analysis of ME was typically done on master pulps after standard gold analysis with a company multi-element standard inserted every 50 samples. No QAQC problems were identified in the results. No twinned drilling has been undertaken.
Data spacing and distribution	The spacing and location of the majority of drilling in the projects is, by the nature of early exploration, variable.
	The spacing and location of data is currently only being considered for exploration purposes.
Orientation of data in relation to geological	Drilling is dominantly perpendicular to regional geological trends where interpreted and practical. True width and orientation of intersected mineralisation is currently unknown or not clear.
structure	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 Ipec to the laboratories in Perth.

Audits or reviews	Data review and interpretation by independent consultants on a regular basis. Group technical
	meetings are usually held monthly.

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

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

Criteria	Commentary
Mineral tenement and land tenure status	Side Well tenement E51/1905 is a 48-block exploration license covering an area of 131.8km2 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 other parties	Tenement E51/1905 has a protracted exploration history but is relatively unexplored compared to other regions surrounding Meekatharra.
Geology	The Side Well tenement group covers a portion of the Meekatharra-Wydgee Greenstone Belt north of Meekatharra, WA. The north-northeasterly-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.
Data aggregation methods	Results were reported using cut-off levels relevant to the sample type. For composited samples 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 0.5g/t Au with a maximum dilution of 3m.
	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 mineralisation widths and intercept lengths	The orientation of structures and mineralisation is not known with certainty, but majority of the drilling was conducted using appropriate perpendicular orientations for interpreted mineralisation. Stratigraphy appears to be steeply dipping to the west however mineralisation may have a different orientation.
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 exploration data	Subsequent to Doray Minerals Limited exiting the project in 2015, private companies have held the ground with no significant work being undertaken.
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#### **Section 3 Estimation and Reporting of Mineral Resources**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	Commentary
Database integrity	All data was collected electronically by Great Boulder and stored in an acQuire SQL database with appropriate data validation procedures. The database is managed by an external consultant with extracts provided to Haren for Mineral Resource estimation.
	Haren undertook a basic check of the data for potential errors as a preliminary step to compiling the resource estimate. No significant flaws were identified.
Site visits	No site visit has been conducted by the competent person for Mineral Resources at this stage.
Geological interpretation	There is a high level of confidence in the interpreted geological and mineralisation model. Progressive drilling since the initial Inferred resource estimate was completed has mainly confirmed the existing orientations and positions of mineralised structures without any material depletion of lodes. Structural measurements from ongoing diamond drilling programs have also been used to help confirm the strike and dip direction of veins, faults and foliation.
	The data used for Mineral Resource estimation has been collected reliably and is recent being completed since 2010 by both Doray Mineral Ltd for Mulga Bill and Great Boulder for Mulga Bill and Ironbark in a professional manner with most QAQC available and acceptable.
	Alternative interpretations have been investigated by a process of review, drill testing and updating of geological and mineralisation interpretations. Areas where interpretations are ambiguous or alternative interpretations could make a material difference are not included in the Mineral Resource Estimate.
	Geological interpretations of lithology and contact relationships are key to understanding the mineralisation emplacement and are used extensively in the mineralisation interpretations
Dimensions	The Mulga Bill deposit extends approximately 1,150 m from north to south, 450 m east to west and is currently known to a depth of $\sim$ 300 m.
	The Ironbark deposit extends approximately 600 m from north to south, 130 m east to west and is currently known to a depth of $\sim$ 150 m.
Estimation and modelling techniques	The Mulga Bill and Ironbark mineralisation 1m composites exhibit approximately log-normal distributions within each domain which is suitable for estimation by ordinary kriging.
,	Top-cuts were applied, where required, to ensure outliers were not smeared during grade estimation.
	All estimates used hard boundaries between estimation domains and soft boundaries between weathering and geology which were confirmed by contact analysis.
	Reported Mineral Resource estimations were limited to extrapolation of less than ~30 m from drill hole data.
	Datamine version 1.13.202.0 was used for block modelling, estimation, and reporting. Supervisor version 8.15.1.2 was used for statistical and geostatistical analysis.
	No assumptions were made regarding recovery of by-products and no other estimates than the gold grades are reported.
	No other variables are considered deleterious, and no deleterious elements or other non-grade variables of economic significance were estimated.

	For Mulga Bill the block model was constructed using a parent cell size of 10 mE by 10 mN by 5 mRL for mineralised material.
	For Ironbark the block model was constructed using a parent cell size of 10 mE by 10 mN by 5 mRL for mineralised material.
	The parent cell size was selected based on the drill hole data spacing and its relationship to the complexity of mineralisation and continuity with the parent block size used for estimation of gold grade.
	Ordinary Kriging was used to estimate grades in all domains, with estimation searches and number of samples used determined by iterative testing and validation of the estimates.
	Dynamic anisotropy was utilised to allow the estimation to follow the geometry of the mineralisation.
	Hard boundary conditions were applied for grade estimation into each of the mineralised domains so that grade estimation for each domain used only the data that is contained within that domain.
	At this stage the selective mining units are unknown.
	Elemental correlation analysis was completed and only Au is reported.
	Validation of grade estimates was completed using a three-stage process. The first is a global comparison of declustered and top-cut (where required) composites key statistics to the block model estimates for the first search pass as well as subsequent search passes. The second is a trend analysis where the declustered and top-cut (where required) composites are sliced into windows in northing or elevation directions and compared. The third is careful local validation of composite grades to estimated grade in multiple orientations to ensure expected grade trends are reproduced and the estimates are a good reflection of the input composites and estimation parameters. Where required, parameters were adjusted in an iterative process to ensure a high-quality estimation.
Moisture	All tonnages have been estimated as dry tonnages.
Cut-off parameters	A 0.5 g/t Au gold cut-off was used to report the upper zones with open pit potential while a 1.0 g/t Au cut-off was used where the mineralisation is deeper with underground mining potential.
Mining factors or assumptions	It is assumed the deposit will be mined using open cut and underground methods. Successful mining operations are located on surrounding leases.
	Western Australia has a low geopolitical risk, an extensive history of gold mining and stable government policies and processes.
Metallurgical factors or assumptions	It is assumed that the gold will be extracted using standard gravity recovery and CIL methods common in the Western Australian goldfields. Initial tests on Mulga Bill mineralisation included gravity and cyanide leach test recoveries which demonstrated excellent recoveries with a very low residual tail on the single parcel tested to date.
Environmental factors or assumptions	It is assumed that no environmental factors exist that could prohibit any potential mining development at the deposits.
Bulk density	A total of 146 density measurements were taken from Mulga Bill diamond core. These were grouped based on regolith layer to obtain common values for extrapolation across the deposit.
	The measurements were used to obtain the density values used for the Mulga Bill MRE of 1.86 t/m3 for Transported and Upper Saprolite, 2.10 t/m3 for Lower Saprolite, 2.57 t/m3 for Saprock and 2.71 t/m3 for Fresh.
	A total of 99 density measurements have been taken at Ironbark. As holes were drilled with RC to the saprock, no density measurements exist for the transported and saprolite zones. The transported and upper saprolite density is taken from the Mulga Bill data set, however this may under-represent

	the true density of the upper saprolite. The lower saprolite density is conservatively extrapolated as
	a factor of the saprock density and again may under represent the true value density of this material.
	The values used for the Ironbark MRE are 1.86 t/m3 for Transported and Upper Saprolite, 2.20 t/m3 for Lower Saprolite, 2.72 t/m3 for Saprock and 2.80 t/m3 for Fresh.
Classification	The Mulga Bill and Ironbark Mineral Resources have been classified as Indicated and Inferred based on confidence in the geological model, continuity of mineralised zones, drilling density, confidence in the underlying database and bulk density information.
	Mineralisation domains with isolated and/or very few drill hole intercepts remain unclassified until increased confidence in their volume, orientation and grade tenor is established with further drilling.
	The classification appropriately represents the view of the Competent Person.
Audits or reviews	No external reviews or audits have been completed.
Discussion of relative accuracy/ confidence	A quantitative procedure for assessing relative accuracy and precision has not been deemed appropriate by the Competent Person for the estimation of gold grade at this stage.
	The Mineral Resource discussed is a global estimate. Ongoing infill drilling will provide closer spaced data to achieve improved local estimates around particularly high-grade gold zones suitable for reliable localisation of ore and waste at a mining stage.