

Operational review for the half year ended 31 December 2023

Strong H1 in copper, iron ore and energy coal. Challenging half in metallurgical coal.

Tragically, a team member from BEP Engineering & Maintenance, a contracting partner to BMA, was fatally injured in an incident at BMA's Saraji mine earlier this week. Our deepest sympathies are with their family, friends and colleagues at this difficult time. We are committed to learning from this tragedy and investigations into the incident are underway.

Operationally, BHP has had a solid first half. WA Iron Ore production was up 5% quarter-on-quarter, while first half copper production rose 7% reflecting a record half at Spence and ongoing strong performance and additional tonnes at Copper South Australia. NSW Energy Coal had its best first half in five years, while BMA had a tough six months following significant planned maintenance and low starting inventories. At Nickel West, we are evaluating options to mitigate the impacts of the sharp fall in nickel prices.

We progressed our growth agenda during the quarter with ongoing construction of the Jansen mine in Canada and the sanction of Jansen Stage 2, which doubles our planned potash production capacity. In South Australia, we successfully integrated our Copper SA business and significant exploration drilling beneath Olympic Dam has identified attractive copper mineralisation above 1% grade along a 2 km strike, with areas above 2%.

Mike Henry
BHP Chief Executive Officer

Summary

Operational performance

Production guidance unchanged, except at BMA

FY24 production guidance ranges remain unchanged for all assets, with the exception of BMA which has been lowered to between 23 and 25 Mt (46 – 50 Mt at 100%) excl. Blackwater and Daunia from the expected sale completion date of 2 April 2024.

Copper production increased¹ 7%, including a record quarter at Carrapateena, and energy coal production increased 36%, with its FY24 production now expected to be in the upper end of the guidance range.

Portfolio

Enhancing the quality of our portfolio

We are investing in growth with the [approval of US\\$4.9 bn in Jansen Stage 2](#). We continued our strategic focus on higher quality metallurgical coal with the [planned divestment of BMA's Blackwater and Daunia mines](#) for cash consideration of up to US\$4.1 bn (100% basis). We have undertaken ~62 km of exploratory drilling beneath Olympic Dam (OD Deeps), which has shown extensive mineralisation continuity, with attractive copper grades of above 1% along more than 2 km in strike and more than 1 km in depth. Results are included in [Appendix 3](#).

Financial performance

Unit cost guidance

WAIO, Escondida and Spence are expected to be within their respective unit cost guidance ranges at FY24, with BMA unit cost guidance for FY24 increasing to between US\$110/t and US\$116/t as a result of the lowered production guidance.

Leadership

Executive Leadership Team update

In December, [we announced a number of changes](#) to our Executive Leadership Team, effective 1 March 2024, including that [Catherine Raw will join BHP](#) from SSE plc as Chief Development Officer effective 29 April 2024.

Production	Quarter performance			YTD performance		FY24 production guidance		
	Q2 FY24	v Q1 FY24	v Q2 FY23	HY24	v HY23	Previous	Current	
Copper (kt)	437.4	(4%)	3%	894.4	7%	1,720 – 1,910	1,720 – 1,910	
Escondida (kt)	254.6	(7%)	(1%)	527.9	3%	1,080 – 1,180	1,080 – 1,180	Unchanged
Pampa Norte (kt)	59.8	(24%)	(22%)	138.1	(6%)	210 – 250 ⁱ	210 – 250 ⁱ	Unchanged
Copper South Australia (kt)	82.0	14%	51%	153.7	48%	310 – 340	310 – 340	Unchanged
Antamina (kt)	39.2	21%	11%	71.7	(1%)	120 – 140	120 – 140	Unchanged
Carajás (kt)	1.8	50%		3.0		-	-	-
Iron ore (Mt)	65.8	4%	(2%)	129.0	(2%)	254 – 264.5	254 – 264.5	
WAIO (Mt)	64.5	4%	(2%)	126.5	(3%)	250 – 260	250 – 260	Unchanged
WAIO (100% basis) (Mt)	72.7	5%	(2%)	142.1	(3%)	282 – 294	282 – 294	Unchanged
Samarco (Mt)	1.3	6%	19%	2.5	13%	4 – 4.5	4 – 4.5	Unchanged
Metallurgical coal – BMA (Mt)	5.7	2%	(18%)	11.3	(17%)	28 – 31	23 – 25	Lowered
BMA (100% basis) (Mt)	11.4	2%	(18%)	22.6	(17%)	56 – 62	46 – 50	Lowered
Energy coal – NSWEC (Mt)	3.9	7%	35%	7.5	36%	13 – 15	13 – 15	Upper end
Nickel – Nickel West (kt)	19.6	(3%)	11%	39.8	4%	77 – 87	77 – 87	Unchanged

ⁱ Production guidance for FY24 is for Spence only and excludes Cerro Colorado which produced 11 kt before ceasing production on 9 November 2023.

Summary of disclosures

BHP expects its financial results for the half year ended 31 December 2023 (HY24) to reflect certain items summarised in the table below. The table does not provide a comprehensive list of all items impacting the period. The financial statements are the subject of ongoing work that will not be finalised until the release of the financial results on 20 February 2024.

Accordingly, the information in the table below contains preliminary information that is subject to update and finalisation.

Description	H1 impact ⁱ (US\$M)	Classification ⁱⁱ
Unit costs (at guidance FX)ⁱⁱⁱ		
At HY24, unit costs at WAIO and Escondida are expected to be within their respective guidance ranges, while Spence is expected to be in the lower half of its guidance range. Unit costs at BMA are expected to be substantially higher than the revised guidance range due to the lower volumes	-	Operating costs
For FY24, unit cost guidance for WAIO, Escondida and Spence remains unchanged. Unit cost guidance for BMA has been increased to between US\$110/t and US\$116/t as a result of the decrease in expected production, and excludes Blackwater and Daunia from the expected date of completion of the divestment	-	Operating costs
Note: weaker Australian dollar and Chilean peso than guidance rates were realised in the period	Refer footnote ^{iv}	
Income statement		
The Group's adjusted effective tax rate for HY24 is expected to be in the lower half of the guidance range of 30 – 35%	-	Taxation expense
Cash flow statement		
Working capital movements including net price impacts, closure and rehabilitation payments and other movements	-1,500 – 1,700	↓ Operating cash flow
Cash tax paid	-3,500 – 3,600	↓ Operating cash flow
Dividends received from equity-accounted investments	~200	↑ Operating cash flow
Dividends paid to non-controlling interests	~600	↓ Financing cash flow
Payment of the H2 FY23 dividend	~4,000	↓ Financing cash flow
Balance sheet		
The Group's net debt balance at 31 December 2023 is expected to be between \$12.5 and \$13.0 bn	-	Net debt
Exceptional items		
Financial impact on BHP Brasil of the Samarco dam failure The financial impact is expected to primarily relate to amortisation of discounting on the provision and the impact of foreign exchange	Refer footnote ^{iv}	Exceptional item

i Numbers are not tax effected, unless otherwise noted.

ii There will be a corresponding balance sheet, cash flow and/or income statement impact as relevant, unless otherwise noted.

iii Average exchange rates for HY24 of AUD/USD 0.65 (guidance rate AUD/USD 0.67) and USD/CLP 874 (guidance rate USD/CLP 810).

iv Financial impact is the subject of ongoing work and is not yet finalised. See [Iron ore](#) section for further information on Samarco operations.

Further information in [Appendix 1](#)



Detailed production and sales information for all operations in [Appendix 2](#)

Detailed drilling results for Olympic Dam Deeps [Appendix 3](#)

Segment and asset performance | FY24 YTD v FY23 YTD

Copper

Production

894 kt ↑7%

HY23 834 kt

FY24e 1,720 – 1,910 kt

Average realised price

US\$3.66/lb ↑5%

HY23 US\$3.49/lb

Total copper production increased by 7% to 894 kt. Copper guidance for FY24 remains unchanged at between 1,720 and 1,910 kt.

Escondida **528 kt ↑3% (100% basis)**

Increased production was primarily due to higher concentrator feed grade of 0.81%, compared to 0.79% in HY23 and higher concentrator throughput. Concentrator feed grade is expected to be between 0.85% and 0.90% for FY24. Production guidance for FY24 remains unchanged at between 1,080 and 1,180 kt.

Pampa Norte **138 kt ↓6%**

Production at Spence increased 4% to a half year record of 127 kt, driven by improved concentrator throughput. Record concentrate production was partially offset by lower cathode production, in line with an expected decline in stacked feed grade. The concentrator plant modifications which commenced in August 2022 are expected to be completed in FY24.

We approved an incremental US\$570 m in sustaining capital to progress remediation of previously identified anomalies in the Spence Tailings Storage Facility (TSF). These plans have been developed with the Engineer of Record, Independent Tailings Review Board and expert consultants. This is the first stage to remediate the TSF. Production guidance for Spence for FY24 remains unchanged at between 210 and 250 kt and remains subject to successful remediation of the TSF anomalies.

Cerro Colorado entered temporary care and maintenance in December 2023, after producing 11 kt for the period.

Copper South Australia **154 kt ↑48%**

Production increased by 51 kt due to the additional volumes from Prominent Hill and Carrapateena. Successful integration of the Copper South Australia asset has resulted in strong underlying operational performance, including record quarterly copper production at Carrapateena in Q2. Strong smelter performance at Olympic Dam was supported by increased transfers of concentrate from Prominent Hill for processing to higher margin cathode. Olympic Dam also delivered record half year gold production and sales.

Production guidance for FY24 remains unchanged at between 310 and 340 kt.

Crusher 2 at Carrapateena remains on track to come online in Q3 FY24 and to ramp up in Q4 FY24. We have also had continued success with exploration drilling across the asset. Drilling to date beneath the known Olympic Dam ore body (OD Deeps) confirms attractive mineralisation continuity at above 1% copper grade (refer to [Appendix 3](#)). At Oak Dam, there are 12 active drill rigs (up from 10) and the accommodation camp is nearing completion.

Other copper

At Antamina, copper production decreased by 1% to 72 kt, while zinc production was 10% higher at 69 kt, both in line with planned concentrator feed grades. Production guidance at Antamina remains unchanged for FY24 with expected copper production of between 120 to 140 kt and zinc production of between 85 and 105 kt.

Carajás produced 3.0 kt of copper and 2.1 troy koz of gold. Operations were stopped in August due to a geotechnical event, and gradually restarted in October. In Q3 FY24 operations will continue to ramp back up with shipments also expected to resume.

Iron ore

Production

129 Mt ↓2%

HY23 132 Mt

FY24e 254 – 264.5 Mt

Average realised price

US\$103.70/wmt ↑21%

HY23 US\$85.46/wmt

Total iron ore production decreased by 2% to 129 Mt. Guidance for FY24 remains unchanged at between 254 and 264.5 Mt.

WAIO 126 Mt ↓3% | 142 Mt (100% basis)

Lower production due to the continued tie-in activity for the Rail Technology Programme (RTP1), and the impacts of the ongoing ramp up of the Central Pilbara hub (South Flank and Mining Area C).

South Flank is on track to ramp up to full production capacity of 80 Mtpa (100% basis) by the end of FY24. The planned tie-in of the Port Debottlenecking Project (PDP1) is on track to be completed in CY24, following commissioning on 7 December 2023.

Production guidance for FY24 remains unchanged at between 250 and 260 Mt (282 and 294 Mt on a 100% basis).

Samarco 2.5 Mt ↑13% | 5.1 Mt (100% basis)

Production increased as a result of higher concentrator throughput. Production guidance for FY24 remains unchanged at between 4 and 4.5 Mt.

In December 2023, BHP Brasil approved up to US\$925 m in further financial support for the Renova Foundation. The funding is for CY24 and will be deducted from the Group's provision for the Samarco dam failure.

Coal

Metallurgical coal

Production

11.3 Mt ↓17%

HY23 13.6 Mt

FY24e 23 – 25 Mt

Average realised price

US\$266.43/t ↓1%

HY23 US\$268.73/t

BMA 11.3 Mt ↓17% | 22.6 Mt (100% basis)

On 15 January, a team member from BEP Engineering & Maintenance, a contracting partner to BMA, was fatally injured in a vehicle incident at Saraji mine. Investigations are underway and we are working closely with the relevant authorities. Operations at Saraji were suspended and are expected to progressively restart over the coming days.

In the period, lower production was as a result of a significant increase in planned maintenance across the asset, the extended longwall move, and geotechnical faulting which impacted underground operations at Broadmeadow until early November. Production was also impacted by an increase in prime stripping to improve value chain stability following depleted inventory positions arising from extended weather impacts and labour constraints over recent years.

Full year production guidance is now expected to be between 23 and 25 Mt (46 and 50 Mt on a 100% basis). This guidance excludes Blackwater and Daunia from the date of completion of the divestment which is expected to occur on 2 April 2024. This has been lowered from 28 – 31 Mt (56 and 62 Mt on a 100% basis), inclusive of Blackwater and Daunia.

Energy coal

Production

7.5 Mt ↑36%

HY23 5.5 Mt

FY24e 13 – 15 Mt

Average realised price

US\$123.29/t ↑65%

HY23 US\$354.30/t

NSWEC 7.5 Mt ↑36%

Increased production as a result of strong operating performance as eased labour constraints and improved weather conditions enabled an uplift in truck productivity, with record annualised truck hours for the half. Domestic sales under the NSW Government Coal Market Price Emergency (Directions for Coal Mines) Notice commenced in Q4 FY23, which resulted in a lower proportion of washed coal and contributed to the higher volumes.

Production guidance for FY24 is expected to be at the upper end of the range of between 13 and 15 Mt.

We submitted a modification request to the NSW Government to extend mining approval to 30 June 2030 in support of the 2030 closure plan. The modification submission went on public exhibition for four weeks in November 2023. The approval process will continue through FY24.

Group & Unallocated

Nickel

Production

40 kt ↑4%

HY23 38 kt

FY24e 77 – 87 kt

Average realised price

US\$18,602/t ↓24%

HY23 US\$24,362/t

Nickel West 40 kt ↑4%

Production increased due to improved performance, and a shorter shutdown period at the Kalgoorlie Smelter offsetting downtime at the Kwinana Refinery.

Production guidance remains unchanged at between 77 and 87 kt for FY24.

The nickel industry is undergoing a number of structural changes and is at a cyclical low in realised pricing. Nickel West is not immune to these challenges. Operations are being actively optimised, and options are being evaluated to mitigate the impacts of the sharp fall in nickel prices. Given the market conditions, a carrying value assessment of the Group's nickel assets is ongoing, and a further update will be provided with the release of the financial results on 20 February 2024.

Quarterly performance | Q2 FY24 v Q1 FY24

Copper

437 kt ↓4%

Q1 FY24 457 kt

Lower concentrator grade at Escondida and concentrator throughput at Spence, partially offset by higher volumes at Copper South Australia following planned maintenance in Q1.

Iron ore

66 Mt ↑4%

Q1 FY24 63 Mt

Increased production at WAIO as a result of the Q1 impacts of the RTP1 integration, planned equipment maintenance and Central Pilbara hub ramp up.

Metallurgical coal

5.7 Mt ↑2%

Q1 FY24 5.6 Mt

Production increased due to the lower planned wash plant maintenance, the ramp up of the longwall at Broadmeadow, and improved strip ratio. This was partially offset by significantly increased rainfall.

Energy coal

3.9 Mt ↑7%

Q1 FY24 3.6 Mt

Higher production as a result of strong performance across the value chain, largely driven by strong Q1 stripping performance, and the opportune draw down of raw coal.

Nickel

20 kt ↓3%

Q1 FY24 20 kt

Lower volumes due to downtime at the Kwinana Refinery.

The following footnotes apply to this Operational Review:

1 Prior year comparatives do not include production volumes for the operations acquired from OZL on 2 May 2023.

Appendix 1

Average realised prices¹

	Q2 FY24	HY24	Q2 FY24 v Q1 FY24	HY24 v H2 FY23	HY24 v HY23
Copper (US\$/lb) ^{2,3,4}	3.68	3.66	1%	(4%)	5%
Iron ore (US\$/wmt, FOB) ⁵	109.47	103.70	12%	4%	21%
Metallurgical coal (US\$/t) ⁶	293.21	266.43	24%	(2%)	(1%)
Hard coking coal (US\$/t) ⁷	305.69	274.99	26%	0%	2%
Weak coking coal (US\$/t) ⁷	214.26	204.55	12%	(18%)	(19%)
Thermal coal (US\$/t) ^{6,8}	121.35	123.29	(3%)	(22%)	(65%)
Nickel metal (US\$/t)	16,812	18,602	(17%)	(21%)	(24%)

1 Based on provisional, unaudited estimates. Prices exclude sales from equity accounted investments, third party product and internal sales, and represent the weighted average of various sales terms (for example: FOB, CIF and CFR), unless otherwise noted. Includes the impact of provisional pricing and finalisation adjustments.

2 At 31 December 2023, the Group had 356 kt of outstanding copper sales that were revalued at a weighted average price of US\$3.87/lb. The final price of these sales will be determined over the remainder of FY24. In addition, 342 kt of copper sales from FY23 were subject to a finalisation adjustment in the current period. The displayed prices include the impact of these provisional pricing and finalisation adjustments.

3 The large majority of copper cathodes sales were linked to index price for quotation periods one month after month of shipment, and three to four months after month of shipment for copper concentrates sales with price differentials applied for location and treatment costs.

4 Does not include sales from assets acquired through the purchase of OZL.

5 The large majority of iron ore shipments were linked to index pricing for the month of shipment, with price differentials predominantly a reflection of market fundamentals and product quality. Iron ore sales for HY24 and Q2 FY24 were based on an average moisture rate of 6.7% (HY23: 6.8%).

6 The large majority of metallurgical coal and energy coal exports were linked to index pricing for the month of scheduled shipment or priced on the spot market at fixed or index-linked prices, with price differentials reflecting product quality.

7 Hard coking coal (HCC) refers generally to those metallurgical coals with a Coke Strength after Reaction (CSR) of 35 and above, which includes coals across the spectrum from Premium Coking to Semi Hard Coking coals, while weak coking coal (WCC) refers generally to those metallurgical coals with a CSR below 35.

8 Export sales only. Includes thermal coal sales from metallurgical coal mines.

Current year unit cost guidance

	Previous FY24 guidance ¹	Current FY24 guidance ¹	
Escondida unit cost (US\$/lb) ²	1.40 – 1.70	1.40 – 1.70	Unchanged
Spence unit cost (US\$/lb)	2.00 – 2.30	2.00 – 2.30	Unchanged
WAIO unit cost (US\$/t)	17.40 – 18.90	17.40 – 18.90	Unchanged
BMA unit cost (US\$/t)	95 – 105	110 – 116	Increased

1 FY24 unit cost guidance is based on exchange rates of AUD/USD 0.67 and USD/CLP 810.

2 Escondida unit costs for FY24 onwards exclude revenue-based government royalties.

Medium term guidance

	Production guidance	Unit cost guidance ¹
Escondida ²	1,200 – 1,300 kt	US\$1.30 – \$1.60/lb ³
Spence ⁴	~250 kt	
WAIO (100% basis)	>305 Mt	<US\$17/t

1 Medium term unit cost guidance is based on exchange rates of AUD/USD 0.67 and USD/CLP 810.

2 Medium term refers to FY25 and FY26.

3 Escondida unit costs for FY24 onwards exclude revenue-based government royalties.

4 Average of 250 ktpa over five years on the basis that remediation of the previously identified TSF anomalies does not impact operations.

Major projects

Commodity	Project and ownership	Project scope / capacity	Capital expenditure US\$M	First production target date	Progress
Potash	Jansen Stage 1 (Canada) 100%	Design, engineering and construction of an underground potash mine and surface infrastructure, with capacity to produce 4.15 Mtpa.	5,723	End-CY26	Project is 38% complete
Potash	Jansen Stage 2 (Canada) 100%	Development of additional mining districts, completion of the second shaft hoist infrastructure, expansion of processing facilities and addition of rail cars to facilitate production of an incremental 4.36 Mtpa.	4,859	FY29	Approval announced October 2023

The operating expenditure related to Potash for HY24 is expected to be ~US\$130 m.

Exploration

Minerals exploration and evaluation expenditure was US\$199 m for HY24 (HY23: US\$156 m) of which US\$170 m was expensed (HY23: US\$127 m).

Appendix 2

Production									
Quarter ended					Year to date				
Dec 2022	Mar 2023	Jun 2023	Sep 2023	Dec 2023	Dec 2023	Dec 2022	Var %		
usly reported.									
276.0	262.4	310.7	317.3	308.7	626.0	544.8	15%		
208.3	200.8	220.5	221.3	207.7	429.0	411.4	4%		
32.5	32.0	32.2	38.8	32.6	71.4	61.1	17%		
		19.9	23.5	27.4	50.9				
35.2	29.6	36.5	32.5	39.2	71.7	72.3	(1)%		
		1.6	1.2	1.8	3.0				
148.3	143.5	165.5	139.7	128.7	268.4	289.6	(7)%		
49.7	50.8	72.5	52.0	46.9	98.9	99.3	0%		
44.2	41.0	36.3	39.5	27.2	66.7	86.2	(23)%		
54.4	51.7	56.7	48.2	54.6	102.8	104.1	(1)%		
424.3	405.9	476.2	457.0	437.4	894.4	834.4	7%		
114	169	146	96	105	201	342	(41)%		
114	169	146	96	105	201	342	(41)%		
29,929	23,612	38,822	35,669	33,475	69,144	62,614	10%		
29,929	23,612	38,822	35,669	33,475	69,144	62,614	10%		
52,277	57,106	96,655	89,024	94,794	183,818	96,034	91%		
48,402	48,954	53,503	48,063	48,633	96,696	86,638	12%		
3,875	8,152	9,263	3,931	2,854	6,785	9,396	(28)%		
		32,736	36,228	42,051	78,279				
		1,153	802	1,256	2,058				
43,280	49,086	46,479	53,028	55,828	108,856	90,464	20%		
43,280	49,086	46,479	53,028	55,828	108,856	90,464	20%		
95,557	106,192	143,134	142,052	150,622	292,674	186,498	57%		
2,678	2,556	2,592	2,582	3,074	5,656	5,330	6%		
1,510	1,346	1,008	1,168	1,401	2,569	2,720	(6)%		
245	409	412	356	388	744	497	50%		
		201	260	310	570				
923	801	971	798	975	1,773	2,113	(16)%		
261	277	256	261	221	482	556	(13)%		
261	277	256	261	221	482	556	(13)%		
2,939	2,833	2,848	2,843	3,295	6,138	5,886	4%		
943	833	813	825	986	1,811	1,760	3%		
943	833	813	825	986	1,811	1,760	3%		
564	636	666	612	481	1,093	860	27%		
216	407	333	329	145	474	250	90%		
348	229	333	283	336	619	610	1%		
65,807	58,725	64,074	62,004	64,460	126,464	129,732	(3)%		
1,095	1,048	1,221	1,231	1,302	2,533	2,243	13%		
66,902	59,773	65,295	63,235	65,762	128,997	131,975	(2)%		
6,952	6,929	8,477	5,601	5,717	11,318	13,614	(17)%		
2,851	3,934	4,765	3,613	3,855	7,468	5,473	36%		
17.7	19.6	22.0	20.2	19.6	39.8	38.4	4%		
93	175	246	192	182	374	331	13%		

¹ Includes BMA thermal coal sales.

Sales									
Quarter ended						Year to date			
Dec 2022	Mar 2023	Jun 2023	Sep 2023	Dec 2023		Dec 2023	Dec 2022	Var %	
272.7	268.4	323.1	298.0	316.5		614.5	533.0	15%	
216.0	197.3	220.3	209.5	211.7		421.2	412.7	2%	
22.0	38.7	38.6	31.3	34.9		66.2	48.0	38%	
		27.6	22.2	31.6		53.8			
34.7	32.4	34.5	32.8	38.3		71.1	72.3	(2)%	
		2.1	2.2	-		2.2			
155.9	130.3	179.9	131.9	137.6		269.5	290.1	(7)%	
53.5	43.8	78.0	49.2	52.2		101.4	99.4	2%	
45.6	36.0	42.4	36.6	31.1		67.7	88.0	(23)%	
56.8	50.5	59.5	46.1	54.3		100.4	102.7	(2)%	
428.6	398.7	503.0	429.9	454.1		884.0	823.1	7%	
91	181	143	154	91		245	221	11%	
91	181	143	154	91		245	221	11%	
29,127	25,851	37,629	33,912	37,092		71,004	62,947	13%	
29,127	25,851	37,629	33,912	37,092		71,004	62,947	13%	
52,277	57,106	108,552	87,703	98,969		186,672	96,034	94%	
48,402	48,954	53,503	48,063	48,633		96,696	86,638	12%	
3,875	8,152	9,263	3,931	2,854		6,785	9,396	(28)%	
		44,098	34,176	47,482		81,658			
		1,688	1,533	-		1,533			
41,900	47,300	49,182	54,036	55,349		109,385	91,442	20%	
41,900	47,300	49,182	54,036	55,349		109,385	91,442	20%	
94,177	104,406	157,734	141,739	154,318		296,057	187,476	58%	
2,605	2,523	2,409	2,527	2,938		5,465	5,082	8%	
1,510	1,346	1,008	1,168	1,401		2,569	2,720	(6)%	
245	409	412	356	388		744	497	50%	
		242	258	364		622			
850	768	747	745	785		1,530	1,865	(18)%	
233	307	270	219	222		441	553	(20)%	
233	307	270	219	222		441	553	(20)%	
2,838	2,830	2,679	2,746	3,160		11,371	10,717	6%	
1,127	683	1,275	481	895		1,376	1,399	(2)%	
1,127	683	1,275	481	895		1,376	1,399	(2)%	
514	789	594	564	468		1,032	789	31%	
216	492	367	303	162		465	241	93%	
298	297	227	261	306		567	548	3%	
64,496	59,204	62,926	64,180	62,606		126,786	126,753	0%	
1,097	1,111	1,160	1,136	1,329		2,465	2,243	10%	
65,593	60,315	64,086	65,316	63,935		129,251	128,996	0%	
7,027	6,186	8,876	5,325	5,706		11,031	13,509	(18)%	
2,862	3,667	4,894	3,307	4,250		7,557	5,303	43%	
18.4	19.6	23.4	18.9	20.0		38.9	39.1	(1)%	
93	175	246	192	110		302	331	(9)%	

Production									
Quarter ended					Year to date				
	Dec	Mar	Jun	Sep	Dec	Dec	Dec	Var	
	2022	2023	2023	2023	2023	2023	2022	%	
Production and sales									
By asset									
Copper									
Metals production is payable metal unless otherwise noted.									
Escondida, Chile¹									
									BHP interest 57.5%
Material mined	kt	101,987	106,170	95,451	87,462	95,168	182,630	212,235	(14)%
Concentrator throughput	kt	33,911	33,309	30,750	33,332	34,752	68,084	66,805	2%
Average copper grade - concentrator	%	0.76%	0.78%	0.93%	0.85%	0.78%	0.81%	0.79%	2%
Production ex mill	kt	212.8	210.0	228.9	225.7	217.6	443.3	427.4	4%
Payable copper	kt	208.3	200.8	220.5	221.3	207.7	429.0	411.4	4%
Copper cathode (EW)	kt	49.7	50.8	72.5	52.0	46.9	98.9	99.3	0%
Oxide leach	kt	17.6	14.7	29.3	17.5	17.0	34.5	32.8	5%
Sulphide leach	kt	32.1	36.1	43.2	34.5	29.9	64.4	66.5	(3)%
Total copper	kt	258.0	251.6	293.0	273.3	254.6	527.9	510.7	3%
Payable gold concentrate	troy oz	48,402	48,954	53,503	48,063	48,633	96,696	86,638	12%
Payable silver concentrate	troy koz	1,510	1,346	1,008	1,168	1,401	2,569	2,720	(6)%

¹ Shown on a 100% basis.

Pampa Norte, Chile									
Copper									
Payable metal in concentrate	kt	32.5	32.0	32.2	38.8	32.6	71.4	61.1	17%
Cathode	kt	44.2	41.0	36.3	39.5	27.2	66.7	86.2	(23)%
Total copper	kt	76.7	73.0	68.5	78.3	59.8	138.1	147.3	(6)%
Gold	troy oz	3,875	8,152	9,263	3,931	2,854	6,785	9,396	(28)%
Silver	troy koz	245	409	412	356	388	744	497	50%
Molybdenum	t	216	407	333	329	145	474	250	90%

Cerro Colorado¹									
Material mined	kt	583	172	145	-	-	-	3,762	(100)%
Ore stacked	kt	4,119	3,567	3,928	154	-	154	8,492	(98)%
Average copper grade - stacked	%	0.56%	0.57%	0.53%	0.58%	-	0.58%	0.55%	6%
Copper cathode (EW)	kt	12.2	12.0	12.2	9.5	1.6	11.1	25.0	(56)%

Spence									
Material mined	kt	26,980	24,858	25,622	27,654	25,973	53,627	53,936	(1)%
Ore stacked	kt	5,155	4,947	5,625	5,113	4,744	9,857	10,732	(8)%
Average copper grade - stacked	%	0.66%	0.60%	0.58%	0.60%	0.59%	0.60%	0.68%	(13)%
Concentrator throughput	kt	7,602	7,290	6,927	8,473	7,151	15,624	14,035	11%
Average copper grade - concentrator	%	0.60%	0.61%	0.61%	0.64%	0.65%	0.64%	0.61%	5%
Payable copper	kt	32.5	32.0	32.2	38.8	32.6	71.4	61.1	17%
Copper cathode (EW)	kt	32.0	29.0	24.1	30.0	25.6	55.6	61.2	(9)%
Total copper	kt	64.5	61.0	56.3	68.8	58.2	127.0	122.3	4%
Payable gold concentrate	troy oz	3,875	8,152	9,263	3,931	2,854	6,785	9,396	(28)%
Payable silver concentrate	troy koz	245	409	412	356	388	744	497	50%
Payable molybdenum	t	216	407	333	329	145	474	250	90%

¹ Cerro Colorado entered temporary care and maintenance in December 2023.

Sales								
Quarter ended					Year to date			
Dec 2022	Mar 2023	Jun 2023	Sep 2023	Dec 2023	Dec 2023	Dec 2022	Var %	

Production								
Quarter ended					Year to date			
Dec 2022	Mar 2023	Jun 2023	Sep 2023	Dec 2023	Dec 2023	Dec 2022	Var	%

Copper (continued)

Copper South Australia, Australia		BHP interest 100%						
Copper	Payable metal in concentrate	kt		19.9	26.2	30.6	56.8	
	Cathode	kt	54.4	51.7	56.7	48.2	102.8	104.1 (1)%
	Total copper	kt	54.4	51.7	76.6	74.4	159.6	104.1 53%
	Payable metal in concentrate transfer to Olympic Dam ¹	kt		-	(2.7)	(3.2)	(5.9)	
	Net copper	kt	54.4	51.7	76.6	71.7	153.7	104.1 48%
Gold	Payable metal in concentrate	troy oz		32,736	41,424	48,051	89,475	
	Refined gold	troy oz	43,280	49,086	46,479	53,028	108,856	90,464 20%
	Total gold	troy oz	43,280	49,086	79,215	94,452	198,331	90,464 119%
	Payable metal in concentrate transfer to Olympic Dam ¹	troy oz		-	(5,196)	(6,000)	(11,196)	
	Net gold	troy oz	43,280	49,086	79,215	89,256	187,135	90,464 107%
Silver	Payable metal in concentrate	troy koz		201	271	323	594	
	Refined silver	troy koz	261	277	256	261	482	556 (13)%
	Total silver	troy koz	261	277	457	532	1,076	556 94%
	Payable metal in concentrate transfer to Olympic Dam ¹	troy koz		-	(11)	(13)	(24)	
	Net silver	troy koz	261	277	457	521	1,052	556 89%
Uranium	t		943	833	813	825	1,811	1,760 3%

Olympic Dam								
	Material mined	kt	2,264	2,317	2,356	2,655	5,192	4,676 11%
	Ore milled	kt	2,687	2,433	2,755	2,596	5,230	5,257 (1)%
	Average copper grade	%	2.08%	1.95%	2.00%	1.96%	2.04%	2.10% (3)%
	Average uranium grade	kg/t	0.58	0.59	0.55	0.56	0.59	0.58 2%
	Copper cathode (ER and EW)	kt	54.4	51.7	56.7	48.2	102.8	104.1 (1)%
	Refined gold	troy oz	43,280	49,086	46,479	53,028	108,856	90,464 20%
	Refined silver	troy koz	261	277	256	261	482	556 (13)%
	Payable uranium	t	943	833	813	825	1,811	1,760 3%

Prominent Hill²								
	Material mined	kt		661	1,110	1,125	2,235	
	Ore milled	kt		1,228	1,652	1,800	3,452	
	Average copper grade	%		0.77%	0.85%	0.83%	0.84%	
	Production ex mill	kt		16.3	23.8	23.6	47.4	
	Payable copper	kt		8.2	12.1	12.9	25.0	
	Payable gold concentrate	troy oz		17,432	22,031	25,779	47,810	
	Payable silver concentrate	troy koz		44	63	65	128	

Carrapateena²								
	Material mined	kt		880	1,201	1,310	2,511	
	Ore milled	kt		856	1,230	1,307	2,537	
	Average copper grade	%		1.52%	1.29%	1.52%	1.41%	
	Production ex mill	kt		30.1	37.6	49.2	86.8	
	Payable copper	kt		11.7	14.1	17.7	31.8	
	Payable gold concentrate	troy oz		15,304	19,393	22,272	41,665	
	Payable silver concentrate	troy koz		157	208	258	466	

¹ Excludes prior year production previously reported and transferred during the period.

² Production and sales included from 1 May 2023, following the acquisition of OZL on 2 May 2023.

Sales								
Quarter ended					Year to date			
Dec 2022	Mar 2023	Jun 2023	Sep 2023	Dec 2023	Dec 2023	Dec 2022	Var	%

		27.6	22.2	31.6	53.8			
56.8	50.5	59.5	46.1	54.3	100.4	102.7	(2)%	
56.8	50.5	87.1	68.3	85.9	154.2	102.7	50%	

		44,098	34,176	47,482	81,658			
41,900	47,300	49,182	54,036	55,349	109,385	91,442	20%	
41,900	47,300	93,280	88,212	102,831	191,043	91,442	109%	

		242	258	364	622			
233	307	270	219	222	441	553	(20)%	
233	307	512	477	586	1,063	553	92%	

1,127	683	1,275	481	895	1,376	1,399	(2)%	
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56.8	50.5	59.5	46.1	54.3	100.4	102.7	(2)%	
41,900	47,300	49,182	54,036	55,349	109,385	91,442	20%	
233	307	270	219	222	441	553	(20)%	
1,127	683	1,275	481	895	1,376	1,399	(2)%	

	15.7	8.4	10.6	19.0				
	28,856	15,524	20,045	35,569				
	87	53	59	112				

	11.9	13.8	21.0	34.8				
	15,242	18,652	27,437	46,089				
	155	205	305	510				

Production								
Quarter ended					Year to date			
Dec	Mar	Jun	Sep	Dec	Dec	Dec	Var	
2022	2023	2023	2023	2023	2023	2022	%	

Copper (continued)

Antamina, Peru								
BHP interest 33.75%								
Material mined	kt	68,750	57,939	62,894	63,310	61,539	124,849	132,615 (6)%
Concentrator throughput	kt	14,272	12,349	13,897	14,246	14,824	29,070	28,130 3%
Average head grade - copper	%	0.86%	0.88%	0.88%	0.83%	0.90%	0.87%	0.89% (3)%
Average head grade - zinc	%	0.99%	1.06%	1.25%	1.17%	1.03%	1.10%	1.04% 6%
Payable copper	kt	35.2	29.6	36.5	32.5	39.2	71.7	72.3 (1)%
Payable zinc	t	29,929	23,612	38,822	35,669	33,475	69,144	62,614 10%
Payable silver	troy koz	923	801	971	798	975	1,773	2,113 (16)%
Payable lead	t	114	169	146	96	105	201	342 (41)%
Payable molybdenum	t	348	229	333	283	336	619	610 1%

Carajás, Brazil ¹								
BHP interest 100%								
Material mined	kt			103	74	115	189	
Ore milled	kt			100	70	119	189	
Average copper grade	%			1.71%	1.91%	1.69%	1.77%	
Production ex mill	kt			6.6	5.2	7.6	12.8	
Payable copper	kt			1.6	1.2	1.8	3.0	
Payable gold concentrate	troy oz			1,153	802	1,256	2,058	

¹ Production and sales included from 1 May 2023, following the acquisition of OZL on 2 May 2023.

Iron ore

Iron ore production and sales are reported on a wet tonnes basis.

WAI O, Australia								
BHP interest 85%								
Newman	kt	16,172	11,925	14,795	13,234	15,468	28,702	30,225 (5)%
Area C Joint Venture	kt	26,302	25,284	28,818	25,804	26,074	51,878	53,273 (3)%
Yandi Joint Venture	kt	5,613	4,941	5,359	3,150	4,978	8,128	11,110 (27)%
Jimblebar ¹	kt	17,720	16,575	15,102	19,816	17,940	37,756	35,124 7%
Total	kt	65,807	58,725	64,074	62,004	64,460	126,464	129,732 (3)%
Total (100%)	kt	74,292	66,163	72,717	69,448	72,670	142,118	146,427 (3)%
Lump	kt							
Fines	kt							
Total	kt							
Total (100%)	kt							

¹ Shown on a 100% basis. BHP interest in saleable production is 85%.

Samarco, Brazil								
BHP interest 50%								
Total	kt	1,095	1,048	1,221	1,231	1,302	2,533	2,243 13%

Sales								
Quarter ended					Year to date			
Dec	Mar	Jun	Sep	Dec	Dec	Dec	Var	
2022	2023	2023	2023	2023	2023	2022	%	

34.7	32.4	34.5	32.8	38.3	71.1	72.3	(2)%
29,127	25,851	37,629	33,912	37,092	71,004	62,947	13%
850	768	747	745	785	1,530	1,865	(18)%
91	181	143	154	91	245	221	11%
298	297	227	261	306	567	548	3%

2.1	2.2	-	2.2
1,688	1,533	-	1,533

20,375	18,021	20,022	20,969	19,176	40,145	39,936	1%
44,121	41,183	42,904	43,211	43,430	86,641	86,817	0%
64,496	59,204	62,926	64,180	62,606	126,786	126,753	0%
72,688	66,580	71,172	71,748	70,340	142,088	142,964	(1)%

1,097	1,111	1,160	1,136	1,329	2,465	2,243	10%
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Coal

Coal production is reported on the basis of saleable product.

BMA, Australia		BHP interest 50%								
	Blackwater	kt	1,160	1,107	1,505	1,295	1,182	2,477	2,443	1%
	Goonyella	kt	1,997	2,185	2,348	827	1,736	2,563	3,777	(32)%
	Peak Downs	kt	1,480	1,251	1,424	1,121	846	1,967	2,805	(30)%
	Saraji	kt	1,243	1,007	1,326	1,010	701	1,711	2,263	(24)%
	Daunia	kt	441	607	617	545	431	976	765	28%
	Caval Ridge	kt	631	772	1,257	803	821	1,624	1,561	4%
	Total¹	kt	6,952	6,929	8,477	5,601	5,717	11,318	13,614	(17)%
	Total (100%)	kt	13,904	13,858	16,954	11,202	11,434	22,636	27,228	(17)%
	Coking coal	kt								
	Weak coking coal	kt								
	Thermal coal	kt								
	Total	kt								
	Total (100%)	kt								

¹ Production figures include some thermal coal.

NSWEC, Australia		BHP interest 100%							
	Export	kt							
	Domestic ¹	kt							
	Total	kt	2,851	3,934	4,765	3,613	3,855	7,468	5,473 36%

¹ Domestic sales are made under the NSW Government Coal Market Price Emergency (Directions for Coal Mines) Notice 2023.**Other**

Nickel production is reported on the basis of saleable product.

Nickel West, Australia		BHP interest 100%							
Mt Keith	Nickel concentrate	kt	39.6	38.8	44.5	42.7	43.8	86.5	82.2 5%
	Average nickel grade	%	15.5	16.5	16.2	16.7	16.8	16.8	16.3 3%
Leinster	Nickel concentrate	kt	47.9	68.4	71.1	66.0	63.4	129.4	114.7 13%
	Average nickel grade	%	9.4	8.6	8.5	8.1	8.0	8.1	9.7 (17)%
	Refined nickel ¹	kt	10.8	13.2	13.1	13.8	12.6	26.4	28.3 (7)%
	Nickel sulphate ²	kt	0.4	0.9	0.7	0.9	0.7	1.6	1.6 0%
	Intermediates and nickel by-products ³	kt	6.5	5.5	8.2	5.5	6.3	11.8	8.5 39%
	Total nickel	kt	17.7	19.6	22.0	20.2	19.6	39.8	38.4 4%
	Cobalt by-products	t	93	175	246	192	182	374	331 13%

¹ High quality refined nickel metal, including briquettes and powder.² Nickel sulphate crystals produced from nickel powder.³ Nickel contained in matte and by-product streams.

		Sales							
		Quarter ended				Dec 2023	Year to date		
		Dec 2022	Mar 2023	Jun 2023	Sep 2023		Dec 2023	Dec 2022	Var %

5,872	5,372	7,448	4,497	4,756	9,253	11,487	(19)%
727	710	1,064	529	752	1,281	1,327	(3)%
428	104	364	299	198	497	695	(28)%
7,027	6,186	8,876	5,325	5,706	11,031	13,509	(18)%
14,054	12,372	17,752	10,650	11,412	22,062	27,018	(18)%

2,862	3,667	4,693	3,087	3,942	7,029	5,303	33%
		201	220	308	528		
2,862	3,667	4,894	3,307	4,250	7,557	5,303	43%

10.2	13.0	13.1	13.2	13.0	26.2	28.3	(7)%
0.5	0.9	0.8	0.8	0.7	1.5	1.3	15%
7.7	5.7	9.5	4.9	6.3	11.2	9.5	18%
18.4	19.6	23.4	18.9	20.0	38.9	39.1	(1)%
93	175	246	192	110	302	331	(9)%

Appendix 3

Explanatory Notes and JORC Table 1

Project status update – Olympic Dam “Deeps” (OD Deeps)

In 2006-07, three deep holes were drilled below known Olympic Dam mineralisation, testing a modelled density anomaly, and subsequently intersected mineralisation. These holes, RD1988, RD2786A and RD2785 returned mineralised intercepts.

Table 1. Historic deep drilling below Olympic Dam from 2006-07.

Hole ID	Depth from (m)	Depth to (m)	Interval (m)	Cu (%)	U ₃ O ₈ (ppm)	Au (g/t)	Ag (g/t)	Density (g/cm ³)
RD1988	922	1897.9	975.9	1.53	266	0.98	4.24	3.73
RD2786A	1771	1847	76	1.36	279	0.92	4.67	3.82
and	1925	2027	102	1.52	288	0.74	5.92	3.57
RD2785	2058	2184	126	0.86	228	0.49	2.61	3.05

In 2020-21 BHP Olympic Dam geologists reviewed mineralisation potential at depth and commenced exploration drilling in 2022. As of 9th September 2023, total drilling of the OD Deeps mineralisation, including historic drilling, was approximately 62 km, with nominal drill space ranging from 160 m to 320 m. All holes completed to target depth intersected mineralisation and have outlined a mineralisation extending more than 2 km along strike, and more than 1 km in depth. Mineralisation continues to be open along strike and at depth.

The iron oxide copper gold (IOCG) mineralisation style of the OD Deeps appears similar to the main body of Olympic Dam (refer to Section 2-Reporting of Exploration Results). Mineralisation is dominantly chalcopyrite with some areas of bornite. To date, and noting wide spaced drilling, continuity continues to appear favourable above 1% copper grade. The absolute extent of mineralisation has not been discovered. However, along strike there are geological indications of decreasing brecciation as well as decreasing iron content. These suggest a diminishing system along strike.

Figure 1 describes the location of the new drilling and Figures 2, 3, 4 and 5 show the new drilling on cross section(s), long section, and level plan. Mineralised intercepts provided in Table 2 and drilling collar location is provided in Table 3.

This release reflects progress in our exploration activities at Olympic Dam. Further work will be required to enable an estimate of Mineral Resources.

Table 2. Length and density-weighted mineralised intercepts reported as down hole lengths.

Hole ID	Depth from (m)	Depth to (m)	Interval (m)	Cu (%)	U ₃ O ₈ (ppm)	Au (g/t)	Ag (g/t)	Density (g/cm ³)
RU50-12091	516	1096 (EOH)	580	2.22	473	0.93	4.87	3.77
including	522	648	126	4.41	945	0.99	7.13	3.90
RD4552A	1608	2050	442	1.38	350	0.65	2.98	3.49
including	1790	1912	122	2.15	506	0.89	4.20	3.88
RD4552AW2	1862	2252	390	1.38	396	0.65	2.43	3.35
including	2124	2176	52	1.72	483	0.63	1.33	3.55
RD4577W1	2022	2322	300	1.53	426	0.72	4.16	3.52
RU50-17932	718	1000 (EOH)	282	1.46	340	0.88	3.66	3.70
including	718	744	26	3.34	876	0.93	2.04	3.98
RD4552AW3	2101	2401	300	1.50	330	1.04	5.81	3.60
including	2101	2143	42	2.09	327	1.39	12.52	3.71
RU48-14098W1	1807.5	1985	177.5	1.54	402	0.87	11.22	3.54
including	1912.5	1985	72.5	2.29	422	1.31	21.60	3.86
RU48-14099	1388	1587.5	199.5	1.68	357	0.80	6.37	3.63
including	1388	1462	74	2.35	534	0.73	6.42	3.69
RD4551	1298	1486	188	1.17	325	0.52	5.57	3.38
RD4551W1	1474	1646	172	1.52	348	0.65	7.91	3.61
including	1596	1646	50	2.03	355	0.83	9.11	3.82
RD4551W2A	1320	1390	70	1.33	327	0.73	5.09	3.76
RD4554W2	1917	1971	54	1.99	386	1.32	13.37	3.89
and	2123	2307	184	1.38	340	0.76	5.63	3.53
RD4554W3	1560	1662	102	1.74	468	0.95	2.62	3.85
and	1698	1734	36	1.67	415	0.66	1.30	3.87
RD4568W1	1384	1580	196	1.12	292	0.76	5.08	3.67
and	1626	1696	70	1.62	290	0.88	7.87	3.74
and	1816	1836	20	2.04	244	0.22	3.52	3.19
RD4554W1	1691	1911	220	1.09	293	0.77	5.69	3.50
including	1691	1713	22	1.68	456	0.91	12.02	3.50
and	2001	2041	40	2.32	439	0.57	9.20	3.36
and	2187	2211	24	1.18	464	0.24	1.50	3.06
RD4561W4	1772	1810	38	2.42	799	0.16	0.91	3.50
RU48-14097	1148	1198	50	1.25	328	0.27	0.59	3.26
and	1392	1426	34	2.37	224	0.73	8.97	3.76
and	1516	1580	64	1.38	254	0.93	5.46	3.80
RU50-12093W1	539.2	644	104.8	1.23	409	0.92	4.24	3.42
and	770	834	64	1.29	335	0.62	3.33	3.28
RU50-17930	618	782	164	1.02	306	0.61	3.93	3.41
RU48-14098	1604	1632	28	1.09	309	0.45	1.17	3.16
and	1690	1737.5	47.5	1.41	433	0.70	1.90	3.45
and	1760	1812.5	52.5	2.08	335	1.03	8.53	3.52
RU48-17326	1126	1192	66	1.36	264	0.25	<1.0	3.08
and	1332	1378	46	1.38	438	0.67	2.45	3.62
and	1524	1574	50	1.41	378	0.64	7.04	3.38
RD4573W1	1348	1380	32	1.47	340	0.20	1.07	3.00
and	1574	1680	106	1.32	331	0.75	5.71	3.94
RD4574W1	1459	1523	64	1.14	619	0.50	0.42	3.34
RD4575	1380	1390	10	1.39	349	0.31	1.15	3.04
and	1434	1494	60	1.07	511	0.38	0.75	3.29
RU50-17931	424	448	24	1.62	482	0.98	7.81	3.67
RD4561	1294	1334	40	1.31	348	0.73	5.39	3.87
RD4578A	1872	1886	14	1.03	1797	0.15	0.58	4.04
RD4571	1610	1628	18	1.08	989	0.26	4.20	3.63

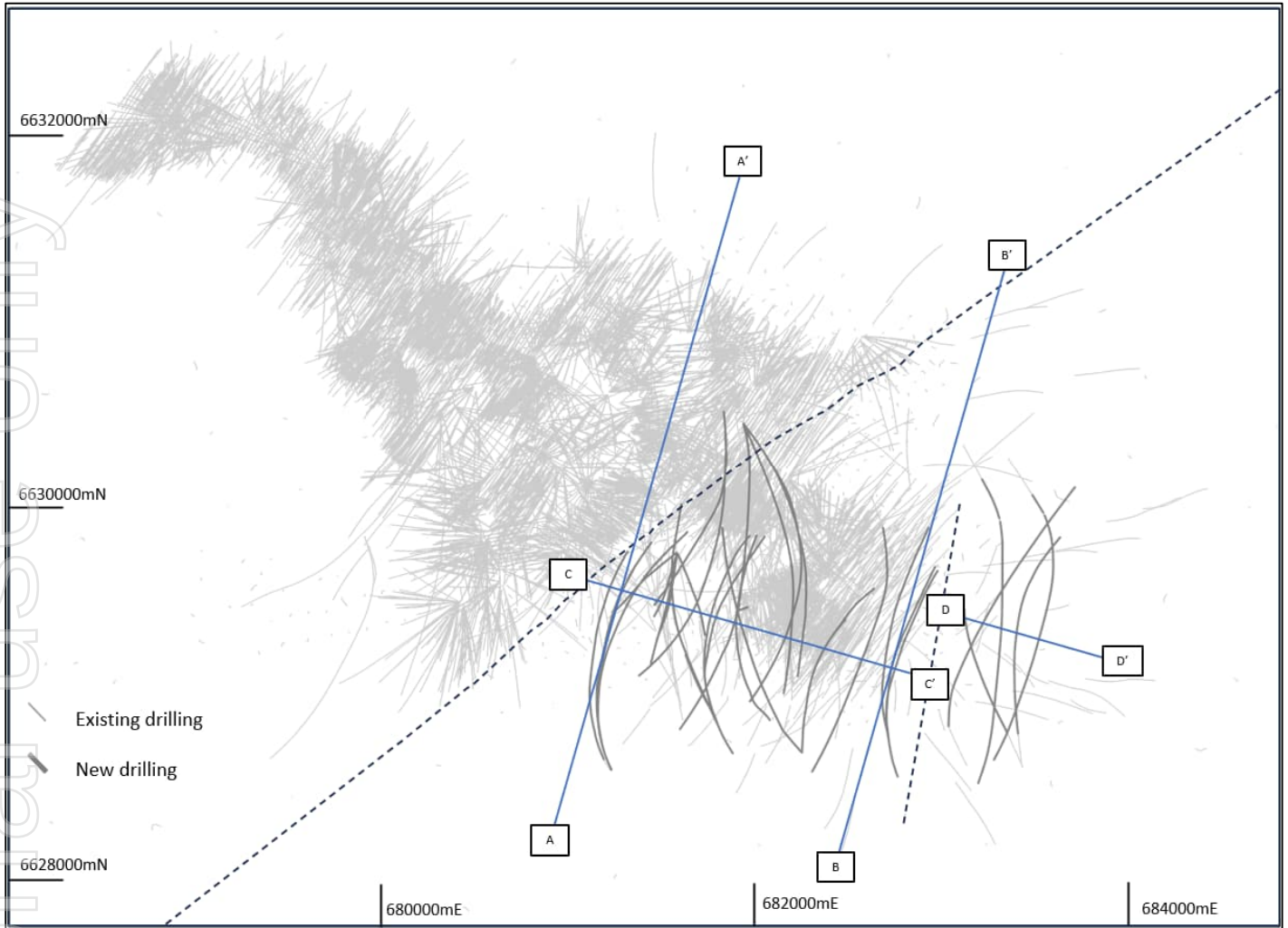


Figure 1. New drill hole traces shown against all Olympic Dam drilling. Reference sections provides for cross sections and long section.

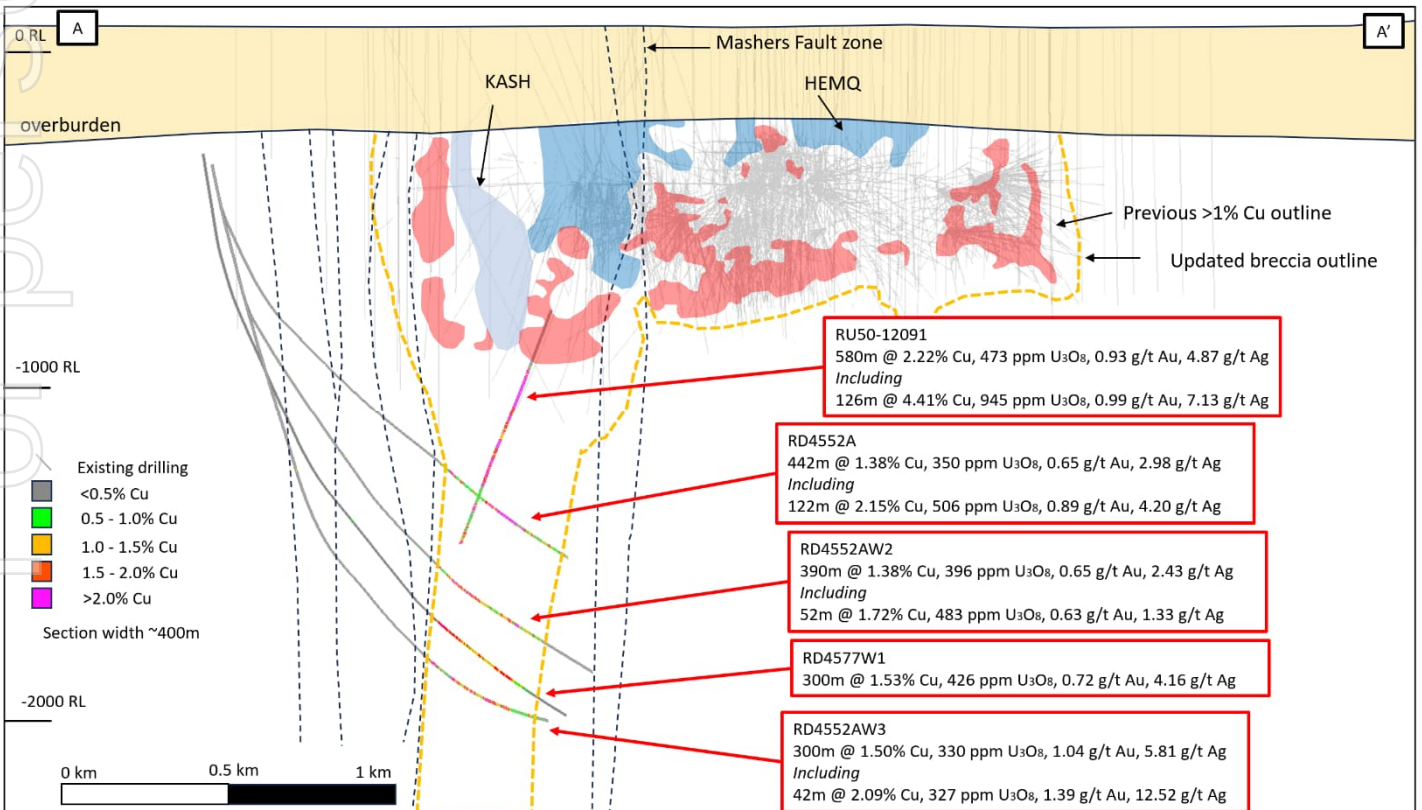


Figure 2. Representative cross-section (A-A' from Figure 1) showing simplified geology and down hole Cu assays.

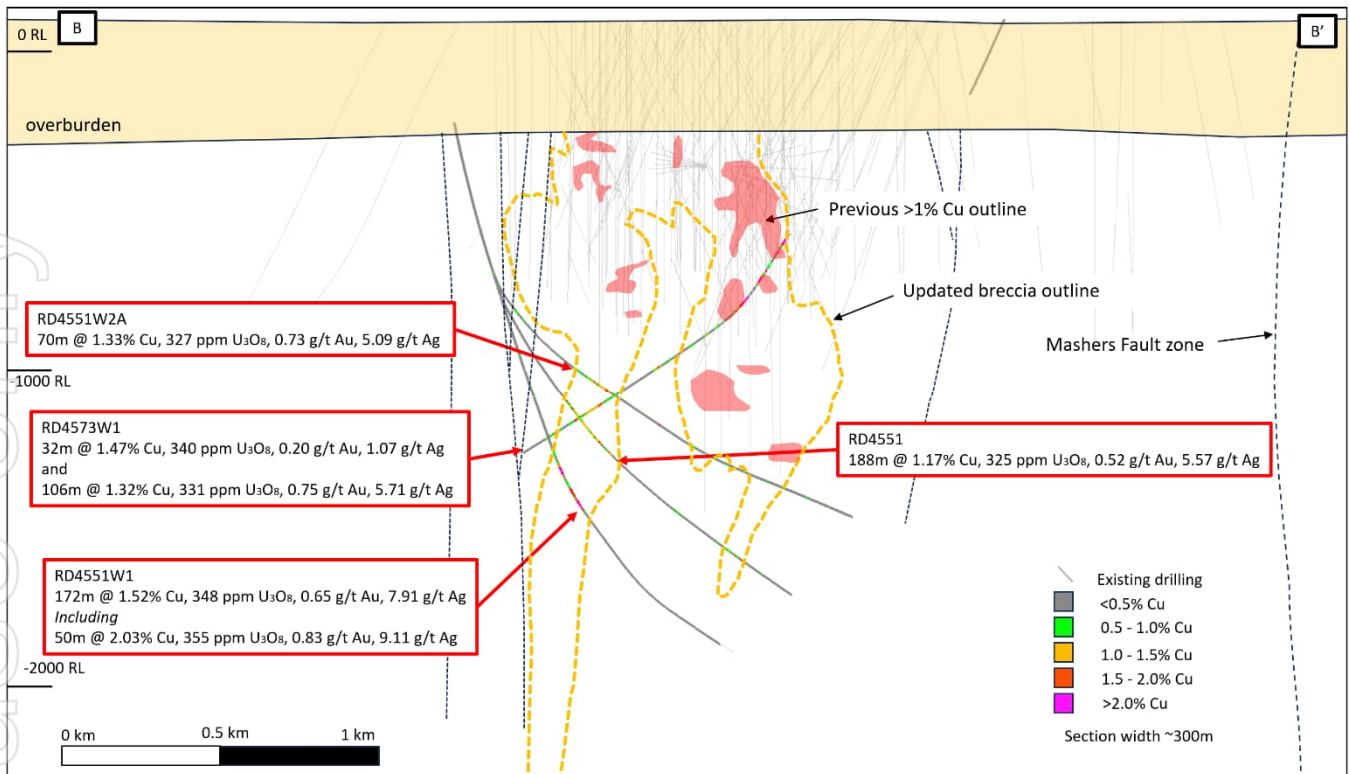


Figure 3. Representative cross-section (B-B' from Figure 1) showing simplified geology and down hole Cu assays.

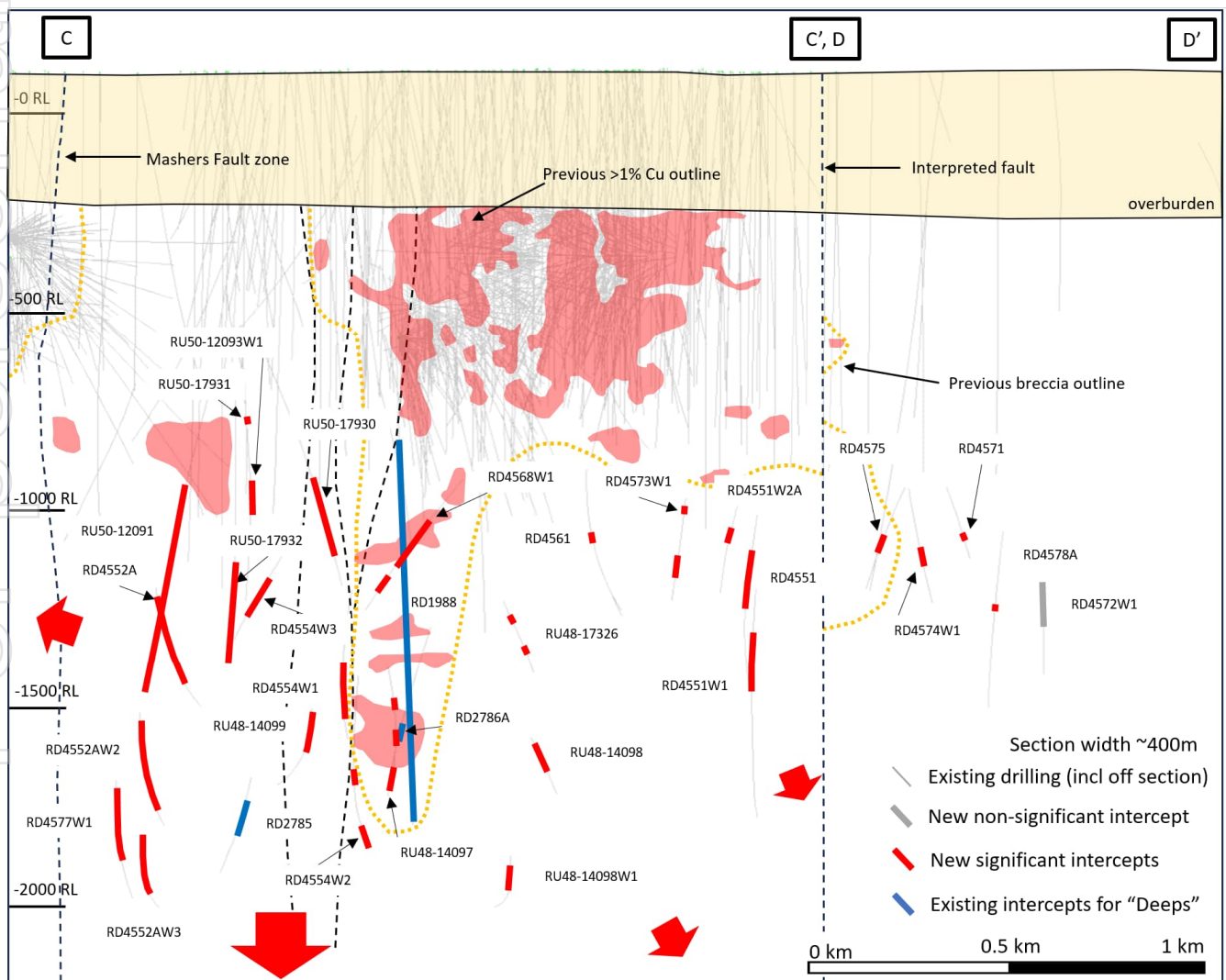


Figure 4. Representative composite long-section (C-C' and D-D' from Figure 1) showing simplified geology and significant intercepts.



Sampling techniques

- ## Drilling techniques

- ## Drill sample recovery

- 17

Logging

- Drill holes were logged in qualitative detail below the post mineral cover.
- Logging included, but was not limited to, lithology composition and texture, alteration minerals, sulphide distribution and geotechnical logging for rock-mass qualification. Drill holes were logged to a level of detail that would support future studies.
- Structural measurements were recorded from oriented core.
- Core was photographed dry.

Sub-sampling techniques and sample preparation

- Diamond core was split by core saw, with half core submitted for assay and the other half stored in trays at Olympic Dam. Samples are submitted as 2 m or 2.5 m intervals.
- Approximately 4-8 kg samples were submitted to an analytical laboratory for final drying, staged crushing to 2 mm, splitting to approximately 2-3 kg portion, followed by pulverisation to 90% passing 75 micron particle size pulp.
- Duplicate samples were collected at each preparation stage where a reduction in sample mass occurred.
- Bulk dry density measurements were collected on all assayed samples using water immersion method.
- Sample sizes are considered appropriate for the style of the mineralisation.

Quality of assay data and laboratory tests

- All samples were submitted to Intertek Group Plc (Intertek), Adelaide Laboratory, South Australia.
- Drill hole results reported here were analysed for either the routine Olympic Dam multi-element suite or an expanded Olympic Dam multi-element suite. The routine suite includes Cu, Ag, Co, Ni, Pb, Zn (3-acid digest, measured via IOC-OES) and Li-borate fusion measured via ICP-OES/MS (Al, As, Ba, Bi, Ca, Ce, Cr, Fe, K, La, Mg, Mn, Mo, Na, P, Sb, Sc, Si, Sr, Ti, U, V, Y, Zr). The expanded suite includes 4-acid digest measured via ICP-OES/MS (Cu, Ni, Pb, Zn, Ag, As, Bi, Cd, Co, Ge, In, Li, Re, Se, Te, Tl) and Li-borate fusion measured via ICP-OES/MS (Al, Ba, Be, Ca, Ce, Cr, Cs, Dy, Er, Eu, Fe, Ga, Gd, Hf, Ho, K, La, Lu, Mg, Mn, Mo, Na, Nb, Nd, P, Pr, Rb, Sb, Sc, Si, Sm, Sn, Sr, Ta, Tb, Th, Ti, Tm, U, V, W, Y, Yb, Zr) and loss-on-ignition. All samples were assayed for Au (via 25-g FA with ICP-OES finish), and C and S (via induction furnace combustion, measured by infrared analyser).
- Comparative analysis between the 4- and 3-acid digest methods demonstrates equal accuracy and precision within the Olympic Dam mineral system. The 4-acid digest is used to expand the geochemical suite of elements when initially characterising new parts of the deposit. Drill holes (Table 3) assayed via the 3-acid method were RD4552A, RD4554, RD4554W1, RD4554W2, RD4554W3, RU48-14097, RU48-14098, RU48-14098W1, RU48-14099, RU48-17326. The remainder were assayed via the 4-acid method.
- Quality control samples consisted of duplicates (1:25), analytical blanks (1:50) and certified standards (1:25).
- Quality control results were reviewed when received. All performed within acceptable accuracy and precision limits.

Verification of sampling and assaying

- BHP has robust QAQC standards and procedures relating to sampling and assay quality control.
- Significant intersections were compiled by BHP staff members, and were verified by the Competent Person.
- There were no adjustments to the assay data. Data is electronically uploaded to the database from the external laboratory.
- All drill hole data is managed internally via a SQL server hosted database with strict validation rules.
- No twinned holes have been drilled.

Location of data points

- All surface drill hole collar locations (historic and recent) have been surveyed with Leica GS16 Rover and manually entered into acQuire database. Underground drill holes collar locations have been surveyed using Leica TS16 Total Station.
- All coordinates are provided in Geocentric Datum of Australia 1994 (GDA94 Zone 53), and all surface collars correlate well with the Olympic Dam topographic model, and all underground drill collars correlate well with underground development.

Table 3. Collar Dip and Azimuths as presented may not reflect the variation of deep directional drilling effect at depth as per section A-A' in Figure 3.

Hole ID	Type	Collar location	Easting (m)	Northing (m)	RL (m)	End of Hole (m)	Dip (°)	Azimuth (°)
RD4551	parent	surface	682,771	6,628,552	100	2262.8	-76	335
RD4551W1	wedge	surface	682,771	6,628,552	100	2260.3	-76	335
RD4551W2A	wedge	surface	682,771	6,628,552	100	2257.5	-76	335
RD4552A	parent	surface	681,234	6,628,589	99	2337.6	-75	337
RD4552AW2	wedge	surface	681,234	6,628,589	99	2445.3	-75	337
RD4552AW3	wedge	surface	681,234	6,628,589	99	2523.7	-75	337
RD4554	parent	surface	681,885	6,628,678	98	1419.3	-76	327
RD4554W1	wedge	surface	681,885	6,628,678	98	2346.8	-76	327
RD4554W2	wedge	surface	681,885	6,628,678	98	2565.8	-76	327
RD4554W3	wedge	surface	681,885	6,628,678	98	2231.3	-76	327
RD4561	parent	surface	682,257	6,628,686	101	1609.1	-74	353
RD4561W4	wedge	surface	682,257	6,628,686	101	1867.0	-74	353
RD4568W1	wedge	surface	682,257	6,628,681	101	2145.5	-76	319
RD4571	parent	surface	683,123	6,630,335	105	2554.9	-59	152
RD4572W1	wedge	surface	683,364	6,630,263	103	2661.9	-63	148
RD4573W1	wedge	surface	682,628	6,630,057	102	2320.0	-69	158
RD4574W1	wedge	surface	683,142	6,628,612	99	2667.0	-60	334
RD4575	parent	surface	683,444	6,628,602	102	1614.8	-61	336
RD4577	parent	surface	681,226	6,628,588	99	691.4	-77	326
RD4577W1	wedge	surface	681,226	6,628,588	99	2511.7	-79	330
RD4578A	parent	surface	683,439	6,628,607	102	2449.1	-65	352
RU48-14097	parent	underground	681,942	6,630,450	-474	2254.4	-55	165
RU48-14098	parent	underground	681,942	6,630,451	-474	1982.5	-62	143
RU48-14098W1	wedge	underground	681,942	6,630,451	-474	2388.4	-62	143
RU48-14099	parent	underground	681,837	6,630,515	-472	2073.9	-52	174
RU48-17326	parent	underground	681,942	6,630,449	-474	1801.1	-42	155
RU50-12091	parent	underground	681,581	6,629,753	-462	1100.0	65	229
RU50-12093W1	wedge	underground	681,587	6,629,752	-461	900.0	-59	189
RU50-17930	parent	underground	681,587	6,629,751	-461	867.5	-54	154
RU50-17931	parent	underground	681,586	6,629,751	-461	896.4	-45	190
RU50-17932	parent	underground	681,587	6,629,752	-462	1000.0	-69	198

Data spacing and distribution

- Drilling from surface, and some underground, used parent and wedge-styled drilling.
- Nominal drill space ranging from 160 m to 320 m.
- Sample length was 2 m to 2.5m in length. No compositing was undertaken for reporting.
- Drilling is perpendicular to the interpreted orebody orientation. The current drilling does not provide sufficient information for estimation of a Mineral Resource.

Orientation of data in relation to geological structure

- Drilling at Olympic Dam is designed to intersect nominally perpendicular to the strike of the mineralisation.
- Drill holes were angled approximately north-south and were designed to drill from outside the hydrothermal system, inwards towards mineralisation.

Sample security

- Core trays are transported by BHP contractors from the drill rigs to the core processing facility at Olympic Dam, Roxby Downs. Samples in calico bags are transported from Olympic Dam via road on trucks to Intertek, Adelaide, South Australia.
- Calico bag numbers are automatically generated. Intertek is informed of the sample number ranges for each pending shipment and are recorded in their management system. Intertek use these to create barcode labels for Kraft geochemical bags used for storing the pulverised samples. On sample receipt, Intertek manually checks the submitted sample list against all samples in the shipment. Once the samples are pulverised, all further steps are tracked using the bar codes. BHP is informed of any discrepancies.
- BHP has internal governance and standards related to sample security and data management. BHP undertakes routine verification of these practices.

Audits or reviews

- OD Deeps exploration results have not been externally audited.
- BHP routinely reviews standards, procedures and results from external laboratories. No issues have been noted from any BHP review.

Section 2 Reporting of Exploration Results

Mineral tenement and land tenure status

- The Roxby Downs (Indenture Ratification) Act 1982 (SA) provides statutory authority for an agreement (Indenture) between BHP and the State of South Australia. The Indenture establishes the legal framework for existing and future operations at Olympic Dam and defines the roles and responsibilities of the South Australian Government and BHP. Part of the Indenture provides for the grant of Olympic Dam's special mining lease (SML).
- The indenture confers continuous mining rights (via the SML) to BHP until the deposit is economically depleted. The lease is granted for 50 years, with extension rights for a further 50 years. Additional extensions can be requested. The current 50-year period ends in 2036. All agreements are in place as part of the normal operating practices.

Exploration done by other parties

- The project has a long exploration history, dating back to 1975 by Western Mining Corporation (prior to their acquisition by BHP in 2005) and BHP.

Geology

- The geology of the Olympic Dam iron-oxide copper uranium gold and silver (IOCG) deposit is described comprehensively in numerous publications. In summary, the deposit occurs entirely within the Olympic Dam Breccia Complex (ODBC) (see Figure 6), hosted within the 1,593.28 ± 0.26 Ma Roxby Downs Granite (RDG). The ODBC, which contains the mineralised rock volume, has an overall areal extent of around 50 km². It is approximately 6 km long and 3 km wide, and typically extends to depths of 900 m and up to 2,300 m beneath the surface locally.

The ODBC is unconformably overlain by approximately ~350 m of unaltered, unmineralized Neoproterozoic to Cambrian flat-lying sedimentary rocks. The primary host rock within the ODBC is the RDG. Lesser, yet significant bedded clastic facies, clasts of 1594.63 ± 0.71 Ma Gawler Range Volcanic felsic feldspar-phyric lavas in hematite-rich breccias and dykes, and mafic-ultramafic lavas/dykes (MDY) which are pre-, syn- and post-mineralisation, are an integral part of the Olympic Dam ore-forming system. The ODBC and surrounding unbrecciated RDG are intruded by the regionally extensive ca 825 Ma Gairdner Dyke Swarm (dolerite). The host rocks for mineralisation consist of RDG and other lithologies (bedded clastic facies, felsic lavas, mafic-ultramafic lavas, sills and dykes, and a subvolcanic quartz-phyric rhyolite), all of which have been weakly to intensely brecciated (via tectonic, magmatic and hydrothermal processes). These are variably replaced by iron oxides forming a compositional continuum from recognisable lithologies to iron oxide breccias, where the primary lithology texture is obliterated by iron oxide alteration. Lithological contacts are typically obscured by faulting and brecciation.

There are more than 125 minerals within the deposit, 15 of which account for more than 98 per cent of the rock mass. The most common gangue minerals are hematite, quartz, muscovite, K-feldspar, chlorite, fluorite, siderite and barite. The dominant sulfide minerals within the deposit are chalcocite/digenite/djurleite (referred to here as chalcocite), bornite, chalcopyrite and pyrite, with lesser concentrations of sphalerite, galena, molybdenite, tennantite-tetrahedrite and trace amounts of native copper. The sulfides typically occur as disseminated grains in the breccia matrix and clasts. The grain size varies from <20 µm up to several millimetres, with an average size of ~100 µm. Sulfides occur rarely as veins in granite-dominated breccias.

The Cu ± Fe sulfides display a distinct upwards and inwards deposit scale zonation, from pyrite → chalcopyrite-pyrite → chalcopyrite exsolution lamellae in brown bornite → purple bornite-chalcocite symplectites → digenite lamellae in chalcocite.

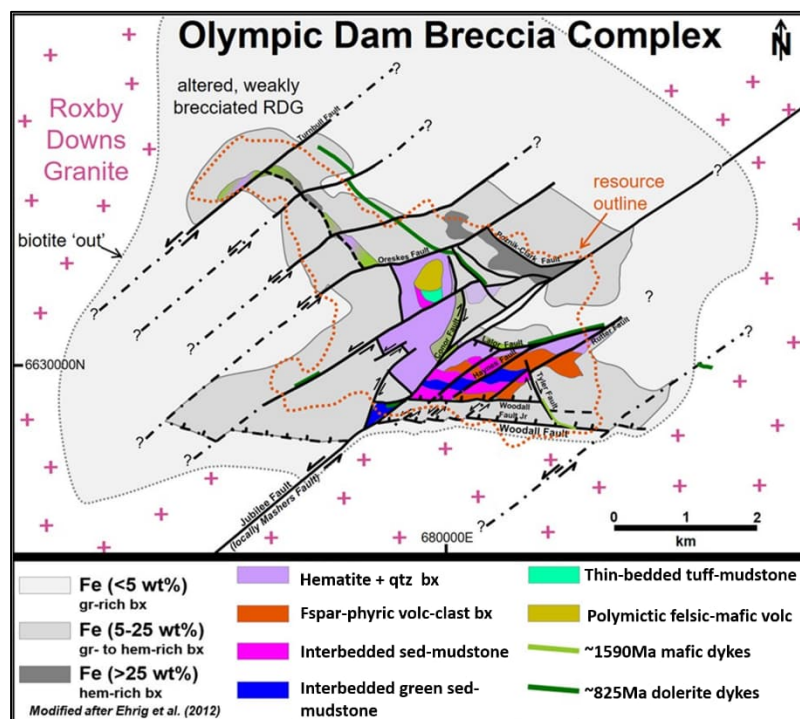


Figure 6. Simplified geological plan of the Olympic Dam deposit, approximately 350 m below surface.

Drill hole information

- Table 1 provides historic hole information for context. Tables 2 and 3, as well as Figures 1 and 5 provide details of new drill hole coordinates, orientations and locations, lengths and mineralised intercepts for the OD Deeps exploration drilling. Figures 2 and 3 provide representative cross sections. Figure 4 provides a representative long section.

Data aggregation methods

- All reported intersections are length and density weighted with reported intersection in Table 2.
- Intervals in Table 2 have more than 1% Cu with no more than 10 consecutive metres of less than 0.5% Cu, with an average internal waste of no more than 3 m. Two exceptions, due drilling orientation, to this are RD4552A (442 m mineralised interval reported) and RU48-14098W1 (177.5 m mineralised interval reported) which have single instances of 14m and 18m, respectively, internal waste <0.5%Cu.

Relationship between mineralisation widths and intercept lengths

- Intersections are presented as apparent (downhole) lengths. True width is unknown.

Diagrams

- Figures in the main body text provide details of drill hole location and context.

Balanced reporting

- All exploration results from the OD Deeps exploration program to 9 September 2023 have been included.

Other substantive exploration data

- Representative magnetic susceptibility measurements are recorded at 1 m intervals within mineralisation.
- 2D and pseudo 3D seismic data acquisition was undertaken in July 2022. In June-August 2023 BHP acquired 3D seismic data, with processing underway.

Further work

- BHP will consider future drilling to test lateral and depth extents, as well as grade continuity.

Competent Person statement

The information in the report to which this statement is attached that relates to Exploration Results is based on information compiled by Dr Kathy Ehrig, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (FAusIMM(CP)). Dr Ehrig is a full-time employee of BHP. Dr Ehrig 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'. Dr Ehrig consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

Variance analysis relates to the relative performance of BHP and/or its operations during the six months ended December 2023 compared with the six months ended December 2022, unless otherwise noted. Production volumes, sales volumes and capital and exploration expenditure from subsidiaries are reported on a 100% basis; production and sales volumes from equity accounted investments and other operations are reported on a proportionate consolidation basis. Numbers presented may not add up precisely to the totals provided due to rounding.

The following abbreviations may have been used throughout this report: billion tonnes (Bt); cost and freight (CFR); cost, insurance and freight (CIF); carbon dioxide equivalent (CO₂-e); dry metric tonne unit (dmtu); free on board (FOB); giga litres (GL); greenhouse gas (GHG); grams per cubic centimeter (g/cm³); grams per tonne (g/t); high-potential injury (HPI); kilograms per tonne (kg/t); kilometre (km); million ounces per annum (Mozpa); metres (m); million pounds (Mlb); million tonnes (Mt); million tonnes per annum (Mtpa); ounces (oz); OZ Minerals Limited (OZL); part per million (ppm); pounds (lb); thousand ounces (koz); thousand ounces per annum (kozpa); thousand tonnes (kt); thousand tonnes per annum (ktpa); thousand tonnes per day (ktpd); tonnes (t); total recordable injury frequency (TRIF); wet metric tonnes (wmt); and year to date (YTD).

In this release, the terms 'BHP', the 'Group', 'BHP Group', 'we', 'us', 'our' and 'ourselves' are used to refer to BHP Group Limited and, except where the context otherwise requires, our subsidiaries. Refer to note 30 'Subsidiaries' of the Financial Statements in BHP's 30 June 2023 Annual Report for a list of our significant subsidiaries. Those terms do not include non-operated assets. Notwithstanding that this release may include production, financial and other information from non-operated assets, non-operated assets are not included in the BHP Group and, as a result, statements regarding our operations, assets and values apply only to our operated assets unless stated otherwise. Our non-operated assets include Antamina and Samarco. BHP Group cautions against undue reliance on any forward-looking statement or guidance in this release. These forward-looking statements are based on information available as at the date of this release and are not guarantees or predictions of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control and which may cause actual results to differ materially from those expressed in the statements contained in this release.

Further information on BHP can be found at [bhp.com](https://www.bhp.com)

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