

Australian & New Zealand Gold Operations March Quarter 2025

Overview

The average All-in Sustaining Cost (AISC) for Australia and New Zealand was A\$2,278/oz, which is up 11.1% (A\$227/oz) on the previous quarter average AISC of A\$2,051/oz. Evolution Mining's North Parkes and Ernest Henry operations were the lowest cost producers reporting an AISC of **-A\$3,356/oz**, **-A\$2,992/oz** respectively followed by Ramelius Resources' Mt Magnet operations with an AISC of A\$1,226/oz. The average gold spot price for the quarter was A\$4,552/oz (US\$2,857/oz). It should be noted that North Parkes and Ernest Henry benefit from significant base metal by-products. Aurum Analytics' estimate of these operations AISC on a co-product basis (Co-AISC) is as follows; North Parkes Co-AISC of A\$1,593/oz and Ernest Henry Co-AISC of A\$2,240/oz. The lowest cost "gold only" operations were Ramelius Resource's Mt Magnet operations with an AISC of A\$1,226/oz, Capricorn Metals' Karlawinda mine (A\$1,390/oz), followed by Northern Star's Kalgoorlie operations (A\$1,892/oz).

Newmont's Boddington operation took out top spot as Australia's largest gold producer with 126,000 oz for the quarter, followed by AngloGold Ashanti's and Regis Resources Tropicana operation (105,267 oz) and Newmont's Cadia operations (103,000 oz). Of the mines where gold is a by-product, BHP's Olympic Dam produced the most gold 57,006 oz followed by their Prominent Hill mine with 24,309 oz, then their Carrapateena mine with 21,788 oz.

Grade wise for the companies that report AISC, the average reported mill head/feed grade was 2.37 g/t (Open Pit (OP) - 1.02 g/t, Underground (UG) – 3.48 g/t, Open Pit & Underground (OP/UG) - 1.71 g/t) which was down on the previous quarter, 2.61 g/t (-9.1%). Mandalay Resources' Costerfield mine took out the honour as the operation with the highest average feed grade with 9.60 g/t, followed by Gold Fields' Agnew mine 7.41 g/t. The lowest grade mine was Evolution's Mt Rawdon mine processing an average head grade of 0.40 g/t. The high-grade operations that do not report an AISC were Agnico Eagle's Fosterville mine with 8.63 g/t and Tribune Resources' and Rand Mining's share of the Kundana EKJV mine with 4.37 g/t.

Top 10 Gold Producing Operations

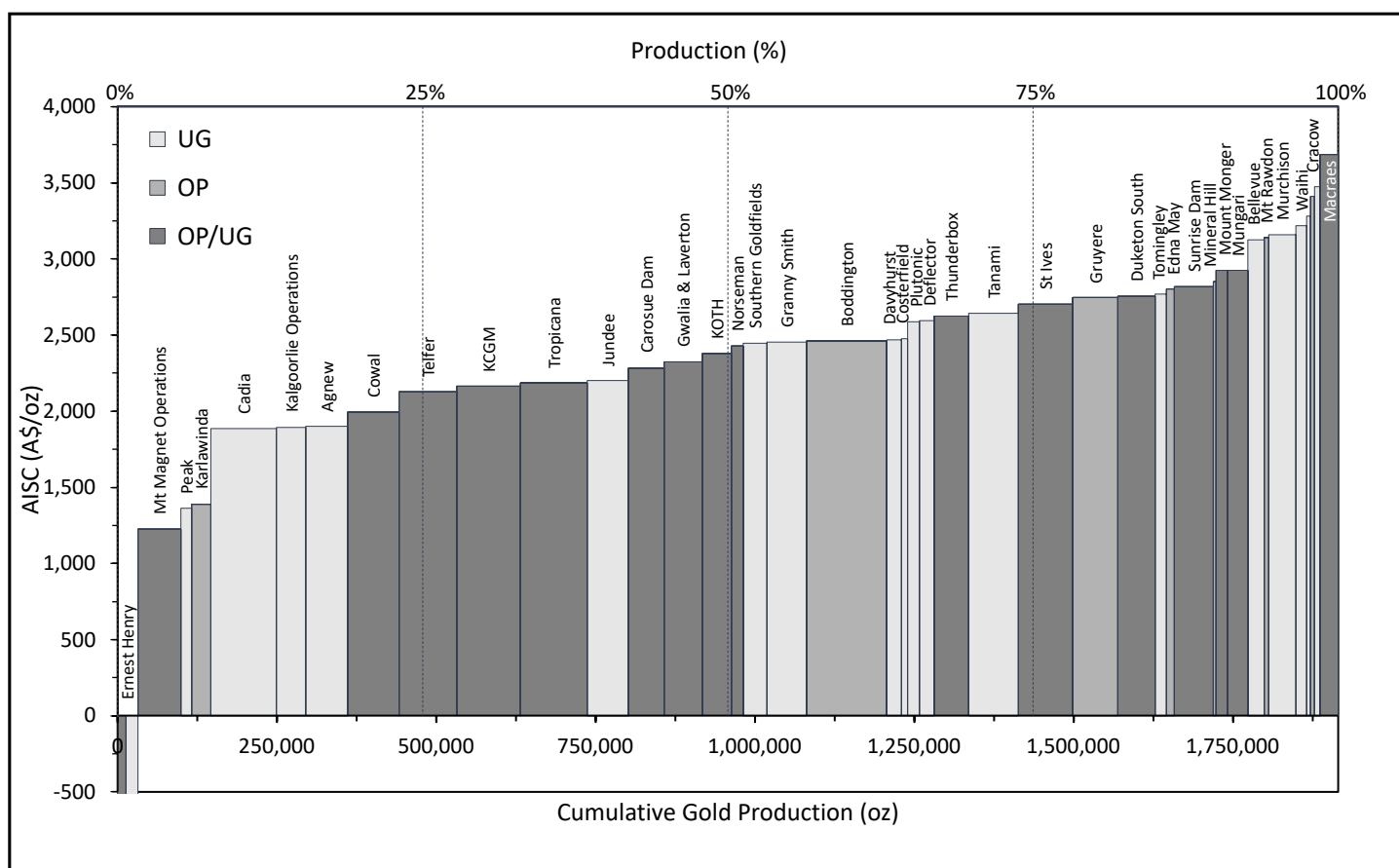
Rank	Operation	Company	Mine Type	Au Produced (oz)
1	Boddington	Newmont Corporation	OP	126,000
2	Tropicana	JV AngloGold Ashanti Limited/Regis Resources Limited	OP/UG	105,267
3	Cadia	Newmont Corporation	UG	103,000
4	KCGM	Northern Star Resources Limited	OP/UG	99,998
5	Telfer	Greatland Gold plc	OP/UG	90,172
6	St Ives	Gold Fields Limited	OP/UG	85,200
7	Cowal	Evolution Mining Limited	OP/UG	80,657
8	Tanami	Newmont Corporation	UG	78,000
9	Gruyere	JV Gold Fields Limited/Gold Road Resources Limited	OP	71,226
10	Mt Magnet Operations	Ramelius Resources Limited	OP/UG	67,464

Gold Operations That Report AISC

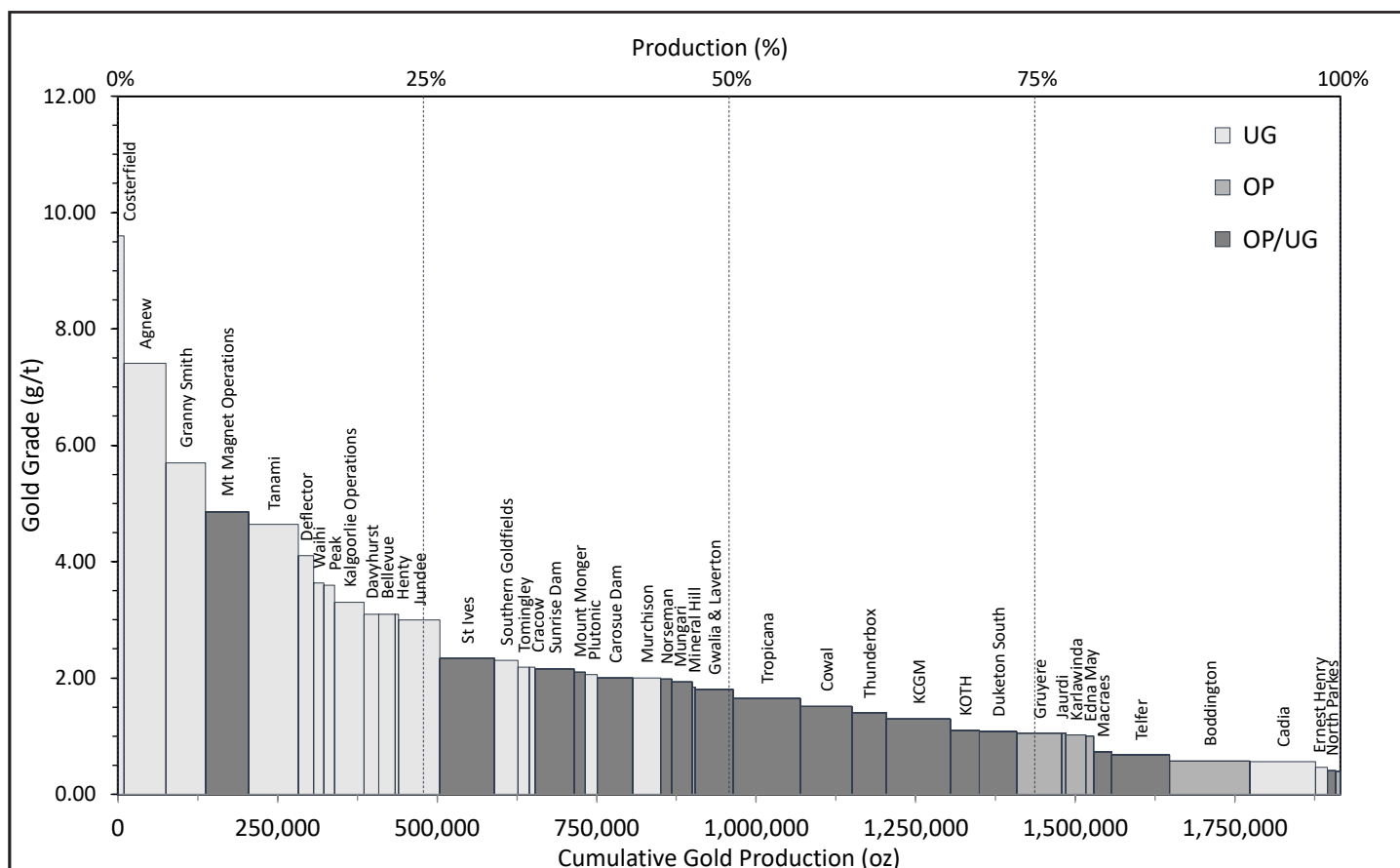
AISC Rank	Operation	Company	Mine Type	AISC (A\$/oz)	Grade (g/t)	Grade Rank	Au Produced (oz)
1	North Parkes	Evolution Mining Limited	OP/UG	-3,356	0.41	42	13,483
2	Ernest Henry	Evolution Mining Limited	UG	-2,992	0.46	41	18,309
3	Mt Magnet Operations	Ramelius Resources Limited	OP/UG	1,226	4.86	4	67,464
4	Peak	Aurelia Metals Limited	UG	1,362	3.59	8	16,590
5	Karlawinda	Capricorn Metals Limited	OP	1,390	1.02	35	30,599
6	Cadia	Newmont Corporation	UG	1,887	0.56	40	103,000
7	Kalgoorlie Operations	Northern Star Resources Limited	UG	1,892	3.30	9	46,092
8	Agnew Lawlers	Gold Fields Limited	UG	1,901	7.41	2	65,500
9	Cowal	Evolution Mining Limited	OP/UG	1,992	1.51	28	80,657
10	Telfer	Greatland Gold plc	OP/UG	2,126	0.68	38	90,172
11	KCGM	Northern Star Resources Limited	OP/UG	2,163	1.30	30	99,998
12	Tropicana	JV AngloGold/Regis Resources	OP/UG	2,186	1.65	27	105,267
13	Jundee	Northern Star Resources Limited	UG	2,200	3.00	13	64,373
14	Carosue Dam	Northern Star Resources Limited	OP/UG	2,285	2.00	21=	56,174
15	Gwalia & Laverton	Genesis Minerals Limited	OP/UG	2,323	1.80	26	59,767
16	KOTH	Vault Mineral Limited	OP/UG	2,380	1.10	31	45,680
17	Norseman	Pantoro Limited	OP/UG	2,427	1.98	23	18,334
18	Southern Goldfields	Westgold Resources Limited	UG	2,446	2.30	15	37,201
19	Granny Smith	Gold Fields Limited	UG	2,455	5.70	3	62,300
20	Boddington	Newmont Corporation	OP	2,461	0.57	39	126,000
21	Davyhurst	Ora Banda Mining Limited	UG	2,470	3.10	10=	23,150
22	Costerfield	Mandalay Resources Limited	UG	2,478	9.60	1	9,549
23	Plutonic	Catalyst Metals Limited	UG	2,587	2.06	20	18,265
24	Deflector	Vault Mineral Limited	UG	2,595	4.10	6	23,349
25	Thunderbox	Northern Star Resources Limited	OP/UG	2,626	1.40	29	54,207
26	Tanami	Newmont Corporation	UG	2,645	4.64	5	78,000
27	St Ives	Gold Fields Limited	OP/UG	2,703	2.34	14	85,200
28	Gruyere	JV Gold Fields/Gold Road	OP	2,748	1.05	33=	71,226
29	Duketon South	Regis Resources Limited	OP/UG	2,753	1.08	32	58,087
30	Tomingley	Alkane Resources Limited	UG	2,770	2.19	16=	17,657
31	Edna May	Ramelius Resources Limited	NM	2,802	1.00	36	12,991
32	Sunrise Dam	AngloGold Ashanti Limited	OP/UG	2,818	2.16	18	61,000
33	Mineral Hill	Kingston Resources Limited	OP	2,851	1.84	25	4,029
34=	Mount Monger	Vault Mineral Limited	OP/UG	2,926	2.10	19	18,081
34=	Mungari	Evolution Mining Limited	OP/UG	2,926	1.93	24	32,095
36	Bellevue	Bellevue Gold Limited	UG	3,124	3.10	10=	25,146
37	Mt Rawdon	Evolution Mining Limited	NM	3,140	0.40	43	7,131
38	Murchison	Westgold Resources Limited	UG	3,160	2.00	21=	42,906
39	Waihi	OceanaGold Corporation	UG	3,218	3.63	7	16,800
40	Henty	Catalyst Metals Limited	UG	3,283	3.10	10=	6,064
41	Jaurdi	Beacon Minerals Limited	OP	3,413	1.05	33=	6,183
42	Cracow	Aeris Resources Limited	UG	3,473	2.19	16=	9,000
43	Macraes	OceanaGold Corporation	OP/UG	3,687	0.73	37	28,412

Notes: Operations shown on a 100% basis, except North Parkes only Evolution's 80% interest is shown.

Gold Production Cost Curve Ranked By Reported AISC



Gold Production Grade Curve Ranked By Average Mill Feed/Head Grade



Gold Mines That Did Not Report All-in Sustaining Costs

Rank	Operation	Company	Mine Type	Grade (g/t)	Au Produced (oz)
1	Fosterville	Agnico Eagle Mines Limited ¹	UG	8.63	43,615
2	Kal East	Black Cat Syndicate Limited	OP	1.62	8,872
3	Second Fortune	Brightstar Resources Limited	UG	2.30	5,207
4	Kundana EKJV	Tribune Resources Limited & Rand Mining Limited	UG	4.37	4,909
5	Coolgardie	Focus Minerals Limited	OP/UG	1.19	3,826
6	Paulsens	Black Cat Syndicate Limited	UG	1.54	3,566
7	Phillips Find	Horizon Minerals Limited	OP	1.46	1,675
8	Boorara	Horizon Minerals Limited	OP	0.79	1,163
9	A1	Kaiser Reef Limited	UG	4.35	551
NR	Ravenswood	EMR Capital ²	OP	NA	NA
NR	Paddington	Zijin Mining Group Company Limited ²	OP/UG	NA	NA
NR	Marvel Loch	Barto Gold Pty Ltd ²	OP/UG	NA	NA
NR	Pajingo	Minjar Gold Pty Ltd ²	UG	NA	NA

1. Agnico Eagle Mines Limited does not report quarterly AISC values for individual mines.

2. These companies do not provide detailed quarterly production statistics.

Mines Where Gold Is A By-Product

Rank	Operation	Company	Mine Type	Au Produced (oz)
1	Olympic Dam	BHP Group Limited	UG	57,006
2	Prominent Hill	BHP Group Limited	UG	24,309
3	Carrapateena	BHP Group Limited	UG	21,788
4	Ernest Henry	Evolution Mining Limited	UG	18,309
5	North Parkes ¹	Evolution Mining Limited	OP/UG	13,483
6	Rosebery	MMG Limited	UG	6,440
7	Golden Grove	29Metals Limited	UG	4,971
8	Mt Colin	Aeris Resources Limited	NM	1,500
9	Tritton	Aeris Resources Limited	UG	1,400
10	Eloise	AIC Mines Limited	UG	1,362
11	Kanmantoo	Hillgrove Resources Limited	UG	730

1. North Parkes is a joint venture between Evolution Mining Limited (80%) and Sumitomo Australia Pty Ltd (20%). Gold produced represents Evolutions 80% interest for part ownership of the quarter only.

Quarter on Quarter Change in AISC and Grade

Statistic	AISC (A\$/oz)	Change (%)	Grade (g/t)	Change (%)
Average (Simple) ¹	2,278	11.1%	2.37	-9.1%
Average (Weighted) ²	2,284	12.9%	1.27	-9.8%
Minimum	-3,356	-55.7%	0.40	2.6%
First Quartile ³	2,126	17.8%	1.05	-18.0%
Median ³	2,380	20.9%	1.80	-15.5%
Third Quartile ³	2,703	16.8%	3.00	2.7%
Maximum	3,687	11.3%	9.60	-18.8%

Notes: This table of statistics is only based on mines that report an AISC.

1. Simple averages done by number of mining operations.

2. AISC weighted by gold ounces produced, Au grade weighted by ore tonnes milled.

3. First Quartile, Median and Third Quartile values are based on production in the AISC Cost Curve and Grade Curve.

Top 5 Gold Operations - Major Gold Miners

Gold Production (Attributable)			All-in Sustaining Costs		
Rank	Operation	oz	Rank	Operation	A\$/oz
1	Boddington	126,000	1	Cadia Valley	1,887
2	Cadia	103,000	2	Kalgoorlie Operations	1,892
3	KCGM	99,998	3	Agnew Lawlers	1,901
4	St Ives	85,200	4	KCGM	2,163
5	Tanami	78,000	5	Jundee	2,200

Top 5 Gold Operations - Mid-Tier Gold Miners

Gold Production (Attributable)			All-in Sustaining Costs		
Rank	Operation	oz	Rank	Operation	A\$/oz
1	Telfer	90,172	1	North Parkes	-2,156
2	Cowal	80,657	2	Ernest Henry	-2,108
3	Mt Magnet Operations	67,464	3	Mt Magnet Operations	1,277
4	Gwalia & Laverton	59,767	4	Cowal	1,773
5	Duketon South	58,087	5	Tropicana (30% Regis Resources Limited)	1,804

Top 5 Gold Operations - Junior Gold Miners

Gold Production (Attributable)			All-in Sustaining Costs		
Rank	Operation	oz	Rank	Operation	A\$/oz
1	Gruyere (50% Gold Road Resources Limitd)	35,613	1	Peak	1,362
2	Karlawinda	30,599	2	Karlawinda	1,390
3	Bellevue	25,146	3	Norseman	2,427
4	Davyhurst	23,150	4	Davyhurst	2,470
5	Norseman	18,334	5	Costerfield	2,478

Top 5 Pure Gold Operations (No Base Metal By or Co-Products)

Gold Production (Total)			All-in Sustaining Costs		
Rank	Operation	oz	Rank	Operation	A\$/oz
1	Tropicana ¹	105,267	1	Mt Magnet Operations	1,226
2	KCGM	99,998	2	Karlawinda	1,390
3	St Ives	85,200	3	Kalgoorlie Operations	1,892
4	Cowal	80,657	4	Agnew Lawlers	1,901
5	Tanami	78,000	5	Cowal	1,992

1. Tropicana is a joint venture between AngloGold Ashanti Limited (70%) and Regis Resources Limited (30%).

General Notes

Data was sourced from company quarterly reports. Aurum Analytics created the cost and grade curves. Mine Type reflects the source of the ore mined for the quarter, OP - Open Pit, UG - Underground, OP/UG - Open Pit and Underground and NM - No Mining.

For operations in joint venture such as Gruyere and Tropicana AISC values were apportioned by equity ownership percentages.

Where AISC values were reported in US\$ and no A\$ equivalent provided, the quarterly average US\$/A\$ exchange rate (0.6273) from the Reserve Bank of Australia was used.

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About Aurum Analytics

Aurum Analytics is an independent business providing information and analysis on the Australian and New Zealand gold industry. The information and analysis given is a by-product of Sam Ulrich's PhD research at The University of Western Australia's Centre for Exploration Targeting titled "Insights into the Economic Cost Structure of Gold Mining: From All-in Sustaining Costs to Quantifying Externalities."

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