

# NI 43-101 TECHNICAL REPORT CUE GOLD OPERATIONS MURCHISON GOLDFIELDS, WESTERN AUSTRALIA

Report Date: October 31, 2024 Effective Date: June 30, 2024

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# DATE AND SIGNATURE PAGE

Technical Report Title:

NI 43-101 Technical Report Cue Gold Operations Murchison Goldfields, Western Australia

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October 31, 2024

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October 31, 2024



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# 1 SUMMARY

# 1.1 INTRODUCTION

This technical report (the Technical Report) titled Cue Gold Operations, Murchison Goldfields, Western Australia has been prepared by Westgold Resources Limited (Westgold) following completion of the updated Mineral Resource and Mineral Reserve for Cue Gold Operations as of 30 June 2024.

This Technical Report dated October 31, 2024, can be found on Westgold's website at www.westgold.com.au and under Westgold's profile at www.sedarplus.ca.

The Report was prepared in accordance with the requirements of National Instrument 43-101 (NI 43-101), 'Standards of Disclosure for Mineral Projects', of the Canadian Securities Administrators (CSA) for lodgement on CSA's System for Electronic Document Analysis and Retrieval (SEDAR+).

All amounts have been presented in Australian Dollars (\$) unless otherwise indicated.

# 1.2 PROPERTY DESCRIPTION AND OWNERSHIP

The Cue Gold Operations (CGO) are owned by Big Bell Gold Operations Pty Ltd, a 100% owned subsidiary of Westgold.

CGO comprises the Big Bell, Cuddingwarra, Day Dawn and Tuckabianna Mineral Fields, two accommodation villages, the Tuckabianna Mill, seventy-eight mineral leases (as of June 30, 2023) and underground mining operations including the Big Bell, Fender and Great Fingall mines.

Westgold acquired CGO in May 2011. In November 2015 the Comet mine was added to the project and this was followed by the acquisition of the Tuckabianna Mill and associated mineral leases following in June 2017. The mill is located at Tuckabianna, Western Australia, approximately 25 km east of the township of Cue. The mill has a capacity of 1.4 Mtpa.

# 1.3 CUE - GEOLOGY AND MINERALISATION

CGO is located in the Achaean Murchison Province, a granite-greenstone terrane in the northwest of the Yilgarn Craton. Greenstone belts trending north-northeast are separated by granite-gneiss domes, with smaller granite plutons also present within or on the margins of the belts.

The greenstone belts comprise tholeiitic and high-Mg basalts, komatiites and other ultramafic volcanics, mafic and ultramafic intrusives (dolerites, gabbros, dunites), felsic and intermediate volcanics and metasediments including banded iron formations. A definitive stratigraphic succession per se cannot be established for the greenstone belts as outcrop mapping and geochronological studies have shown inconsistencies in previous stratigraphic schemes (e.g. Watkins and Hickman, 1990).



The Big Bell Greenstone Belt is comprised of variably altered and intensely sheared, northnortheast-trending amphibolites and felsic schists. The muscovite and biotite-altered rocks hosting gold mineralisation at Big Bell are informally referred to as the Big Bell Mine Sequence.

Mineralisation at Big Bell is hosted within a shear zone and is associated with the postpeak metamorphic retrograde assemblages (Smith, 1998). Stibnite, native antimony and trace arsenopyrite are disseminated through the K-feldspar-rich lode schist. These are intergrown with pyrite and pyrrhotite, which are noted in most rocks of the Mine Sequence, and chalcopyrite (Barnes, 1996). Mineralisation outside the typical Big Bell host rocks (KPSH), for example 1,600N and Shocker, also display a very strong W-As-Sb geochemical halo (Barnes, 1999).

The Cuddingwarra Project area encloses three lithological sequences;

- A high-Mg basalt and basalt sequence in the west.
- Intercalated komatiites and high-Mg basalts, with minor tholeiitic basalts and dolerite units in the centre of the project area, which are punctuated by numerous early granodioritic intrusives and quartz-feldspar porphyries.
- A sequence of sediments and volcaniclastics in the east.

Numerous gold deposits occur within the Cuddingwarra Project area, the majority of which are hosted within the central mafic-ultramafic ± felsic porphyry sequence. Structural analyses indicated the presence of at least three separate deformation episodes. Within this broad framework, mineralisation was shown to be spatially related to the D2 and D3 events, with gold tenor maximised where structures from both were coincident. Mineralisation is controlled by competency contrasts across, and flexures along, layer-parallel D2 shear zones, and is maximised when transected by corridors of northeast striking D3 faults and fractures.

A significant degree of supergene remobilisation of gold has occurred within the deep and intense weathering profile and is an important mechanism controlling economic concentrations of gold.

The Day Dawn project tenements cover a section of the Meekatharra-Wydgee Greenstone Belt extending approximately 35 km southwest from Cue. The strike of this belt changes, from north-northeast to north, just to the south of Mount Fingall (approximately 13 km southwest of Cue), due to drag on the Cuddingwarra Shear Zone (CSZ).

The lithological units of the greenstone belt within the project area are correlated with the Gabanintha Formation. The 3 km thick sequence consists of predominantly extrusive basic volcanics and their intrusive counterparts, which may be divided into three broad groups;

- Hangingwall Basalts (HWB).
- Great Fingall Dolerite (GFD).
- Footwall Basalts (FWB).



The GFD is a large (up to 600 m thick), differentiated tholeiitic sill that strikes northnortheast and dips 60-70° west-northwest. It extends over a strike length of at least 16 km, from Cue in the north (where it is terminated against the Cue Gabbro and a postfolding granodiorite) to the Cuddingwarra Shear Zone in the vicinity of Lake Austin in the south.

The GFD is a major lithological control on gold mineralisation, thought largely to be driven by its brittle nature and high competency contrast with the surrounding rocks of the HWB and FWB,

The Tuckabianna project area lies in the Archaean Murchison Province within a northeast trending supracrustal greenstone sequence comprising various volcanic, intrusive and sedimentary rocks that form part of the Luke Creek Group. Mineralisation is concentrated within the lower formations of the Group (Golconda Formation and Gabanintha Formation), which dominate the greenstone belt in the district (Watkins and Hickman, 1990).

Mineralisation at Tuckabianna is associated with the Tuckabianna Shear Zone (also referred to as the Comet - White Well Shear Zone), a broad (1 to 2 km wide), northnortheast trending zone of intense deformation and alteration stretching the entire 30 km length of the Tuckabianna project area. The shear zone is a portion of the much larger Mount Magnet-Meekatharra Shear Zone, which extends at least 180 km between these two main mining centres and beyond. The shear zone is very poorly exposed and marked by deep weathering.

### 1.4 MINERAL RESOURCE ESTIMATES

The CGO Mineral Resource estimate is presented Table 1-1.

Cue Gold Project Mineral Resource Statement - Rounded for Reporting 30/06/2024												
	Measured			Indicated			Measured and Indicated			Inferred		
Project	kt	g/t	koz	kt	kt g/t koz		kt	g/t	koz	kt	g/t	koz
Big Bell UG	4,022	3.07	397	7,965	3.33	853	11,988	3.24	1,250	5,927	3.11	593
Fender UG	95	3.22	10	201	3.05	20	297	3.10	30	345	3.33	37
Great Fingall UG	0	0.00	0	1,616	5.25	273	1,616	5.25	273	883	3.51	100
Golden Crown UG	0	0.00	0	333	6.18	66	333	6.18	66	944	5.14	156
Big Bell District	60	2.81	5	802	2.64	68	861	2.65	73	1,848	2.94	175
Cuddingwarra	85	1.66	5	1,600	1.63	84	1,685	1.63	88	597	1.50	29
Day Dawn District	58	1.73	3	1,068	2.04	70	1,126	2.02	73	1,043	1.78	60
Tuckabianna	267	3.54	30	3,448	2.78	308	3,715	2.84	339	2,899	2.63	245
Stockpiles	81	2.09	5	3,627	0.70	81	3,709	0.73	87	0	0.00	0
Total	4,669	3.04	456	20,661	2.74	1,823	25,330	2.80	2,279	14,485	2.99	1,394



- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

### 1.5 MINERAL RESERVE ESTIMATES

The Cue Mineral Reserve Estimate is presented Table 1-2.

Cue Gold Operations Mineral Reserve Statement - Rounded for Reporting									
30/06/2024									
	Proven			Probable			Proven and Probable		
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell UG	9,808	1.48	467	4,898	3.10	489	14,706	2.02	956
Fender UG	81	2.58	7	147	2.68	13	228	2.65	19
Great Fingall UG	0	0.00	0	1,895	4.20	256	1,895	4.20	256
Golden Crown UG	0	0.00	0	230	4.52	33	230	4.52	33
Big Bell District	0	0	0	59	2.98	6	59	2.98	6
Cuddingwarra	0	0	0	98	1.77	6	98	1.77	6
Day Dawn District	0	0.00	0	0	0.00	0	0	0.00	0
Tuckabianna	0	0.00	0	683	3.00	66	683	3.00	66
Stockpiles	81	2.09	5	3,627	0.70	81	3,709	0.73	87
Total	9,971	1.50	480	11,636	2.54	949	21,606	2.06	1,429

#### Table 1-2 Cue Gold Operations Mineral Reserves at June 30, 2024.

1 The Mineral Reserve is reported at varying cut-off grades per based upon economic analysis of each individual deposit.

- Key assumptions used in the economic evaluation include:
  - a) A metal price of A\$3,000/oz gold for underground operations and A\$2,600/oz gold for open pit operations.
  - b) Metallurgical recovery varies by deposit.

2



- c) The cut-off grade takes into account operating, mining, processing/haulage and G&A costs, excluding capital.
- 3 The Mineral Reserve is depleted for all mining to June 30, 2024.
- 4 The tonnes and grades are stated to a number of significant digits reflecting the confidence of the estimate. Since each number is rounded individually, the table may show apparent inconsistencies between the sum of rounded components and the corresponding rounded total.
- 5 The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (the point where material is delivered to the mill) and is therefore inclusive of ore loss and dilution.
- 6 CIM Definition Standards (2014) were followed in the estimation of Mineral Reserves.
- 7 Gold Mineral Reserve estimates were prepared under the supervision of Qualified Person L Devlin, FAusIMM.

### 1.6 OPERATIONS AND DEVELOPMENT

At CGO, the Tuckabianna Mill has been in operation since March 2018, and local mill feed variability is well understood. Since acquisition by Westgold in June 2017, the mill has received Big Bell, Cuddingwarra, Day Dawn and Tuckabianna mineralisation for processing. The plant is two stage crush to a ball mill with a conventional carbon-in-leach (CIL) gold processing plant built for Silverlake Resources from relocated equipment in 2012. The plant has a nominal the capacity of 1.4 Mtpa.

Since acquiring CGO in February 2011, from the restart in March 2018 until June 2024, the Tuckabianna Mill has processed 7.9 Mt at 2.2 g/t. Mining is active at the Big Bell, Fender and Great Fingall underground mines.

# 1.7 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

The Tuckabianna Mill operates under all necessary permits, with Westgold responsible for compliance with environmental regulations for both mining and processing activities. Tuckabianna is part of the Cue Gold Operations, with tenure over 156 km<sup>2</sup>. This area includes a processing facility, tailings storage facilities (TSF), open pits, underground mines, worker camps, and haul roads.

The current workforce of approximately 300 people primarily consists of fly-in/fly-out (FIFO) workers from Perth. Westgold runs dedicated charter flights from Perth to Cue Airport three times a week (Mondays, Thursdays, and Fridays) with capacity for the entire FIFO workforce. Additionally, the FIFO workers are supplemented by workers who reside in regional towns such as Geraldton.

The region is located in the state of Western Australia, which was ranked as the secondbest jurisdiction in the world for mining investment by the Fraser Institute in their 2023 survey (Bromby, 2023).

# 1.8 CAPITAL AND OPERATING COSTS

Westgold has a long history of cost information for capital and operating costs and to the extent possible, mining, processing and site administration costs were derived from actual performance data, in addition to recent supplier quotations. As such, these costs are well understood and allow enough detail for Mineral Reserves to be declared.

The following data were used to inform the cost estimate.



### 1.8.1 Underground

The costs are scheduled based on combination of first principles and internal underground contractor unit costs and scheduled physicals. Fixed and variable costs have been included as appropriate. Personnel quantities (including mine management, supervision, underground personnel and maintenance) have been calculated from the activity required in the scheduled physicals and used to calculate salaries, wages, on costs, flights and accommodation.

Capital costs include non-sustaining capital for ventilation infrastructure upgrades and new equipment and sustaining capital in the form of mine development extending the decline, ventilation and electrical network.

### 1.8.2 Open Pit Mining

The costs are scheduled based on contractor unit costs. Fixed and variable costs have been included as appropriate. Personnel quantities (including mine management, supervision, open pit personnel and maintenance) have been calculated from the activity required in the scheduled physicals and used to calculate salaries, wages, on costs, flights, and accommodation. Capital costs have been separated.

### 1.8.3 Processing and Tailings Storage Facilities

The costs are scheduled based on first principles unit costs and the scheduled physicals. Fixed and variable costs have been included as appropriate. Personnel quantities (including mill management, supervision, mill operators and maintenance) have been calculated from the activity required in the scheduled physicals and used to calculate salaries, wages, on costs, flights, and accommodation.

Sustaining capital expenditure is allocated for tailings lifts, plant and process improvements including process optimisation, ongoing processing equipment costs (replacements, rebuilds and major overhauls), and other infrastructure replacement, including water security and electrical infrastructure.

#### 1.8.4 General and Administration

The costs are scheduled based on first principles unit costs and scheduled physicals. Fixed and variable costs have been included as appropriate. Personnel quantities have been calculated from the activity required in the scheduled physicals and used to calculate salaries and wages.

#### 1.8.5 Royalties

Gross royalties are calculated as respective percentage of block revenue less all relevant deductions applicable to that royalty.

The Net Smelter Royalties calculation takes into account revenue factors, metallurgical recovery assumptions, transport costs and refining recovery and charges. The site operating costs vary between royalty and commodity and can include mining cost, processing cost, relevant site, transport, general and administration costs, and relevant sustaining capital costs.



# 1.8.6 Closure Costs

Closure costs are based on detailed estimates prepared under the Mine Closure Plan.

# 1.9 CONCLUSION AND RECOMMENDATIONS

The recently updated Gold Mineral Reserves for the Cue Gold Operations (CGO) provide the opportunity to deliver medium- to long-term security for the ongoing development of CGO.

Specific recommendations to support securing CGO's future include:

- Using the security of the Gold Mineral Reserve to develop medium- to long-term improvements in operational performance and costs, and also to provide leverage for capital investment if required.
- Complete a property-wide review of the Mineral Resources with the aim to prioritise extensional opportunities to support the combined mill capacity for future production.
- Realise the growth potential of the project by supporting exploration with sufficient funds to test high quality greenfields exploration targets.



# 2 INTRODUCTION

The Technical Report has been prepared by and for Westgold Resources Limited (Westgold or the Company), a Perth, Western Australia headquartered mineral resource company focused on the exploration, development and acquisition of precious metals properties, at the request of the Company's senior executives.

The Company demerged from ASX listed Metals X Limited (Metals X), and commenced trading on the ASX on December 6, 2016.

Westgold acquired CGO through a staged acquisition process, firstly acquiring the Central Murchison Gold Project (the Big Bell, Cuddingwarra and Day Dawn mineral fields) via a merger in October 2012 with Westgold Resources limited when trading as Metals X Limited. In November 2015 the Comet mine was added to the project via purchase from Silverlake Resources.

Metals X demerged its base metals and gold assets into separate listings in December 2016, with the gold asset vehicle being the current Westgold Resources Limited (ASX : WGX), and subsequently acquired the Tuckabianna mineral field, Tuckabianna Mill and Cue Camps via direct purchase from previous operator Silverlake Resources in June 2017.

The CGO assets are held by Big Bell Gold Operations Pty Ltd, a 100% owned subsidiary of Westgold.

This Technical Report covers the Cue Gold Operations and has been prepared by Westgold following completion of updated Mineral Resources and Reserves for CGO effective 1 October 2024. The Technical Report will also be available on the SEDAR+ website.

The Cue Gold Operations comprises the following:

- The Big Bell, Cuddingwarra, Day Dawn and Tuckabianna mineral fields.
- Seventy eight mineral leases as of 1 October 2024.
- The operating Big Bell, Fender and Great Fingall mines.
- The 1.4 Mtpa Tuckabianna processing plant.
- The 266 room Cue accommodation village and the 160 room Big Bell accommodation village.

The Company has reported the Cue Mineral Resources and Reserve estimations under 'The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition' (JORC, 2012; the JORC Code). There are no material differences between the definitions of 'Mineral Resource' and 'Mineral Reserve' under the applicable definitions adopted by the Canadian Institute of Mining, Metallurgy and Petroleum (the CIM Definition Standards) and the corresponding equivalent definitions in the JORC Code.



This Technical Report supports the updated Cue Gold Project Mineral Resource and Reserve estimations and has been prepared in accordance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 (NI 43-101), Companion Policy 43-101CP and Form 43-101F1.

# 2.1 REPORT CONTRIBUTORS AND QUALIFIED PERSON

The Technical Report was assembled by Qualified Person (QP) Jake Russell. The details of all QPs and contributors are summarised in **Table 2-1**, along with dates that each QP and contributor last visited the operation.

Name	Position	Employer	Independent	Operation Visit Date	Professional Designation	Contribution (section)		
QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION AND SIGNING OF THIS TECHNICAL REPORT								
Jake Russell	General Manager - Technical Services	Westgold	No	August-24	BSc. (Hons), MAIG	1,2,3,4,5,6,7,8,9,10, 11, 12, 14, 19, 20, 22, 23,24, 25, 26, 27		
Leigh Devlin	General Manager - LoM Planning and Studies	Westgold	No	Mar-24	BEng., Grad Dip Eng (Mining), BA FAusIMM	13, 15, 16, 17, 18, 21		
OTHER PERSO	OTHER PERSONS WHO ASSISTED THE QUALIFIED PERSON							
Tim Cook	Manager - Compliance	Westgold	No	N/A	N/A	4, 20		
Mark Cronin	Regional Senior Planning Engineer	Westgold	No	Oct-23	BEng	13, 15, 16, 17, 18, 21		
Kaisan Critchell	Group Manager – Environment & Sustainability	Westgold	No	Jul-24	BSc, PGDip	4, 5, 17, 18, 20		
Geoff Cheong	Group Metallurgy Manager	Westgold	No	May-24	B. App. Sci (Metallurgy) MAusIMM	1, 4, 17, 18		
David Hunt	Superintendent Resource Geology	Westgold	No	Aug-24	BSc. (Hons). MAIG	6, 7, 8, 14		
Simon Rigby	General Manager Exploration and Growth	Westgold	No	Aug-24	BSc. (Hons), MAIG	9, 10, 24		
Reece Witten	Group Resource Geologist	Westgold	No	Aug-24	MAIG MAusIMM	6, 7, 8, 14		

Table 2-1 Persons who prepared or contributed to this Technical Report.

The authors of this report have assumed and relied on the fact that all the information and technical documents listed in Section 27 (References), are accurate and complete in all material aspects. While the authors have carefully reviewed, within the scope of their technical expertise, all the available information presented to them, they cannot guarantee its accuracy and completeness. The authors reserve the right, but will not be obligated to, revise the Technical Report and its conclusions if additional information becomes known to them subsequent to the effective date of this report.

Information sources and other parties relied upon to provide technical content and review are shown in **Table 2-2**.

Information Supplied	Other Parties	Section
Ownership, title, social and environmental studies and information	Westgold	1, 2, 4, 6, 7, 9, 10, 20
Infrastructure capital and operating estimates	Westgold	1, 18, 21, 22
Market studies & contracts	Westgold	1, 19

Table 2-2 Other parties relied upon to provide technical content to this Technical Report.



#### 3 **RELIANCE ON OTHER EXPERTS**

The authors are not experts with respect to legal, socio-economic, land title or political issues, and are therefore not qualified to comment on issues related to the status of permitting, legal agreements and royalties.

Information related to these matters has been provided directly by Westgold and include, without limitation, validity of mineral tenure, status of environmental and other liabilities, and permitting to allow completion of annual assessment work.

These matters were not independently verified by the QPs and appear to be reasonable representations that are suitable for inclusion in this report. Furthermore, the authors have not attempted to verify the legal status of the property; however, the Western Australian Department of Mines, Energy, Industry Regulation and Safety (DEMIRS) reports that Westgold's mineral licences / tenements are active and in good standing at the effective date of this report.



#### 4 **PROPERTY DESCRIPTION AND LOCATION**

#### 4.1 LOCATION

The Cue Gold Operations (CGO) comprises the 1.4 Mtpa Tuckabianna Mill, three active underground mines (Big Bell, Fender and Great Fingall) and two accommodation villages.

The Tuckabianna Mill is located 31 km east of Cue by road and 691 km north of the state capital of Perth (Figure 4-1) along the Great Northern Highway. The mill is accessed via the Cue – Wondinong Road, which is located 7.2 km south of the mill or the Miner's Pass, 29 km southwest of the mill.

#### 4.2 MINERAL TENURE

#### 4.2.1 Cue

The Cue Gold Operations (CGO) encompass the Tuckabianna Mill, all related infrastructure, ongoing mining activities, and prospective exploration areas. These operations span over seventy eight active mining tenements across approximately 157 km<sup>2</sup> (live) owned by Westgold (Table 4-1 and Figure 4-3). DEMIRS recently approved the mining proposal for the construction of the new Tuckabianna West In-Pit TSF and TSF 3 (TSF3) to manage tailings impoundment for an additional eleven years.

In respect of each tenement, there is an expenditure commitment, rent payable to DEMIRS and local government rates. There is also an annual reporting requirement for each tenement or group of tenements, pursuant to the Mining Act 1978 (WA) (Mining Act).

The tenements that make up the CGO are currently in good standing supported by Westgold's strong compliance with regulatory reporting requirements and relevant operating conditions of licences and permits.



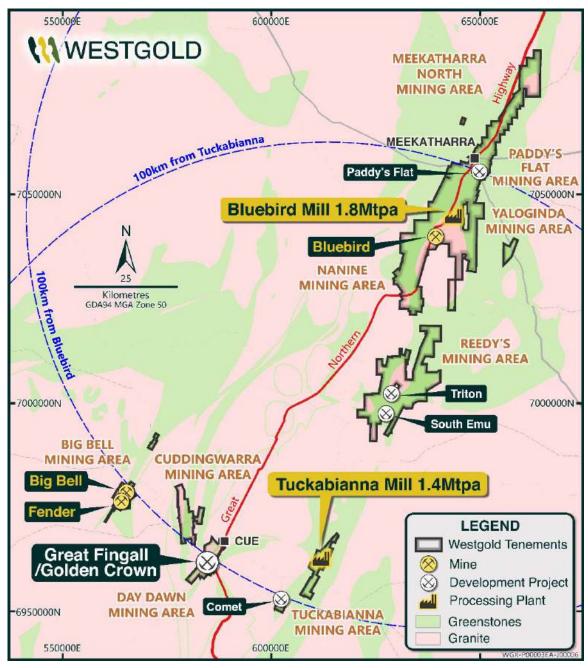


Figure 4-1 Westgold Murchison operations asset map p - Source: Westgold.

Lease	Status	Commence	Expiry	Commitment	Next Rent	Approx Area ha	Holders
G20/1	LIVE	3/04/1986	4/11/2026		\$5,808.00	241.35	BIG BELL GOLD OPERATIONS PTY LTD
G20/2	LIVE	3/04/1986	4/11/2026		\$4,896.00	203.4	BIG BELL GOLD OPERATIONS PTY LTD
G20/3	LIVE	3/04/1986	4/11/2026		\$816.00	33.845	BIG BELL GOLD OPERATIONS PTY LTD
G20/11	LIVE	19/05/1999	18/05/2041		\$48.00	1.2145	BIG BELL GOLD OPERATIONS PTY LTD
G20/23	LIVE	15/11/2019	14/11/2040		\$26.40	1	BIG BELL GOLD OPERATIONS PTY LTD
L20/21	LIVE	18/04/1989	17/04/2029		\$3,816.00	158.22	BIG BELL GOLD OPERATIONS PTY LTD
L20/29	LIVE	29/01/1991	28/01/2026		\$72.00	3	BIG BELL GOLD OPERATIONS PTY LTD

Table 4-1 Cue Gol	d Operations Mineral	Tenure Information.
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Lease	Status	Commence	Expiry	Commitment	Next Rent	Approx Area ha	Holders
L20/38	LIVE	23/11/1995	22/11/2025		\$264.00	9.97	BIG BELL GOLD OPERATIONS PTY LTD
L20/39	LIVE	27/12/1996	26/12/2026		\$1,372.80	51.43	BIG BELL GOLD OPERATIONS PTY LTD
L20/40	LIVE	27/10/1998	26/10/2028		\$3,696.00	139.2	BIG BELL GOLD OPERATIONS PTY LTD
L20/41	LIVE	27/10/1998	26/10/2028		\$264.00	9.43	BIG BELL GOLD OPERATIONS PTY LTD
L20/52	LIVE	17/04/2007	16/04/2028		\$600.00	25	BIG BELL GOLD OPERATIONS PTY LTD
L20/82	LIVE	18/10/2019	17/10/2040		\$554.40	20.84145	BIG BELL GOLD OPERATIONS PTY LTD
L21/11	LIVE	27/02/1990	26/02/2025		\$24.00	0.935	BIG BELL GOLD OPERATIONS PTY LTD
L21/14	LIVE	31/07/2012	30/07/2033		\$158.40	6	BIG BELL GOLD OPERATIONS PTY LTD
L21/16	LIVE	23/01/2012	22/01/2033		\$480.00	20	BIG BELL GOLD OPERATIONS PTY LTD
L21/17	LIVE	23/01/2012	22/01/2033		\$1,584.00	65.3	BIG BELL GOLD OPERATIONS PTY LTD
L21/19	LIVE	4/12/2015	3/12/2036		\$79.20	2.3355	BIG BELL GOLD OPERATIONS PTY LTD
L21/20	LIVE	23/05/2017	22/05/2038		\$144.00	5.1096	BIG BELL GOLD OPERATIONS PTY LTD
M20/17	LIVE	5/11/1984	4/11/2026	\$53,500.00	\$15,301.00	534.5	BIG BELL GOLD OPERATIONS PTY LTD
M20/21	LIVE	29/08/1985	28/08/2027	\$10,100.00	\$2,888.60	100.8	BIG BELL GOLD OPERATIONS PTY LTD
M20/22	LIVE	29/08/1985	28/08/2027	\$10,000.00	\$257.40	8.4	BIG BELL GOLD OPERATIONS PTY LTD
M20/50	LIVE	25/02/1987	24/02/2029	\$15,500.00	\$4,030.00	154.3	BIG BELL GOLD OPERATIONS PTY LTD
M20/55	LIVE	19/05/1987	18/05/2029	\$34,500.00	\$8,970.00	344.25	BIG BELL GOLD OPERATIONS PTY LTD
M20/78	LIVE	14/01/1988	13/01/2030	\$15,200.00	\$3,952.00	151.9	BIG BELL GOLD OPERATIONS PTY LTD
M20/98	LIVE	19/02/1988	18/02/2030	\$26,800.00	\$6,968.00	267.15	BIG BELL GOLD OPERATIONS PTY LTD
M20/99	LIVE	19/02/1988	18/02/2030	\$24,600.00	\$6,396.00	245.9	BIG BELL GOLD OPERATIONS PTY LTD
M20/102	LIVE	27/07/1988	26/07/2030	\$58,500.00	\$16,731.00	584.05	BIG BELL GOLD OPERATIONS PTY LTD
M20/103	LIVE	19/05/1988	18/05/2030	\$56,900.00	\$14,794.00	569	BIG BELL GOLD OPERATIONS PTY LTD
M20/104	LIVE	19/05/1988	18/05/2030	\$35,300.00	\$9,178.00	352.25	BIG BELL GOLD OPERATIONS PTY LTD
M20/108	LIVE	6/05/1988	5/05/2030	\$93,300.00	\$24,258.00	932.7	BIG BELL GOLD OPERATIONS PTY LTD
M20/111	LIVE	6/05/1988	5/05/2030	\$24,100.00	\$6,266.00	240.05	BIG BELL GOLD OPERATIONS PTY LTD
M20/171	LIVE	29/06/1989	28/06/2031	\$19,800.00	\$5,148.00	197.55	BIG BELL GOLD OPERATIONS PTY LTD
M20/176	LIVE	10/04/1989	9/04/2031	\$32,300.00	\$8,398.00	322.55	BIG BELL GOLD OPERATIONS PTY LTD
M20/183	LIVE	5/09/1989	4/09/2031	\$10,000.00	\$257.40	8.0905	BIG BELL GOLD OPERATIONS PTY LTD
M20/192	LIVE	11/09/1990	10/09/2032	\$16,200.00	\$4,633.20	161.4741	BIG BELL GOLD OPERATIONS PTY LTD
M20/195	LIVE	16/05/1990	15/05/2032	\$78,500.00	\$20,410.00	784.35	BIG BELL GOLD OPERATIONS PTY LTD
M20/197	LIVE	14/06/1990	13/06/2032	\$10,000.00	\$2,522.00	96.745	BIG BELL GOLD OPERATIONS PTY LTD
M20/202	LIVE	24/10/1991	23/10/2033	\$10,000.00	\$1,201.20	41.695	BIG BELL GOLD OPERATIONS PTY LTD
M20/208	LIVE	4/12/1990	3/12/2032	\$82,000.00	\$23,452.00	819.75	BIG BELL GOLD OPERATIONS PTY LTD
M20/218	LIVE	2/04/1992	1/04/2034	\$10,000.00	\$2,002.00	76.625	BIG BELL GOLD OPERATIONS PTY LTD
M20/247	LIVE	26/10/1992	25/10/2034	\$10,000.00	\$286.00	9.9855	BIG BELL GOLD OPERATIONS PTY LTD
M20/252	LIVE	16/12/1992	15/12/2034	\$80,000.00	\$22,880.00	799.5	BIG BELL GOLD OPERATIONS PTY LTD
M20/256	LIVE	18/05/1993	17/05/2035	\$10,000.00	\$2,288.00	87.985	BIG BELL GOLD OPERATIONS PTY LTD



Lease	Status	Commence	Expiry	Commitment	Next Rent	Approx Area ha	Holders
M20/293	LIVE	28/11/1995	27/11/2037	\$84,800.00	\$24,252.80	847.15	BIG BELL GOLD OPERATIONS PTY LTD
M20/297	LIVE	17/05/1999	16/05/2041	\$10,900.00	\$2,834.00	108.8	BIG BELL GOLD OPERATIONS PTY LTD
M20/299	LIVE	27/02/1996	26/02/2038	\$13,600.00	\$3,536.00	135.9	BIG BELL GOLD OPERATIONS PTY LTD
M20/301	LIVE	27/02/1996	26/02/2038	\$17,000.00	\$4,420.00	169.5	BIG BELL GOLD OPERATIONS PTY LTD
M20/307	LIVE	3/04/1996	2/04/2038	\$10,000.00	\$1,092.00	41.7987	BIG BELL GOLD OPERATIONS PTY LTD
M20/332	LIVE	13/03/2015	12/03/2036	\$21,300.00	\$5,538.00	212.6	BIG BELL GOLD OPERATIONS PTY LTD
M20/333	LIVE	13/03/2015	12/03/2036	\$12,200.00	\$3,172.00	121.35	BIG BELL GOLD OPERATIONS PTY LTD
M20/354	LIVE	16/06/1999	15/06/2041	\$42,200.00	\$10,972.00	421.45	BIG BELL GOLD OPERATIONS PTY LTD
M20/418	LIVE	13/03/2015	12/03/2036	\$39,900.00	\$10,374.00	398.45	BIG BELL GOLD OPERATIONS PTY LTD
M20/435	LIVE	13/03/2015	12/03/2036	\$13,700.00	\$3,562.00	136.1	BIG BELL GOLD OPERATIONS PTY LTD
M20/456	LIVE	13/03/2015	12/03/2036	\$23,700.00	\$6,162.00	236.95	BIG BELL GOLD OPERATIONS PTY LTD
M21/7	LIVE	1/10/1985	30/09/2027	\$100,000.00	\$28,600.00	999.9	BIG BELL GOLD OPERATIONS PTY LTD
M21/8	LIVE	16/05/1986	15/05/2028	\$10,000.00	\$1,248.00	47.68	BIG BELL GOLD OPERATIONS PTY LTD
M21/10	LIVE	29/04/1986	28/04/2028	\$13,600.00	\$3,536.00	135.55	BIG BELL GOLD OPERATIONS PTY LTD
M21/14	LIVE	6/06/1986	5/06/2028	\$13,100.00	\$3,406.00	130.55	BIG BELL GOLD OPERATIONS PTY LTD
M21/24	LIVE	20/04/1989	19/04/2031	\$10,000.00	\$494.00	18.005	BIG BELL GOLD OPERATIONS PTY LTD
M21/44	LIVE	3/08/1989	2/08/2031	\$21,800.00	\$6,234.80	217.1	BIG BELL GOLD OPERATIONS PTY LTD
M21/49	LIVE	3/03/1989	2/03/2031	\$11,800.00	\$3,068.00	117.6	BIG BELL GOLD OPERATIONS PTY LTD
M21/55	LIVE	14/10/1991	13/10/2033	\$5,000.00	\$85.80	2.639	BIG BELL GOLD OPERATIONS PTY LTD
M21/56	LIVE	14/10/1991	13/10/2033	\$10,000.00	\$286.00	9.2865	BIG BELL GOLD OPERATIONS PTY LTD
M21/65	LIVE	25/10/1991	24/10/2033	\$64,500.00	\$18,447.00	644.8	BIG BELL GOLD OPERATIONS PTY LTD
M21/69	LIVE	7/07/1992	6/07/2034	\$10,000.00	\$2,259.40	78.23	BIG BELL GOLD OPERATIONS PTY LTD
M21/72	LIVE	2/09/1991	1/09/2033	\$74,600.00	\$21,335.60	745.3	BIG BELL GOLD OPERATIONS PTY LTD
M21/74	LIVE	2/04/1992	1/04/2034	\$10,000.00	\$2,184.00	83.62	BIG BELL GOLD OPERATIONS PTY LTD
M21/75	LIVE	2/09/1991	1/09/2033	\$10,000.00	\$171.60	5.0585	BIG BELL GOLD OPERATIONS PTY LTD
M21/83	LIVE	22/09/1993	21/09/2035	\$10,000.00	\$1,687.40	58.425	BIG BELL GOLD OPERATIONS PTY LTD
M21/89	LIVE	29/09/1995	28/09/2037	\$20,400.00	\$5,834.40	203.25	BIG BELL GOLD OPERATIONS PTY LTD
M21/96	LIVE	17/09/2014	16/09/2035	\$10,000.00	\$1,172.60	40.017	BIG BELL GOLD OPERATIONS PTY LTD
M21/97	LIVE	17/09/2014	16/09/2035	\$10,000.00	\$257.40	8.285	BIG BELL GOLD OPERATIONS PTY LTD
M21/105	LIVE	15/07/1996	14/07/2038	\$10,000.00	\$572.00	19.415	BIG BELL GOLD OPERATIONS PTY LTD
M21/122	LIVE	17/09/2014	16/09/2035	\$5,000.00	\$85.80	2.6465	BIG BELL GOLD OPERATIONS PTY LTD
M21/123	LIVE	17/09/2014	16/09/2035	\$10,000.00	\$1,458.60	50.18	BIG BELL GOLD OPERATIONS PTY LTD
M21/141	LIVE	17/09/2014	16/09/2035	\$12,200.00	\$3,489.20	121.315	BIG BELL GOLD OPERATIONS PTY LTD
P20/2350	LIVE	26/04/2019	25/04/2027	\$7,920.00	\$792.00	198	BIG BELL GOLD OPERATIONS PTY LTD
Total: 78				\$1,576,320.00	\$420,791.40	15,656.03	



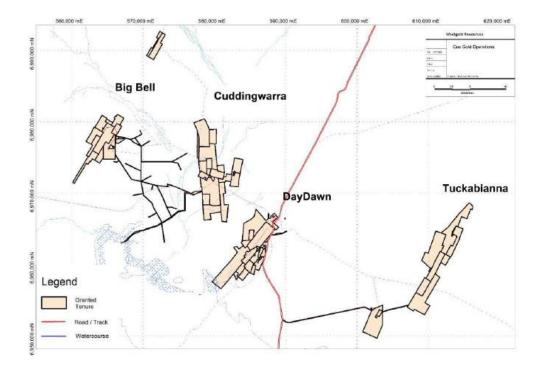


Figure 4-2 Cue Gold Operations map showing location of mineral tenure - Source: Westgold.



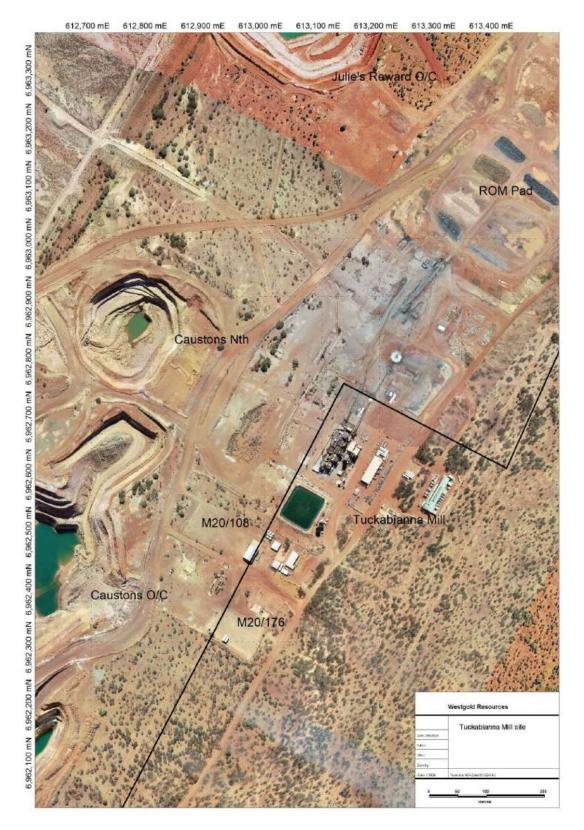


Figure 4-3 Tuckabianna Mill tenure map - Source: Westgold.



# 4.3 UNDERLYING AGREEMENTS

## 4.3.1 Royalties

Westgold pays the following royalties on gold production:

- Royalty equal to 2.5% of recovered gold to the Government of Western Australia;
- Various Native Title holders and other third parties hold rights to receive royalties in respect of gold (and in some cases other minerals or metals) recovered from the tenements.

# 4.3.2 Joint Ventures

None of the Cue Gold Operations tenements are subject to any Joint Venture arrangements.

# 4.4 ENVIRONMENTAL CONSIDERATIONS

Westgold is responsible for ensuring all rehabilitation obligations for the CGO project areas are met. As part of this responsibility, Westgold submits an annual report detailing the estimated cost of rehabilitation. Section 20 provides further detail on environmental considerations.

As of June 2023, the estimated rehabilitation liability for CGO was \$23.5 million. This estimate includes the future cost of rehabilitating areas following the completion of ore extraction activities.

# 4.4.1 Permits and Authorisation

WGX adheres to the regulatory framework established by Western Australia's *Mining Act* 1978 (Mining Act). This framework ensures responsible mining practices throughout the entire mine life cycle. A cornerstone of this framework is the Mining Lease, which grants CGO the exclusive right to extract minerals from designated areas.

To ensure comprehensive planning and responsible mine closure, detailed Mining Proposals (MP's) have been developed to meet the conditions of tenure, to permit mining under the Mining Act. These MPs outline the proposed mining methods, environmental management strategies, and social impact assessments. They also incorporate Mine Closure Plans (MCP's) that detail the steps for post-mining rehabilitation, to ensure the long-term stability and safety of the sites. The Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) has approved both MPs and MCP's for all CGO project areas.

DEMIRS issues clearing permits for the removal of native vegetation, adhering to the guidelines set out in the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) also issues prescribed premises licences for specific industrial facilities. CGO holds such licences for activities such as mine dewatering, material screening, ore processing, and waste management. Additionally, DWER issues water abstraction licences for CGO's operations. The detail of these permits and licences are further described in Section 20.



The following approvals have been issued by DEMIRS and DWER to support current mining operations:

- Big Bell Project (Reg ID: 119434): Mining Proposal and Mine Closure Plan.
- Cuddingwarra Project (Reg ID: 101167): Mining Proposal.
- Cuddingwarra Project (Reg ID: 115837): Mine Closure Plan.
- Day Dawn Project (Reg ID: 118218): Mining Proposal and Mine Closure Plan.
- Tuckabianna Project (Reg ID: 122437): Mining Proposal and Mine Closure Plan.
- Prescribed Premises Licences (Licences No. L8934/2015/1, L8907/2015/1, L8644/2012/1 and L8978/2016/1) issued by the Department of Water and Environmental Regulation (DWER) pursuant to Part V of the Environmental Protection Act 1986.
- Water Abstraction Licences (GWL 156542 (7), GWL 176056 (5), GWL 207140 (1), GWL 207611 (1), GWL 207612 (1) and GWL 207613 (1)) issued by DWER under Section 5C of the Rights in Water and Irrigation Act 1914.

Proposals with the potential for significant environmental impact require a separate assessment under Part IV of the EP Act. However, CGO's current activities demonstrably meet the established criteria, and therefore do not trigger the need for such an assessment.

# 4.5 MINING RIGHTS IN WESTERN AUSTRALIA

# 4.5.1 Mining Tenements

Under Section 9 of the Mining Act, all gold, silver, other precious metals, and other minerals on or below the surface of the land are generally the property of the Crown. In Western Australia, a Mining Lease is the primary approval required for major mineral development projects and mining activities as it authorises the holder to mine for, and dispose of, minerals on the land over which the lease is granted.

The holder of a Mining Lease may work and mine the land, take and remove minerals and do all acts and things necessary to effectually carry out mining operations in, on or under the land, subject to conditions of the Mining Lease and certain other exceptions under the Mining Act.

The term of a Mining Lease is 21 years and may be renewed for further terms.

In addition to Mining Leases, other types of mining tenements granted under the Mining Act and held by subsidiaries of Westgold for the purposes of exploration and mining activities include Exploration Licences, Prospecting Licences, Miscellaneous Licences and General Purpose Leases.

The CGO mining tenements are active and in good standing at the effective date of this Technical Report.



## 4.5.2 Native Title Act 1993

In 1992, the High Court of Australia determined in Mabo v Queensland (No. 2) that the common law of Australia recognised certain proprietary rights and interests of Aboriginal and Torres Strait Islander people in relation to their traditional lands and waters. In response to the Mabo decision, the Native Title Act 1993 (Cth) was enacted in an attempt to codify the implications of the decision and establish a legislative regime under which Australia's Indigenous people could seek to have their native title rights recognised. Native title is recognised where persons claiming to hold that title can establish, they have maintained a continuous connection with the land in accordance with traditional laws and customs since settlement and where those rights have not been lawfully extinguished.

The Native Title Act codifies much of the common law in relation to native title. The doing of acts after January 1, 1994 that may affect native title (known as 'future acts'), including the grant of mining tenements, are validated subject to certain procedural rights (including the 'right to negotiate') afforded to persons claiming to hold native title and whose claim has passed a 'registration test' administered by the National Native Title Tribunal (which assesses the claim against certain baseline requirements).

The CGO tenements are subject to native title determinations and claims.

As of the date of this Technical Report, the status of Native Title determinations with respect to the CGO tenements is as follows:

- Wajarri Yamatji Part A (WCD2017/007, WAD6033/1998) and Wajarri Yamatji Part B (WCD2018/002, WAD382/2017 & WAD28/2019): the Federal Court of Australia has determined that the Wajarri Yamatji people hold native title rights and interests in relation to an area of land that includes a large number of the CGO tenements.
- Yugunga-Nya People Part A (WCD2021/008, WAD29/2019): the Federal Court of Australia has determined that the Yugunga-Nya people hold native title rights and interests in relation to an area of land that includes a large number of the CGO tenements.

Applicable legislation contains provisions that may make a tenement holder liable for the payment of compensation for the effect of mining and exploration activities on native title rights and interests.

While a majority of Westgold's CGO tenements were granted prior to the commencement of the Native Title Act and therefore were not subject to the Native Title Process, Westgold is party to the following agreements with these Native Title holders in relation to certain tenements:

• 2004 Co-Operation and Mining Agreement with the Yugunga-Nya People dated 17 March 2004.



- 2013 Deferred Mining Agreement with the Yugunga-Nya People dated April 2013; and
- 2019 Mining Agreement with the Wajarri Yamatji Claim Group dated 28 January 2019.

#### 4.5.3 Aboriginal Heritage Act 1972

The Aboriginal Heritage Act 1972 (WA) (AHA) protects places and objects that are of significance to Aboriginal and Torres Strait Islander people in accordance with their traditional laws and customs (Aboriginal Sites). The AHA provides that it is an offence for a person to damage or in any way alter an Aboriginal Site.

Compliance with the AHA is an express condition of all mining tenements in Western Australia. Accordingly, commission of an offence under the AHA may mean that the mining tenement is vulnerable to an order for forfeiture.

The Department of Planning Lands and Heritage (DPLH) Aboriginal Cultural Heritage Inquiry System (AHIS) provides details about certain registered Aboriginal Sites, and Westgold also maintains a geospatial database containing any confirmed or potential Aboriginal Sites identified during archaeological and ethnographic heritage surveys it has commissioned over the CGO tenements.

A search of the AHIS conducted on May 5 2024 shows there are a number of Aboriginal Sites within the CGO tenements, however no current or planned activities relating to the operation of the existing underground mines and Tuckabianna Mill require disturbance of these Aboriginal Sites.

Heritage protection obligations under various agreements with the Native Title holders may require Westgold to undertake additional heritage surveys prior to commencing certain activities.



#### 5 ACCESSIBILITY, LOCAL RESOURCES, INFRASTRUCTURE, CLIMATE AND **PHYSIOGRAPHY**

#### ACCESSIBILITY 5.1

#### 5.1.1 **Big Bell**

The Big Bell project area and the associated Big Bell and Fender underground mines is located 31 km west of Cue by road (Coodardy – Noondie then Beringarra – Cue Roads) and 671 km north of the state capital of Perth (Figure 4-1) along the Great Northern Highway. The Tuckabianna mill is accessed via the Cue – Wondinong Road, which is located 7.2 km south of the mill or the Miner's Pass, 29 km southwest of the mill.

The site and its immediate surrounds have been subject to extensive historic disturbance from the early 1900's associated with gold mining and processing inclusive, mine voids, previous processing plant site, tailings storage facilities, waste rock dumps and stockpiles.

The Big Bell project area is situated partially within Coodardy Pastoral Station (Pastoral Lease N049528).

#### 5.1.2 Cuddingwarra

The Cuddingwarra project area is located 10 km west of Cue by road (Beringarra – Cue Road) and 655 km north of the state capital of Perth (Figure 4-1) along the Great Northern Highway. The Tuckabianna mill is accessed via the Cue – Wondinong Road, which is located 7.2 km south of the mill or the Miner's Pass, 29 km southwest of the mill.

The site and its immediate surrounds have been subject to extensive historic disturbance from the early 1900's associated with gold mining predominantly open pit voids, waste rock dumps and stockpiles.

The Cuddingwarra project area is situated partially within Austin Downs Pastoral Station (Pastoral Lease N050063).

#### 5.1.3 Day Dawn

The Day Dawn project area is located 6 km southwest of Cue by road (Great Northern Highway then Lakeside Drive) and 639 km north of the state capital of Perth (Figure 4-1) along the Great Northern Highway. The Tuckabianna mill is accessed via the Cue – Wondinong Road, which is located 7.2 km south of the mill or the Miner's Pass, 29 km southwest of the mill.

The site and its immediate surrounds have been subject to extensive historic disturbance from the early 1900's associated with gold mining and processing inclusive, mine voids, previous processing plant site, tailings storage facilities, waste rock dumps and stockpiles.

The Day Dawn project area is situated partially within Austin Downs Pastoral Station (Pastoral Lease N050063).



# 5.1.4 Tuckabianna

The Tuckabianna project area including the Tuckabianna mill is located 31 km east of Cue by road and 691 km north of the state capital of Perth (**Figure 4-1**) along the Great Northern Highway. The mill is accessed via a combination of Public and Private roads, primarily the Cue – Wondinong Road (Public), which is located 7.2 km south of the mill and the Miner's Pass Haul Road (Private), 29 km southwest of the mill.

The site and its immediate surrounds have been subject to extensive historic disturbance from the early 1900's associated with gold mining and processing inclusive, mine voids, processing plants, tailings storage facilities and stockpiles.

# 5.2 LOCAL RESOURCES AND INFRASTRUCTURE

The Cue region has a substantial history of exploration and mining. Cue was one of the earliest mining centres in Western Australia, taking its name from Mr. Tom Cue who discovered alluvial gold in 1891.

Cue has a population of 215 (2021 Census). Cue is serviced by several general stores, a service station, hotel, caravan park and boarding house. Transport links between Cue and Perth are predominantly via the Great Northern Highway, although charter flights service the Cue airport, and commercial flight options are available in the nearby towns of Meekatharra (110 km north) and Mouth Magnet (90 km south).

Geraldton, the primary regional centre with a population of 38,634 (2021 Census), is located 420 km via road, to the southwest of CGO. Geraldton is the regional centre for the Mid-West and is a regional hub for transport, communications, commercial activities and community facilities. Geraldton is also the nearest port.

The current workforce at CGO (Westgold employees and contractors) comprises 391 personnel. All are accommodated on site during their rostered-on periods. Most workers permanently reside in Perth and FIFO from Perth to CGO on either a 4 days-on / 3 days-off, 8 days-on / 6 days-off or 14 days-on / 7 days-off rotation. The FIFO workers are supplemented by workers who reside in regional towns such as Geraldton.

The FIFO workforce arrives at the Cue airport via Westgold chartered flights three days a week, to the state capital of Perth. Perth is a major centre with a population in excess of 2 million and an international airport.

# 5.3 CLIMATE

The Cue area is on the border of desert and semi-desert Mediterranean climatic regions. The mean daily maximum temperatures range from 37.8 °C in January to 18.4°C in July, whilst mean daily minimum temperatures range from 22.8 °C in January to 6.9 °C in July (Bureau of Meteorology, 2008). The highest recorded maximum temperature was 45 °C in January 1980 and lowest recorded minimum was –0.5 °C in July 1982.

Rainfall is unreliable and highly variable with an average annual rainfall of 231.2 mm per year. The least reliable and lowest rainfall occurs from September to November. Rainfall is most reliable (although still highly variable) between May and July and the wettest



months occur between January and July. The highest recorded daily rainfall was 229.9 mm in February 1960. On average there are forty-two rainfall days per year. The mean monthly relative humidity varies from 67% in June to 32% in December at 9 AM, and 45% in June to 19% in December at 3 PM.

# 5.4 PHYSIOGRAPHY

# 5.4.1 Cue Gold Operations

CGO is within the East Murchison subregion (MUR1) of Western Australia's Murchison bioregion. Encompassing 278,360 km<sup>2</sup>, this bioregion represents a critical ecological transition zone. It bridges the divide between the eucalypt-dominated woodlands characteristic of southwest Australia and the mulga-spinifex shrublands prevalent in central Australia (Morton *et. al.*, 1995). Ephemeral wetlands scattered throughout the bioregion offer sanctuaries for waterbird populations.

# 5.4.2 Landscape

Spanning over 7.8 million hectares, the East Murchison subregion is primarily utilised for mining and pastoral activities. Its geological composition is characterised by extensive red-brown desert sandplains with minimal dune formations. Breakaway complexes, remnants of eroded mesas, are also prominent features. Internally draining systems with associated salt lakes, vestiges of ancient drainage networks, further define the subregion's geomorphology (Cowan *et. al.*, 2001).

The dominant landscape feature is saline stony plains with low rises. These plains support low-growing halophytic shrublands with scattered mulga (Acacia aneura) and snakewood (Acacia victoriae) trees (Schoknecht & Pathan, 2013; Tille, 2006). Notably, climatic factors and historical land use practices (mining and grazing) have likely reduced the overall productivity of these lands.

Soils are derived from sediments that infill the Glengarry Basin, situated between the Pilbara and Yilgarn Cratons. Extensive weathering processes during the Tertiary period resulted in the formation of laterite and silcrete deposits. A defining characteristic of these soils is their well-leached nature, often accompanied by a layer of siliceous hardpan or cemented material.

# 5.4.3 Vegetation

Vegetation communities within the East Murchison subregion exhibit a strong correlation with underlying geology, soil composition, and climatic conditions. Areas dominated by exposed rock with shallow soils support low mulga woodlands. Calcareous soils foster the growth of hummock grasslands, while saline alluvium provides a habitat for samphire (Halosarcia sp.) shrublands.

Mulga woodlands rich in ephemeral flora flourish in areas with exposed rock and skeletal soils. These regions also harbor hummock grasslands and saltbush shrublands on calcareous soils. Tecticornia and Haloarcia shrublands are present on saline alluvium (Outback Ecology, 2012, 2005).



# 6 HISTORY

# 6.1 PRE-WESTGOLD

The area that encompasses the Cue Gold Project and its four constituent mineral fields has a long history of gold exploration and mining, with Cue being one of the earliest mining centres in Western Australia, taking its name from Mr. Tom Cue who discovered alluvial gold in 1891.

Prior to Westgold's involvement in its current form (via acquisition through its predecessor company Metals X), the gold exploration and production history of CGO is as follows:

Gold was first discovered at Big Bell in 1904 by Harry Paton, who mined rich surface mineralisation. In 1910, companies Great Fingal Consolidated and Great Boulder Pty. Ltd. undertook sampling and trenching in the Big Bell area. Prospecting continued at Big Bell until 1913.

Chesson and Heydon developed the first large-scale mine (open pit) at Big Bell which ran until 1923.

The Big Bell leases were taken up by Mandelstam in 1929 who proceeded to drill a series of holes to define the extents of the orebody. Mandelstam attracted a backer in 1932, the Premier Gold Mining Company based in New York. Exploration and mining at Big Bell recommenced in 1932 when ASARCO undertook an evaluation of the area, followed by the commencement of underground mining in 1937 and the establishment of a town. Mining continued until 1955 when the project closed due to low gold prices and increased costs. It remained closed for 34 years until open pit mining recommenced in 1989.

After the closure of the mine in 1954 the Big Bell field remained dormant until 1969 when Australian Consolidated Minerals acquired the title to the leases. Various joint ventures were entered into until ownership by ACM was consolidated in 1980. Deep drilling in 1980-1982 delineated an underground resource.

In 1984 ACM entered into a joint venture agreement with Placer Pacific. Between 1984 and 1989 development work progressed leading up to the official opening of the modern Big Bell open pit mine and associated processing infrastructure in April 1989. Mining of the open pit continued through to 1993.

In 1992 Normandy Mining Limited acquired ACM and full ownership of Big Bell. Underground development and mining commenced in 1994. During this time the Fender and Shocker pits were mined.

New Hampton Goldfields acquired Big Bell in December 1999. Exploration particularly around satellite deposits and targets in the Big Bell area increased.

Harmony Australia gained control of Big Bell in May 2001 after a successful takeover of New Hampton Goldfields. Underground mining continued throughout this time at Big Bell Mine. The 1,600N and Shocker pits were reopened in 2001. Exploration continued.



At the end of June 2003, the Big Bell Operations were placed in care and maintenance by Harmony. Environmental monitoring was conducted form the Mount Magnet operations also owned by Harmony approximately 110 km away. Effective exploration ceased.

In 2008 The Big Bell tenements were briefly sold by Harmony to Monarch Gold Mining Limited. However, the financial collapse of Monarch prior to final settlement of the deal meant that Harmony retained ownership of the area through to 2009 when the project was purchased by Fulcrum. No exploration conducted during this period.

Fulcrum on-sold the tenements to Aragon Resources later in 2009. Transfer to Westgold Resources (WGR) ownership occurred in 2011 upon the takeover of Aragon by WGR. recommenced exploration of the Big Bell Deeps, satellite deposits and Big Bell Trend Targets and drilled a number of RC and Diamond holes in 2010-2011.

In 2012 Metals X Limited merged with WGR and took ownership of the wholly owned subsidiary Big Bell Gold Operations Pty Ltd.

The summary of the history of the Big Bell mineral field is taken from Russell, 2012.

Gold was first discovered at the Cuddingwarra mineral field in 1891. Mining occurred at over thirty sites around the Cuddingwarra town site and up to 1954, 44669 ounces were produced at a combined grade of 37.5 g/t Au.

There was no further activity in the region until the Cuddingwarra leases were acquired by Getty Oil Development Company in 1984 whom carried out limited rock chip sampling, photogeology and minor RAB drilling. This was followed up by modern systematic gold exploration by Freeport Australian Minerals Ltd from 1985 to 1988, Sons of Gwalia NL from 1990 to 1991, and Saint Barbara Mines Ltd from 1992 to 1996.

Normandy purchased the Cuddingwarra tenements in 1997 and for the next two years consolidated the holdings. Normandy then sold the Big Bell, Cuddingwarra and Day Dawn projects to New Hampton Goldfields, and Harmony Australia gained control of the Cuddingwarra tenements in May 2001 after a successful takeover of New Hampton Goldfields

Between 1999 and 2002 firstly the Normandy Group (Wirralie Gold Mines Pty, Ltd.) and subsequently New Hampton Goldfields and then Harmony Gold undertook a substantial open pit mining campaign in the central Cuddingwarra area, centred on the Black Swan and Reingold deposit. This was followed by a second campaign of open pit mining between 2005 and 2006.

Aragon Resources Ltd purchased the Cuddingwarra tenements in early 2010 and undertook limited exploration. Transfer to Westgold Resources (WGR) ownership occurred in 2011 upon the takeover of Aragon by WGR.

In 2012 Metals X Limited merged with WGR and took ownership of the wholly owned subsidiary Big Bell Gold Operations Pty Ltd.

The summary of the history of the Cuddingwarra mineral field is taken from Shenton, 2012a and Shenton, 2012b.



The greater Cue area has been known for gold production for over a century. Cue was one of the earliest mining centres in Western Australia, taking its name from Mr. Tom Cue who discovered alluvial gold in 1891 (McMath, 1939). In the same year Heffenan pegged the auriferous Day Dawn Reef, subsequently known as the Great Fingall Reef (Woodward, 1907).

Historically, the Cue gold mines have been relatively high-grade underground operations on quartz reefs. The largest producer by far was the Great Fingall mine, which yielded 1,224,473 oz gold from 1,881,842 t ore (inclusive of foreign ore sources), for a recovered grade of 20.27 g/t, between 1891 and 1929. More recently the Golden Crown underground mine was developed, together with a number of open pit operations (Great Fingall, 3210, Yellow Taxi, Rubicon and Try Again), both on old historic mine sites and on newly discovered deposits.

Between 1891 and 1996 the mines within the Golden Crown project tenements have a recorded production of 1,691,876 oz from 4,937,020 tonnes of ore, for an average recovered grade of 10.66 g/t Au. The majority (94.5%) of this production has come from mines located within the Great Fingall Dolerite (GFD), with much smaller amounts from the Footwall Basalts (FWB) and Hanging-wall Basalts (HWB) to the southeast and northwest, respectively, of the GFD.

More recent exploration in the area has taken the following form;

- Australian Consolidated Minerals Limited (ACM) initiated systematic exploration in the district in 1973, employing aerial photography, geological mapping, griding, airborne and ground magnetic surveys, geochemical soil surveying, costeaning and geochemical RAB drilling (on 200 m by 20 m grids) to the saprolite horizon and / or bedrock. These programs led to follow-up RC and diamond drilling of the Emperor, Galena, Golden Crown, Mountain View and Queen's Birthday Reefs. The Golden Crown Reef was drilled over a strike length of four hundred metres to a depth of two hundred metres. This led to the definition and delineation of Mineral Resources and Mineral Reserves that culminated in the development of an underground mine by ACM in 1987.
- Concurrently, Invincible Gold N.L. (Invincible) targeted reefs within the FWB employing broadly similar exploration techniques. This work led to the defining of two small open pit resources by RC drilling at Brega and Try Again. This work culminated in the development of the Try Again open pit by Invincible in 1988. ACM acquired Invincibles' leases in 1990. However, the company was taken over by Poseidon Limited (subsequently Normandy Mining Limited) in 1991.
- Normandy carried out infill saprolite geochemical surveys (via RAB drilling) over prospective portions of its leases during the period 1991 - 1993. Significant anomalies were followed up with RC drilling. This program covered Ballarat, Brega, Caledonian, Crème d'Or, Curly's, East Porphyry, Emperor, Empress, Eureka, Galena, Golden Crown, Great Fingall, Kinsella, New Caledonia, Smith's United, South Fingall, Tailings Dam Reef, Trenton, Try Again, Try Again East, White Elephant, Yellow Taxi, 3,700 Reef, 3,580 Reef and 3,210 Reef. It delineated open pit resources



(totalling 561,000 t at 2.78 g/t) at four prospects; Great Fingall stockwork, 3,210 Reef, Yellow Taxi and Mount Fingall (Pellegrini, 1994). The resources were upgraded to Mineral Reserves at all deposits during 1993-94 and mining commenced during 1995.

- Post 1996 Normandy focussed exploration largely on its tenements acquired from Australasian Gold Mines N.L., Hill 50 Gold Mine N.L. / Western Mining Corporation Limited, Saint Barbara Mines Limited and Norex. Although aerial photography, helimag surveying, geochemical RAB drilling and follow-up RC drilling (at Kalahari, Chloe, Dame Joan, Ada, Brega, Ironclad and Transformer) and diamond drilling (at Dame Joan) were undertaken, only minor new resources were outlined at Brega and Kinsella.
- New Hampton undertook some minor underground drilling at Golden Crown during their short tenure in charge of the project area (1999 to 2001).
- In 2001 Harmony Gold conducted extensive exploration, with over 2,400 exploration holes (RAB, AC, RC diamond) drilled at various prospects in the area (including over four hundred holes in and around the existing Great Fingall open pit). Resistivity and Induced Polarisation surveys were undertaken in the Yellow Taxi area, and open pit mining was undertaken at Rubicon and Try Again East, and cutbacks at Great Fingall, Try Again and Yellow Taxi.

Aragon undertook minor exploration work within the project area. Transfer to Westgold Resources (WGR) ownership occurred in 2011 upon the takeover of Aragon by WGR.

In 2012 Metals X Limited merged with WGR and took ownership of the wholly owned subsidiary Big Bell Gold Operations Pty Ltd.

The summary of the history of the Day Dawn mineral field is taken from Hunt, 2023.

Mining activities commenced in the Comet project area in 1913 with underground mining being carried out until 1983. Before the 1980s gold mining activities were largely limited to intermittent underground mining and in the late 1980s, open pit mining was undertaken at the Comet and Pinnacles deposits with production being 638,335 tonnes at 3.45 g/t Au. Previous underground workings have been consumed by the more recent open pit mining.

Gold was discovered at Tuckabianna in 1915 with intermittent small-scale production from rich mineralised pods within the host banded iron formation ("BIF"). During the period leading up to the commencement of modern open pit mining operations in 1988, total gold production was 53,000 oz at an average grade of 18 g/t Au.

Between 1988 and 1997, approximately six million tonnes of open pit ore was treated from the Tuckabianna and Comet areas for a total production exceeding 500,000 oz Au. Most of this production came from 17 different open pits within the area.

Post the modern open phase of mining, ownership of the Tuckabianna mineral field passed between multiple owners until the field was consolidated by Silverlake Resources who constructed the Tuckabianna mill and associated infrastructure and the Cue Accommodation Village.





Figure 6-1 Tuckabianna Mill (2022) - Source: Westgold.

Silverlake commenced open pit and following-on underground mining in the Tuckabianna district in October 2012, however by February 2014 the decision was taken to place the operations on Care and Maintenance due to disappointing performance.

After a period of dormancy Westgold acquired the Tuckabianna mineral field, Tuckabianna Mill and Cue Camps via direct purchase from previous operation Silverlake Resources in June 2017.

The summary of the history of the Tuckabianna mineral field is taken from McKern and Larritt, 2012.

# 6.2 WESTGOLD RESOURCES

In December 2016, Metals X spun off its gold division (including Big Bell Gold Operations Pty Ltd) into a separate entity called Westgold Resources Limited (WGX).

In 2016, dewatering of the Big Bell mine started. Underground mine rehabilitation commenced in late-2017 and first ore from development of the upper levels was mined in November 2018. Production from Big Bell is ongoing. As of June 30<sup>th</sup>, 2023, the restarted Big Bell Underground mine has produced 3.1 Mt at 2.49 g/t for 247,136 oz. The Fender open pit was cut-back and produced first ore in June 2020 with mining complete by November 2020 having produced 130 kt at 2.15 g/t for 9,013 oz. Production of ore from the 700/1100 open pit also commenced in June 2020 with mining complete by October 2020 having produced 45 kt at 2.29 g/t for 3,324 oz. In October 2023, first ore from the Fender Underground was produced and is ongoing.



Resource development activities have been ongoing during this time, primarily to support the continuing mining operations at Big Bell and Fender. Due to the current match between Big Bell mine output and Tuckabianna mill feed requirements, and the significant Mineral Resource base already defined at CGO, grassroots exploration efforts to identify new Mineral Resources has been sporadic to this point in time.

At Day Dawn, Westgold Resources commenced a cut back on the existing Great Fingall open pit in 2018 with ore hauled from August 2018 to May 2020. Total production was 620,353 t at 1.28 g/t for 25,536 oz with the pit floor now at the 830 mRL. Open pit mining also took place at Yellow Taxi and South Fingall, commencing in 2018. In 2019, mining commenced at Kinsella and Crème D'Or pits. By mid-2020 all mining had been completed at Day Dawn for a total of 1.29 Mt at 1.45 g/t for 60,138 oz.

Resource development activities were ongoing at Day Dawn during this time, primarily to extend the continuation of open pit mining operations and to define the down dip extent of the Great Fingall mine. Ongoing resource development work at Great Fingall has continued post-cessation of open pit mining at Day Dawn.

At Cuddingwarra open pit mining from the Lady Rosie and South Victory deposits commenced in 2020. In 2021, additional ore was mined from the Jim's Find and Coventry pits and cutbacks on the existing City of Chester pits. By mid-2022 all mining had been completed at Cuddingwarra for a total of 742 kt at 1.70 g/t for 40,608 oz.

Resource development and exploration activities were ongoing at Cuddingwarra during this time, primarily to extend the continuation of open pit mining operations. However, no additional resources of sufficient scale and return on investment were defined to keep the mining fleet active in the area beyond 2022.

At Tuckabianna, the Comet underground mine has been in production since the demerger of Westgold Resources Limited from Metals X in December 2016. Combined with the adjacent Pinnacles underground mine which commenced production in 2019, the Comet underground mines have produced 1.41 Mt at 3.17 g/t for 143,993 oz before being placed on care and maintenance in mid-2022.

Resource development activities have been ongoing at Tuckabianna during this time, primarily to support the continuing mining operations at Comet and Pinnacles. Due to the current match between Big Bell mine output and Tuckabianna mill feed requirements, and the significant Mineral Resource base already defined at CGO, grassroots exploration efforts to identify new Mineral Resources has been sporadic to this point in time.

At the first reporting of Mineral Resource and Mineral Reserves of WGX post Metals X spin off in December 2016, the CGO had a Mineral Resource Estimate and Mineral Reserve Estimate as presented in **Table 6-17** and **Table 6-18** respectively.



			Minera	l Resourc		ld Project ent - Rou	t nded for R	eporting							
						6/2016									
	Measured Indicated Measured and Indicated Inferred														
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz			
Big Bell	0	0.00	0	17,366	2.85	1,593	17,366	2.85	1,593	10,716	2.64	910			
Cuddingwarra	0	0.00	0	2,824	2.10	191	2,824	2.10	191	4,205	2.62	354			
Day Dawn	136	1.73	8	5,167	4.54	755	5,302	4.47	762	2,381	1.64	125			
Tuckabianna	0	0.00	0	1,850	3.91	233	1,850	3.91	233	998	2.81	90			
Stockpiles	0	0.00	0	4,058	0.72	94	4,058	0.72	94	0	0.00	0			
Total	136	1.73	8	31,264	2.85	2,866	31,400	2.85	2,873	18,300	2.51	1,479			

### Table 6-1 Cue Gold Operation Mineral Resources at June 30, 2016.

### Table 6-2 CGO Mineral Reserves at June 30, 2016.

		Miner		Cue Gold Pro Statement - F 30/06/201	, Rounded for F	Reporting					
Proven Probable Proven and Probable											
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz		
Big Bell	0	0.00	0	9,826	2.54	802	9,826	2.54	802		
Cuddingwarra	0	0.00	0	57	2.25	4	57	2.25	4		
Day Dawn	0	0.00	0	2,033	4.46	291	2,033	4.46	291		
Tuckabianna	0	0.00	0	1,501	3.43	166	1,501	3.43	166		
Stockpiles	0	0.00	0	3,562	0.70	81	3,562	0.70	81		
Total	0	#DIV/0!	0	16,979	2.46	1,344	16,979	2.46	1,344		

The yearly evolution of the Mineral Resources and Mineral Reserves under WGX and its predecessor's ownership is presented in the tables below.

### Table 6-3 Cue Gold Operation Mineral Resources at May 31, 2011 – Westgold Resources Limited Takeover of Aragon Resources.

				c	Cue Gold	Project						
		М	lineral R	esource S	Statemer	nt - Round	led for Re	porting				
					31/05/	2011						
		Measure	d		Indicated	ł	Measur	ed and In	dicated		Inferred	
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	6,024	4.18	809	6,024	4.18	809	944	2.23	68
Cuddingwarra	27	3.05	3	824	3.30	87	851	3.29	90	2,160	3.70	257
Day Dawn	21	2.85	2	2,216	7.80	556	2,237	7.75	558	2,162	2.50	174
Stockpiles	0	0.00	0	142	0.90	4	142	0.90	4	0	0.00	0
Total	48	2.96	5	9,206	4.92	1,457	9,254	4.91	1,461	5,266	2.94	498



### Table 6-4 Cue Gold Operation Mineral Reserves at May 31, 2011 – Westgold Resources Limited Takeover of Aragon Resources.

		Mineral		ue Gold Proj atement - Ro 31/05/2011	ounded for R	eporting			
		Proven			Probable		Prov	en and Prob	able
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	2,895	4.20	391	2,895	4.20	391
Cuddingwarra	0	0.00	0			0	0	-	0
Day Dawn	0	0.00	0	878	8.00	226	878	8.00	226
Stockpiles	0	0.00	0			0	0	-	0
Total	0	-	0	3,773	5.08	617	3,773	5.08	617

### Table 6-5 Cue Gold Operation Mineral Resources at June 30, 2012.

		I	Mineral	C Resource S	Cue Gold Statemei 30/06/	nt - Roun	ded for Re	porting				
		Measure	b	II	ndicated	l	Measure	ed and In	dicated		Inferred	
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	9,639	3.13	969	9,639	3.13	969	9,439	1.65	501
Cuddingwarra	23	3.35	3	2,426	2.06	161	2,450	2.07	163	2,490	3.43	275
Day Dawn	20	2.89	2	3,833	5.21	642	3,853	5.20	644	940	3.84	116
Stockpiles	0	0.00	0	3,733	0.72	86	3,733	0.72	86	0	0.00	0
Total	43	3.14	4	19,631	2.94	1,858	19,675	2.94	1,863	12,869	2.15	891

### Table 6-6 Cue Gold Operation Mineral Reserves at June 30, 2012.

		Mineral		ue Gold Proj atement - Ro 30/06/2012	ounded for R	eporting						
Proven Probable Proven and Probable												
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz			
Big Bell	0	0.00	0	4,718	3.30	501	4,718	3.30	501			
Cuddingwarra	0	0.00	0	0	0.00	0	0	-	0			
Day Dawn	0	0.00	0	1,789	4.83	278	1,789	4.83	278			
Stockpiles	0	0.00	0	3,394	0.70	76	3,394	0.70	76			
·												
Total	0	-	0	9,901	2.69	855	9,901	2.69	855			



			Mineral	C Resource S		l Project	ded for Re	norting				
			merat	nesource (	30/06/			porting				
		Measure	<u> </u>	lı lı	ndicated		Measur	ed and In	dicated		Inferred	
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	28,745	2.50	2,313	28,745	2.50	2,313	14,905	2.41	1,155
Cuddingwarra	0	0.00	0	2,951	2.14	203	2,951	2.14	203	3,965	2.72	347
Day Dawn	110	1.39	5	5,284	4.46	758	5,394	4.40	763	2,549	1.63	134
Stockpiles	0	0.00	0	4,358	0.70	98	4,358	0.70	98	0	0.00	0
Total	110	1.39	5	41,338	2.54	3,372	41,449	2.53	3,377	21,420	2.37	1,635

### Table 6-7 Cue Gold Operation Mineral Resources at June 30, 2013.

### Table 6-8 Cue Gold Operation Mineral Reserves at June 30, 2013.

		Mineral		ue Gold Proj atement - Ro 30/06/2013	ounded for F	Reporting			
		Proven			Probable		Prov	en and Prol	bable
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	9,826	2.54	802	9,826	2.54	802
Cuddingwarra	0	0.00	0	0	0.00	0	0	-	0
Day Dawn	0	0.00	0	1,951	4.58	287	1,951	4.58	287
Stockpiles	0	0.00	0	3,681	0.71	84	3,681	0.71	84
Total	0	-	0	15,458	2.36	1,174	15,458	2.36	1,174

### Table 6-9 Cue Gold Operation Mineral Resources at June 30, 2014.

		I	Mineral I	C Resource S	Cue Gold Statemei 30/06/	nt - Roun	ded for Re	porting				
		Measure	d	l li	ndicated	I	Measur	ed and In	dicated		Inferred	
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	28,745	2.50	2,310	28,745	2.50	2,310	14,905	2.41	1,155
Cuddingwarra	0	0.00	0	2,974	2.15	206	2,974	2.15	206	4,015	2.72	351
Day Dawn	110	1.39	5	5,284	4.46	758	5,394	4.40	763	2,549	1.63	134
Stockpiles	0	0.00	0	4,358	0.70	98	4,358	0.70	98	0	0.00	0
Total	110	1.39	5	41,361	2.54	3,372	41,471	2.53	3,377	21,470	2.38	1,640



Table 6-10 Cue Gold Operation	Mineral Reserves at June 30, 2014.
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		Mineral		ue Gold Proj atement - Ro		Reporting			
				30/06/2014					
		Proven			Probable		Prov	en and Prob	bable
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	9,826	2.54	802	9,826	2.54	802
Cuddingwarra	0	0.00	0	0	0.00	0	0	-	0
Day Dawn	0	0.00	0	1,951	4.58	287	1,951	4.58	287
Stockpiles	0	0.00	0	3,681	0.71	84	3,681	0.71	84
Total	0	-	0	15,458	2.36	1,174	15,458	2.36	1,174

### Table 6-11 Cue Gold Operation Mineral Resources at June 30, 2015.

		I	Mineral	CL Resource S				porting				
		Measure	ł	1	ndicated	1	Measur	ed and In	dicated		Inferred	
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	28,745	2.50	2,310	28,745	2.50	2,310	14,905	2.41	1,155
Cuddingwarra	0	0.00	0	2,896	2.14	199	2,896	2.14	199	4,093	2.71	357
Day Dawn	176	1.55	9	5,224	4.50	756	5,400	4.40	765	2,349	1.65	125
Stockpiles	0	0.00	0	4,358	0.70	98	4,358	0.70	98	0	0.00	0
Total	176	1.55	9	41,223	2.54	3,364	41,399	2.53	3,372	21,347	2.38	1,636

### Table 6-12 Cue Gold Operation Mineral Reserves at June 30, 2015.

	Cue Gold Project Mineral Reserve Statement - Rounded for Reporting 30/06/2015 Brown and Brokekle												
		Proven			Probable		Prov	en and Prol	bable				
Project	kt	kt g/t koz kt g/t koz kt g/t											
Big Bell	0	0.00	0	9,826	2.54	802	9,826	2.54	802				
Cuddingwarra	0	0.00	0	57	2.25	4	57	2.25	4				
Day Dawn	0	0.00	0	1,947	4.59	287	1,947	4.59	287				
Stockpiles	0	0.00	0	3,681	0.71	84	3,681	0.71	84				
Total	0	<u> </u>	0	15,512	2.36	1,178	15,512	2.36	1,178				

### Table 6-13 Cue Gold Operation Mineral Resources at February 4, 2016 – Purchase of Comet from Silverlake Resources.

		I	Mineral	( Resource S	Stateme		ded for Re	porting				
		Measure	d	1	4/02/3 ndicated		Measur	ed and In	dicated		Inferred	
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	28,745	2.50	2,310	28,745	2.50	2,310	14,905	2.41	1,155
Cuddingwarra	0	0.00	0	2,896	2.14	199	2,896	2.14	199	4,093	2.71	357
Day Dawn	176	1.55	9	5,224	4.50	756	5,400	4.40	765	2,349	1.65	125
Tuckabianna	60	1.50	3	2,335	3.40	255	2,395	3.35	258	1,407	2.10	95
Stockpiles	0	0.00	0	4,358	0.70	98	4,358	0.70	98	0	0.00	0
Total	236	1.54	12	43,558	2.58	3,619	43,794	2.58	3,630	22,754	2.37	1,731

### Table 6-14 Cue Gold Operation Mineral Reserves at February 4, 2016 – Purchase of Comet from Silverlake Resources.

	Cue Gold Project Mineral Reserve Statement - Rounded for Reporting 4/02/2016 Proven and Prohebia												
	Proven Probable Proven and Probable												
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz				
Big Bell	0	0.00	0	9,826	2.54	802	9,826	2.54	802				
Cuddingwarra	0	0.00	0	57	2.25	4	57	2.25	4				
Day Dawn	0	0.00	0	1,947	4.59	287	1,947	4.59	287				
Tuckabianna	0	0.00	0	0	0.00	0	0	-	0				
Stockpiles	0	0.00	0	3,681	0.71	84	3,681	0.71	84				
Total	0	-	0	15,512	2.36	1,178	15,512	2.36	1,178				

### Table 6-15 Cue Gold Operation Mineral Resources at June 30, 2016.

		I	Mineral I	C Resource S	Cue Gold Statemer 30/06/	nt - Roun	ded for Re	porting				
		Measure	d	l	ndicated	l	Measur	ed and In	dicated		Inferred	
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	17,366	2.85	1,591	17,366	2.85	1,591	10,716	2.64	910
Cuddingwarra	0	0.00	0	2,824	2.10	191	2,824	2.10	191	4,205	2.62	354
Day Dawn	136	1.73	8	5,167	4.54	754	5,302	4.47	762	2,381	1.64	126
Tuckabianna	0	0.00	0	1,850	3.91	233	1,850	3.91	233	998	2.81	90
Stockpiles	0	0.00	0	4,058	0.72	94	4,058	0.72	94	0	0.00	0
Total	136	1.73	8	31,264	2.85	2,863	31,400	2.84	2,870	18,300	2.51	1,479



	1			ue Gold Proj atement - Ro 30/06/2016	ounded for F	Reporting	1		
		Proven			Probable	-	Prov	en and Prob	bable
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	0	0.00	0	9,826	2.54	802	9,826	2.54	802
Cuddingwarra	0	0.00	0	57	2.25	4	57	2.25	4
Day Dawn	0	0.00	0	2,033	4.46	291	2,033	4.46	291
Tuckabianna	0	0.00	0	1,501	3.43	166	1,501	3.43	166
Stockpiles	0	0.00	0	3,562	0.70	80	3,562	0.70	80
Total	0	-	0	16,979	2.46	1,344	16,979	2.46	1,344

## Table 6-17 Cue Gold Operation Mineral Resources at June 30, 2017.

	Cue Gold Project Mineral Resource Statement - Rounded for Reporting 30/06/2017													
	Measured Indicated Measured and Indicated Inferred													
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz		
Big Bell	0	0.00	0	17,366	2.85	1,591	17,366	2.85	1,591	10,716	2.64	910		
Cuddingwarra	0	0.00	0	2,824	2.10	191	2,824	2.10	191	4,205	2.62	354		
Day Dawn	136	1.73	8	5,167	4.54	754	5,302	4.47	762	2,381	1.64	126		
Tuckabianna	0	0.00	0	4,250	2.88	394	4,250	2.88	394	6,565	2.16	456		
Stockpiles	0	0.00	0	4,058	0.72	94	4,058	0.72	94	0	0.00	0		
Total	136	1.73	8	33,664	2.79	3,023	33,800	2.79	3,031	23,867	2.40	1,845		

### Table 6-18 Cue Gold Operation Mineral Reserves at June 30, 2017.

	Cue Gold Project Mineral Reserve Statement - Rounded for Reporting 30/06/2017												
		Proven			Probable		Prov	en and Prob	bable				
Project	kt	kt g/t koz kt g/t koz kt											
Big Bell	0	0.00	0	9,826	2.54	802	9,826	2.54	802				
Cuddingwarra	0	0.00	0	57	2.25	4	57	2.25	4				
Day Dawn	0	0.00	0	2,033	4.46	291	2,033	4.46	291				
Tuckabianna	0	0.00	0	1,501	3.43	166	1,501	3.43	166				
Stockpiles	0	0.00	0	3,562	0.70	80	3,562	0.70	80				
Total	0	-	0	16,979	2.46	1,344	16,979	2.46	1,344				



### Table 6-19 Cue Gold Operation Mineral Resources at June 30, 2017 – Post Tuckabianna Acquisition from Silverlake Resources.

	Cue Gold Project Mineral Resource Statement - Rounded for Reporting 30/06/2017														
Measured Indicated Measured and Indicated Inferred															
Project	kt	kt g/t koz kt g/t koz kt g/t koz kt g/t													
Big Bell	0	0.00	0	17,276	2.85	1,583	17,276	2.85	1,583	10,717	2.64	910			
Cuddingwarra	0	0.00	0	6,555	2.06	434	6,555	2.06	434	2,826	2.34	213			
Day Dawn	136	1.73	8	5,127	3.58	590	5,263	3.53	598	3,499	2.44	274			
Tuckabianna	0	0.00	0	4,227	2.88	391	4,227	2.88	391	6,293	2.11	427			
Stockpiles	19	2.92	2	4,058	0.72	94	4,077	0.73	96	0	0.00	0			
Total	155	1.88	9	37,243	2.58	3,093	37,398	2.58	3,102	23,334	2.43	1,824			

### Table 6-20 Cue Gold Operation Mineral Reserves at June 30, 2017 – Post Tuckabianna Acquisition from Silverlake Resources.

	Cue Gold Project Mineral Reserve Statement - Rounded for Reporting 30/06/2017													
		Proven			Probable		Prov	en and Prol	bable					
Project	kt g/t koz kt g/t koz kt g/t													
Big Bell	0	0.00	0	12,254	2.78	1,095	12,254	2.78	1,095					
Cuddingwarra	0	0.00	0	1,358	2.02	88	1,358	2.02	88					
Day Dawn	0	0.00	0	2,154	4.04	280	2,154	4.04	280					
Tuckabianna	0	0.00	0	1,864	2.97	178	1,864	2.97	178					
Stockpiles	19	2.92	2	4,058	0.72	94	4,077	0.73	96					
Total	19	2.92	2	21,688	2.49	1,735	21,707	2.49	1,737					

### Table 6-21 Cue Gold Operation Mineral Resources at June 30, 2018.

	Cue Gold Project Mineral Resource Statement - Rounded for Reporting 30/06/2018													
Measured Indicated Measured and Indicated Inferred														
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz		
Big Bell	0	0.00	0	16,472	2.79	1,478	16,472	2.79	1,478	7,505	2.66	642		
Cuddingwarra	0	0.00	0	6,555	2.06	434	6,555	2.06	434	2,826	2.34	213		
Day Dawn	188	1.73	10	4,661	3.77	565	4,849	3.69	575	3,389	2.47	269		
Tuckabianna	367	5.92	70	3,810	2.72	333	4,177	3.00	403	5,786	2.27	422		
Stockpiles	101	2.42	8	4,054	0.72	94	4,155	0.76	102	0	0.00	0		
Total	656	4.18	88	35,553	2.54	2,904	36,208	2.57	2,992	19,506	2.46	1,546		



	Cue Gold Project Mineral Reserve Statement - Rounded for Reporting 30/06/2018													
Proven Probable Proven and Proba														
Project	kt g/t koz kt g/t koz kt g/t													
Big Bell	0	0.00	0	11,829	2.89	1,099	11,829	2.89	1,099					
Cuddingwarra	0	0.00	0	1,289	2.08	86	1,289	2.08	86					
Day Dawn	0	0.00	0	2,112	3.93	267	2,112	3.93	267					
Tuckabianna	304	5.14	50	2,119	2.90	198	2,423	3.18	248					
Stockpiles	101	2.42	8	4,054	0.72	94	4,155	0.76	102					
Total	405	4.46	58	21,403	2.53	1,744	21,807	2.57	1,802					

## Table 6-23 Cue Gold Operation Mineral Resources at June 30, 2019.

	Cue Gold Project Mineral Resource Statement - Rounded for Reporting 30/06/2019														
	Measured Indicated Measured and Indicated Inferred														
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz			
Big Bell	115	3.35	12	16,250	2.79	1,458	16,365	2.79	1,470	7,496	2.65	639			
Cuddingwarra	0	0.00	0	6,441	2.06	427	6,441	2.06	427	2,048	2.50	165			
Day Dawn	263	2.15	18	4,258	3.90	534	4,521	3.80	552	3,269	2.52	265			
Tuckabianna	247	6.49	51	4,340	2.87	400	4,587	3.06	452	5,341	2.26	388			
Stockpiles	37	4.91	6	3,731	0.71	85	3,768	0.75	91	0	0.00	0			
Total	662	4.13	88	35,021	2.58	2,904	35,683	2.61	2,992	18,155	2.49	1,456			

Table 6-24 Cue Gold Operation Mineral Reserves at June 30, 2019.

	Cue Gold Project Mineral Reserve Statement - Rounded for Reporting 30/06/2019												
		Proven			Probable		Prov	en and Prol	bable				
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz				
Big Bell	0	0.00	0	11,829	2.88	1,095	11,829	2.88	1,095				
Cuddingwarra	0	0.00	0	865	2.21	61	865	2.21	61				
Day Dawn	120	2.29	9	1,827	5.83	342	1,947	5.61	351				
Tuckabianna	66	5.90	13	1,708	2.36	130	1,774	2.49	142				
Stockpiles	37	4.91	6	3,731	0.71	85	3,768	0.75	91				
Total	224	3.79	27	19,959	2.67	1,714	20,183	2.68	1,741				



	Cue Gold Project Mineral Resource Statement - Rounded for Reporting 30/06/2020														
Measured Indicated Measured and Indicated Inferred															
Project	kt	kt g/t koz kt g/t koz kt g/t koz kt g/t k													
Big Bell	2,018	3.48	226	20,136	2.63	1,703	22,154	2.71	1,928	5,444	2.43	425			
Cuddingwarra	0	0.00	0	2,913	1.84	172	2,913	1.84	172	1,137	1.53	56			
Day Dawn	81	1.85	5	3,812	4.19	514	3,894	4.14	518	2,891	2.67	248			
Tuckabianna	275	5.88	52	3,212	2.71	280	3,487	2.96	332	5,753	2.31	427			
Stockpiles	67	3.04	7	3,756	0.71	86	3,823	0.75	92	10	0.76	0			
Total	2,441	3.68	289	33,829	2.53	2,754	36,270	2.61	3,043	15,236	2.36	1,157			

### Table 6-25 Cue Gold Operation Mineral Resources at June 30, 2020.

### Table 6-26 Cue Gold Operation Mineral Reserves at June 30, 2020.

	Cue Gold Project Mineral Reserve Statement - Rounded for Reporting 30/06/2020													
Proven Probable Proven and Probable														
Project	kt	kt g/t koz kt g/t koz kt g/t												
Big Bell	1,874	3.06	184	11,846	2.71	1,032	13,719	2.76	1,216					
Cuddingwarra	0	0.00	0	814	1.92	50	814	1.92	50					
Day Dawn	0	0.00	0	1,398	6.55	294	1,398	6.55	294					
Tuckabianna	23	4.12	3	863	2.39	66	886	2.43	69					
Stockpiles	67	3.04	7	3,756	0.71	86	3,823	0.75	92					
Total	1,963	3.07	194	18,677	2.55	1,529	20,640	2.60	1,723					

### Table 6-27 Cue Gold Operation Mineral Resources at June 30, 2021.

	Cue Gold Project Mineral Resource Statement - Rounded for Reporting 30/06/2021														
	Measured Indicated Measured and Indicated Inferred														
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz			
Big Bell	5,565	3.30	590	10,811	2.56	890	16,376	2.81	1,480	4,667	2.57	386			
Cuddingwarra	288	1.99	18	1,809	1.81	105	2,097	1.83	124	918	1.59	47			
Day Dawn	58	1.73	3	3,501	4.42	498	3,559	4.38	501	3,089	2.57	255			
Tuckabianna	212	4.88	33	3,366	2.70	292	3,579	2.83	326	5,835	2.33	437			
Stockpiles	67	3.04	7	3,756	0.71	86	3,823	0.75	92	10	0.76	0			
Total	6,190	3.28	652	23,244	2.50	1,871	29,434	2.67	2,523	14,519	2.41	1,125			



	Cue Gold Project Mineral Reserve Statement - Rounded for Reporting 30/06/2021													
	Proven Probable Proven and Probable													
Project	kt	kt g/t koz kt g/t koz kt g/t koz												
Big Bell	4,861	2.95	461	5,019	2.64	426	9,879	2.79	887					
Cuddingwarra	0	0.00	0	1,074	1.71	59	1,074	1.71	59					
Day Dawn	0	0.00	0	1,398	6.55	294	1,398	6.55	294					
Tuckabianna	29	3.13	3	860	2.36	65	889	2.38	68					
Stockpiles	67	3.04	7	3,756	0.71	86	3,823	0.75	92					
Total	4,956	2.95	470	12,107	2.39	930	17,063	2.55	1,401					

## Table 6-29 Cue Gold Operation Mineral Resources at June 30, 2022.

Cue Gold Project Mineral Resource Statement - Rounded for Reporting 30/06/2022												
	Measured			l	ndicated	l	Measured and Indicated Infe			Inferred	erred	
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	5,249	3.27	552	9,860	2.61	827	15,109	2.84	1,379	4,976	2.64	422
Cuddingwarra	118	2.09	8	1,708	1.82	100	1,826	1.84	108	994	1.57	50
Day Dawn	58	1.73	3	3,501	4.42	498	3,559	4.38	501	3,089	2.57	255
Tuckabianna	295	4.09	39	3,781	2.66	323	4,076	2.76	362	6,765	2.32	505
Stockpiles	567	1.32	24	3,792	0.70	85	4,358	0.78	109	0	0.00	0
Total	6,287	3.10	626	22,642	2.52	1,834	28,929	2.64	2,459	15,824	2.42	1,232

### Table 6-30 Cue Gold Operation Mineral Reserves at June 30, 2022.

Cue Gold Project Mineral Reserve Statement - Rounded for Reporting 30/06/2022											
		Proven			Probable		Prov	Proven and Probable			
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz		
Big Bell	4,170	2.94	394	4,641	3.08	460	8,811	3.01	854		
Cuddingwarra	0	0.00	0	710	1.75	40	710	1.75	40		
Day Dawn	0	0.00	0	1,289	6.92	287	1,289	6.92	287		
Tuckabianna	42	4.09	5	1,034	2.48	82	1,075	2.54	88		
Stockpiles	567	1.32	24	3,758	0.70	85	4,324	0.78	109		
Total	4,778	2.76	424	11,432	2.59	953	16,210	2.64	1,377		

Cue Gold Project Mineral Resource Statement - Rounded for Reporting 30/06/2023												
	Measured				Indicated Measured and Indicated					Inferred		
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell	5,498	3.08	544	9,917	3.23	1,030	15,415	3.18	1,574	8,942	2.73	785
Cuddingwarra	85	1.66	5	1,600	1.63	84	1,685	1.63	88	597	1.50	29
Day Dawn	58	1.73	3	3,776	4.63	562	3,834	4.58	565	2,339	4.29	322
Tuckabianna	267	3.54	30	3,448	2.78	308	3,715	2.84	339	2,899	2.63	245
Stockpiles	481	1.64	25	3,744	0.70	85	4,225	0.81	110	-	-	-
Total	6,389	2.96	607	22,485	2.86	2,068	28,875	2.88	2,676	14,777	2.91	1,381

### Table 6-31 Cue Gold Operation Mineral Resources at June 30, 2023.

### Table 6-32 Cue Gold Operation Mineral Reserves at June 30, 2023.

Cue Gold Project Mineral Reserve Statement - Rounded for Reporting 30/06/2023											
		Proven			Probable		Prov	en and Proba	able		
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz		
Big Bell	3,573	2.85	327	6,270	3.31	668	9,843	3.14	995		
Cuddingwarra	0	0.00	0	98	1.77	6	98	1.77	6		
Day Dawn	0	0.00	0	1,944	5.08	317	1,944	5.08	317		
Tuckabianna	0	0.00	0	683	3.00	66	683	3.00	66		
Stockpiles	481	1.64	25	3,744	0.70	85	4,225	0.81	110		
Total	4,054	2.71	353	12,739	2.79	1,141	16,793	2.77	1,494		

The latest (June 2023) CGO Mineral Resource Estimates and Mineral Reserve Estimate are presented in **Table 6-33** and **Table 6-34** respectively.



			Mineral		Cue Gold	•	ded for Re	norting				
			rinerati	10300100	30/06/			porting				
	Measured			Indicated			Measur	ed and In	dicated	Inferred		
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell UG	4,022	3.07	397	7,965	3.33	853	11,988	3.24	1,250	5,927	3.11	593
Fender UG	95	3.22	10	201	3.05	20	297	3.10	30	345	3.33	37
Great Fingall UG	0	0.00	0	1,616	5.25	273	1,616	5.25	273	883	3.51	100
Golden Crown UG	0	0.00	0	333	6.18	66	333	6.18	66	944	5.14	156
Big Bell District	60	2.81	5	802	2.64	68	861	2.65	73	1,848	2.94	175
Cuddingwarra	85	1.66	5	1,600	1.63	84	1,685	1.63	88	597	1.50	29
Day Dawn District	58	1.73	3	1,068	2.04	70	1,126	2.02	73	1,043	1.78	60
Tuckabianna	267	3.54	30	3,448	2.78	308	3,715	2.84	339	2,899	2.63	245
Stockpiles	81	2.09	5	3,627	0.70	81	3,709	0.73	87	0	0.00	0
Total	4,669	3.04	456	20,661	2.74	1,823	25,330	2.80	2,279	14,485	2.99	1,394

### Table 6-33 Cue Gold Operation Mineral Resources at June 30, 2024.

#### Table 6-34 Cue Gold Operation Mineral Reserves at June 30, 2024.

Cue Gold Operations Mineral Reserve Statement - Rounded for Reporting 30/06/2024											
		Proven			Probable		Prove	n and Prob	able		
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz		
Big Bell UG	9,808	1.48	467	4,898	3.10	489	14,706	2.02	956		
Fender UG	81	2.58	7	147	2.68	13	228	2.65	19		
Great Fingall UG	0	0.00	0	1,895	4.20	256	1,895	4.20	256		
Golden Crown UG	0	0.00	0	230	4.52	33	230	4.52	33		
Big Bell District	0	0	0	59	2.98	6	59	2.98	6		
Cuddingwarra	0	0	0	98	1.77	6	98	1.77	6		
Day Dawn District	0	0.00	0	0	0.00	0	0	0.00	0		
Tuckabianna	0	0.00	0	683	3.00	66	683	3.00	66		
Stockpiles	81	2.09	5	3,627	0.70	81	3,709	0.73	87		
Total	9,971	1.50	480	11,636	2.54	949	21,606	2.06	1,429		

Since Westgold Resources Limited's demerger from Metals X Limited in December 2016, CGO has mined 8.0 Mt of gold mineralisation at an average grade of 2.3 g/t Au (593 Koz contained gold) to June 30, 2024. Gold was mined from the South Fingall, Great Fingall, Yellow Taxi, Kinsella, Coventry, Crème D'Or, Fender, 700, Lady Rosie, South Victory, Jim's Find and City of Chester open pits, and the Big Bell and Comet underground mines.



# 7 GEOLOGICAL SETTING AND MINERALISATION

# 7.1 REGIONAL GEOLOGY

The Cue Gold Operations is located within the Murchison Province of the Youanmi Terrane within the Archaean Yilgarn. The province is bounded by major transcrustal structures which separate it from the surrounding tectonic provinces of the craton and the Western Gneiss Belt. The Cue Gold Operations lies within the northern part of the province, which is an area dominated by northeast trending supracrustal greenstone sequences within the Archaean Murchison Supergroup.



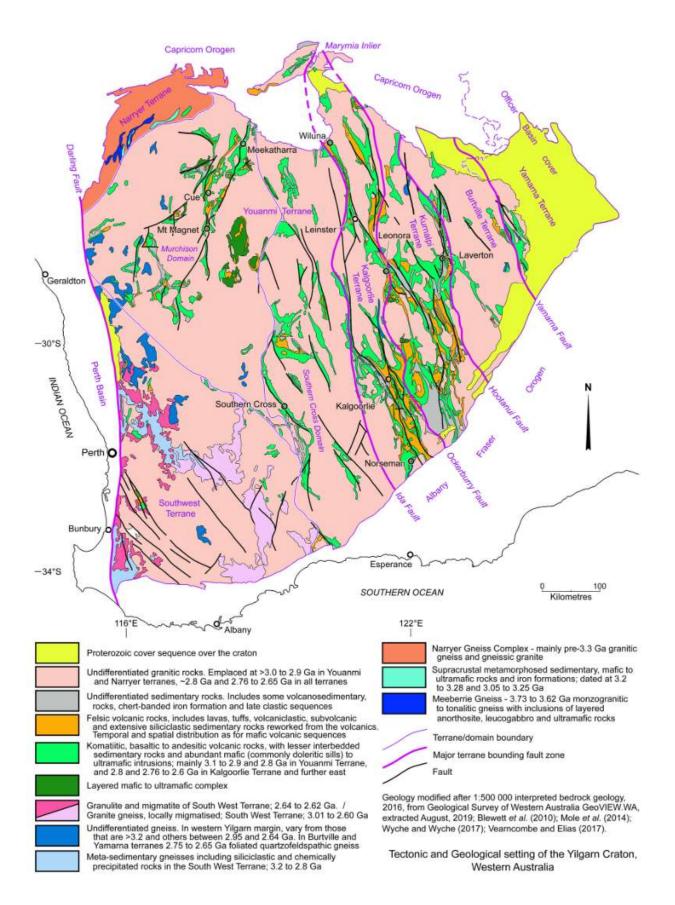


Figure 7-1 Tectonic and Geological setting of the Yilgarn Craton, Western Australia - Source: potergeo.com.au.



The Murchison Supergroup consists primarily of mafic extrusive and intrusive rocks, with subordinate felsic volcanic and volcaniclastic rocks and minor ultramafics and banded iron formation.

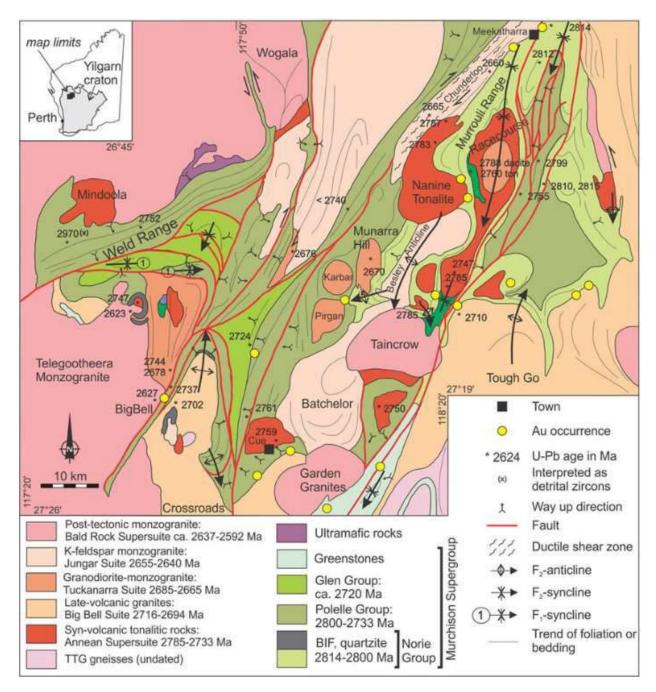


Figure 7-2 Solid geology map for the northern portion of the Murchison Domain showing major lithological associations, structures and published geochronologic data (modified after Van Kranendonk and Ivanic 2009).



The Cue Gold Operations is situated within the Meekatharra-Wydgee Greenstone Belt of the Murchison Province of the Archaean Yilgarn Craton of Western Australia (Myers, 1992). This belt extends over a strike length of approximately 300 km southwest from Meekatharra, and includes the mining centres of Meekatharra, Cue, Big Bell and Mount Magnet. It contains two major sequences, the Luke Creek and Mount Farmer Groups, which together comprise the Murchison Supergroup.

The solid rock geology is overlain by Quaternary and Tertiary sediments, comprising aeolian dune deposits, alluvium and colluvium.

#### 7.2 **MINERALISATION (BY GEOLOGICAL DOMAIN)**

The Cue Gold Operations can be subdivided into four major geological domains:

- Big Bell;
- Cuddingwarra;
- Day Dawn;
- Tuckabianna.

#### 7.2.1 **Big Bell**

The Big Bell project area is located at the southern end of a narrow northeast-trending greenstone belt, (informally referred to as the Big Bell Greenstone Belt), which adjoins the larger Meekatharra - Mount Magnet Greenstone Belt. The belt has a strike length of 33 km and a width of 1.5 km at Big Bell and is bounded to the east and west by granite intrusions. To the north of Big Bell, the Big Bell Greenstone Belt widens, whereas to the south the sequence thins to less than 200 m (approximately 7 km south of the mine).

The Big Bell Greenstone Belt is comprised of variably altered and intensely sheared, northnortheast-trending amphibolites and felsic schists. The muscovite and biotite-altered rocks hosting gold mineralisation at Big Bell are informally referred to as the Big Bell Mine Sequence. The greenstone belt can be divided into three domains separated by two major regional fault zones (Barnes, 1996). The eastern domain (mostly amphibolite), the central domain (quartzofeldspathic and biotite schists which host the Big Bell Mine Sequence), and the western domain (dominated by amphibolite). The metamorphic grade within the greenstone belt is mid to upper amphibolite facies (Phillips, 1985).

The Mine Sequence includes biotite and quartzofeldspathic schist (BISH and INSH), altered amphibolite (AMPH) and sheared porphyry dyke (PORP) within the central domain of the Big Bell greenstone belt. The main host for gold mineralisation at Big Bell is altered K-feldspar-rich (KPSH) and muscovite-rich (ALSH) quartzofeldspathic schist. The sequence dips to the east, and its base is the tectonic contact with the amphibolite of the western domain, along the graphitic Footwall Shear Zone (G Barnes, 1999).

Along strike to the south of Big Bell the lithological host of the mineralisation is variable, although still restricted to the altered biotite or quartzofeldspathic schist. At Little Bell and Big Bell South, better gold mineralisation is found on the hanging wall (BISH) and to a lesser degree the footwall (KPSH) contacts of the mineralisation observed at Big Bell.



Moving south, the biotite (+ cordierite) schist (BISH) is the dominant host at Shocker and 1,600N with lower, more dispersed, grade within ALSH. Fender is the southernmost deposit, and the entire mine sequence narrows significantly such that, although only approximately 13 metres wide, the mineralised lithologies include ALSH and BISH. The Fender mineralisation is bound on the footwall by KPSH and hanging wall by garnet-rich schist (GASH) which can be variably mineralised.

In the Big Bell area, mineralisation outside the immediate Mine Sequence has been observed in the hanging wall amphibolite at Irishman - Mary Belle and the Footwall Amphibolites at Harris Find.

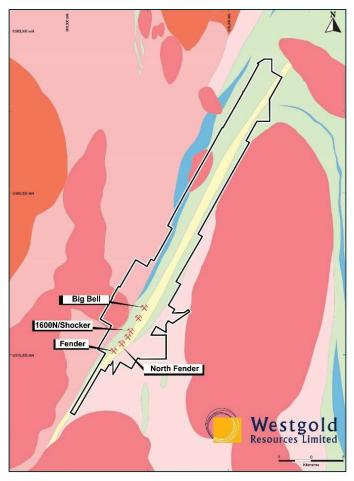


Figure 7-3 Deposits of the Big Bell Project Area - Source: Westgold.



# 7.2.2 Cuddingwarra

The Cuddingwarra project area is located within the Archaean Meekatharra-Wydgee Greenstone Belt. The greenstone belt is comprised of thick sequences of mafic and ultramafic rocks, with banded iron formation and felsic volcanic rocks. Felsic porphyries have intruded the layered sequence. Deeper crustal shear zones (such as the Cuddingwarra Shear) and secondary structures have been influential in gold deposition (Barber, 2013).

The Cuddingwarra Project area encloses three lithological sequences, generally separated from each other by sub-concordant strike faults trending northerly to north-northeast.

- A high-Mg basalt and basalt sequence in the west.
- Intercalated komatiites and high-Mg basalts with minor tholeiitic basalts and dolerite in the centre of the project area.
- A sequence of sediments and volcaniclastics in the east.

The central sequence is fault-bounded by components of the Cuddingwarra Shear Zone, which strikes north-northeast and juxtaposes the greenstone sequences with the eastern volcano-sedimentary package.

The mafic-ultramafic sequences west of the Cuddingwarra Shear Zone are intruded by smaller plutonic to sub-volcanic felsic bodies. Two types and generations of porphyritic felsic intrusives are identified in the area: an earlier granodioritic phase and a later quartz feldspar porphyry. Both types have been recognised during mapping campaigns conducted at the Rheingold open pit.

The granodioritic porphyry shows evidence of having undergone two deformation episodes and intrudes the ultramafic/mafic packages along a predominantly northeast-southwest axis (D3 orientation).

The later quartz-feldspar porphyry appears to have experienced at least one brittle deformation event and is seen to intrude the ultramafic/mafic packages along a predominantly north-south axis (D2 orientation). This later porphyritic suite has been observed to cut the earlier granodioritic phase.

The regolith over the area varies from transported colluvial/alluvial cover to outcrop, with a substantial portion of the Cuddingwarra project area characterised by transported cover. Historical aircore drilling has confirmed that in certain areas of the project area the cover is up to 80 m deep and consists of a stripped profile on fresh bedrock.

The majority of gold mineralisation in the Cuddingwarra area is hosted by the central mafic/ultramafic (and felsic porphyry) sequence. Deep saprolitic weathering and laterite caps are common in the area and have been variably degraded by erosion.



Earlier studies used data integrated from multiple geological datasets including interpretation of 1st VD RTP 5%AGC airborne magnetic images. This enabled the construction of a structural framework for gold mineralisation at the Cuddingwarra Project. Structural analyses indicated the presence of at least three separate deformation episodes. Within this broad framework, mineralisation was shown to be spatially related to the D2 and D3 events, with gold tenor maximised where structures from both were coincident. In this early study, the presence and influence of felsic porphyritic intrusives was considered to have been greatly overestimated and to be misleading.

Mineralisation is controlled by competency contrasts across, and flexures along, layerparallel D2 shear zones, and is maximised where transected by corridors of northeast striking D3 faults and fractures.

Distinct alteration assemblages and mineralisation geometries provided vectors to both styles of mineralisation, and each could be targeted accordingly. Exploration strategies were directed towards locating and evaluating brittle mafic and felsic porphyry units situated between ultramafic-hosted D2 shear zones, particularly where potentially dilatant curves are present. It is recommended that future exploration should focus on locating cross-cutting structures via the presence of late felsic porphyries on detailed geophysical datasets and drilling to account for any varying orientation of the intersection between D2 and D3 structures. In particular, areas indicating a high D3 fracture density would be more favourable target sites for high fluid : rock ratios and therefore more likely to host mineralisation (given suitable lithologies).

A significant degree of supergene remobilisation of gold has occurred within the deep and intense weathering profile and is an important mechanism controlling economic concentrations of gold. Gold grades are quite variable above the base of oxidation, with horizontal near surface and base of oxidation dispersion zones common above primary mineralisation. It is likely that there has been localised remobilisation of gold into ferruginous clays and pisolitic laterite above the base of oxidation, with coarser gold being associated with quartz and much finer grained gold occurring within the clay-rich materials.



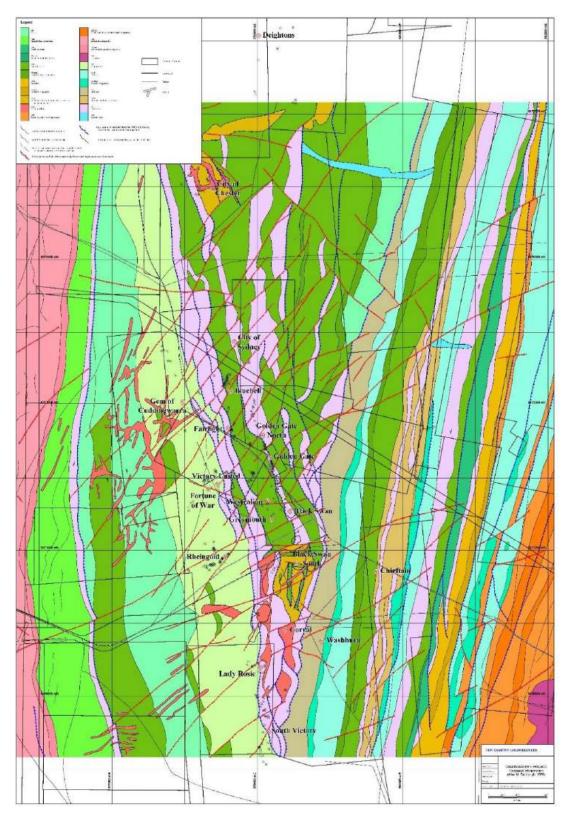


Figure 7-4 Interpreted geological map and major deposits of the Cuddingwarra Project Area - Source: Westgold.



# 7.2.3 Day Dawn

The Day Dawn project area is situated within the Meekatharra-Wydgee Greenstone Belt, in the Murchison Province of the Archaean Yilgarn Craton of Western Australia (Myers, 1992). Within the Day Dawn project area, the Greenstone Belt consists of intrusive and extrusive mafic and ultramafic units, felsic volcanics and volcaniclastics, sediments and quartz-haematite banded iron formation (BIF) belonging to the Gabanintha Formation, one of four laterally extensive litho-stratigraphic formations comprising the Luke Creek Group (Martin, 1993b). The Gabanintha Formation overlies sedimentary rocks of the Golconda Formation.

The following summarises the Luke Creek Group as defined by Watkins and Hickman (1990). These formations listed from youngest to oldest are:

- Windaning Formation A succession of abundant jaspilitic BIF and chert units interlayered with felsic volcanics, volcaniclastic, and volcanogenic rocks with minor basalts.
- Gabanintha Formation A bimodal succession of mafic and ultramafic rocks, felsic volcanics and volcaniclastics, and sedimentary rocks.
- Golconda Formation A succession of quartz-haematite BIF, interlayered with mafic and ultramafic extrusive and intrusive rocks. The lowermost formation of the Luke Creek Group, the Murrouli Basalt, is not exposed in this region. The area around Cue is composed of rocks of the Gabanintha and Golconda Formation and late-stage granite intrusives.

The Great Fingall Dolerite (GFD) hosts the major gold mineralisation of the Greenstone Belt, including the following deposits within the project tenements (from north to south);

Princess Royal, Great Fingall, Wallace's, Goldilocks, Golden Crown, Smith's United, 3210, Galena, Trenton, Porphyry, Yellow Taxi and Mount Fingall.

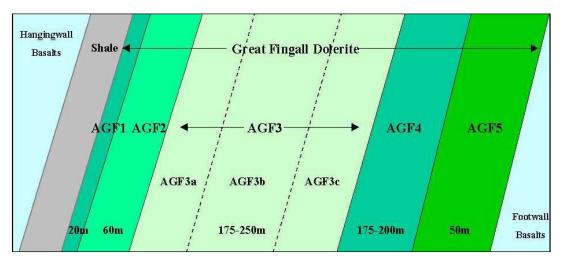
The GFD is a large differentiated tholeiitic sill striking 030° (MGA) and dipping 70° to the NW and is approximately 530 m thick. It is truncated to the north-east by a gabbroic intrusion and a post-folding tonalite, and to the south-west it is progressively attenuated by and brought into parallelism with the N-S Cuddingwarra Shear Zone (CSZ). The GFD hosts numerous quartz vein gold deposits attributed to dilatational strain. This strain appears to have been induced by refracted N-S late-stage regional cross fractures.

Differentiation within the sill was initially sub-divided into at least five separate units by Cairns (1982). It was recognised that the central granophyric unit, AGF3, was more prospective and subsequent work by Pawlitschek (1993), further divided this unit. A summary of the present divisions (from Pawlitschek, 1993) is outlined below, from top to base (west to east).

- AGF1 Upper chilled margin, about twenty metres thick, of fine-grained amphiboleplagioclase dolerite. Near the hanging-wall contact (with meta-sediments) it is schistose and heavily chloritised and carbonated.
- AGF2 A medium to coarse-grained, amphibole-plagioclase dolerite, approximately 60 m thick, characterised by elongated dark green amphiboles. There is a transitional contact with AGF3A.



- AGF3 A thick (approximately 175-250 m) coarse-grained, differentiated, Fe-rich, granophyric dolerite showing a marked foliation sub-parallel to the regional synformal axial plane. Calcite is a common accessory mineral. This thick central unit may be further divided into three sub-units:
  - AGF3A A medium-grained granophyric dolerite. Marked by appearance of quartz, stubby black amphiboles and granophyric texture.
  - AGF3B A medium to coarse-grained granophyric magnetic dolerite.
     Appearance of magnetite, and an increase in grain size, distinguishes it from AGF3A.
  - AGF3C A fine to medium-grained melanocratic magnetic dolerite. There is no visible quartz. Amphibole and plagioclase make up the bulk of the rock, which has an equigranular texture.
- AGF4 A medium-grained sub-ophitic dolerite, approximately 175-200 m thick, with only minor quartz. This unit becomes more leucocratic with an increase in plagioclase and decrease in magnetite towards the footwall. Equigranular texture.
- AGF5 Footwall ultramafic, approximately 50 m thick, consisting of amphibolechlorite-talc-magnetite schist. Distinguished by its high talc content, which gives the rock a soft and greasy texture, strong foliation and high magnetic signature.





The GFD unit is bounded by less competent basalts. Dilation of refracted regional fault structures within the dolerite has created sites favourable for quartz accumulation and gold mineralisation.

Gold is widely distributed throughout the project tenements, especially in quartz reefs (within faults and shear zones, mainly the northwest-trending and subordinate northeast-trending sets) and, to a lesser extent, in quartz stockworks (occupying northwest -trending structures with shallow SW dips). These two types of deposit are both preferentially developed within the more brittle rock units, particularly the GFD (especially the coarser grained, granophyric unit AGF3) and basalts / dolerites of both the FWB and HWB. Thus, the epigenetic gold deposits reflect both lithological and structural controls of mineralisation.



Within the mine area Great Fingall Reef strikes northwest, within the GFD, and dips 60-65  $^\circ$ southwest, flattening to 45° southwest below approximately 700 m depth. The reef varies in width up to thirteen metres, averaging two to three metres in thickness. It consists dominantly of bluish quartz, with only minor white quartz, and sulphides (mainly pyrite, chalcopyrite, galena, arsenopyrite, sphalerite and bornite). Fresh sulphides occur only below the base of oxidation (approximately 30 m vertical depth below surface). Thin footwall reefs, less than one metre thick, have been intersected by deep diamond drilling, up to 60 m into the footwall of the main reef. The original zone of secondary enrichment, upon which the mine started, proved to be of very limited extent (Woodward, 1907), being about 75 m in strike length and extending down-dip only about 40 m depth to Level 2. Old mining records indicate that gold mineralisation was depleted at vertical depths of 50-75 m below surface, possibly related to a zone of depletion below the zone of supergene enrichment.

The mineralisation shoots display both structural and lithological controls of gold mineralisation, developing maximum width and grade within the GFD in a zone of maximum dilation (Scott, 1991). Outside of the GFD the Great Fingall Reef refracts to a more north-south strike and displays significantly lower widths. With the exception of the Mountain View Reef (the northwestern continuation of the Great Fingall Reef within the HWB), the gold grade also falls significantly outside the GFD.

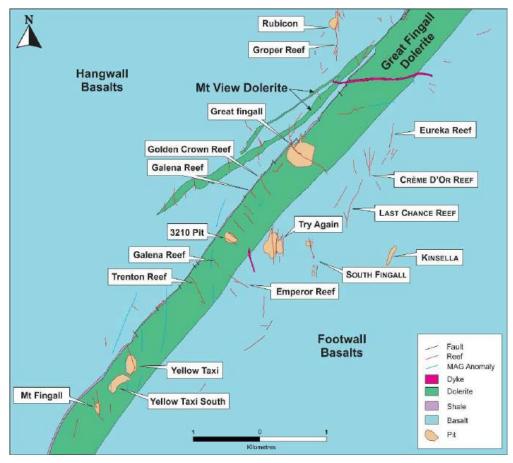


Figure 7-6 Major Deposits of the Day Dawn Project Area: Westgold.



#### 7.2.4 Tuckabianna

The Tuckabianna project area lies in the Archaean Murchison Province within a northeasttrending supracrustal greenstone sequence comprising various volcanic, intrusive and sedimentary rocks that form part of the Luke Creek Group. Mineralisation is concentrated within the lower formations of the Group (Golconda Formation and Gabanintha Formation), which dominate the greenstone belt in the district (Watkins and Hickman, 1990).

Detailed mapping at 1:25,000 scale has been completed over the area by Hallberg. His interpretation is at variance with the GSWA formal stratigraphy (Hallberg, 2000). Hallberg has broadly divided the supracrustal rocks into two associations separated by a major fault zone, the Tuckabianna Shear Zone, and intruded by post-tectonic granitoids. Association 1 rocks to the east of the shear zone comprise numerous BIF beds interlayer with mafic and ultramafic volcanic and intrusive rocks, which have been deformed into an asymmetric syncline referred to as the Kurrajong syncline. Association 2 rocks are located to the west of the Tuckabianna Shear Zone and consist of felsic rocks of the Eelya complex and mafic and ultramafic volcanic rocks.

Association 2 is characterised by an almost complete absence of BIF sediments. The Tuckabianna Shear Zone (also referred to as the Comet-White Well Shear Zone) is a broad, 1 to 2 km wide, north-northeast trending zone of intense deformation and alteration stretching the entire 30 km length of the Tuckabianna project area. The shear zone is a portion of the much larger Mount Magnet-Meekatharra Shear Zone, which extends at least 180 km between these two main mining centres and beyond. The shear zone is very poorly exposed and marked by deep weathering. Also present are north north-northwest trending faults and shear zones with displacements of up to several hundred metres.

Granitoids to the east of the greenstones are pre- to syn-tectonic granodiorite, while those to the west are largely post-tectonic. The Achaean lithologies are cut by east-west trending mafic dykes of presumed mid Proterozoic age.

Association 2 lithologies to the west of the Tuckabianna Shear Zone have been metamorphosed to lower-middle amphibolite facies. To the east of the shear, the grade is generally greenschist facies but with grade increasing to amphibolite facies in close proximity to granitoid contacts.

All of the basement rocks have suffered extensive weathering and deep oxidation during the Mesozoic and Tertiary Period. Much of the ground is now covered by a complex regolith comprising residual and transported lateritic materials.



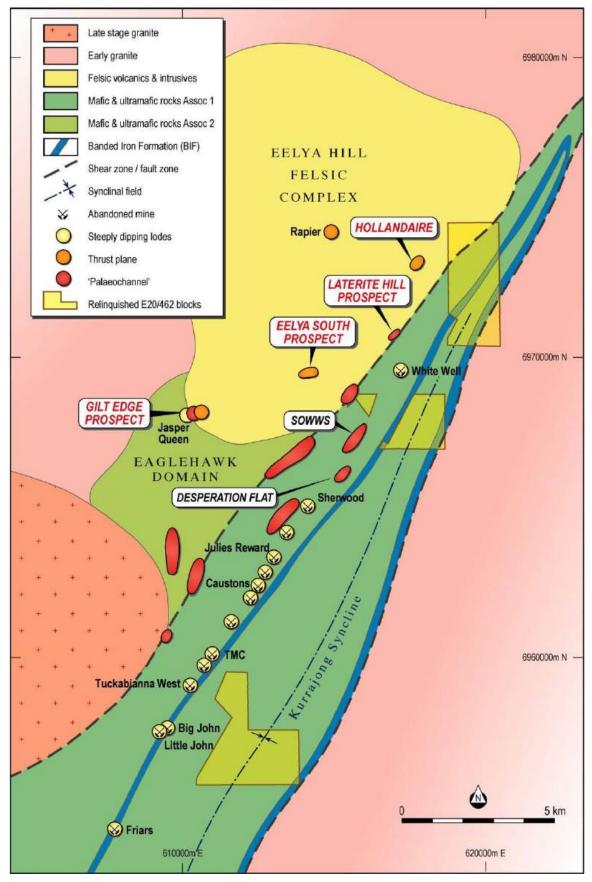


Figure 7-7 Deposits of the Tuckabianna Project Area (excludes Comet Area): Westgold.



Recent work by Williams (2001) has suggested that Hallberg's regional framework is incorrect and requires revision. Williams identifies a regional scale structure called the Moyagee Shear, which is located to the west of Tuckabianna. The Mount Magnet-Meekatharra shear identified by earlier workers is considered to devolve into a number of splays off this structure. In the Tuckabianna area the Moyagee Shear is represented as a zone of gneissic granite, varying in width between 1.25 km and 4.5 km wide. Elsewhere it is represented as a series of granite intrusions and lineated gneisses with the shear clearly separating different stratigraphic sequences. The total length of the shear is considered to be 185 km, stretching from Mount Magnet in the south to Meekatharra in the north. The granites and gneisses that mark the shear were identified by earlier workers as posttectonic. The Tuckabianna Shear is interpreted by Williams to be a splay off the Moyagee Shear and though important in its own right, is not a primary regional structure.

Most of the gold produced to date at Tuckabianna occurs in or adjacent to structurally deformed BIF located along the western limb of the Kurrajong syncline where the Tuckabianna Shear Zone cuts it. In addition to BIF hosted mineralisation, gold has been mined from deposits in other iron rich sediments, mafic rocks, porphyry and granitoid. A significant portion of gold production has also been achieved from lateritic material and from alluvial wash within a Tertiary palaeochannel.

### 7.2.4.1 BIF / Mafic / Porphyry Package

A total of approximately 70% to 80% of the gold produced to date from Tuckabianna has come from a line of deposits extending from Sherwood in the north to Friars in the south along the sheared western limb of the Kurrajong syncline. The most significant producers were the Julies Reward, Causton's and Tuckabianna West deposits.

Within the Sherwood to Friars corridor numerous BIF units are present. In the zone between Julie's Reward and Tuckabianna West, in excess of a dozen BIF and other sedimentary units have been mapped over a 400 m wide zone. The mineralised BIF units strike northeast and dip southeast between 45° and 65°. Commonly only one or two of these BIF units carries significant gold mineralisation.

In the primary BIF, gold is associated with quartz, carbonate, pyrite and pyrrhotite as stringers disrupting, fracturing and replacing well laminated BIF. Higher grade zones are associated with increased quartz and sulphide. In the upper 70 m oxidised zone, secondary mobilisation of gold has made zones of economic mineralisation wider than those in the primary zone drilled to date.

Gold also commonly occurs within sheared mafic, narrow quartz porphyry / quartzfeldspar porphyry intrusive rocks in association with the mineralised BIF units.



### 7.2.4.2 Iron Rich Sediments

The cluster of deposits in the southwest (Comet area) of the Tuckabianna project are hosted principally by iron rich sediments within a dominantly mafic sequence. The Comet deposit is the largest of this group of deposits where mineralisation occurs in two horizons, the Footwall and Hangingwall Lodes, dipping to the southeast at 45° and separated by a massive fine grained barren basalt unit 0.5 m – 1 m thick. The Footwall Lode is a banded quartz-chlorite-amphibolite pyrite-pyrrhotite rock with minor stilpnomelane, retrograded garnet, magnetite and chalcopyrite. The Hangingwall Lode is similar to the Footwall Lode but contains more quartz and garnet. Gold mineralisation is intimately associated with pyrrhotite in both lodes and the distribution of gold within the mineralised zones is variable with the highest grades occurring in well-defined steeply dipping shoots.

#### 7.2.4.3 Granitoids

Gold mineralisation at Rapier within the Tuckabianna project area is located entirely within a granitoid body that ranges from tonalite to granodiorite in composition. The gold is hosted in multiple gentle to steeply dipping silicified and anastomosing shear zones associated with quartz and pyrite and minor chalcopyrite, pyrrhotite and molybdenite.

#### 7.2.4.4 Porphyry

The White Well deposit occurs within porphyry intruded into a sequence of andesites. The andesites are coarse immature fragmental rocks, which lie to the west of the main Tuckabianna BIF sequence. The quartz-feldspar porphyry body which hosts the gold mineralisation is a southeast dipping semi-conformable body up to 60 m thick characterised by flattened ovoid quartz phenocrysts (or amygdales). The gold occurs in a quartz vein stockwork in the porphyry body over a strike length of approximately 1 km. Both the andesite and porphyry have undergone intense deformation and are deeply weathered to white kaolin clay, quartz and sericite.



#### 8 **DEPOSIT TYPES**

The gold deposits at Meekatharra are consistent with the greenstone-hosted quartzcarbonate vein (mesothermal) gold deposit model. Exploration for extensions of these deposits and new deposits are therefore based on these models as described below.

- Shear-hosted (e.g. Big Bell, Fender, Black Swan, South Fingall, Golden Gate).
- Quartz reef-hosted (e.g. Great Fingall, Crown, Yellow Taxi, Rheingold, Rheingold South).
- BIF-hosted (e.g. Comet, Causton's.
- Porphyry-hosted (Rheingold, Black Swan South).
- Secondary gold deposits.

#### 8.1 SHEAR-HOSTED GOLD DEPOSITS

Throughout the Murchinson region, gold mineralisation is almost entirely epigenetic and is intimately associated with major faults and shear zones throughout the greenstone belts of the area. As is the case throughout the CGO region, many deposits occur within 3 km of post-folding granitoid contacts, suggesting either a genetic relationship to granitic intrusion or common source regions and structural controls. Adapted from Watkins and Hickman, 1990.

#### 8.1.1 **Diagnostic Features**

At Big Bell, the host lithology is a pyritic quartz-muscovite-K feldspar-schist within the regional Big Bell shear. The gold mineralisation is chiefly microscopic and occurs both as grains forming inclusions in silicates and in blebs of pyrite.

At Cuddingwarra, basalt, dolerite, metasedimentary and ultramafic rocks contain two fracture sets, one striking north and the other striking northeast. Each type of fracture contains lenticular quartz veins and dykes of felsic porphyry. Gold mineralisation appears to be confined to the fracture system; the highest-grade material is in shoots at intersections of the fracture sets and lithology contacts.

At Day Dawn, situated in the Day Dawn Shear Zone, gold mineralisation is hosted by dolerite and basalt. Two sets of mineralised fractures are present in the area, layer parallel northeasterly striking shears, and north to northwesterly striking transverse shears. Considerable dilation is evident. Shears range in width from one to ten metres and play host to the mineralised quartz reefs. Whist thick lenticular quartz reefs occur in the Great Fingall Dolerite host, the hangingwall and footwall basalts tend to host discontinuous veins in the fault and shear structures. Gold mineralisation is associated with highly sheared basalts with quartz veining +/- pyrite and arsenopyrite.





Figure 8-1 Big Bell shear-hosted mineralisation and alteration in northern pit wall - Source: Westgold.

### 8.1.2 Grade and Tonnage Characteristics

The grade and tonnage characteristics for the shear hosted gold deposits vary depending on area.

The Big Bell deposit contains over 2.7 Moz in pre-Westgold past production from 31.3 Mt of ore at an average grade of 2.69 g/t, with remaining resource at a grade of 2.3-2.7 g/t above a 2.0 g/t cut-off grade.

At Cuddingwarra, the Black Swan and Golden Gate deposits have seen modern open pit production of 640 kt at 3.51 g/t for 72,200 oz, with remaining resource of 1.55 g/t above a 0.70 g/t cut-off grade.

At Day Dawn, the South Fingall is a footwall basalt splay from the major Great Fingall reef structure. Westgold produced 61 kt of ore at 1.72 g/t for 3,400 oz, with the remnant resource at a grade of 1.4-1.6 g/t above a 0.7 g/t cut-off grade.

### 8.2 QUARTZ REEF-HOSTED GOLD DEPOSITS

At Day Dawn, gold mineralisation is hosted by dolerite and basalt. Two sets of mineralised fractures are present in the area, layer parallel northeasterly striking shears, and north to northwesterly striking transverse shears. Considerable dilation is evident. Thick lenticular quartz reefs occur where the dilational shear or fracture structures intersect the Great Fingall Dolerite host, such as the Great Fingall and Golden Crown reefs. The host dolerite is a 600 m thick sill of quartz dolerite which has intruded a 100 m thick unit of shale and fine-grained clastic sediment within the basalt pile in the Day Dawn area. Adapted from Watkins and Hickman (1990).



At Cuddingwarra during late-stage extensional fracturing, emplacement of localised, strike-extensive quartz reefs occurred. The reef systems crosscut and slightly displace all lithological units in the vicinity, suggesting that their development postdates the establishment of both the mafic and felsic porphyry lithological suites in the area. Adapted from Isatelle (2020).

# 8.2.1 Diagnostic Features

At Day Dawn, Great Fingall is a major quartz vein dipping 65 degrees southwest and can be up to 12 m wide. The reef is blue quartz and white quartz from secondary fluid events and contains nuggetty gold and sulphides. Wall-rock alteration 'selvedge' includes silicification and carbonation and contains sulphides and numerous stringers of quartz and calcite. Adapted from Watkins and Hickman (1990). Both the Golden Crown and Yellow Taxi deposits host mineralisation in quartz reefs of similar diagenetic origin.

At Cuddingwarra, both the Rheingold and Rheingold South quartz reefs strike northeastsouthwest but form along a conjugate set of faults which have juxtaposing dip directions. Gold is found both within the veins and disseminated about the veins comprising the reef system. The reef system is locally rich in sulphides, mainly pyrite, arsenopyrite, chalcopyrite with occasional galena and sphalerite. Throughout the production history of the pits, gold within the reef system was found to be nuggety, with assays in the reef regularly returning grades above 100g/t. Adapted from Isatelle (2020).

# 8.2.2 Grade and Tonnage Characteristics

The grade and tonnage characteristics for the reef hosted gold deposits vary depending on area.

At Day Dawn, Historic production form the Great Fingall reef up to 1929 was 1.2 Moz of gold from 1.88 Mt of ore at an average grade of 19.5 g/t, but it is unknown if this is from the complete quartz reef structure or if ore selectivity was conducted. Westgold reports the total remnant resource at Great Fingall at an average grade of 6.6 - 7.6 g/t above a 2.0 g/t cut-off grade.

At Cuddingwarra, the Rheingold deposits have seen modern open pit production of 1.04 Mt at 2.44 g/t for 81,00 oz, but this total production is from several mineralisation types. For the remining Rheingold resource the quartz reef mineralisation domains average a modelled grade of approximately 3.0 g/t.

# 8.3 BIF-HOSTED GOLD DEPOSITS

The BIF hosted mineralisation at CGO is primarily found in the Tuckabianna area. Gold mineralisation occurs in sheared and brecciated jaspilitic Banded Iron Formation (BIF) rock. Quartz veining is absent or uncommon in most of the deposits. Most mineralisation domains are less than 10 m true width and dip southeast at 45 degrees. Adapted from Watkins and Hickman, 1990.



#### 8.3.1 Diagnostic Features

For the BIF hosted deposits at Tuckabianna, the deposits occur along shear planes which are parallel to the Mount Magnet Shear Zone. The mineralized BIF units are deformed by north easterly plunging minor folds which appear to have controlled the more productive shoots of mineralisation.

At Comet, gold mineralisation occurs within a lode formation up to 10 m wide consisting of two planar BIF units which strike 030 and dip 45-50 degrees towards the east. The BIF units are separated by a 0-2 m thick massive to sheared basalt. The mineralised units are comprised of hydrothermally altered silicate facies BIF often characterised by replacement assemblages of intense sulphidisation, chloritisation and silicification. Mineralisation shoots plunge north-eastwards which correspond to the plunge of minor folds and crenulation lineation in BIF units of the Comet area (Tomsett, 2019). The remaining Tuckabianna BIF hosted mineral resources have a similar diagenetic origin.



# Hole ID:WRD04

- Southern extension
- BIF 194.76-197.14m
- Apparent thickness
   2.38m
- Steeply dipping 350° sulphide rich (py,po) structure
- 2m @ 19.74g/t incl. 1m @ 30.1g/t & 1m @ 9.37g/t
- Supports model

Figure 8-2 Example of the SIF/SIG hosted mineralisation and the steeply dipping north-northwest shear zones in hole WRD04 - Source: Westgold.

### 8.3.2 Grade and Tonnage Characteristics

For deposits of this category at CGO, underground mining at Comet and Pinnacles by Westgold produced 144 koz from 1.41 Mt of ore at an average grade of 3.17 g/t. Total historic open pit production for the open pits in the Comet area (Comet, Comet North, Pinnacles, Eclipse, Venus) produced 89,700 oz from 1.15 Mt of ore at an average grade of 2.42 g/t.



#### 8.4 PORPHYRY-HOSTED GOLD DEPOSITS

Porphyry hosted mineralisation at CGO is primarily found in the Cuddingwarra area. The mafic and ultramafic rock sequences west of the Cuddingwarra Shear Zone are intruded by plutonic to sub-volcanic felsic bodies. Some of the locations of porphyritic units are controlled by dilatational structures within an early fault system. The intrusive contacts have acted as planes of weakness along which shearing has occurred. It is theorised that the event leading to this shearing has resulted in fracturing of the relatively brittle porphyries and synchronous development of strong foliations within the more ductile mafic and ultramafic rock. The fracturing has provided space for mineralising fluids to infiltrate, leading to the development of quartz veins with associated sulphides and gold mineralisation. Adapted from Isatelle (2020).

#### 8.4.1 Diagnostic Features

At both Rheingold and Black Swan South in Cuddingwarra, gold is found both within the quartz veins and disseminated throughout the porphyries. Alteration associated with mineralisation in the porphyries is characterised by strong silica and sericite wallrock alteration on vein selvages, with varying amounts of sulphides, mostly pyrite.

High grades in the porphyries are often associated with the strongly biotitic granodiorite. Alteration can be locally extensive with or without the emplacement of quartz veining, although the most intense silica-sericite alteration is associated with numerous small quartz veins. Chlorite alteration is seen, with or without Au depending on silica and sulphide content and this probably represents a retrograde metamorphic alteration of biotite. Sericite alteration is sometimes seen with less silica and the pale green appearance of the altered rock is an indicator of lower Au grades (Isatelle, 2020).



Figure 8-3 Mineralised vein set with disseminated pyrite cuts pervasive north to north-northeast-striking foliation in Cuddingwarra felsic intrusive - Source: Westgold.



#### 8.4.2 **Grade and Tonnage Characteristics**

At Cuddingwarra, the Rheingold deposits have seen modern open pit production of 1.04 Mt at 2.44 g/t for 81,00 oz, but this total production is from several mineralisation types.

For Black Swan South, the remaining Indicated resource of 1.12 Moz averaging a grade of 1.53 g/t above a 0.70 g/t cut-off grade is primarily porphyry-hosted mineralisation.

#### 8.5 SECONDARY GOLD DEPOSITS

Secondary gold mineralisation is commonly found in weathered profiles developed over bedrock mineralisation. Laterally more continuous and higher gold grades are typically found within iron-rich, pisolitic horizons near the base of the laterite profile.

#### 8.5.1 **Diagnostic Features**

Taken from Butt, 1998.

Lateritic supergene deposits are more or less flat-lying enrichment zones contiguous with the ferruginous and mottled zones of the lateritic profile. They are characterised by finegrained gold of high fineness (Ag < 0.5%) and some residual primary gold. Particles of coarse gold may be present as primary nuggets and inclusions in vein quartz and pisoliths, and as secondary crystals developed with iron oxide segregations.

Saprolitic supergene deposits exhibit relative enrichment of gold, with minor secondary accumulation, is common as the result of weathering of gold -bearing lodes and shear zones. Where the regolith is thick, this may result in exploitable reserves, amenable to low-cost open-cut mining. Marked absolute enrichment in saprolite also occurs, commonly deep in the regolith, either mostly confined to the source unit or laterally dispersed into the weathered wall rocks, as one or more sub-horizontal zones. The gold is dominantly secondary and of high fineness, even in the weathered source unit, but residual primary grains become more abundant close to the base of the profile.

Numerous, secondary deposits associated with palaeochannels ('deep leads') are known, mainly in Victoria (Ballarat-Bendigo-Ararat area) and in the Kalgoorlie-Norseman area of the Yilgarn Craton. In the southern Yilgarn, gold occurs either in the sediments or in the saprolite immediately beneath the channel. Most of these deposits are individually small (e.g. Baseline, 0.25 Mt at 3g/t Au), but they may occur in clusters along a particular palaeodrainage system, thereby forming a significant resource, such as at Kanowna (Gibb Maitland 1919), Lady Bountiful Extended (Devlin & Crimeen 1990), and Challenge-Swordsman at Higginsville. In some deposits, the Au in the sediments may be alluvial. However, it commonly occurs as secondary silver-poor particles and the enrichment zones themselves may transgress sedimentary features, including the unconformity. Accordingly, it is considered that, in most deposits, the gold is probably a chemical precipitate, derived from a source up-drainage or, possibly, from immediately beneath the channel.

This subdivision of supergene Au deposits is part descriptive and part genetic. There are other enrichments, some of economic grade, that do not fit easily into this classification.



#### 8.5.2 **Grade and Tonnage Characteristics**

Australian laterite gold deposits are typically small; <1.5 Mt, with grades 1.5-5.0 g/t Au. In some cases, they represent the only mineable reserves over otherwise uneconomic primary mineralisation. Commonly laterite mineralisation is a minor proportion of total reserves of major deposits but may offer the opportunity for early commercialisation.

The type deposit of this category at CGO is the laterite mineralisation in the Back Swan South resource. The laterite mineralisation saw significant production in historic open pit mining. Reported above a 0.5 g/t cut-off grade, there is 225,000 t at a grade of 0.71 g/t of Indicated classified resource remaining, and a further 320,000 t at a grade of 0.69 g/t Inferred material. Other deposits of this type at CGO are significantly smaller components of the total mineral resource.



# 9 EXPLORATION

# 9.1 SUMMARY

Westgold non-drilling regional exploration activities for gold mineralisation within the CGO tenements has been limited to the collection of aeromagnetic and gravity data within the Day Dawn region, and a small aeromagnetic survey in the Cuddingwarra region. These new datasets, along with the compilation of extensive historic exploration datasets, has been used to generate exploration targets for subsequent drill testing (refer section 10).

# 9.2 GEOPHYSICAL SURVEYS

While Westgold has access to extensive historic geophysical datasets, the renewed exploration initiative that commenced in 2021 identified that the existing aeromagnetic coverage within the Day Dawn block (Great Fingall and Golden Crown regions) and parts of the Cuddingwarra block lacked appropriate data. The Company subsequently completed high resolution aeromagnetic surveys within these regions on 25 m line spacings and flying heights (**Figure 9-1**).

In addition to the aeromagnetic surveys, during 2023 the company completed a highresolution gravity survey over the Day Dawn block (**Figure 9-2**) which, in conjunction with the aeromagnetics, was used to select priority drill targets for 2024 within this area.

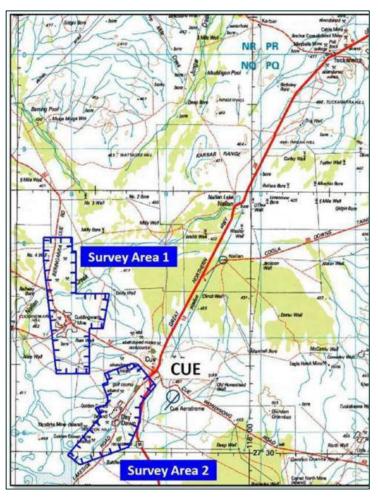


Figure 9-1 2021 Westgold Aeromagnetic Surveys (Area 1 – Cuddingwarra & Area 2 – Day Dawn). Source: Westgold.



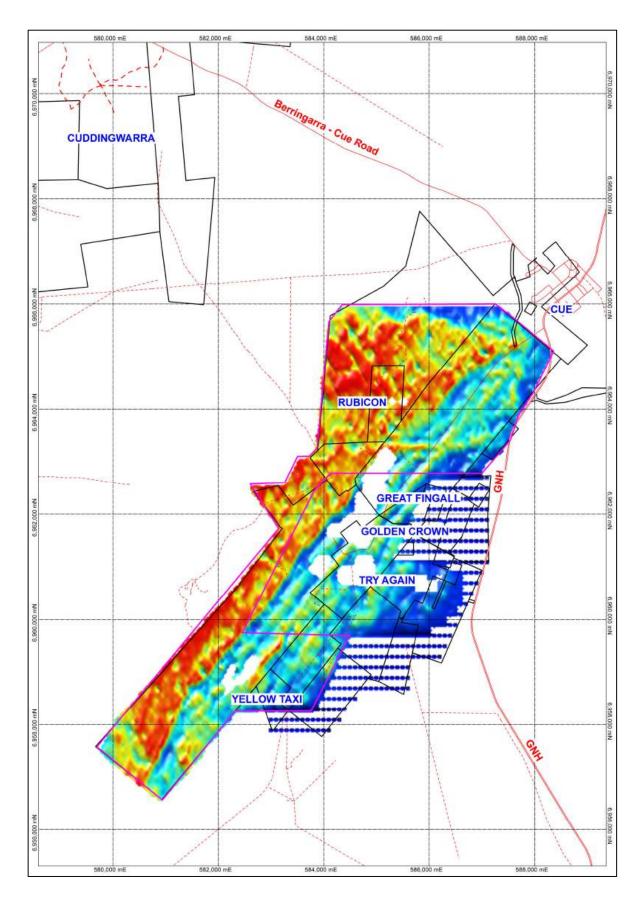


Figure 9-2 2023 Westgold Day Dawn Gravity Survey – 1VD Image. Source: Westgold.



#### 9.3 **GEOCHEMICAL SURVEYS**

As Westgold has access to extensive historic geochemical datasets, including soil and rock chip geochemistry, additional datapoints have been limited to sporadic rock chip sampling.

#### 9.4 TARGET SELECTION FOR DRILL TESTING

The completed exploration targeting using available datasets has resulted in the drill testing of multiple prospects / targets to date with the majority of these being within the Day Dawn and Cuddingwarra Regions, with minor programs conducted in the Big Bell area (refer Section 10).

Westgold has recently completed a further round of targeting within the CGO region which has highlighted 14 exploration targets that are scheduled for drill testing during FY2024 and FY2025 (along with various resource definition targets). These are detailed in Section 10 of this report.



# 10 DRILLING

### 10.1 DRILLING SUMMARY

Since taking ownership of the project, Westgold drilled has drilled 7,313 Exploration, Resource Development and Grade Control holes for 389,453 m (May 1 2011, to June 30, 2024). Drilling was completed for the purpose of development of gold resources as well as exploration for new gold deposits. The total drill holes and metres by type are shown in **Table 10-1** with total drill holes and metres by prospect shown in **Table 10-2**.

Table 10-1 CGO drill hole database– number of holes and metres drilled between May 1, 2011 and June 30, 2024.

Drill Type	Number of Holes	Metres
AC	611	28,078
DDH	781	158,852
RAB	57	2,849
RC	5,864	195,793
Grand Total	7,313	389,453

Prospect	Hole_Type	Number of Holes	Metres
3210	RC	15	462
3210N	RC	13	646
700N	RC	52	2,484
Accelerator	RC	61	2,017
Big Bell South	RC	7	915
Big Bell	DDH	463	80,189
	RC	19	209
Black Swan South	RC	7	2,314
Causton's	DDH	5	1,245
City of Chester	AC	206	8,175
	RC	832	21,712
City of Chester South	RC	5	170
City of Sydney	RC	394	8,621
Comet	RC	39	4418
Corral	RC	6	294
Coventry	AC	27	932
	RC	684	21,249
Coventry Northeast	RC	67	2,858
Crème D' Or	AC	150	3,361
Cuddingwarra	AC	15	642
Cuddingwarra South	AC	191	10,774
	RAB	57	2,849
Dame	RC	11	1,302
Dubbo	RC	62	2,788
Exodus	RC	3	84
Fairlight	RC	57	2,396

Table 10-2 CGO drilling by prospect and hole type from between May 1, 2011 and June 30, 2024.



Prospect	Hole_Type	Number of Holes	Metres
Fender	DDH	54	8,181
	RC	74	2,915
Fender South	RC	15	950
Fingall East Wing	RC	18	613
Fingall West Wing	RC	17	694
Fleece Pool	AC	27	1,173
	RC	247	9,047
Friar's	RC	18	223
Golden Crown	DDH	3	2,560
	RC	6	270
Government Well	RC	32	1,734
Great Fingall	DDH	134	38,900
	RC	85	4,790
Indicator	RC	258	11,229
Jim's Find	AC	18	559
	RC	597	24,909
Kalahari	RC	42	1,524
Katie's	RC	12	640
Kinsella	RC	216	5,515
Lady Rosie	RC	247	9,110
Mafeking Bore	AC	88	4,091
Morning Star	RC	23	780
Mountain View	RC	8	348
Mount Fingall	RC	5	252
Oceanic	AC	9	418
Pinnacles	DDH	4	1,774
Racecourse	RC	131	4,169
Reef Pit	RC	12	648
Rubicon	RC	18	846
Rubicon East	RC	9	522
Smith's United	RC	11	749
South Fingall	RC	200	5,245
South Victory	RC	188	4,860
Sovereign	DDH	13	3,816
	RC	5	1,233
The Arches	AC	30	1,314
	RC	18	1,479
Try Again	RC	20	1,162
Yellow Taxi	RC	792	19,384
Yellow Taxi North	RC	14	573
Yellow Taxi South	RC	23	1,698
		<u> </u>	
Total		7,313	389,453



#### 10.2 DRILLING MAPS

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Figure 10-1 shows the drilling distribution for CGO.

Figure 10-1 Distribution of drilling between May 1, 2011 and June 30, 2024 within the FGO tenements - Source: Westgold.

Drill hole collars are originally set out by surveyors once the coordinates have been given by the geologists. They are later picked up once they are drilled. The surveyor uploads the coordinates given to them onto the Trimble GPS controller which also includes the hole IDs. This is then used to stake out the holes again and ensure the correct ID is used when picking up the hole and that it matches the hole ID on the stake. The holes are picked up in MGA94 (Zone 51) coordinates using RTK. Once picked up, the survey team exports this to a CSV file which includes the hole ID, method of survey (RTK), MGA94 eastings, MGA94 northings, MGA RL, surveyors name, coordinate system and survey instrument (R12).

Downhole surveys are undertaken on each hole by drilling contractors using digital true north seeking gyro instruments. During first pass exploration RC and AC drill holes, single shot downhole survey measurements are taken at 4 m depth then at 30 m depth, followed by 30 m intervals before the final reading taken at end of hole. During resource development RC drilling programs, single shot surveys are taken every 30 m downhole to monitor hole deviation during active drilling. Results are actively monitored by the supervising geologist as the hole progresses. This is then followed up by a multi-shot survey at every 5 m or 10 m interval throughout the length of the hole on completion of each hole. For all DDH holes, multi-shot surveys are conducted as described above, with hole deviation being monitored by single shot surveys at 50 m intervals downhole as drilling progresses.



#### 10.3 RESULTS

The majority of the drilling completed within the Big Bell region pertained to resource definition or resource extension drilling with results detailed in Section 14.

#### 10.3.1 Big Bell

The majority of the drilling completed within the Big Bell region pertained to resource definition or resource extension drilling with results detailed in Section 14.

#### 10.3.2 Cuddingwarra

The majority of the previous drilling completed by Westgold at Cuddingwarra pertained to resource definition with results detailed in Section 14. A small program of aircore drilling was completed during the first half of 2024 to test targets defined by the 2021 gravity survey completed over the northern part of Cuddingwarra. The drilling failed to define any new mineralised trends and failed to intersect target porphyry intrusions. A single line of drilling encountered mineralisation that correlates to a known trend in the area and returned a best result of 3m at 1.74g/t gold from 20m in drill hole 24CDAC029.

#### 10.3.3 Day Dawn

The majority of the previous drilling completed by Westgold at Day Dawn pertained to resource definition with results detailed in Section 14. Gravity data collected in 2023 appeared to show a number of previously unidentified structures in the Hangingwall Basalt sequence, to the west of the Fingall Dolerite, analogous to the Great Fingall and Golden Crown Reefs. Gravity data was combined with other available datasets to refine targets prior to drill testing. A total of 11 targets were initially defined with 6 targets located within the Fingall Dolerite and the remaining 5 located within the Mountain View Dolerite to the west. The first phase of RC drilling was completed on the 6 targets within the Fingall Dolerite. Given the largely conceptual nature of the targets, highly encouragingly, 7 holes returned significant mineralisation including 11m at 2.76g/t in hole 24GCRC016 from South Trenton and 5m at 5.88g/t in hole 24GCRC022 from Lakeside.

Targets within the Mountain View Dolerite are scheduled to be drilled during FY2025.



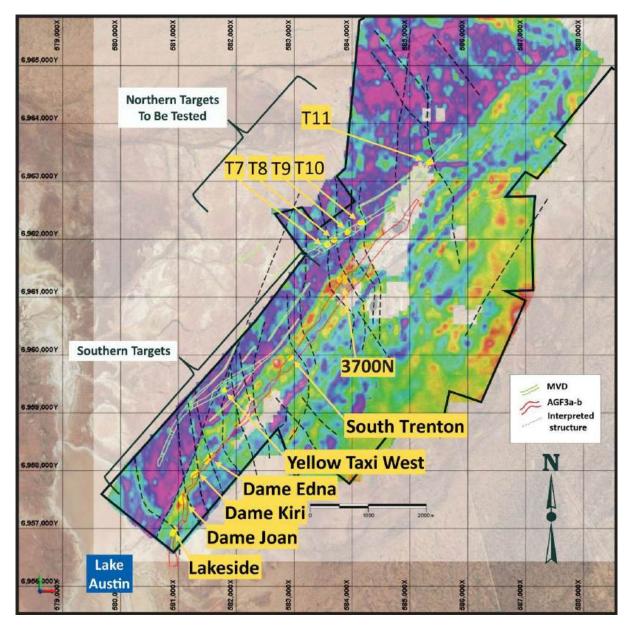


Figure 10-2 Overview of the Day Dawn gravity targets tested and those awaiting drilling - Source: Westgold.



Target	Hole	Collar N	Collar E	Collar RL	Intercept (Downhole Width)	From (m)	Dip	Azi	G.M
Dame Joan	24GCRC001	6957524	581066	412	NSI		-60.7	50.3	0
	24GCRC002	6957503	581036	413	NSI		-56.5	48.7	0
	24GCRC003	6957489	581086	413	NSI		-60	51.2	0
	24GCRC004	6957468	581058	413	NSI		-60.5	50.1	0
Dame Kiri	24GCRC005	6957921	581259	411	NSI		-60.3	52.8	0
	24GCRC006	6957950	581293	411	5m @ 0.99 g/t	108	-60.2	50.1	4.95
	24GCRC007	6957979	581328	411	3m @ 1.35 g/t	52	-60.2	50	4.05
Dame Edna	24GCRC008	6958159	581485	412	3m @ 1.98 g/t	96	-59.8	36.5	5.93
	24GCRC009	6958199	581516	412	4m @ 0.54 g/t	8	-59.9	40.1	2.16
					4m @ 0.65 g/t	40			2.6
					6m @ 2.08 g/t	126			12.45
	24GCRC010	6958243	581541	412	4m @ 1.63 g/t	104	-60	38.3	6.52
					6m @ 1.18 g/t	115			7.09
	24GCRC011	6958291	581585	412	2m @ 2.81 g/t	30	-59.7	39.5	5.62
					2m @ 2.41 g/t	68			4.82
					4m @ 0.66 g/t	112			2.64
Yellow Taxi West	24GCRC012	6959414	581781	430	NSI		-51.2	72.4	0
	24GCRC013	6959414	581781	430	NSI		-62.6	61.1	0
	24GCRC014	6959389	581794	428	NSI		-49.8	80.6	0
	24GCRC015	6959389	581794	428	NSI		-67.5	72.1	0
Trenton South	24GCRC016	6959970	582959	420	5m @ 1.04 g/t	35	-59.9	48.7	5.2
	24GCRC016	6959970	582959	420	3m @ 1.22 g/t	47	-59.9	48.7	3.67
	24GCRC016	6959970	582959	420	6m @ 1.33 g/t	77	-59.9	48.7	7.98
	24GCRC017	6959939	582920	420	11m @ 2.76 g/t	71	-60	50.7	30.36
				inc.	2m @ 4.11 g/t	72			8.22
			Also	inc.	5m @ 3.55 g/t	77			17.75
					4m @ 0.96 g/t	120			3.84
3580 - 3700N	24GCRC018	6961276	583875	420	4m @ 0.97 g/t	245	-60	270	3.87
	24GCRC019	6961296.2	583779.3	422	NSI		-75	42.2	0
	24GCRC020	6961338.6	583879.5	422	NSI		-61.3	40.8	0
	24GCRC021	6961284	584030.7	422	NSI		-60.8	38.2	0
Lakeside	24GCRC022	6956996	580944	412	5m @ 5.88 g/t	23	-60	270	29.39
				inc.	1m @ 26.60 g/t	23			26.6
	24GCRC023	6956958.5	580912	410	NSI		-55.2	29.9	0
	24GCRC024	6956907	580894.8	412	NSI		-55.6	29.9	0

#### Table 10-3 Day Dawn South RC Drilling – Significant Results.

# 10.3.4 Tuckabianna

The Majority of the drilling completed at Tuckabianna pertained to resource definition with results detailed in Section 14.



# 11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

### 11.1 SAMPLE COLLECTION AND SECURITY

The following sections summarise the drill sample collection processes employed by Westgold at CGO for exploration and resource definition drilling:

#### 11.1.1 Aircore (AC)

For aircore (AC) samples, drill cuttings are extracted from the rig return via cyclone. The underflow from each 1 m interval is transferred via bucket to a four-tiered riffle splitter, delivering approximately 3 kg of the recovered material into calico bags for analysis and the residual material into a large green bag. The residual is placed on the ground in 1 m piles. Depending on the program, the samples may be taken in 4 m composites, and if any anomalous assays are received, the 1 m interval sample is then submitted for analysis.

QA/QC Standards are placed in calicos and are inserted within the composite sequence in the field. A register is recorded within the field at the time of drilling of every sample's unique sample ID number and corresponding metre, as well as the Standard ID when it is first placed into the sequence.

The composite samples are then collected in poly-weave bags (five at a time) which are then loaded into bulka bags. The bulka bags are collected by a dedicated Westgold sample transport team and delivered to the Bureau Veritas Bluebird laboratory, or in the case of low-level analysis samples delivered via third-party contractor to the Bureau Veritas Canning Vale laboratory. The 1 m splits are stored in plastic field bags close to the corresponding drilled hole.

The composite samples are analysed for gold and multi-elements. Samples are analysed via multi-element aqua regia analysis (The upper gold limitation for aqua regia is 4.00 g/t Au; when this occurs, the sample is also fire assayed). Upon return of results, intersections of 0.1 g/t and above require their corresponding 1 m splits for further assays. These are taken from the secondary sequence and full QA/QC applied before sending to the laboratory for fire assay.

### 11.1.2 Rotary Air Blast (RAB)

For Rotary Air Blast (RAB) samples, drill cuttings are extracted from the rig return via cyclone. The underflow from each 1 m interval is transferred via bucket to a four-tiered riffle splitter, delivering approximately 3 kg of the recovered material into calico bags for analysis and the residual material into a large green bag. The residual is placed on the ground in 1 m piles. Depending on the program, the samples may be taken in 4 m composites, and if any anomalous assays are received, the 1 m interval sample is then submitted for analysis.

QA/QC Standards are placed in calicos and are inserted within the composite sequence in the field. A register is recorded within the field at the time of drilling of every sample's unique sample ID number and corresponding metre, as well as the Standard ID when it is first placed into the sequence.



The composite samples are then collected in poly-weave bags (five at a time) which are then loaded into bulka bags. The bulka bags are collected by a dedicated Westgold sample transport team and delivered to the Bureau Veritas Bluebird laboratory, or in the case of low-level analysis samples delivered via third-party contractor to the Bureau Veritas Canning Vale laboratory. The 1 m splits are stored in plastic field bags close to the corresponding drilled hole.

The composite samples are analysed for gold and multi-elements. Samples are analysed via multi-element aqua regia analysis (The upper gold limitation for aqua regia is 4.00 g/t Au; when this occurs, the sample is also fire assayed). Upon return of results, intersections of 0.1 g/t and above require their corresponding 1 m splits for further assays. These are taken from the secondary sequence and full QA/QC applied before sending to the laboratory for fire assay.

# 11.1.3 Reverse Circulation Drilling (RC)

RC is a form of percussion drilling designed to eliminate downhole contamination utilising a (nominally) 5¼" face-sampling hammer. Drill cuttings are extracted from the RC return via cyclone. The residual material is retained on the ground near the hole. A cone splitter has typically been used which is located directly below the cyclone, delivering approximately 3 kg of the recovered material into pre-numbered calico bags for analysis. Samples too wet to be split through a splitter are taken as grabs and are recorded as such. The use of a cone splitter is more suitable for wet samples.

Depending on the program, the samples may be taken in 4 m composites, and if any anomalous assays are received, the 1 m interval sample is then submitted for analysis. Ordinarily the 1 m interval sample is submitted in the first instance.

QA/QC Standards are placed in calicos and are inserted within the composite sequence in the field. A register is recorded within the field at the time of drilling of every sample's unique sample ID number and corresponding metre, as well as the Standard ID when it is first placed into the sequence.

The samples are then collected in poly-weave bags (five at a time) which are then loaded into bulka bags. The bulka bags are collected by a dedicated Westgold sample transport team and delivered to the Bureau Veritas Bluebird laboratory.

# 11.1.4 Diamond Drilling (DD)

Diamond drilling carried out by Westgold at CGO is logged, sampled and analysed in line with Westgold procedures. Diamond drill core is cleaned, laid out, measured and logged on site by geologists for lithology, alteration, mineralisation and structures. Structural measurements, alpha and beta angles, are taken using a kenometer core orientation tool or a Reflex IQ Logger on major lithological contacts, foliations, veins and major fault zones, and are recorded based on orientation lines scribed onto the core by the drillers. Multiple specific gravity (SG) measurements are taken per hole in both ore and waste zones. SGs are taken at a specific gravity weighing station. Technicians, or geologists, when necessary, record the Rock Quality Designation (RQD). Logging is entered into



LogChief drill hole logging software on field laptop computers and checked into Westgold's geological database.

Depending on the project requirements, the diamond core will be drilled to PQ, HQ3, and NQ2 core diameter and either be whole core, half core or quarter core sampled. Sample intervals are based on geology, with a minimum 0.2 m to maximum 1.0 m sample size. Before sampling, diamond core is photographed wet and dry, and the generated files stored electronically on the Imago platform. Sampling is performed by a technician in line with sample intervals marked up on the core by a geologist. Core is cut at the sample line and either full, half or quarter core is taken according to the geologist's instructions and placed into numerically marked calico sample bags ready for dispatch to the laboratory, and QA/QC standards and blanks inserted into the series. The half core that is not sent for assaying is stored in the core farm for reference.

# 11.1.5 Sample Security

Sample security protocols in place aim to maintain the chain of custody of samples to prevent inadvertent contamination or mixing of samples, and to render active tampering as difficult as possible. Sampling is conducted by Westgold staff or contract employees under the supervision of site geologists.

Samples are placed in calico bags, then placed into poly-weave bags (five at a time) which are then loaded into bulka bags. The bulka bags are collected by a dedicated Westgold sample transport team and delivered to the Bureau Veritas Bluebird laboratory, or in the case of low-level analysis samples delivered via third-party contractor to the Bureau Veritas Canning Vale laboratory.

All samples received by the laboratory are physically checked against the dispatch order and Westgold personnel are notified of any discrepancies prior to sample preparation commencing. No Westgold personnel are involved in the preparation or analysis process.

# 11.1.6 Prospect Sample Summary

A summary of the prospect, sample type, laboratory and assay method for Cue exploration and resource definition drilling can be found in **Table 11-1**. The majority of samples were sent to Bureau Veritas in Meekatharra for fire assay atomic absorption spectroscopy (FA\_AAS).

Prospect	Sample Type	Laboratory Code	Assay Method	Sample Count
3210	RC CHIPS	KAL	FAR_AAS	187
3210N	RC CHIPS	ALS_PTH	FAOG_AAS	487
700N	RC CHIPS	BV_MLX	FA_AAS	2,052
	RC CHIPS	BV_PTH	FA_AAS	430
Accelerator	RC CHIPS	BV_MLX	FA_AAS	1,081
	RC CHIPS	BV_PTH	FA_AAS	878
Big Bell South	RC CHIPS	ALS_PTH	FAOG_AAS	636

Table 11-1 Sample count for each CGO prospect by sample type, laboratory and method.



Prospect	Sample Type	Laboratory Code	Assay Method	Sample Count
Big Bell	RC CHIPS	ALS_PTH	FAOG_AAS	78
	RC CHIPS	BV_MLX	FA_AAS	122
	WHOLE CORE	BV_MLX	FA_AAS	20,843
	HALF CORE	BV_MLX	FA_AAS	5,821
	HALF CORE	BV_PTH	FA_AAS	1,789
	WHOLE CORE	BV_PTH	FA_AAS	4,902
Black Swan South	RC CHIPS	BV_PTH	FA_AAS	128
	HALF CORE	BV_PTH	FA_AAS	491
Black Swan	RC CHIPS	MINAN	FA50_AAS	97
	HALF CORE	MINAN	FA50_AAS	221
Causton's	HALF CORE	BV_MLX	FA_AAS	607
City of Chester	RC CHIPS	ALS_PTH	FA_AAS	358
	RC CHIPS	ALS_PTH	FAOG_AAS	3,652
	RC CHIPS	BV_MLX	FA_AAS	18,502
	RC CHIPS	BV_PTH	FA_AAS	1,011
	RC CHIPS	MINAN	FA50_AAS	292
City of Chester South	RC CHIPS	BV_MLX	FA_AAS	170
City of Sydney	RC CHIPS	BV_MLX	FA_AAS	2,047
	RC CHIPS	BV_PTH	FA_AAS	5,683
Comet	RC CHIPS	BV_MLX	FA_AAS	576
	RC CHIPS	BV_PTH	FA_AAS	46
	WHOLE CORE	BV_MLX	 FA_AAS	210
	HALF CORE	 BV_MLX	FA_AAS	264
Corral	RC CHIPS	BV_PTH	FA_AAS	294
Coventry	RC CHIPS	BV_MLX	FA_AAS	14,759
	RC CHIPS	BV_PTH	FA_AAS	3,935
Coventry Northeast	RC CHIPS	BV_MLX	FA_AAS	2,856
Crème D' Or	RC CHIPS	BV_MLX	FA_AAS	936
	RC CHIPS	BV_PTH	FA_AAS	1,327
	RC CHIPS	KAL	FAR_AAS	415
Cuddingwarra	RC CHIPS	ALS_PTH	AROG_UN	166
Cuddingwarra South	RC CHIPS	ALS_PTH	AROG_UN	1,662
-	RC CHIPS	ALS_PTH	FA_AAS	1
	RC CHIPS	ALS_PTH	FAOG_AAS	36
	RC CHIPS	BV_PTH	FA_AAS	2,275
Dames	RC CHIPS	BV_MLX	FA_AAS	593
Dubbo	RC CHIPS	BV_MLX	FA_AAS	84
	RC CHIPS	BV_PTH	FA_AAS	979
Exodus	RC CHIPS	BV_PTH	 FA_AAS	84
Fairlight	RC CHIPS	 BV_MLX	 FA_AAS	376
-	RC CHIPS	 BV_PTH	FA_AAS	915
Fender	HALF CORE	BV_MLX	FA_AAS	1,419
	HALF CORE	BV_PTH	FA_AAS	132
	RC CHIPS	ALS_PTH	FAOG_AAS	275



Prospect	Sample Type	Laboratory Code	Assay Method	Sample Count
	RC CHIPS	BV_MLX	FA_AAS	1,865
	WHOLE CORE	BV_MLX	FA_AAS	646
	WHOLE CORE	BV_PTH	FA_AAS	27,62
Fender South	RC CHIPS	ALS_PTH	FAOG_AAS	335
	RC CHIPS	BV_PTH	FA_AAS	131
Fingall East Wing	RC CHIPS	BV_MLX	FA_AAS	414
Fingall West Wing	RC CHIPS	BV_MLX	FA_AAS	429
Fleece Pool	RC CHIPS	BV_MLX	FA_AAS	3,020
	RC CHIPS	BV_PTH	FA_AAS	5,518
Friar's	RC CHIPS	BV_MLX	FA_AAS	222
Golden Crown	HALF CORE	BV_MLX	FA_AAS	158
	HALF CORE	BV_PTH	SFA_AAS	33
	RC CHIPS	MINAN	FA50_AAS	149
Government Well	RC CHIPS	KAL	FAR_AAS	509
Great Fingall	HALF CORE	BV_MLX	FA_AAS	8,792
	HALF CORE	BV_PTH	SFA_AAS	125
	HALF CORE	MINAN	FA50_AAS	216
	HALF CORE	MINAN	SFA_AAS	58
	RC CHIPS	ALS_PTH	FAOG_AAS	72
	RC CHIPS	BV_MLX	FA_AAS	3,994
	RC CHIPS	MINAN	FA50_AAS	343
	WHOLE CORE	BV_MLX	 FA_AAS	10,843
Indicator	RC CHIPS	 ALS_PTH	FAOG_AAS	751
	RC CHIPS	 BV_MLX	 FA_AAS	7,775
Jim's Find	RC CHIPS	ALS_PTH	FAOG_AAS	1,467
	RC CHIPS	BV_MLX	FA_AAS	11,390
	RC CHIPS	 BV_PTH	FA_AAS	8,321
Kalahari	RC CHIPS	ALS_PTH	FAOG_AAS	327
	RC CHIPS	MINAN	 FA50_AAS	1,031
Katie's	RC CHIPS	BV_PTH	FA_AAS	639
Kinsella	RC CHIPS	ALS_PTH	FAOG_AAS	665
	RC CHIPS	 BV_MLX	 FA_AAS	3,015
	RC CHIPS	MINAN	FA50_AAS	1,688
lady Rosie	RC CHIPS	ALS_PTH	FAOG_AAS	598
	RC CHIPS	BV_MLX	FA_AAS	2,812
	RC CHIPS	BV_PTH	FA_AAS	4,347
	RC CHIPS	MINAN	FA50_AAS	1,313
Mafeking Bore	RC CHIPS	ALS_PTH	FA_AAS	1,082
0	RC CHIPS	ALS_PTH	FAOG_AAS	74
Morning Star	RC CHIPS	BV_MLX	FA_AAS	769
Mountain View	RC CHIPS	MINAN	FA50_AAS	254
Mount Fingall	RC CHIPS	KAL	FAR_AAS	218
Oceanic	RC CHIPS	BV_PTH	FA_AAS	126
Pinnacles	HALF CORE	BV_MLX	FA_AAS	16



Prospect	Sample Type	Laboratory Code	Assay Method	Sample Count
	WHOLE CORE	BV_MLX	FA_AAS	91
Racecourse	RC CHIPS	BV_MLX	FA_AAS	986
	RC CHIPS	BV_PTH	FA_AAS	2,011
	RC CHIPS	MINAN	FA50_AAS	628
Reef Pit	RC CHIPS	BV_MLX	FA_AAS	648
Rheingold	RC CHIPS	MINAN	FA50_AAS	25
	HALF CORE	MINAN	FA50_AAS	337
Rubicon	RC CHIPS	KAL	FAR_AAS	478
Rubicon East	RC CHIPS	ALS_PTH	FAOG_AAS	459
Smith's United	RC CHIPS	BV_PTH	FA_AAS	744
South Fingall	RC CHIPS	ALS_PTH	FAOG_AAS	1,295
	RC CHIPS	BV_MLX	FA_AAS	679
	RC CHIPS	MINAN	FA50_AAS	2,496
South Victory	RC CHIPS	ALS_PTH	FAOG_AAS	559
-	RC CHIPS	BV_MLX	FA_AAS	2,094
	RC CHIPS	BV_PTH	FA_AAS	1,635
	RC CHIPS	MINAN	FA50_AAS	406
	PULP	ALS_PTH	FAOG_AAS	7
Sovereign	HALF CORE	BV_MLX	FA_AAS	1877
_	HALF CORE	BV_PTH	FA_AAS	117
	RC CHIPS	BV_PTH	FA_AAS	613
The Arches	RC CHIPS	BV_MLX	FA_AAS	1,475
	RC CHIPS	BV_PTH	FA_AAS	496
Try Again	RC CHIPS	ALS_PTH	FAOG_AAS	291
	RC CHIPS	KAL	FAR_AAS	444
Yellow Taxi	RC CHIPS	ALS_PTH	FAOG_AAS	276
	RC CHIPS	BV_MLX	FA_AAS	14,871
	RC CHIPS	BV_PTH	FA_AAS	647
	RC CHIPS	KAL	FAR_AAS	763
	RC CHIPS	MINAN	FA50_AAS	1,216
Yellow Taxi North	RC CHIPS	ALS_PTH	FAOG_AAS	494
Yellow Taxi South	RC CHIPS	ALS_PTH	FAOG_AAS	630
	RC CHIPS	BV_MLX	FA_AAS	174
	RC CHIPS	BV_PTH	 FA_AAS	596
	HALF CORE	BV_MLX	FA_AAS	99
Total:				240,244

# 11.2 LABORATORY SAMPLE PREPARATION, ASSAYING AND ANALYTICAL PROCEDURES

Samples are processed at the independent commercial laboratories listed in Table 11-2.

Laboratory	Address	Comment
ALS	31 Denninup Way	Accreditation Status: ISO/IEC 17025
(ALS_PTH)	Malaga WA 6090	Accrediting Body: NATA
(MINAN - Minanalytical)		Corporate Accreditation No: 825
		Corporate Site No: 23001
Bureau Veritas	18 Atbara Street	Accreditation Status: ISO 9001.2015
(BV_KAL)	Kalgoorlie WA 6430	Accrediting Body: TUV NORD
(KAL - Kalassay		
Bureau Veritas	Bluebird Mine Site	Accreditation Status: ISO 9001.2015
(BV_MLX)	Great Northern Highway	Accrediting Body: TUV NORD
	Meekatharra WA 6642	
Bureau Veritas	6 Gauge Circuit,	Accreditation Status: ISO/IEC 17025
(BV_PTH)	Canning Vale	(2005)
(ULTRATRACE)	Perth WA 6155	Accrediting Body: NATA
		Corporate Accreditation No: 626
		Corporate Site No: 18466

#### Table 11-2 Independent Commercial Laboratories.

A summary of the laboratory and assay methods are shown in **Table 11-3**. The majority of samples were sent to Bureau Veritas Bluebird for fire assay atomic absorption spectroscopy (FA\_AAS).



Assay Type	Assay Code	Assay Description	Laboratory	Sample Count
Aqua Regia	ua Regia AROG_UN Ore Grade Aqua Regia Digest, unk		ALS (Perth) - Analytical Laboratory Services - Perth, WA	1,828
	FA_AAS	Fire Assay, unspecified AAS finish.	ALS (Perth) - Analytical Laboratory Services - Perth, WA	1,441
Fire Assay	FA_AAS	Fire Assay, unspecified AAS finish.	Bureau Veritas Bluebird	158,446
	FA_AAS	Fire Assay, unspecified AAS finish.	Bureau Veritas Perth	50,979
	FA50_AAS	Fire Assay 50g, AAS finish.	Minanayltical Labs Perth	10,712
	FAOG_AAS	Ore Grade Fire Assay, AAS finish.	ALS (Perth) - Analytical Laboratory Services - Perth, WA	13,464
	FAR_AAS	FA preparation with AR wash digest and AAS finish	Kalgoorlie Assay Laboratory	3,014
	SFA_AAS	Screen Fire Assay. Unspecified AAS finish	Bureau Veritas Perth	253
	SFA_AAS	Screen Fire Assay. Unspecified AAS finish	Minanayltical Labs Perth	58
Grand Total				240,195

#### Table 11-3 Summary of laboratories used and assay.

# 11.2.1 Fire Assay

All geological samples requiring Au fire assaying are sent to Bureau Veritas at either Bluebird or Canning Vale for analysis (Table 11-3).

Sample preparation process consists of.

- Crushing using a vibrating jaw crusher to achieve a maximum sample size of 4 mm.
- The sample is then weighed, and if the sample weight is greater than 3.2 kg, the sample is split into two using a Jones-type riffle splitter.
- The crushed sample is then pulverised in a Labtech LM5 Ring Mill for 6 minutes. For samples weighing greater than 3.2 kg the first portion is removed and second portion is homogenised in the same machine. Once complete the first portion is put back in the LM5 and both portions are homogenised.
- For every 20th sample, an approximately 25 g sample is screened to 75 microns to check that homogenising has achieved 80% passing 75 microns. The sample is dry screened with sample rubbing aiding the screening process. If the screening does not achieve the criteria of 80% passing 75 microns, then the sample is re-homogenised and on manager's discretion 3 or 4 samples from both sides of the defective sample are screened.

Analysis is carried out in the following manner;

- A (nominally) 40 g charge of prepared sample is fused with a mixture of lead • oxide, sodium carbonate, borax, silica and other reagents and then cupelled to yield a precious metal bead.
- The bead is then dissolved in acid and analysed by atomic absorption spectroscopy against matrix-matched standards.
- Samples returning assay values in excess of 100g/t Au are repeated using a gravimetric finish.



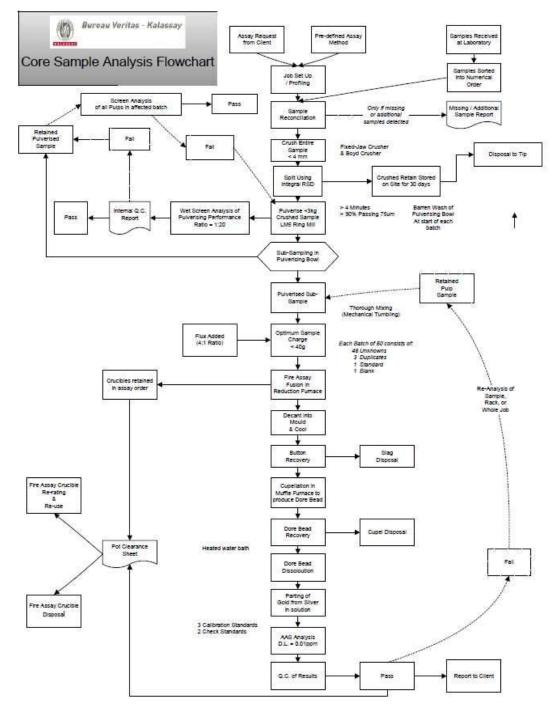


Figure 11-1 Representative fire assay sample flow chart Bureau Veritas. Source: Westgold.

#### 11.2.2 Screen Fire Assay

A screen fire assay uses the same analysis technique as traditional fire assaying, although screen fire assays use a larger volume of sample (typically 1 kg) which is screened (usually to -75 micron or -106 micron) to separate coarse gold particles from fine material. To aid in distinguishing the proportion of coarse and fine gold within the sample the following results are included in a screen fire assay report:

- The results of duplicate fine fraction assays, plus the mean of the results.
- The coarse fraction gold assay.



- Weights of both the fine and coarse fractions.
- A "total" gold calculation for the 1 kg sample based on the weighted average of the coarse and fine fractions.

# 11.2.3 Aqua Regia

For aqua regia, the entire dried sample is jaw crushed (JC2500 or Boyd Crusher) to a nominal 85% passing 4 mm with crushing equipment cleaned between samples. The sample is then split using an Integral RSD to produce a product <3 kg and the remainder of the sample is stored as the coarse reject. The sample is then pulverised in a LM5 ring mill to grind the sample to a nominal 90% passing 75 µm particle size.

A sub-sample of 200 mg is taken from the pulped sample in the high wet strength paper packet; this is the assay weight. The actual weight is recorded and is included in the results calculation process. The aqua regia chemicals (nitric acid and hydrochloric acid) are then added to the crushed sub-sample and left to dissolve.

The resulting liquid is then analysed for gold and/or multi-element content using either AAS, or inductively coupled plasma (ICP) spectroscopy with an overall method detection limit of 0.02 ppm Au content in the original sample.

# 11.3 QUALITY CONTROL PROCEDURES AND QUALITY ASSURANCE

### 11.3.1 Quality Control Procedures

QA/QC consists of regular insertion and submission of blanks, field duplicates and certified standard material (CRMs), as well as regular repeat analysis of the course reject material. As a minimum standard, at least one blank is inserted every 100 samples and at least one CRM is inserted every 25 samples. Extra blanks / CRMs are inserted for diamond core and in the case of known instances of coarse gold. In addition, internal laboratory standard reference material is also regularly analysed at a rate of 1 in every 20 samples. In addition, internal laboratory standard reference material is also regularly analysed at a rate of 1 in every 20 samples.

QA/QC assay results are reviewed by the geologist in charge of each prospect as the assays are delivered to site. In addition, monthly reports are generated by the geology team with the assistance of database administrator, including control charts for assays returned for standards and blanks, and comparison plots of duplicate assays. Exploration and Resource Development programs have a QA/QC reports generated at the end of each drilling program.

When assays are imported into Westgold's geological database, the standards and blanks are automatically checked, and pass / fail criteria applied. If a batch fails, it is assessed for possible reasons and the procedure specifies the following appropriate actions:

- The sample cutsheet is checked for errors or misallocation of standard.
- A single failure with no apparent cause, in a length of waste, may be accepted by the Authorised Person (Senior Geologist).



- A failure near or in a length of mineralisation, will result in a request to the laboratory for re-assay of relevant samples by the Authorised Person (Senior Geologist). The re-assayed results will be re-loaded and checked against QA/QC again.
- The actions taken are recorded against the standard sample in the database.

All assays are loaded into the live database. Those assays with outstanding QA/QC queries, after the above procedures, are assessed and can be excluded from the resource estimation process.

Standard	Element	Unit	Method	Expected Value	Standard Deviation	Au -3SD	Au +3SD
BASALT	Au	PPM	FA_AAS	0.10	0.05	-0.05	0.25
BLANK	Au	ppm	UN_UN	0.00	0.10	-0.30	0.30
G308-6	Au	PPM	FA_AAS	1.28	0.04	1.16	1.40
G310-2	Au	PPM	FA_AAS	0.20	0.02	0.15	0.25
G310-3	Au	PPM	FA_AAS	0.07	0.02	0.01	0.13
G310-4	Au	PPM	FA_AAS	0.43	0.03	0.34	0.52
G310-9	Au	PPM	FA_AAS	3.29	0.14	2.87	3.71
G311-6	Au	ppm	FA_UN	0.22	0.02	0.16	0.28
G312-1	Au	ppm	FA_UN	0.88	0.09	0.61	1.15
G312-2	Au	ppm	FA_UN	1.51	0.13	1.12	1.90
G312-4	Au	ppm	FA_UN	5.30	0.22	4.64	5.96
G314-3	Au	PPM	FA_UN	6.70	0.21	6.07	7.33
G314-5	Au	ppm	FA_UN	5.29	0.17	4.78	5.80
G314-6	Au	ppm	FA_UN	1.98	0.07	1.77	2.19
G315-9	Au	PPM	FA_UN	1.02	0.04	0.90	1.14
G316-1	Au	ppm	FA_UN	0.31	0.02	0.25	0.37
G319-4	Au	ppm	FA_UN	0.50	0.03	0.41	0.59
G319-5	Au	ppm	FA_UN	3.92	0.12	3.56	4.28
G319-8	Au	ppm	FA_UN	1.71	0.06	1.53	1.89
G320-7	Au	PPM	FA_UN	5.33	0.16	4.85	5.81
G321-7	Au	ppm	FA_UN	0.47	0.02	0.41	0.53
G398-2	Au	PPM	FA_AAS	0.50	0.04	0.38	0.62
G398-4	Au	PPM	FA_AAS	0.66	0.05	0.51	0.81
G900-2	Au	PPM	FA_AAS	1.48	0.06	1.30	1.66
G904-7	Au	PPM	FA_AAS	1.58	0.09	1.31	1.85
G904-8	Au	PPM	FA_AAS	5.53	0.18	4.99	6.07
G910-9	Au	PPM	FA_AAS	1.51	0.06	1.33	1.69
G911-10	Au	ppm	FA_UN	1.30	0.05	1.15	1.45
G911-6	Au	ppm	FA_AAS	0.17	0.01	0.14	0.20
G913-10	Au	ppm	FA_AAS	7.09	0.25	6.34	7.84
G914-2	Au	ppm	FA_UN	2.48	0.07	2.27	2.69
G914-6	Au	ppm	FA_UN	3.21	0.12	2.85	3.57
G914-7	Au	ppm	FA_UN	9.81	0.30	8.91	10.71
G915-2	Au	PPM	FA_UN	4.98	0.19	4.41	5.55
G915-6	Au	ppm	FA_UN	0.67	0.04	0.55	0.79

Table 11-4 Westgold-inserted CRM and blank standards for gold for the reporting period to July 2024.



Standard	Element	Unit	Method	Expected Value	Standard Deviation	Au -3SD	Au +3SD
G915-9	Au	ppm	FA_UN	9.82	0.32	8.86	10.78
G916-3	Au	ppm	FA_UN	1.01	0.04	0.89	1.13
G916-8	Au	ppm	FA_UN	3.20	0.12	2.84	3.56
G916-9	Au	PPM	FA_UN	3.13	0.19	2.56	3.70
G917-4	Au	ppm	FA_UN	5.10	0.18	4.56	5.64
G918-6	Au	ppm	FA_UN	3.38	0.11	3.05	3.71
G922-2	Au	ppm	FA_UN	3.25	0.10	2.95	3.55
G922-5	Au	ppm	FA_UN	5.00	0.17	4.49	5.51
G998-3	Au	PPM	FA_AAS	0.81	0.05	0.66	0.96
GLG307-1	Au	PPB	FA_AAS	2.86	1.70	-2.25	7.96
GLG314-2	Au	ppm	UN_UN	0.00	0.00	0.00	0.01

### 11.3.2 Quality Control Analysis

#### 11.3.2.1 Laboratory Summary

During the reporting period from May 2011 to June 2024, a total of 1,961 sample batches were submitted for gold fire assay to Bureau Veritas and ALS laboratories as summarised in **Table 11-5**. These represented 240,244 drill hole samples, 3,980 field duplicates and 11,555 Company certified standards and blanks. Results are summarised in the following tables and charts. No significant issues were noted other than the occasional outliers which were individually investigated and resolved.

#### Table 11-5 Laboratory summary for Au fire assay May 1, 2011 to June 30, 2024

Laboratories	ALS_ASP	ALS_PTH	BV_MLX	BV_PTH	KAL	MinAn
No. of Batches	1	89	1,481	317	10	63
No. of DH Samples	0	16,733	158,495	51,232	3,014	10,770
No. of QC Samples	0	911	2,410	3,567	281	798
No. of Standard Samples	0	750	7,662	2,332	125	694

#### Table 11-6 QC category ratios May 1, 2011 to June 30, 2024

QC_Category	DH Sample Count	QC Sample Count	Ratio of QC Samples to DH Samples
Field duplicate	240,244	3,980	1:60
Field resamples	240,244	8	1:30,030
Lab Pulp Checks	240,244	3,777	1:64

#### Table 11-7 Standard type ratios May 1, 2011 to June 30, 2024

Standard Type	DH Sample Count	Standard Type Count	Standard Sample Count	Ratio of QC Standard to DH Samples
CLIENT	240,244	46	11,555	1:21



# 11.3.2.2 Westgold Submitted Au Standards Fire Assay

	Au S	standard(s)	No. of		Calcu	lated Valu	ies		
Std Code	Method	Exp Method	Exp Value	Exp SD	Samples	Mean Au	SD	CV	Mean Bias
BASALT	AROG_UN	AROG_UN	0.10	0.0500	19	0.01	0.00	0.3235	-94.21%
BASALT	FA_AAS	FA_AAS	0.10	0.0500	17	0.01	0.03	2.1514	-87.06%
BASALT	FAOG_AAS	FAOG_AAS	0.10	0.0500	186	0.01	0.01	1.7429	-91.85%
BASALT	FAR_AAS	FAR_AAS	0.10	0.0500	3	0.01	0.00	0.0000	-95.00%
G308-6	FAOG_AAS	FAOG_AAS	1.28	0.0400	19	1.24	0.08	0.0674	-2.96%
G310-2	FA_AAS	FA_AAS	0.20	0.0164	11	0.18	0.01	0.0610	-9.09%
G310-2	FAOG_AAS	FAOG_AAS	0.20	0.0164	5	0.20	0.04	0.2095	-1.98%
G310-3	AROG_UN	AROG_UN	0.07	0.0200	22	0.06	0.01	0.1033	-15.58%
G310-3	FA_AAS	FA_AAS	0.07	0.0200	4	0.06	0.00	0.0000	-14.29%
G310-3	FAOG_AAS	FAOG_AAS	0.07	0.0200	2	0.06	0.01	0.1286	-21.43%
G310-4	FA_AAS	FA_AAS	0.43	0.0287	7	0.39	0.03	0.0731	-8.62%
G310-4	FAOG_AAS	FAOG_AAS	0.43	0.0287	7	0.39	0.07	0.1867	-9.95%
G310-9	FA_AAS	FA_AAS	3.29	0.1400	59	3.25	0.06	0.0183	-1.33%
G310-9	FA50_AAS	FA50_AAS	3.29	0.1400	94	3.27	0.11	0.0328	-0.61%
G310-9	FAOG_AAS	FAOG_AAS	3.29	0.1400	63	3.26	0.27	0.0827	-1.06%
G310-9	FAR_AAS	FAR_AAS	3.29	0.1400	27	3.12	0.15	0.0477	-5.25%
G311-6	FA_AAS	FA_AAS	0.20	0.0200	13	0.12	0.01	0.0444	-1.75%
G312-1	FA_AAS	FA_AAS	0.88	0.0200	133	0.88	0.09	0.1062	0.48%
G312-2	FA_AAS	FA_AAS	1.51	0.1300	855	1.54	0.25	0.1637	2.05%
G312-4	FA_AAS	FA_AAS	5.30	0.2200	144	5.29	0.24	0.0459	-0.26%
G314-3	FA_AAS	FA_AAS	6.70	0.2100	26	6.71	0.14	0.0206	0.15%
G314-5	FA_AAS	FA_AAS	5.29	0.1700	35	5.28	0.14	0.0278	-0.17%
G314-6	FA_AAS	FA_AAS	1.98	0.0700	57	2.00	0.16	0.0270	0.94%
G315-9	FA_AAS	FA_AAS	1.02	0.0700	119	1.01	0.04	0.0364	-0.76%
G316-1	FA_AAS	FA_AAS	0.31	0.0400	14	0.31	0.04	0.0304	-1.15%
G319-4	FA_AAS	FA_AAS	0.50	0.0200	14	0.31	0.01	0.0207	-1.43%
G319-4	FA_AAS	FA_AAS	3.92	0.0300	28	3.93	0.04	0.0737	0.26%
G319-3	FA_AAS	FA_AAS	1.71	0.0600	102	1.67	0.00	0.1051	-2.35%
G320-7	FA_AAS	FA_AAS	5.33	0.1600	102	5.29	0.18	0.0212	-0.79%
G320-7 G321-7	FA_AAS	FA_AAS	0.47	0.0200	53	0.47	0.02	0.0212	0.64%
G398-2	FA_AAS	FA_AAS	0.47	0.0200	784	0.47	0.02	0.0333	0.45%
G398-2	FA50_AAS	FA50_AAS	0.50	0.0400	103	0.30	0.02	0.0478	-2.03%
G398-2	FAOG_AAS	FAOG_AAS	0.50	0.0400	103	0.49	0.02	0.0308	-3.50%
G398-2	AROG_UN	AROG_UN	0.66	0.0400	22	0.48	0.04	0.0844	-8.40%
G398-4	FA_AAS	FA_AAS	0.66	0.0500	35	0.65		0.2290	-1.32%
G398-4	FAOG_AAS	FAOG_AAS	0.66	0.0500	124	0.64	0.02	0.0243	-3.21%
G398-4				0.0500	17	0.65			-0.98%
	FAR_AAS	FAR_AAS	0.66				0.06	0.0942	
G900-2	FA_AAS	FA_AAS	1.48	0.0600	53	1.43	0.15	0.1035	-3.42%
G900-2	FA50_AAS	FA50_AAS FAR_AAS	1.48	0.0600	102	1.45	0.13	0.0927	-2.28%
G900-2	FAR_AAS		1.48	0.0600	18	1.36	0.22	0.1590	-8.33%
G904-7	FA_AAS	FA_AAS	1.58	0.0900	2	1.33	0.55	0.4147	-15.82%
G904-7	FAOG_AAS	FAOG_AAS	1.58	0.0900	15	1.57	0.06	0.0364	-0.63%
G904-8	FA_AAS	FA_AAS	5.53	0.1799	214	5.52	0.09	0.0161	-0.21%
G910-9	FAOG_AAS	FAOG_AAS	1.51	0.0600	85	1.47	0.18	0.1242	-2.62%
G911-10	FA_AAS	FA_AAS	1.30	0.0500	14	1.34	0.02	0.0134	2.97%
G911-6	FA_AAS	FA_AAS	0.17	0.0100	13	0.16	0.00	0.0123	-5.34%
G913-10	FA_AAS	FA_AAS	7.09	0.2500	106	7.10	0.18	0.0249	0.12%
G913-10	FA50_AAS	FA50_AAS	7.09	0.2500	72	6.93	0.32	0.0456	-2.29%

#### Table 11-8 Standards submitted May 1, 2011 to June 30, 2024



	Au S	itandard(s)	No. of		Calcu	lated Valu	ies		
Std Code	Method	Exp Method	Exp Value	Exp SD	Samples	Mean Au	SD	сѵ	Mean Bias
G914-2	FA_AAS	FA_AAS	2.48	0.0700	153	2.48	0.18	0.0740	-0.06%
G914-6	FA_AAS	FA_AAS	3.21	0.1200	620	3.22	0.23	0.0699	0.43%
G914-7	FA_AAS	FA_AAS	9.81	0.3000	176	9.83	0.50	0.0509	0.18%
G915-2	FA_AAS	FA_AAS	4.98	0.1900	51	5.17	0.63	0.1227	3.80%
G915-6	FA_AAS	FA_AAS	0.67	0.0400	13	0.67	0.01	0.0118	-0.22%
G915-9	FA_AAS	FA_AAS	9.82	0.3200	43	9.88	0.11	0.0114	0.56%
G916-3	FA_AAS	FA_AAS	1.01	0.0400	34	1.01	0.02	0.0162	0.09%
G916-8	FA_AAS	FA_AAS	3.20	0.1200	221	3.23	0.22	0.0693	0.89%
G916-9	FA_AAS	FA_AAS	3.13	0.1900	153	3.13	0.21	0.0664	0.01%
G917-4	FA_AAS	FA_AAS	5.10	0.1800	19	5.16	0.14	0.0280	1.25%
G918-6	FA_AAS	FA_AAS	3.38	0.1100	33	3.27	0.06	0.0178	-3.17%
G922-2	FA_AAS	FA_AAS	3.25	0.1000	66	3.25	0.05	0.0162	-0.02%
G922-5	FA_AAS	FA_AAS	5.00	0.1700	11	5.12	0.12	0.0233	2.47%
G998-3	FA_AAS	FA_AAS	0.81	0.0500	1041	0.81	0.06	0.0727	0.25%
G998-3	FA50_AAS	FA50_AAS	0.81	0.0500	90	0.80	0.07	0.0891	-1.03%
G998-3	FAR_AAS	FAR_AAS	0.81	0.0500	20	0.78	0.08	0.1046	-3.40%
GLG307-1	FAOG_AAS	FAOG_AAS	0.00	0.0017	89	0.01	0.00	0.5658	104.42%
GLG314-2	FA_AAS	FA_AAS	0.00	0.0018	11	0.00	0.00	0.4353	39.39%

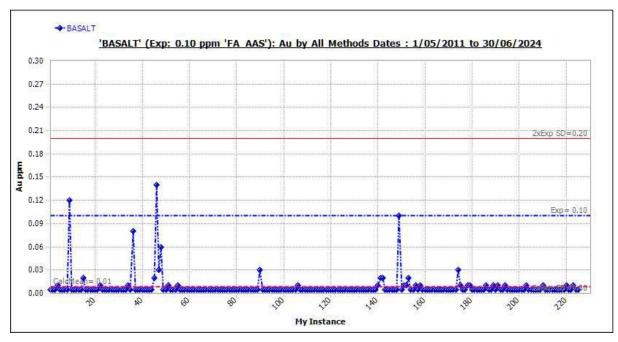


Figure 11-2 Standard BASALT: Outliers Included.



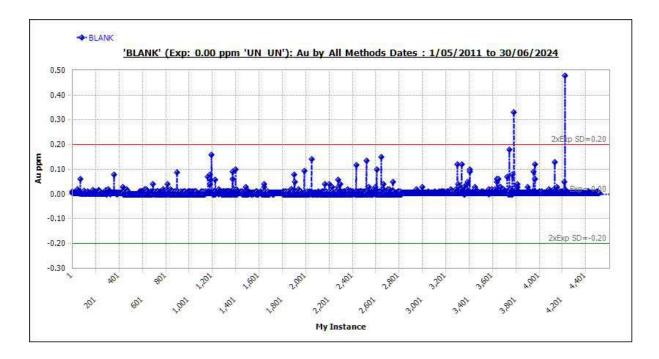


Figure 11-3 Standard BLANK: Outliers Included.

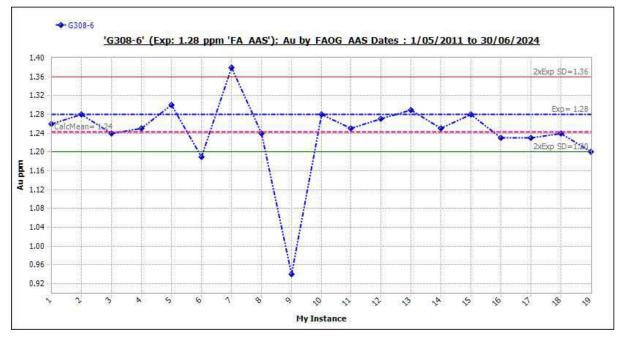


Figure 11-4 Standard G308-6: Outliers Included.



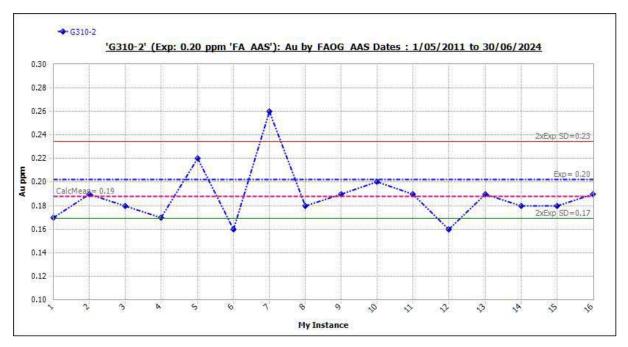


Figure 11-5 Standard G310-2 : Outliers Included

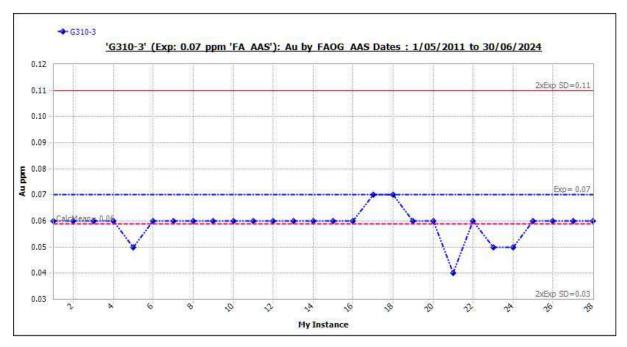


Figure 11-6 Standard G310-3 : Outliers Included



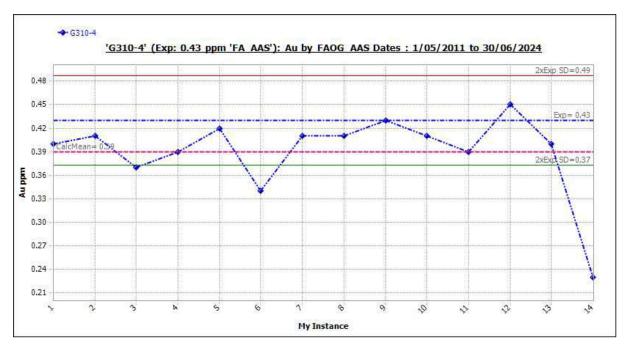


Figure 11-7 Standard G310-4 : Outliers Included

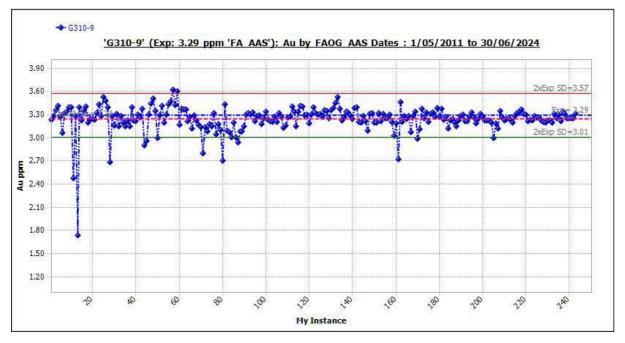


Figure 11-8 Standard G310-9 : Outliers Included



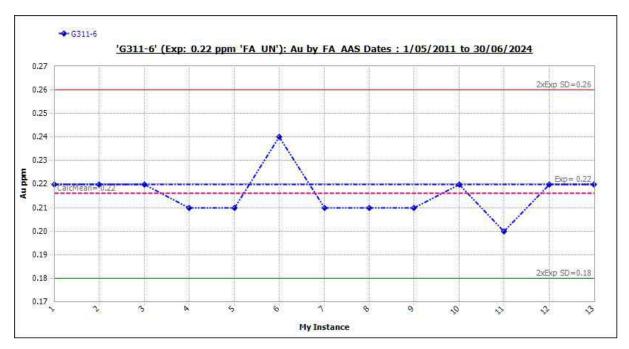


Figure 11-9 Standard G311-6 : Outliers Included

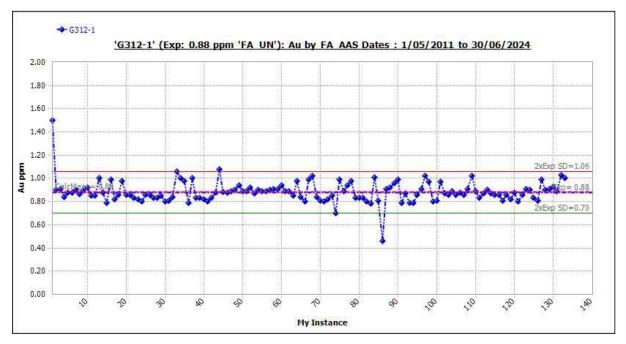


Figure 11-10 Standard G312-1 : Outliers Included



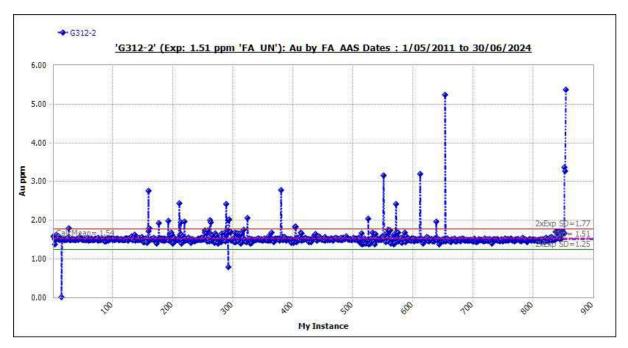


Figure 11-11 Standard G312-2 : Outliers Included

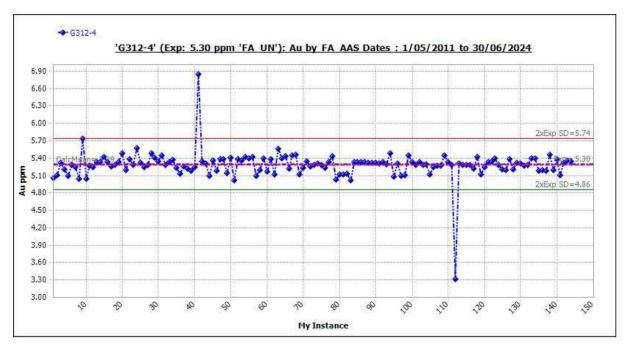


Figure 11-12 Standard G312-4 : Outliers Included



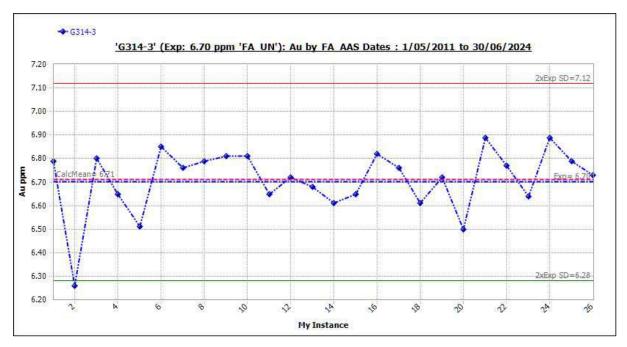


Figure 11-13 Standard G314-3 : Outliers Included

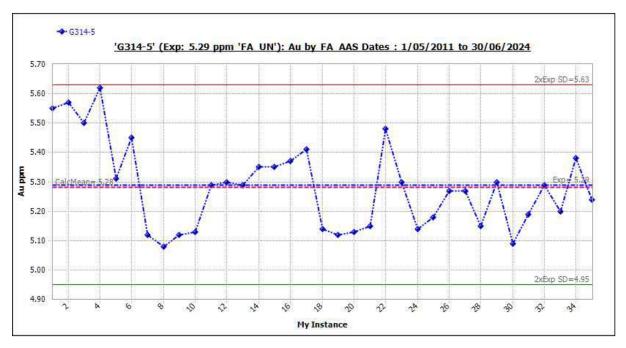


Figure 11-14 Standard G314-5 : Outliers Included



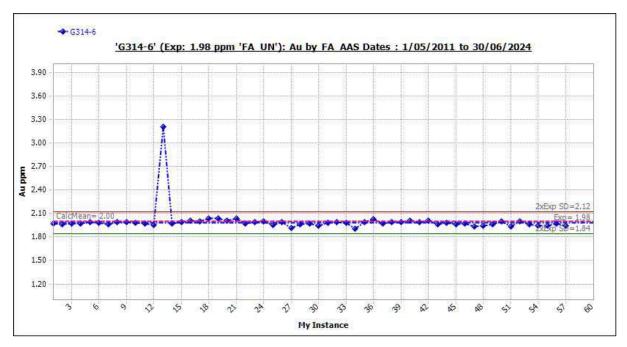


Figure 11-15 Standard G314-6 : Outliers Included

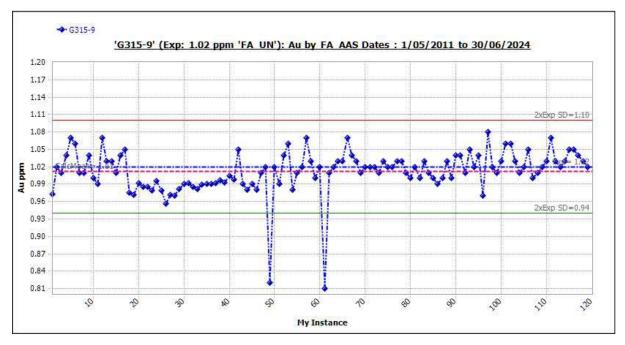


Figure 11-16 Standard G315-9 : Outliers Included



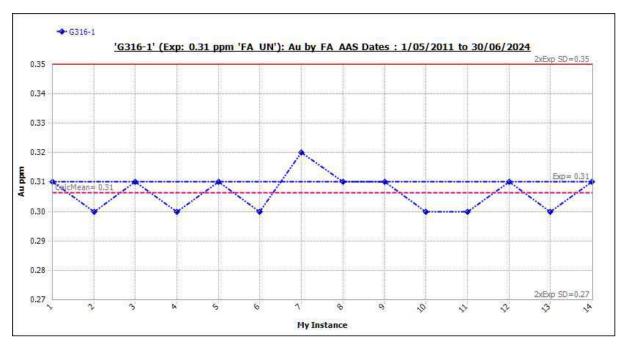


Figure 11-17 Standard G316-1 : Outliers Included

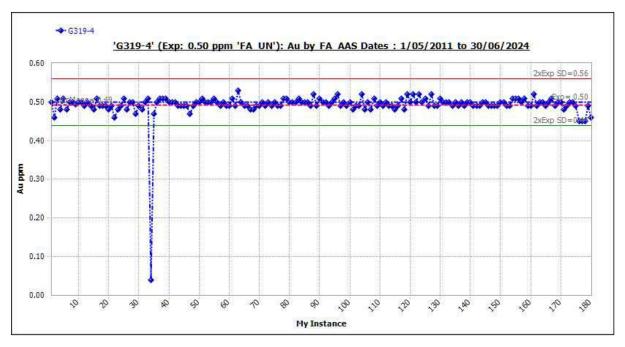


Figure 11-18 Standard G319-4 : Outliers Included



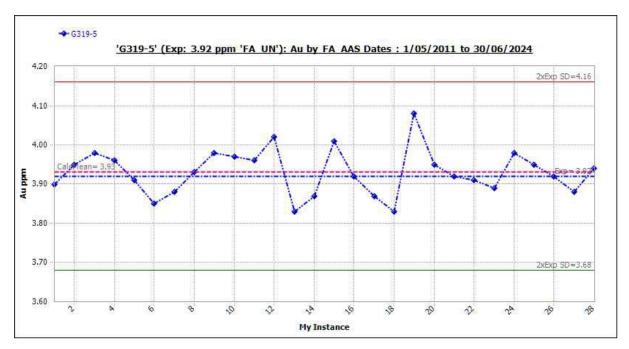


Figure 11-19 Standard G319-5 : Outliers Included

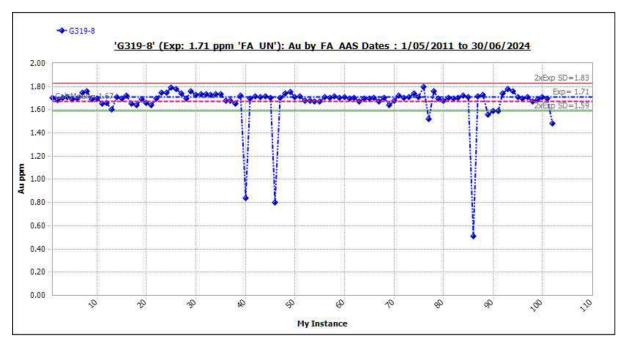


Figure 11-20 Standard G319-8 : Outliers Included



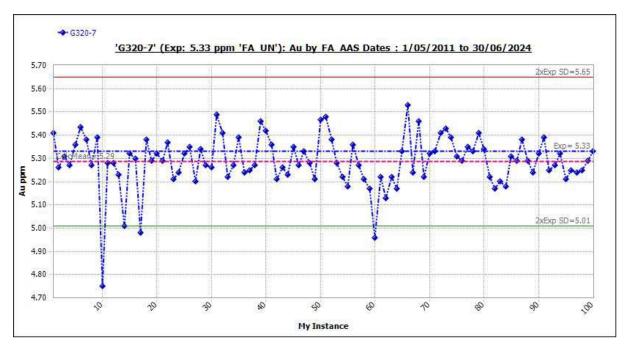


Figure 11-21 Standard G320-7: Outliers Included

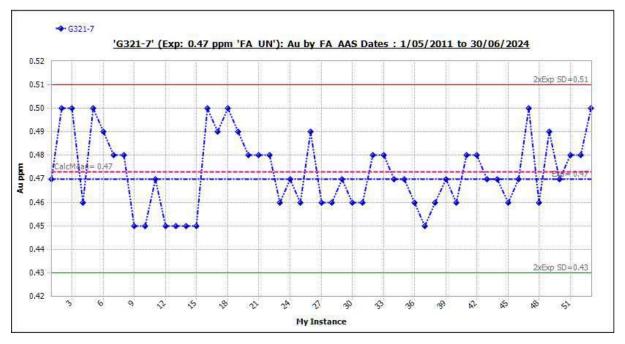


Figure 11-22 Standard G321-7: Outliers Included



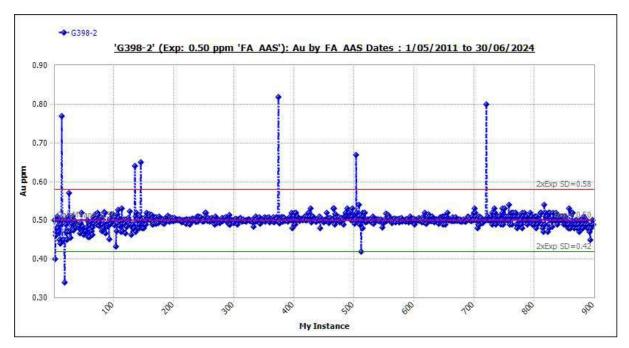


Figure 11-23 Standard G398-2: Outliers Included

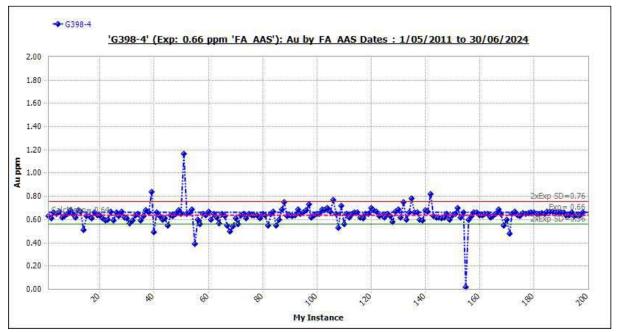


Figure 11-24 Standard G398-4: Outliers Included



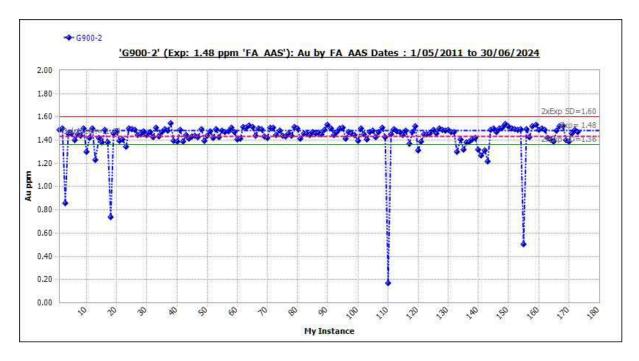


Figure 11-25 Standard G900-2: Outliers Included

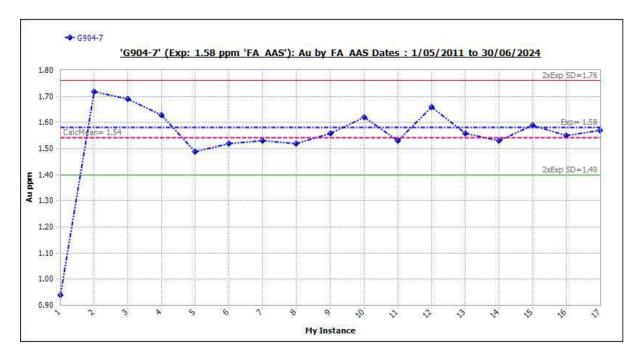


Figure 11-26 Standard G904-7: Outliers Included



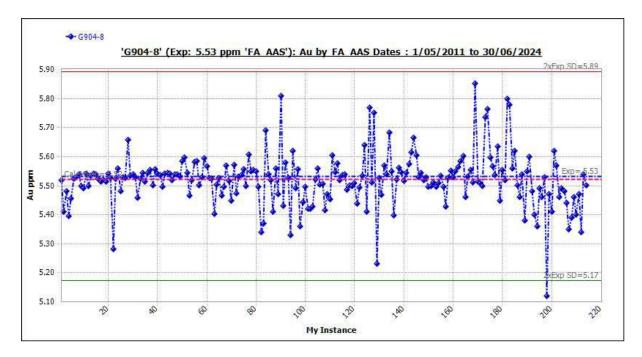


Figure 11-27 Standard G904-8: Outliers Included

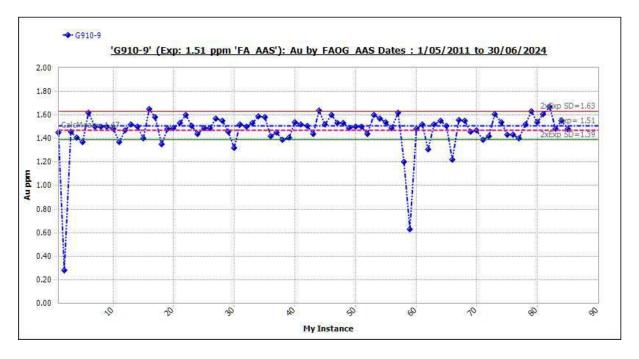


Figure 11-28 Standard G910-9: Outliers Included



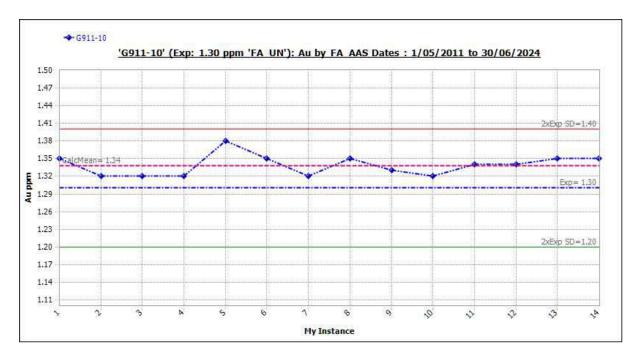


Figure 11-29 Standard G911-10: Outliers Included

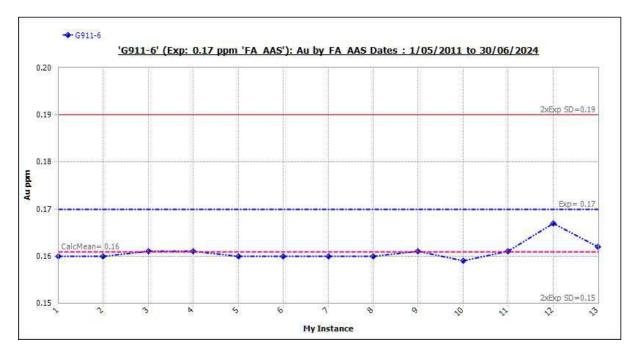


Figure 11-30 Standard G911-6: Outliers Included



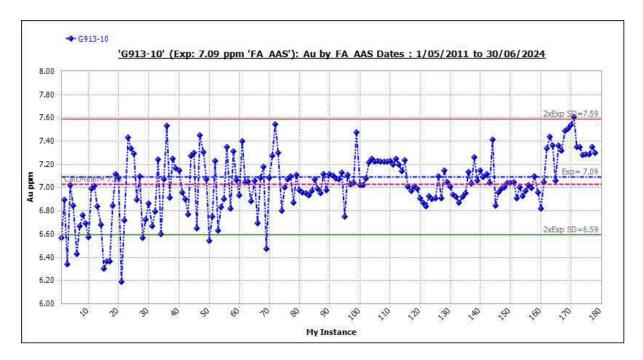


Figure 11-31 Standard G913-10: Outliers Included

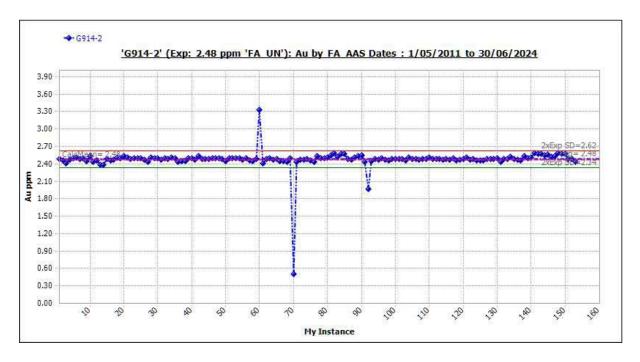


Figure 11-32 Standard G914-2: Outliers Included



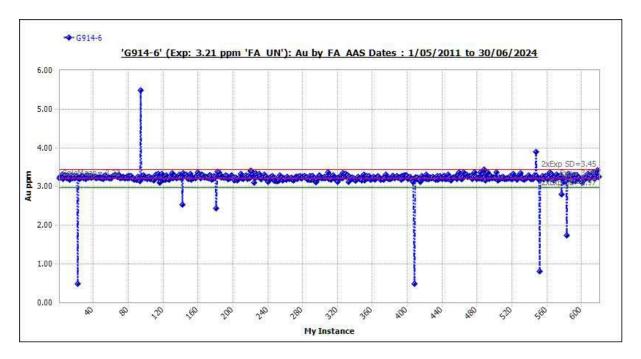


Figure 11-33 Standard G914-6: Outliers Included

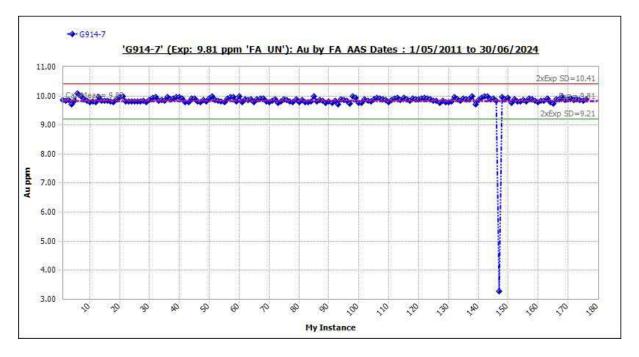


Figure 11-34 Standard G914-7: Outliers Included



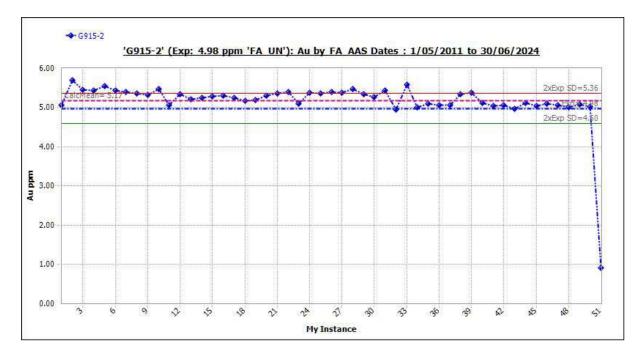


Figure 11-35 Standard G915-2: Outliers Included

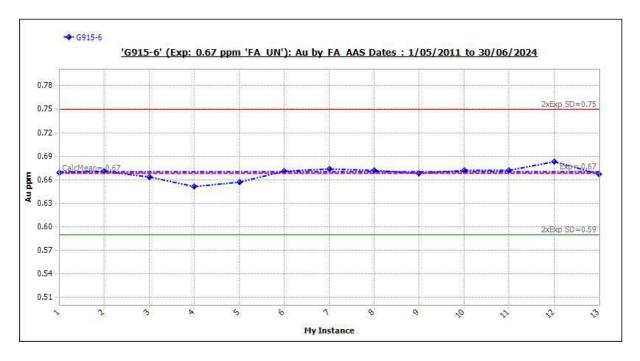


Figure 11-36 Standard G915-6: Outliers Included



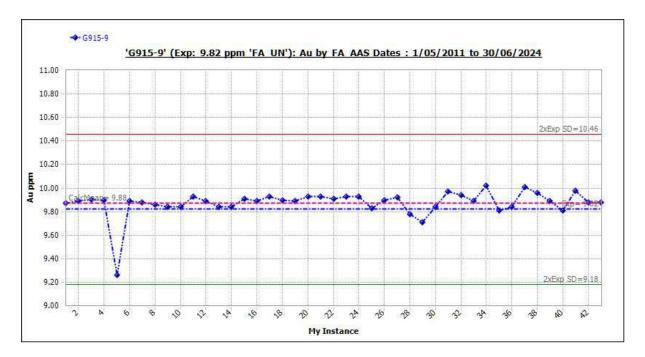


Figure 11-37 Standard G915-9: Outliers Included

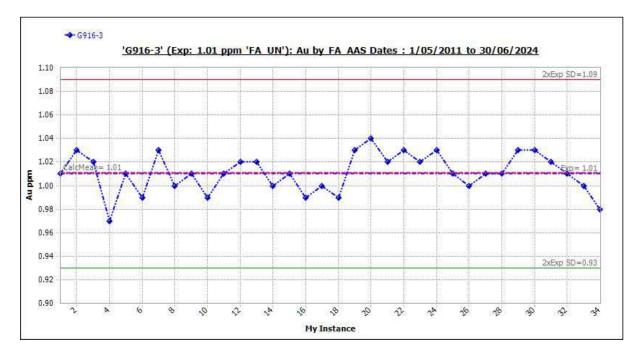


Figure 11-38 Standard G916-3: Outliers Included



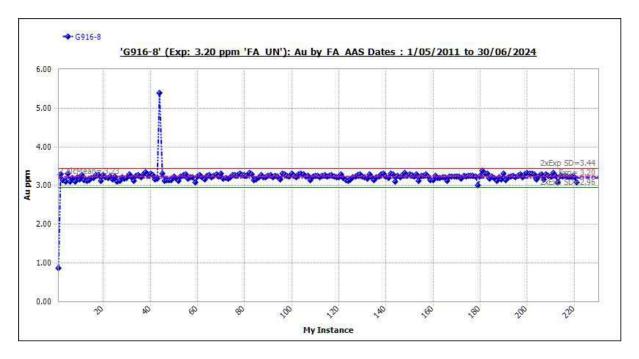


Figure 11-39 Standard G916-8: Outliers Included

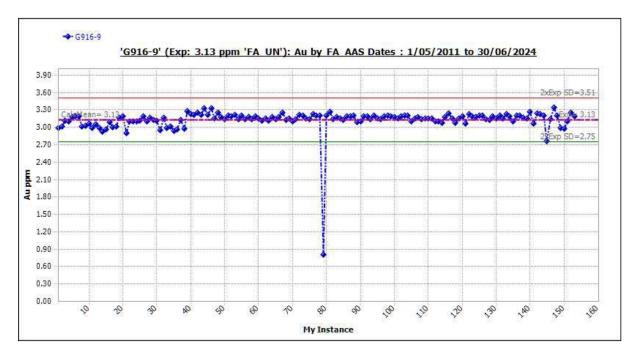


Figure 11-40 Standard G916-9: Outliers Included



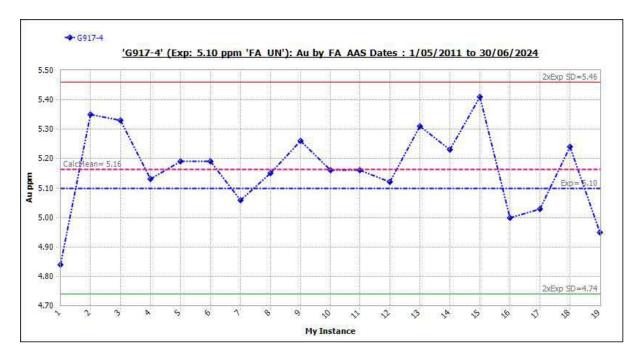


Figure 11-41 Standard G917-4: Outliers Included

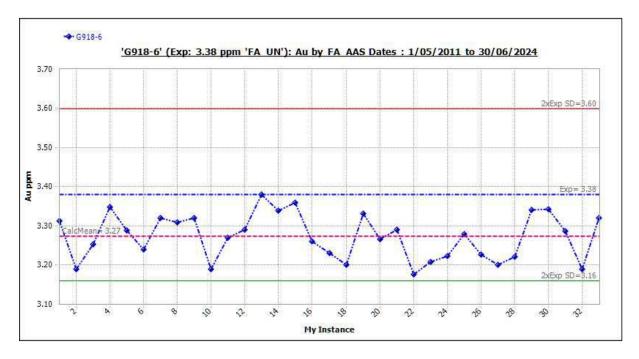


Figure 11-42 Standard G918-6: Outliers Included



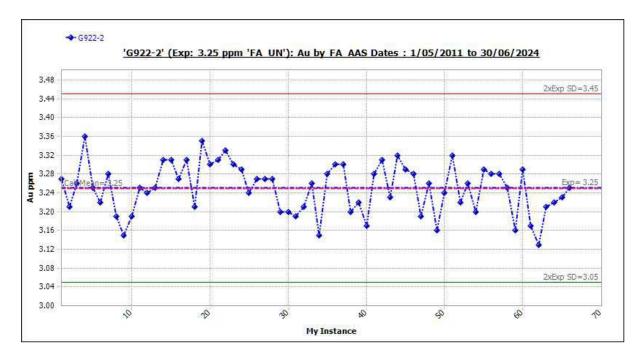


Figure 11-43 Standard G922-2: Outliers Included

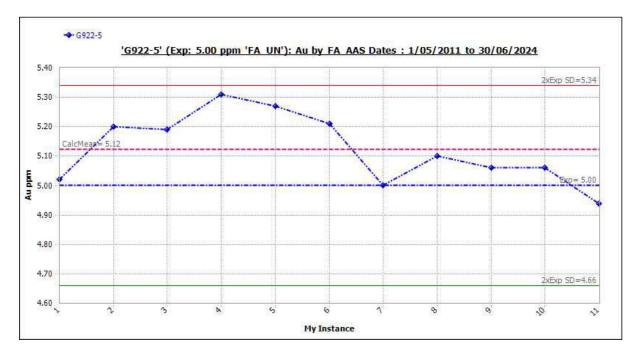


Figure 11-44 Standard G922-5: Outliers Included



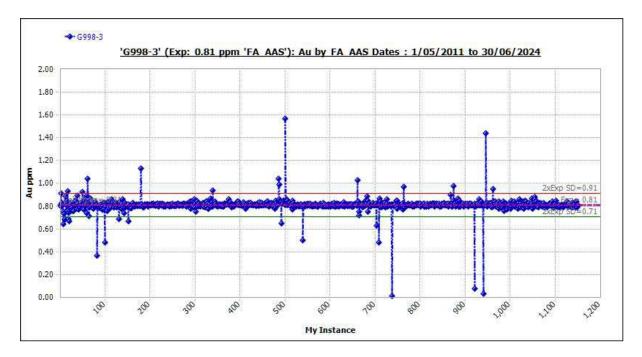


Figure 11-45 Standard G998-3: Outliers Included

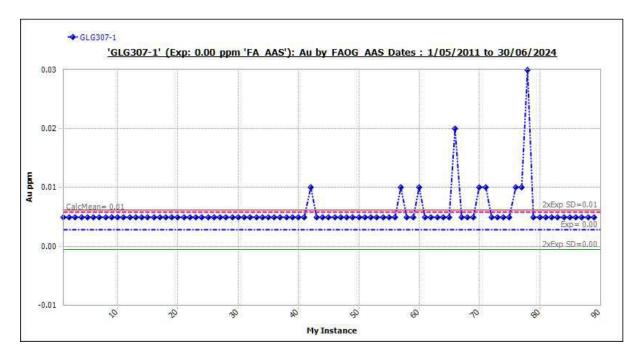


Figure 11-46 Standard GLG307-1: Outliers Included



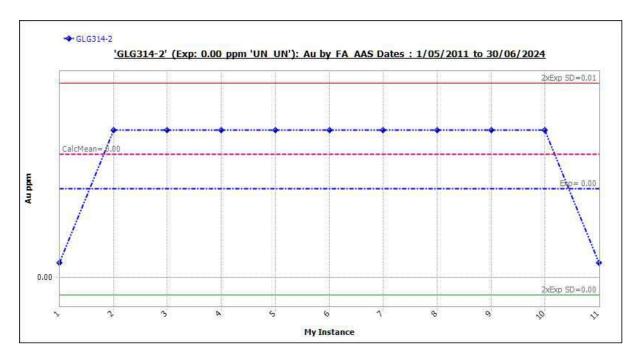


Figure 11-47 Standard GLG314-2: Outliers Included

Table 11-9 Drill hole laboratory original (Au) v. repeat submitted May 1, 2011 to June 30, 2024.

No. of	Mean	Mean	SD	SD	CV	CV	sRPHD
Samples	Au1	Au2	Au1	Au2	Au1	Au2	(mean)
12,713	0.77	0.77	3.40	3.37	4.43	4.40	0.16



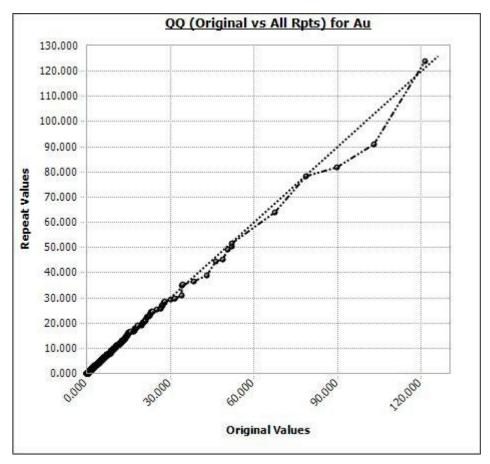


Figure 11-58 Q-Q Plot - Drillhole (Repeat Code) : Original v. All Rpts for Au ppm.



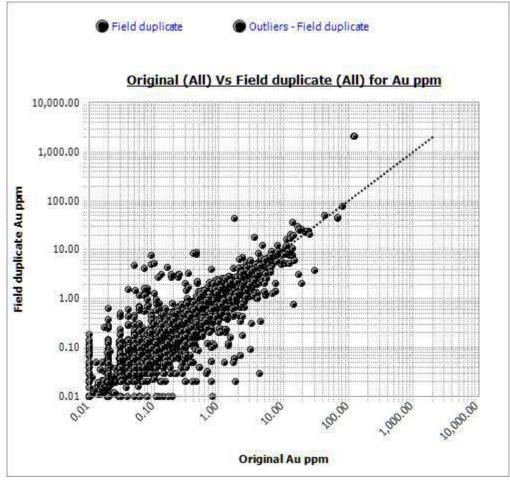


Figure 11-69 Q-Q Plot - drillhole (Repeat Code) : original v. laboratory pulp checks for Au ppm.



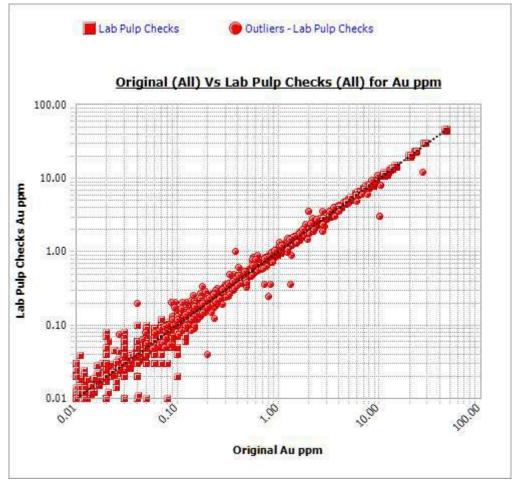


Figure 11-50 Q-Q Plot - drillhole (Repeat Code) : original v. field duplicate for Au ppm.

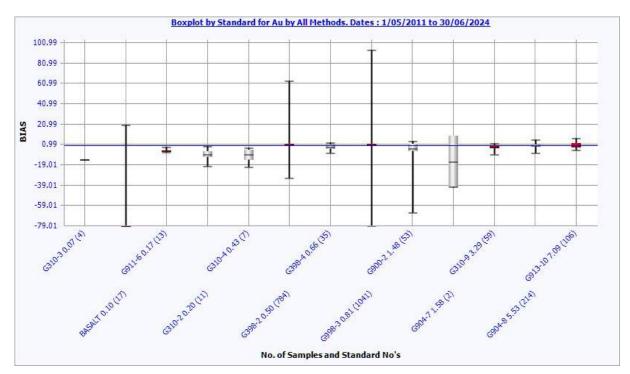


Figure 11-7 Boxplot by Standard for Au by Fire Assay (all methods).



#### 11.3.3 Database Integrity

The Westgold corporate geological database is located on a dedicated Microsoft SQL Server 2019 (RTM-CU24) The database itself utilises the Maxwell Geoservices DataShed architecture and is a fully relational system with strong validation, triggers and stored procedures, as well as a normalised system to store analysis data.

The database itself is accessed and managed in-house using the DataShed front end, whilst routine data capture and upload is managed using Maxwell's LogChief data capture software. This provides a data entry environment which applies most of the validation rules as they are directly within the master database, ensuring only correct and valid data can be input in the field. Data are synced to the master database directly from this software, and once data have been loaded, it can no longer be edited or removed by LogChief users. Authorised users are allowed to make changes of selected collar fields. Only the Company database manager and authorised assistant have permissions allowing for modification or deletion. Validated data cannot be changed or modified unless specifically requested by the supervisors.

Westgold is using DataShed v. 4.6.3.11, utilising Data Schema (MDS) v 4.6.5 (Production). Data validation checks are performed to ensure data migration integrity, namely drill collars and coordinates, downhole direction surveys, geology, sampling, assays and QA/QC.



### 11.4 SAMPLE PREPARATION, SECURITY AND ANALYTICAL PROCEDURES SUMMARY

The Qualified Person considers the sample preparation, security and analytical procedures to be adequate. Any data with errors have either been corrected or excluded to ensure data used for Mineral Resource estimation are reliable.

During site visits, the Qualified Person inspects the various CGO core logging yards and directly observes how core was sampled and transferred to the care of the laboratory. The sampled trays of cut core are stacked on pallets and placed in the onsite core yard before being delivered to the laboratory by a dedicated sample transport vehicle. Regular field inspections of drill sites observing the RC sampling process are also undertaken when RC rigs are on site at CGO. In the opinion of the Qualified Person, the procedures in place ensure samples remained in the custody of appropriately qualified staff.

Monthly audits of the Bureau Veritas Bluebird facility are undertaken by Westgold senior geological staff, with the latest being conducted on July 27, 2024. These audits have confirmed the processes and equipment employed by Bureau Veritas meet industry standards.

Pulps returned from laboratory sample preparation are stored in the core yard on pallets. These remain available for re-checking of assay programs.

During the site visits, the Qualified Person found no evidence of active tampering. Procedures to prevent inadvertent contamination of assay samples have been followed, including daily hosing out of the core saw and sampling area.



## 12 DATA VERIFICATION

Through examination of internal Westgold documents including monthly QA/QC site reporting, the implementation of routine, control checks and personal inspections on site, the Bureau Veritas Meekatharra assay laboratory and discussions with other Westgold personnel, the Qualified Person has verified the data in this Technical Report and satisfied himself that the data is adequate for the purpose of this Technical Report.



## 13 MINERAL PROCESSING AND METALLURGICAL TESTING

The CGO processes its gold mineralisation predominantly through Westgold's Tuckabianna mill. A small volume of CGO ore may be processed at Westgold's Bluebird mill. Details on gold processing and relevant test-work that relate to the metallurgical performance of the mills are summarised below. Further details on processing are outlined in Section 17.

### 13.1 GOLD PROCESSING

The current Tuckabianna mill has been in operation since February 2013, and continuously operated under Westgold ownership since March 2018, therefore local feed variability is well understood. Various test-work programs dating back to 2012 have been used to understand potential impacts during crushing and milling as new production sources come online. As new production sources are delineated, testing is conducted to assess whether the metallurgy will vary significantly from the anticipated responses.

For both the Tuckabianna Mill, feed characterisation, classification and recovery testwork is conducted on new production sources as required. Typical metallurgical testwork comprises the following:

- Head assays determination;
- Ball mill work index determination and Abrasion index testing;
- Grind establishment to 106 µm;
- Gravity recovery;
- Leach test on the gravity tail with the following set points:
  - o pH 9.5;
  - o CN at 200 ppm;
  - $\circ$  40% solids with site water; and
  - 48 hours leach time.

In addition to the above, extended leach test-work is sometimes required using lead nitrate additives. Diagnostic leach test-work may also be carried out if the standard leach test shows lower than expected recoveries.



## 14 MINERAL RESOURCE ESTIMATES

### 14.1 SUMMARY

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimates prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F.

The Consolidated Gold Mineral Resource estimate for Cue (which is divided into four geographical regions, Big Bell, Cuddingwarra, Day Dawn and Tuckabianna), is summarised in **Table 14-1**, and is effective as of June 30, 2024.



		Measured			Indicated		Meas	ured and Indi	cated	Inferred		
Ore Body	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
Big Bell												
Big Bell Underground	4,022,409	3.07	397,023	7,965,284	3.33	852,778	11,987,693	3.24	1,249,801	5,926,775	3.11	592,611
Fender Underground	95,482	3.22	9,885	201,475	3.05	19,757	296,957	3.10	29,641	345,015	3.33	36,938
1600N / Shocker	-	-	-	398,314	2.54	32,527	398,314	2.54	32,527	47,783	2.80	4,297
1600N / Shocker Underground	-	-	-	124,901	3.23	12,971	124,901	3.23	12,971	913,817	3.21	94,232
700/1100	-	-	-	-	-	-	-	-	-	-	-	-
700 / 1100 Underground	-	-	-	-	-	-	-	-	-	85,395	2.59	7,118
Accelerator	-	-	-	35,313	1.68	1,902	35,313	1.68	1,902	20,888	1.58	1,059
Big Bell South	-	-	-	39,479	2.12	2,691	39,479	2.12	2,691	33,366	3.46	3,712
Big Bell South Underground	-	-	-	24,888	2.23	1,784	24,888	2.23	1,784	736,363	2.70	63,895
Fender	59,625	2.81	5,387	124,898	2.36	9,477	184,523	2.51	14,863	9,895	1.12	356
Indicator	-	-	-	53,850	3.81	6,596	53,850	3.81	6,596	-	-	-
Cuddingwarra												
Black Swan	19,930	1.62	1,039	42,452	1.63	2,219	62,382	1.62	3,259			-
Black Swan South	-	-	-	1,121,052	1.53	55,289	1,121,052	1.53	55,289	69,332	1.15	2,570
Chieftain	-	-	-	181,475	1.40	8,168	181,475	1.40	8,168	-	-	-
City of Chester Group	-	-	-	6,472	2.41	501	6,472	2.41	501	-	-	-
City of Sydney	40,799	1.57	2,059	2,796	1.31	118	43,595	1.55	2,177	-	-	-
Coventry Group	7,935	1.81	462	8,766	2.14	603	16,701	1.98	1,065	848	1.69	46
Emily Well	-	-	-	-	-	-	-	-	-	346,840	1.41	15,723
Fleece Pool	-	-	-	56,084	2.37	4,273	56,084	2.37	4,273	110,043	1.53	5,413
Golden Gate Group			-	19,419	1.55	968	19,419	1.55	968			-
Jim's Find	2,195	2.72	192	911	1.46	43	3,106	2.35	235	168	2.32	13
Jim's Find South	-	-	-	34,603	2.00	2,225	34,603	2.00	2,225	-	-	-
Never Can Tell	-	-	-	22,772	2.70	1,977	22,772	2.70	1,977	50,290	2.24	3,622
Rheingold Group	-	-	-	69,928	2.38	5,342	69,928	2.38	5,342	12,836	2.51	1,034
South Cuddingwarra	14,229	1.72	787	33,652	1.86	2,012	47,881	1.82	2,799	6,364	1.32	270

#### Table 14-1 Westgold Consolidated Cue Gold Mineral Resources as of June 30, 2024.



		Measured			Indicated		Meas	ured and Indi	cated		Inferred	
Ore Body	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
Day Dawn												
Great Fingall Underground	-	-	-	1,616,162	5.25	272,794	1,616,162	5.25	272,794	882,569	3.51	99,597
Golden Crown Underground	-	-	-	332,989	6.18	66,162	332,989	6.18	66,162	944,404	5.14	156,067
3210	-	-	-	196,704	1.63	10,308	196,704	1.63	10,308	9,242	2.78	826
Brega Well	-	-	-	-	-	-	-	-	-	512,865	1.53	25,228
Crème d' Or Group	3,034	1.60	156	4,056	4.26	556	7,090	3.12	712	36,067	1.38	1,600
Emperor	-	-	-	-	-	-	-	-	-	48,847	2.78	4,366
Golden Crown Open Pit	-	-	-	31,950	3.15	3,236	31,950	3.15	3,236	8	2.17	1
Great Fingall Open Pit	-	-	-	188,324	1.85	11,201	188,324	1.85	11,201	25,810	1.23	1,021
Kinsella	6,473	1.89	393	31,086	1.52	1,519	37,559	1.58	1,912	5,227	1.38	232
Kalahari	-	-	-	9,867	1.53	485	9,867	1.53	485	16,648	1.47	787
Mount Fingall	-	-	-	89,327	1.84	5,284	89,327	1.84	5,284	188,280	1.23	7,446
Racecourse	9,294	2.52	753	-	-	-	9,294	2.52	753	-	-	-
Rubicon	-	-	-	142,665	2.21	10,137	142,665	2.21	10,137	-	-	-
South Fingall	27,013	1.39	1,207	16,133	1.60	830	43,146	1.47	2,037	1,444	1.17	54
Try Again Group - Open Pit	-	-	-	282,389	2.15	19,520	282,389	2.15	19,520	2,531	1.24	101
Try Again Group - Underground	-	-	-	64,547	2.99	6,205	64,547	2.99	6,205	98,923	4.39	13,962
Trenton	-	-	-	-	-	-	-	-	-	97,043	1.32	4,118
Yellow Taxi Group	12,172	1.82	712	11,057	1.90	675	23,229	1.86	1,388	223	1.26	9
Tuckabianna												
Comet	139,506	4.63	20,767	270,316	4.22	36,675	409,822	4.36	57,442	106,173	3.40	11,606
Comet North	100,000		20,707	332,862	3.06	32,747	332,862	3.06	32,747	369,441	2.40	28,507
Pinnacles	81,856	2.50	6,579	1,104,868	2.51	89,161	1,186,724	2.51	95,740	826,053	2.53	67,192
Lunar		- 2.00			-					37,945	1.15	1,397
Solar	_	-	_							26,700	1.32	1,137
Venus / Mercury	_	-	-	274,740	1.66	14,663	274,740	1.66	14,663	161,590	1.59	8,260
Caustons - Open Pit	-	-	-	7,464	3.02	725	7,464	3.02	725	40,706	2.05	2,683
Caustons - Underground	-	-	-	489,855	3.86	60,740	489,855	3.86	60,740	761,407	3.07	75,185
Julies Reward (OP)	-	-	-	,	0.00		-				0.07	
Julies Reward (UG)	-	-	-	282,721	3.19	28,996	282,721	3.19	28,996	412,533	3.18	42,177
Little John	_	-	-	14,443	2.57	1,193	14,443	2.57	1,193	6,091	1.95	382



		Measured			Indicated		Measu	ured and Indi	cated		Inferred	
Ore Body	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au	Tonnes	Grade (g/t Au)	Ounces Au
Sherwood	40,606	2.20	2,872	16,875	1.40	760	57,481	1.97	3,632	16,922	1.85	1,007
Tucka West - Katies - Jaffa's Folley	5,064	1.13	184	623,656	2.02	40,503	628,720	2.01	40,687	133,363	1.34	5,746
Friars	-	-	-	30,175	2.24	2,173	30,175	2.24	2,173	359	1.05	12
Stockpiles												
Big Bell LGSP	9,929	0.77	247	1,500	0.80	39	11,429	0.78	286	-	-	-
Big Bell Tails				3,339,578	0.70	75,159	3,339,578	0.70	75,159	-	-	-
Cuddingwarra LGSP	-	-	-	26,034	0.40	335	26,034	0.40	335	-	-	-
Day Dawn LGSP	20,528	0.60	396	29,891	0.88	852	50,419	0.77	1,248	-	-	-
Tuckabianna LGSP				73,176	0.63	1,482	73,176	0.63	1,482	-	-	-
Fingall Sands				157,104	0.70	3,536	157,104	0.70	3,536	-	-	-
Tucka ROM	20,071	1.13	731				20,071	1.13	731	-	-	-
Tucka MILL GIC	15,619	7.04	3,543				15,619	7.06	3,543	-	-	-
Mine ROM	15,076	1.09	532				15,076	1.10	532	-	-	-
Totals	4,668,845	3.04	455,906	20,661,298	2.74	1,822,875	25,330,143	2.80	2,278,781	14,485,432	2.99	1,393,614

1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.

2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.

3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.

4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.

5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.

- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).



This section describes the preparation and estimation of Mineral Resources for Cue Gold Operations (CGO). The Mineral Resource estimates reported herein were prepared under the supervision of Mr. Jake Russell, MAIG, in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. Mr. Russell is General Manager – Technical Services at Westgold and 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 JORC Code, 2012 Edition and fulfils the requirements to be a 'Qualified Person' for the purposes of NI 43-101.

There are no material differences between the definitions of Mineral Resources under the applicable definitions adopted by the Canadian Institute of Mining, Metallurgy and Petroleum (the CIM Definition Standards) and the corresponding equivalent definitions in the JORC Code for Mineral Resources.

In the opinion of Mr. Russell, the Mineral Resource estimation reported herein is a reasonable representation of the consolidated gold Mineral Resources found at CGO at the current level of sampling.

Mineral Resource estimates for CGO were previously reported by Westgold in a Technical Report dated May 31, 2024 as filed on SEDAR+. The Mineral Resource estimates reported in this section supersede those previously reported. The changes to the previous Mineral Resource are a result of the following:

- Additional exploration data;
- Revised technical understanding;
- Depletion for mining; and
- Changed economic thresholds impacting reasonable prospects for eventual economic extraction (RPEEE).

## 14.2 CUE GOLD OPERATIONS

CGO is geographically divided into four areas as shown in **Figure 14-1**. The subdivision was established to assist with distinguishing those Mineral Resources proximal to existing Westgold infrastructure (i.e. Tuckabianna) and those 'satellite' Mineral Resources (i.e. Big Bell, Cuddingwarra and Day Dawn).

*Figure* **14-1** shows Location of Westgold CGO Mineral Resources and Mineral Reserves effective June 30, 2024. The plan also depicts the project areas within CGO.



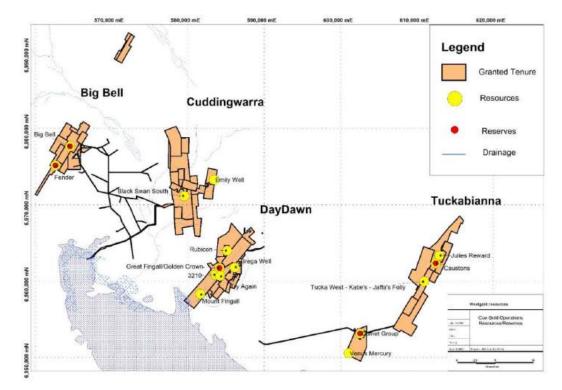


Figure 14-1 Location of Westgold CGO Mineral Resources and Mineral Reserves effective 30 June 2024. Source: Westgold.

#### 14.3 **BIG BELL**

The Big Bell Project area is located at the southern end of a narrow northeast-trending greenstone belt, (informally referred to as the Big Bell Greenstone Belt), which adjoins the larger Meekatharra - Mount Magnet Greenstone Belt. It includes the Big Bell and Fender underground mines and to the south the open pit deposits of 1600N-Shocker, 700/1100 and Fender. To the north, the open pit deposits of Indicator and Accelerator can be found.

There have been several periods of historical production from the Big Bell Project Area. Between 1913 and 2003, the project area produced a total of 2.8 Moz of gold, the majority of which was from 1989 to 2003. During this time, gold was produced from both open pit and underground operations within the Big Bell Area.

Period	Tonnes	Grade	Ounces
Big Bell Pre 1937	64,330	5.47	11,308
Big Bell Underground ASARCO (1937 – 1955)	5,600,000	4.06	730,000
Big Bell Pit (1988 – 1995)	14,203,719	1.76	804,316
Big Bell Underground (1995 – 2003)	11,506,039	3.15	1,163,857
1600N (1991)	480,000	1.80	25,500
Shocker (1994)	131,000	3.87	16,300
1600N-Shocker cut-back (2001 – 2003)	559,638	2.58	46,428
Fender (1995-1996)	272,000	2.13	16,301
Total	32,816,726	2.67	2,814,010

Table 14-2 Summary of Recorded Production from the Big Bell Trend (1913 – 2003).

The Big Bell Project open pit deposits are reported within pit shells, with the exception of Fender which is reported above a nominal elevation.



#### 14.3.1 1600 / Shocker

## 14.3.1.1 Summary

The 1600-Shocker deposit is located 2 km southwest of Big Bell and approximately 51 km west-northwest of the Tuckabianna Mill and is part of the Big Bell Project Area.

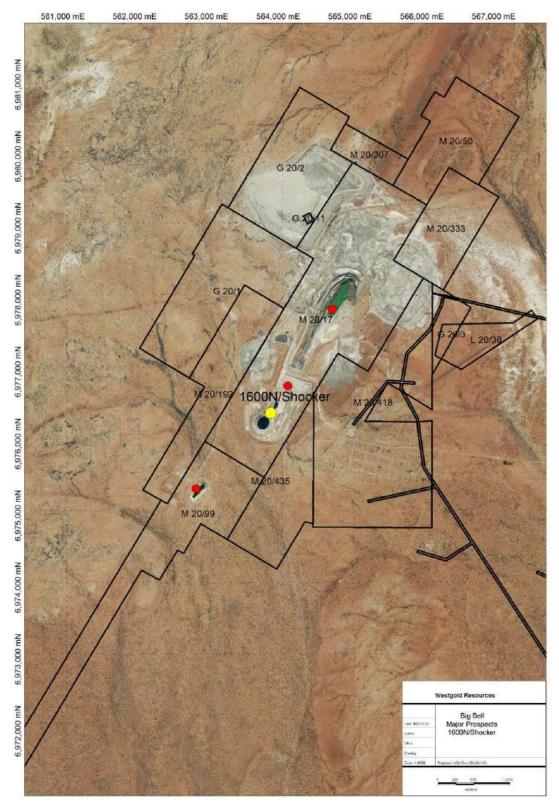


Figure 14-2 1600N / Shocker location map. Source: Westgold.



### 14.3.1.2 Modelling Domains

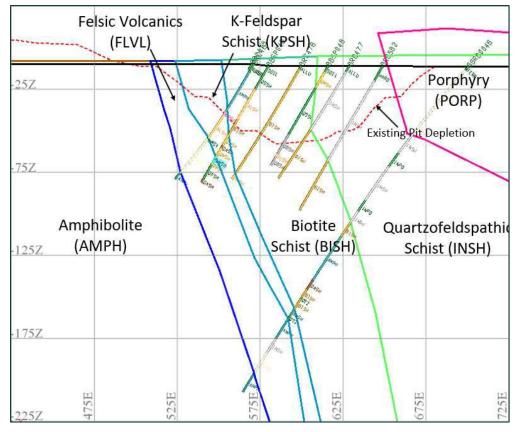
The existing lithology interpretation was reviewed and updated to include the five main lithology types within the 1600N-Shocker area and these included:

- Western Amphibolite (AMPH). •
- Felsic Volcanic (FLVL).
- K-Feldspar Schist (KPSH).
- Biotite Schist (BISH).
- Eastern Quartzofeldspathic Schist (INSH).
- Porphyry.

Note that the KPSH also includes the lesser occurring Muscovite Schist (ALSH), while the eastern INSH also includes eastern Amphibolite.

The combined BISH and KPSH lithologies serve as the primary host for gold mineralisation.

The interpretation was created with digitised polygons snapped where possible on 25 m spaced East-West sections from 1,225 mN to 2,175 mN.



A typical cross-section of the porphyry interpretation is shown below.

Figure 14-3 Lithology Interpretation – Cross-Section at 1,800 mN. Source: Westgold.



As mentioned, the 1600N - Shocker mineralisation generally lies within combined BISH and KPSH lithologies of the Big Bell Mine Sequence. These combined lithologies formed the basis for an encompassing halo interpretation.

The previous interpretation for the 1600N - Shocker area (as part of the 2012 Big Bell Trend interpretation) was based on a nominal cut-off of 0.50g/t Au. In addition, the area south of Big Bell South became difficult to interpret due to a drop off in grade and a lack of data. In this area, the grade envelope was frequently reduced to a 0.20 g/t Au interpretation cut-off to enable effective modelling of the mineralised zones within the shear.

The updated 2020 mineralisation interpretation was completed with all available drilling data and was aided by the inclusion of the close-spaced grade control blast hole data within the 1600N pit.

A comparison between gold and lithology type confirmed the strong correlation between schist and gold. This comparison was expanded to include weathering type. For the largest mineralised lithology types such as BISH, it does not appear that weathering has impacted gold distribution, with only a slight increase in grade observed in the fresh material. The slight increase is not considered significant enough to warrant sub-domaining during the grade estimation process.

A review of the 1600N blast hole GC data suggests a 0.20 g/t Au cut-off represents the natural population break for the overall low-grade mineralised envelope.

Using a 0.20 g/t Au cut-off, the mineralisation envelope was interpreted on a combination of 25 m and 12.5 m spaced east-west sections to account for both the resource definition and grade control drilling. Every attempt was made to snap the interpretations to both the resource definition and grade control drilling. However, the resource definition took priority over the blast hole grade control drilling. Within the Shocker-1600N area, a total of five mineralised envelopes were created and an additional three mineralised domains created to the east representing the Irishman's deposit area.

Within the 1600N - Shocker mineralised envelopes, higher grade trends were observed, and this was confirmed by the gradient change in the log-probability plot of the sample data.

As a result, a number of high-grade sub-domains were interpreted within the lower grade envelopes. A listing of all domains is shown below. The domain numbering convention follows the example of 1100 as the low-grade envelope and 1110, 1120, 1130 as the high-grade sub domains.

Note that the mineralisation wireframes used for the MRE update were based primarily on the RD drilling but were also guided by the blast hole drilling. This mineralisation model was then used for all drill hole coding and compositing (RD and GC) and block model constraints.



Zone	Domain No	Description	Volume
Halo	9999	Encompassing enveloped based on combined BISH, ALSH and KPSH	46,408,565
LG	1100	Low grade domain at HW contact position of BISH/Halo	2,654,483
	1110	High grade sub-domain within 1100 and all within Shocker	100,157
	1120	Very high grade sub-domain within 1100 and all within 1600	104,407
HG Sub- domains	1130 - 1	High grade sub-domain within 1100 and all within 1600 - strike extension of 1120. Nth trisol 1	58,776
	1130 - 2	High grade sub-domain within 1100 and all within 1600 - strike extension of 1120. Sth trisol 2	84,230
LG	1200	Low grade domain central to BISH/Halo all within 1600	3,583,408
	1210	High grade sub-domain within 1200 and all within 1600	20,275
	1220	High grade sub-domain within 1200 and all within 1600	193,010
HG Sub- domain	1230	High grade sub-domain within 1200 and all within 1600	538,930
uoman	1240	High grade sub-domain within 1200 and all within 1600	10,761
	1250	High grade sub-domain within 1200 and all within 1600	149,415
LG	1300	Low grade domain at FW of BISH	1,926,627
	1310	High grade sub-domain within 1300 and all within 1600	140,709
HG Sub- domain	1320	High grade sub-domain within 1300 and all within 1600	46,089
	1330	High grade sub-domain within 1300 and all within 1600	78,258
LG	1400	Low grade domain at FW of KPSH	706,218
LG	1500	Small low grade domain between 1100 and 1200 within 1600	152,435
lrishman's	2100	Main Domain	89,837
lrishman's	2200	Minor domain in FW to Sth	11,623
lrishman's	2300	Minor domain in HW to Nth	11,890

#### Table 14-3 Mineralisation Domain Summary.

## 14.3.1.3 Statistical Analysis and Compositing

Prior to compositing, all interpretations strings were checked for snapping to the RD drilling wherever possible. Although the GC data was used to guide the interpretation, it was not used for snapping the interpretation strings. The intervals for both the RD and GC drilling were flagged into the intercept table of the database. A 'best fit' composite method has been used to extract both 1 m and 2 m composites for all zones with the RD data. The reason for the two composite lengths is the RD drilling above the -90 mRL is dominated by 2 m sample lengths while below the-90 mRL the sampling is dominantly 1 m lengths. Rather than composite all RD sampling to 2m, it was decided to undertake two estimates based on the 1 m and 2 m composite data separately and create a final model as a combination of both.

The analysis for top cut determination was conducted on all individual domains for both the 1 m and 2 m RD composites and also the 2.5 m GC composite data. Several common measures of determining an appropriate top cut were reviewed:

- Log-probability analysis.
- Histogram review.
- Percentile review.



During this review, factors such as the number of composites cut, the percentage of data cut and the percentage of metal content cut were considered to ensure an appropriate value, if any, was chosen.

Top-cutting data eliminates anomalous and often erroneous data from the data set, preventing the over-estimation of metal. Top-cuts reduce the influence of these extreme values and minimise the risk of over-estimation. For some domains, highgrade cuts were not required where the grade variability relative to the mean was acceptable and spatial analysis of the high composite gold values did not indicate that they were outliers.

u_cut 1m RD Comps				1		1														
Domain	1100	1110	1120	1130	1200	1210	1220	1230	1240	1250	1300	1310	1320	1330	1400	1400	2100	2200	2300	9999
Samples	2179	178	121	146	1934	43	304	425	16	115	1095	159	35	64	493	90	290	72	28	6581
Top Cut	8	30	35	10	8	None	None	20	None	12	8	None	None	None	5	2	8	None	None	2
No Values Cut	9	6	7	2	3	0	0	7	0	1	6	0	0	0	2	1	4	0	0	3
% Data	0%	3%	6%	1%	0%	0%	0%	2%	0%	1%	1%	0%	0%	0%	0%	1%	1%	0%	0%	0%
% Metal	63%	23%	28%	15%	7%	0%	0%	17%	0%	3%	5%	0%	0%	0%	4%	13%	31%	0%	0%	0%
Mean	0.40	6.67	7.13	1.70	0.41	1.85	1.99	2.24	1.81	1.82	0.40	1.68	1.40	2.05	0.47	0.24	0.81	2.08	0.99	0.08
50% (Median)	0.23	3.48	2.63	1.14	0.25	1.45	1.41	1.35	1.58	1.06	0.23	1.28	0.79	1.17	0.24	0.18	0.30	0.42	0.38	0.05
Standard Deviation	0.69	7.84	9.74	1.98	0.64	1.22	2.11	3.29	1.12	2.20	0.76	1.48	1.67	2.44	0.69	0.26	1.39	3.15	1.28	0.12
CV	1.72	1.18	1.37	1.16	1.55	0.66	1.06	1.47	0.62	1.21	1.87	0.88	1.19	1.19	1.48	1.10	1.70	1.52	1.30	1.46
Variance	0.48	61.50	94.81	3.90	0.41	1.49	4.43	10.81	1.25	4.82	0.57	2.19	2.77	5.95	0.48	0.07	1.92	9.92	1.65	0.01
Skewness	7.35	1.64	1.82	2.49	6.16	2.11	3.43	3.63	2.02	2.33	7.22	2.23	2.44	2.02	3.33	3.86	3.42	1.88	1.86	6.72
Minimum	0.01	0.01	0.02	0.01	0.01	0.26	0.08	0.02	0.45	0.02	0.01	0.11	0.19	0.02	0.01	0.01	0.01	0.01	0.01	0.00
Maximum	8.00	30.00	35.00	10.00	8.00	6.90	16.90	20.00	5.28	12.00	8.00	9.16	7.92	11.80	5.00	2.00	8.00	12.00	4.60	2.00
90 percentile	0.81	17.68	18.20	3.61	0.85	2.91	4.01	4.61	2.36	4.80	0.78	3.20	3.86	5.48	0.99	0.51	1.82	7.88	2.70	0.16
95 percentile	1.23	28.40	34.88	4.94	1.30	3.80	5.09	7.15	3.13	5.90	1.19	4.72	4.57	6.87	1.88	0.64	3.00	9.34	3.84	0.23
97.5 percentile	1.82	30.00	35.00	8.61	1.93	4.83	7.03	12.76	4.20	8.51	1.67	5.74	5.02	8.36	2.45	0.75	5.77	10.40	4.60	0.36
99 percentile	2.71	30.00	35.00	9.72	3.12	6.04	10.73	20.00	4.85	10.32	3.23	7.59	6.76	10.33	3.85	0.89	8.00	12.00	4.60	0.56
Domain	1100	1110	1120	1130	1200	1210	1220	1230	1240	1250	1300	1310	1320	1330	1400	1400	2100	2200	2300	9999
Samples	1115	91	66																	
Top Cut	8			77	999	25	156	219	8	61	570	83	19	34	253	46	146	36	14	3389
No Values Cut		30	25	8	8	None	None	15	None	None	5	None	None	None	5	2	8	None	None	3389 None
	4	2	<b>25</b>	<b>8</b> 2	<b>8</b> 2	None 0	None 0	15 4	None 0	None 0	5 4	None 0	None 0	None 0	5 1	<b>2</b> 1	<b>8</b> 2	None 0	None 0	3389 None 0
% Data	4 0%	2 2%	25 5 8%	8 2 3%	8 2 0%	None 0 0%	None 0 0%	15 4 2%	None 0 0%	None 0 0%	5 4 1%	None 0 0%	None 0 0%	None 0 0%	5 1 0%	2 1 2%	8 2 1%	None 0 0%	None 0 0%	3389 None 0 0%
	4 0% 61%	2 2% 21%	25 5 8% 29%	8 2 3% 13%	8 2 0% 5%	None 0 0% 0%	None 0 0% 0%	15 4 2% 20%	None 0 0% 0%	None 0 0% 0%	5 4 1% 5%	None 0 0% 0%	None 0 0% 0%	None 0 0% 0%	5 1 0% 7%	2 1 2% 16%	8 2 1% 31%	None 0 0% 0%	None 0 0% 0%	3389 None 0 0% 0%
% Data % Metal Mean	4 0% 61% 0.41	2 2% 21% 6.84	25 5 8% 29% 7.08	8 2 3% 13% 1.72	8 2 0% 5% 0.42	None 0 0% 0% 1.88	None 0 0% 0% 1.99	15 4 2% 20% 2.20	None 0 0% 0% 1.81	None 0 0% 0% 1.91	5 4 1% 5% 0.40	None 0 0% 0% 1.70	None 0 0% 0% 1.36	None 0 0% 0% 2.04	5 1 0% 7% 0.46	2 1 2% 16% 0.25	8 2 1% 31% 0.81	None 0 0% 0% 2.08	None 0 0% 0% 0.99	3389 None 0 0% 0% 0.08
% Data % Metal Mean 50% (Median)	4 0% 61% 0.41 0.24	2 2% 21% 6.84 4.22	25 5 8% 29% 7.08 3.17	8 2 3% 13% 1.72 1.23	8 2 0% 5% 0.42 0.26	None 0 0% 1.88 1.49	None 0 0% 0% 1.99 1.50	15 4 2% 2.20 1.35	None 0 0% 0% 1.81 1.27	None 0 0% 0% 1.91 1.07	5 4 1% 5% 0.40 0.26	None 0 0% 0% 1.70 1.43	None 0 0% 0% 1.36 0.88	None 0 0% 2.04 1.42	5 1 0% 7% 0.46 0.26	2 1 2% 16% 0.25 0.18	8 2 1% 31% 0.81 0.34	None 0 0% 2.08 0.42	None 0 0% 0% 0.99 0.38	3389 None 0 0% 0% 0.08 0.06
% Data % Metal Mean 50% (Median) Standard Deviation	4 0% 61% 0.41 0.24 0.73	2 2% 21% 6.84 4.22 7.62	25 5 8% 29% 7.08 3.17 7.92	8 2 3% 13% 1.72 1.23 1.74	8 2 0% 5% 0.42 0.26 0.63	None 0 0% 0% 1.88 1.49 1.02	None 0 0% 0% 1.99 1.50 1.68	15 4 20% 2.20 1.35 2.66	None 0 0% 0% 1.81 1.27 1.02	None 0 0% 0% 1.91 1.07 2.08	5 4 1% 5% 0.40 0.26 0.59	None 0 0% 0% 1.70 1.43 1.16	None 0% 0% 1.36 0.88 1.36	None 0% 0% 2.04 1.42 1.83	5 1 0% 7% 0.46 0.26 0.66	2 1 2% 16% 0.25 0.18 0.32	8 2 1% 31% 0.81 0.34 1.38	None 0 0% 0% 2.08 0.42 3.17	None 0 0% 0% 0.99 0.38 1.31	3389 None 0% 0% 0.08 0.06 0.11
% Data % Metal Mean 50% (Median) Standard Deviation CV	4 0% 61% 0.41 0.24 0.73 1.76	2 2% 21% 6.84 4.22 7.62 1.11	25 5 8% 29% 7.08 3.17 7.92 1.12	8 2 3% 13% 1.72 1.23 1.74 1.01	8 2 0% 5% 0.42 0.26 0.63 1.51	None 0 0% 0% 1.88 1.49 1.02 0.54	None 0 0% 0% 1.99 1.50 1.68 0.84	15 4 2% 2.20 1.35 2.66 1.21	None 0 0% 0% 1.81 1.27 1.02 0.56	None 0 0% 0% 1.91 1.07 2.08 1.09	5 4 1% 5% 0.40 0.26 0.59 1.46	None 0 0% 0% 1.70 1.43 1.16 0.68	None 0 0% 0% 1.36 0.88 1.36 1.00	None 0 0% 2.04 1.42 1.83 0.90	5 1 0% 7% 0.46 0.26 0.66 1.43	2 1 2% 16% 0.25 0.18 0.32 1.25	8 2 1% 31% 0.81 0.34 1.38 1.70	None 0 0% 0% 2.08 0.42 3.17 1.53	None 0 0% 0% 0.99 0.38 1.31 1.33	3389 None 0 0% 0% 0.08 0.06 0.11 1.30
% Data % Metal Mean 50% (Median) Standard Deviation	4 0% 61% 0.41 0.24 0.73 1.76 0.53	2 2% 21% 6.84 4.22 7.62 1.11 58.09	25 5 8% 29% 7.08 3.17 7.92 1.12 62.75	8 3% 13% 1.72 1.23 1.74 1.01 3.03	8 2 0% 5% 0.42 0.26 0.63 1.51 0.40	None 0 0% 1.88 1.49 1.02 0.54 1.04	None 0 0% 1.99 1.50 1.68 0.84 2.82	15 4 2% 2.20 1.35 2.66 1.21 7.05	None 0 0% 1.81 1.27 1.02 0.56 1.03	None 0 0% 1.91 1.07 2.08 1.09 4.34	5 4 1% 5% 0.40 0.26 0.59 1.46 0.35	None 0 0% 1.70 1.43 1.16 0.68 1.35	None 0 0% 0% 1.36 0.88 1.36 1.00 1.85	None 0 0% 2.04 1.42 1.83 0.90 3.35	5 1 0% 7% 0.46 0.26 0.66 1.43 0.44	2 1 2% 16% 0.25 0.18 0.32 1.25 0.10	8 2 1% 31% 0.81 0.34 1.38 1.70 1.90	None 0 0% 0% 2.08 0.42 3.17 1.53 10.06	None           0           0%           0%           0.99           0.38           1.31           1.33           1.71	3389 None 0 0% 0% 0.08 0.06 0.11 1.30 0.01
% Data % Metal Mean 50% (Median) Standard Deviation CV Variance Skewness	4 0% 61% 0.41 0.24 0.73 1.76 0.53 7.28	2 2% 21% 6.84 4.22 7.62 1.11 58.09 1.55	25 5 8% 29% 7.08 3.17 7.92 1.12 62.75 1.16	8 2 3% 1.72 1.23 1.74 1.01 3.03 2.03	8 2 0% 5% 0.42 0.26 0.63 1.51 0.40 6.77	None 0 0% 1.88 1.49 1.02 0.54 1.04 1.48	None 0 0% 1.99 1.50 1.68 0.84 2.82 1.98	15 4 2% 2.20 1.35 2.66 1.21 7.05 3.10	None 0 0% 1.81 1.27 1.02 0.56 1.03 1.40	None 0 0% 1.91 1.07 2.08 1.09 4.34 2.21	5 4 1% 5% 0.40 0.26 0.59 1.46 0.35 5.10	None 0 0% 1.70 1.43 1.16 0.68 1.35 1.36	None 0 0% 1.36 0.88 1.36 1.00 1.85 1.78	None 0 0% 2.04 1.42 1.83 0.90 3.35 1.35	5 1 0% 7% 0.46 0.26 0.66 1.43 0.44 3.54	2 1 2% 16% 0.25 0.18 0.32 1.25 0.10 3.96	8 2 1% 31% 0.81 0.34 1.38 1.70 1.90 3.49	None 0 0% 2.08 0.42 3.17 1.53 10.06 1.92	None 0 0% 0.99 0.38 1.31 1.33 1.71 1.98	3389 None 0 0% 0% 0.08 0.06 0.11 1.30 0.01 5.30
% Data % Metal Mean 50% (Median) Standard Deviation CV Variance Skewness Minimum	4 0% 61% 0.41 0.24 0.73 1.76 0.53 7.28 0.01	2 2% 21% 6.84 4.22 7.62 1.11 58.09 1.55 0.02	25 5 8% 29% 7.08 3.17 7.92 1.12 62.75 1.16 0.18	8 2 3% 13% 1.72 1.23 1.74 1.01 3.03 2.03 0.01	8 2 0% 5% 0.42 0.26 0.63 1.51 0.40 6.77 0.01	None           0           0%           0%           1.88           1.49           1.02           0.54           1.04           1.48           0.56	None           0           0%           0%           1.99           1.50           1.68           0.84           2.82           1.98           0.10	15 4 2% 2.20 1.35 2.66 1.21 7.05 3.10 0.05	None           0           0%           0%           1.81           1.27           1.02           0.56           1.03           1.40           0.90	None           0           0%           0%           1.91           1.07           2.08           1.09           4.34           2.21           0.06	5 4 1% 5% 0.40 0.26 0.59 1.46 0.35 5.10 0.02	None           0           0%           1.70           1.43           1.16           0.68           1.35           1.36           0.20	None 0 0% 1.36 0.88 1.36 1.00 1.85 1.78 0.21	None 0 0% 2.04 1.42 1.83 0.90 3.35 1.35 0.06	5 1 0% 7% 0.46 0.26 0.66 1.43 0.44 3.54 0.01	2 1 2% 16% 0.25 0.18 0.32 1.25 0.10 3.96 0.02	8 2 1% 31% 0.81 0.34 1.38 1.70 1.90 3.49 0.01	None 0 0% 2.08 0.42 3.17 1.53 10.06 1.92 0.01	None 0 0% 0.99 0.38 1.31 1.33 1.71 1.98 0.01	3389 0 0% 0% 0.08 0.06 0.11 1.30 0.01 5.30 0.01
% Data % Metal Mean 50% (Median) Standard Deviation CV Variance Skewness	4 0% 61% 0.41 0.24 0.73 1.76 0.53 7.28 0.01 8.00	2 2% 21% 6.84 4.22 7.62 1.11 58.09 1.55 0.02 30.00	25 5 8% 29% 7.08 3.17 7.92 1.12 62.75 1.16 0.18 25.00	8 2 3% 13% 1.72 1.23 1.74 1.01 3.03 2.03 0.01 8.00	8 2 0% 5% 0.42 0.26 0.63 1.51 0.40 6.77 0.01 8.00	None           0           0%           0%           1.88           1.49           1.02           0.54           1.04           1.48           0.56           5.03	None           0           0%           0%           1.99           1.50           1.68           0.84           2.82           1.98           0.10           9.65	15 4 2% 2.20 1.35 2.66 1.21 7.05 3.10 0.05 15.00	None           0           0%           0%           1.81           1.27           1.02           0.56           1.03           1.40           0.90           3.94	None           0           0%           0%           1.91           1.07           2.08           1.09           4.34           2.21           0.06           10.98	5 4 1% 5% 0.40 0.26 0.59 1.46 0.35 5.10 0.02 5.00	None           0           0%           1.70           1.43           1.16           0.68           1.35           1.36           0.20           5.88	None           0           0%           0%           1.36           0.88           1.36           1.00           1.85           1.78           0.21           4.87	None           0           0%           0%           2.04           1.42           1.83           0.90           3.35           1.35           0.06           6.98	5 1 0% 7% 0.46 0.26 0.66 1.43 0.44 3.54 0.01 5.00	2 1 2% 16% 0.25 0.18 0.32 1.25 0.10 3.96 0.02 2.00	8 2 1% 31% 0.81 0.34 1.38 1.70 1.90 3.49 0.01 8.00	None           0           0%           0%           0.42           3.17           1.53           10.06           1.92           0.01           12.00	None           0           0%           0.99           0.38           1.31           1.33           1.71           1.98           0.01           4.60	3389 None 0 0% 0% 0.08 0.06 0.11 1.30 0.01 5.30 0.01 1.44
% Data % Meta l Mean 50% (Median) Standard Deviation CV Variance Skewness Minimum Maximum 90 percentile	4 0% 61% 0.41 0.24 0.73 1.76 0.53 7.28 0.01 8.00 0.80	2 2% 21% 6.84 4.22 7.62 1.11 58.09 1.55 0.02 30.00 17.38	25 5 8% 29% 7.08 3.17 7.92 1.12 62.75 1.16 0.18 25.00 19.35	8 2 3% 13% 1.72 1.23 1.74 1.01 3.03 2.03 0.01 8.00 3.41	8 2 0% 5% 0.42 0.26 0.63 1.51 0.40 6.77 0.01 8.00 0.83	None           0           0%           0%           1.88           1.49           1.02           0.54           1.04           1.48           0.56           5.03           2.81	None           0           0%           0%           1.99           1.50           1.68           0.84           2.82           1.98           0.10           9.65           3.85	15 4 20% 2.20 1.35 2.66 1.21 7.05 3.10 0.05 15.00 4.41	None           0           0%           0%           1.81           1.27           0.56           1.03           1.40           0.90           3.94           2.55	None           0           0%           0%           1.91           1.07           2.08           1.09           4.34           2.21           0.06           10.98           4.58	5 4 1% 5% 0.40 0.26 0.59 1.46 0.35 5.10 0.02 5.00 0.76	None           0           0%           0%           1.70           1.43           1.16           0.68           1.35           1.36           0.20           5.88           3.33	None 0 0% 0% 1.36 0.88 1.36 1.00 1.85 1.78 0.21 4.87 2.83	None           0           0%           0%           2.04           1.42           1.83           0.90           3.35           1.35           0.06           6.98           4.49	5 1 0% 7% 0.46 0.26 0.66 1.43 0.44 3.54 0.01 5.00 0.97	2 1 2% 16% 0.25 0.18 0.32 1.25 0.10 3.96 0.02 2.00 0.50	8 2 1% 31% 0.81 0.34 1.38 1.70 1.90 3.49 0.01 8.00 1.79	None           0           0%           0%           0%           0%           1.08           1.92           0.01           12.00           7.64	None           0           0%           0.99           0.38           1.31           1.33           1.71           1.98           0.01           4.60           2.46	3389 None 0% 0% 0.08 0.06 0.11 1.30 0.01 5.30 0.01 1.44 0.16
% Data % Meta I Mean 50% (Median) Standard Deviation CV Variance Skewness Minimum Maximum 90 percentile 95 percentile	4 0% 61% 0.41 0.24 0.73 1.76 0.53 7.28 0.01 8.00 0.80 1.20	2 2% 21% 6.84 4.22 7.62 1.11 58.09 1.55 0.02 30.00 17.38 24.96	25 5 8% 29% 7.08 3.17 7.92 1.12 62.75 1.16 0.18 25.00 19.35 25.00	8 2 3% 13% 1.72 1.23 1.74 1.01 3.03 2.03 0.01 8.00 3.41 5.72	8 2 0% 5% 0.26 0.63 1.51 0.40 6.77 0.01 8.00 0.83 1.26	None           0           0%           0%           1.88           1.49           1.02           0.54           1.04           1.48           0.56           5.03           2.81           3.66	None           0           0%           1.99           1.50           1.68           0.84           2.82           1.98           0.10           9.65           3.85           4.80	15 4 20% 2.20 1.35 2.66 1.21 7.05 3.10 0.05 15.00 4.41 6.74	None           0           0%           0%           1.81           1.27           1.02           0.56           1.03           1.40           0.90           3.94           2.55           3.24	None           0           0%           0%           1.91           1.07           2.08           1.09           4.34           2.21           0.06           10.98           4.58           5.77	5 4 1% 5% 0.40 0.26 0.59 1.46 0.35 5.10 0.02 5.00 0.76 1.27	None           0           0%           1.70           1.43           1.16           0.68           1.35           1.36           0.20           5.88           3.33           4.21	None 0 0% 0% 1.36 0.88 1.36 1.00 1.85 1.78 0.21 4.87 2.83 4.58	None 0% 0% 2.04 1.42 1.83 0.90 3.355 1.35 0.06 6.98 4.49 5.82	5 1 0% 7% 0.46 0.26 0.66 1.43 0.44 3.54 0.01 5.00 0.97 1.77	2 1 2% 16% 0.25 0.18 0.32 1.25 0.10 3.96 0.02 2.00 0.50 0.66	8 2 1% 31% 0.81 0.34 1.38 1.70 1.90 3.49 0.01 8.00 1.79 2.89	None           0           0%           0.0%           0.42           3.17           1.53           10.06           1.92           0.01           12.00           7.64           9.12	None           0           0%           0.99           0.38           1.31           1.33           1.71           1.98           0.01           4.60           2.46           3.27	3389 None 0 0% 0% 0.08 0.06 0.11 1.30 0.01 5.30 0.01 1.44 0.16 0.22
% Data % Metal Mean 50% (Median) Standard Deviation CV Variance Skewness Minimum Maximum 90 percentile	4 0% 61% 0.41 0.24 0.73 1.76 0.53 7.28 0.01 8.00 0.80	2 2% 21% 6.84 4.22 7.62 1.11 58.09 1.55 0.02 30.00 17.38	25 5 8% 29% 7.08 3.17 7.92 1.12 62.75 1.16 0.18 25.00 19.35	8 2 3% 13% 1.72 1.23 1.74 1.01 3.03 2.03 0.01 8.00 3.41	8 2 0% 5% 0.42 0.26 0.63 1.51 0.40 6.77 0.01 8.00 0.83	None           0           0%           0%           1.88           1.49           1.02           0.54           1.04           1.48           0.56           5.03           2.81	None           0           0%           0%           1.99           1.50           1.68           0.84           2.82           1.98           0.10           9.65           3.85	15 4 20% 2.20 1.35 2.66 1.21 7.05 3.10 0.05 15.00 4.41	None           0           0%           0%           1.81           1.27           0.56           1.03           1.40           0.90           3.94           2.55	None           0           0%           0%           1.91           1.07           2.08           1.09           4.34           2.21           0.06           10.98           4.58	5 4 1% 5% 0.40 0.26 0.59 1.46 0.35 5.10 0.02 5.00 0.76	None           0           0%           0%           1.70           1.43           1.16           0.68           1.35           1.36           0.20           5.88           3.33	None 0 0% 0% 1.36 0.88 1.36 1.00 1.85 1.78 0.21 4.87 2.83	None           0           0%           0%           2.04           1.42           1.83           0.90           3.35           1.35           0.06           6.98           4.49	5 1 0% 7% 0.46 0.26 0.66 1.43 0.44 3.54 0.01 5.00 0.97	2 1 2% 16% 0.25 0.18 0.32 1.25 0.10 3.96 0.02 2.00 0.50	8 2 1% 31% 0.81 0.34 1.38 1.70 1.90 3.49 0.01 8.00 1.79	None           0           0%           0%           0%           0%           1.08           1.92           0.01           12.00           7.64	None           0           0%           0.99           0.38           1.31           1.33           1.71           1.98           0.01           4.60           2.46	3389 None 0% 0% 0.08 0.06 0.11 1.30 0.01 5.30 0.01 1.44 0.16

#### Table 14-4 Top-cuts applied to each domain.

#### 14.3.1.4 Density

No bulk density data is available in the database, although it is stated by Chris Arnold in his 1996 Big Bell resource report that there are 722 density measurements within the Big Bell mineralised zone. Arnold states that the mean density of these 722 measurements is 2.75 t/m<sup>3</sup> with a strong clustering in the 2.70 t/m<sup>3</sup> to 2.80 t/m<sup>3</sup> range. The following describes the limited density data details that have been located:

- 65 bulk density readings were found in a database on the old Big Bell server. All were related to Fender holes and so were not used to inform the mineral resource estimate.
- A density data file for the Big Bell Datamine model was found on the old Big Bell server but could not be opened.
- A paper presented at MASSMIN 2000 by Mike Turner and John Player provided a • series of rock property values by lithology. These are presented below.



Rock Type	UCS 50	Young's Modulus (GPa)	Poisson's Ratio	Density (kg/m³)
АМРН	123.11	67.12	0.28	2870
ALSH	121.13	44.51	0.21	2800
BISH	103.42	51.42	0.23	2900
CRSH	136.5	51.7	0.18	2820
KPSH	141.2	43.4	0.27	2738

 Table 14-5 Table from Seismicity at Big Bell Mine (paper by Mike Turner and John Player – MASSMIN 2000).

- The New Hampton Goldfields resource model for 1,600N-Shocker of April 2001 used 2.30 t/m<sup>3</sup> for oxide material and 2.75 t/m<sup>3</sup> for fresh rock. A density of 2.2 t/m<sup>3</sup> was assumed for the backfill material in the 1,600N pit.
- Mining by Harmony at 1,600N-Shocker during 2002 / 2003 used the following densities for ore blocks:

Above -60mRL =  $2.1 \text{ t/m}^3$ -60 to -67.5 =  $2.4 \text{ t/m}^3$ Below -67.5 =  $2.75 \text{ t/m}^3$ 

• The previous Aragon model assumed a bulk density for the Big Bell underground of 2.70 t/m<sup>3</sup>.

Given the above and general lack of data the values listed in **Table 14-6** have been assumed for the 1600N-Shocker MRE.

#### Table 14-6 In situ Density Assignment.

Rock Type	Density (t/m <sup>3</sup> )
Cover	1.80
Oxide	2.00
Transitional	2.40
Fresh (BISH)	2.90
Fresh (All Other)	2.75

These values are based upon underground mining data from 2002-03 and the value for BISH density as noted by Turner and Player (as the BISH unit was able to be domained adequately). There are no direct measurements of in situ density in the oxidised environment, which represents a technical risk, especially in the open pit environment.

## 14.3.1.5 Metallurgy

Big Bell underground ore had a recovery of 87%. The gold recovery on this ore tended to be grind-dependent. Higher antimony in the ore affected recovery. The percentage of Big Bell material in the overall plant blend also affected recovery e.g., once 50% of the blend was Big Bell, the tails grade would slowly increase. Ore blends and grind size were critical to the recovery when treating this ore.

1,600N recoveries were 88-89%. The gold recoveries were the same as the underground ore with the finer grind. Higher antimony in the ore also affected recovery.

Shocker was mainly oxide and transitional and had recoveries of 90-92%.



### 14.3.1.6 Variography

Variograms were analysed in Snowden Supervisor software. Normal scores transforms were applied to limit the influence of extreme grades. Composites within lodes that exhibited common style, geology and univariate statistics were grouped for variogram modelling.

A summary of variogram groupings and resulting parameters is given below.

Vario. Model	Domains	No. Struct	Nugget	Sill 1	Range 1	Major/ Semi	Major/ Minor	Sill 2	Range 2	Major/ Semi	Major/ Minor	Bearing	Plunge	Dip
1100	1100 1500	2	0.26	0.44	12	1	3	0.30	43	1	3.9	0	0	-75
1120	1110 to 1130	2	0.16	0.57	18	3.6	9	0.27	46	3.6	9.2	256	74	18
1200	1200	2	0.20	0.57	30	1	15	0.23	65	1	6.5	5	0	-75
1220	1210 to 1220	2	0.40	0.38	8	1.6	8	0.22	46	2	5.75	36	-79	-63
1230	1230 to 1250	2	0.40	0.34	10	2	10	0.26	32	2	8	216	79	63
1300	1300	2	0.25	0.56	35	1	11.6	0.19	52	1	5.2	5	0	-75
1310	1310 to 1330	2	0.41	0.29	10	1	2.5	0.29	42	1	4.2	275	75	0
1400	1400	2	0.09	0.64	18	1	6	0.27	40	1	4.4	5	0	-75
2100	2100 2200 2300	1	0.18	0.82	30	1	3.75					5	0	-55
9999	9999	2	0.38	0.38	20	2	2	0.24	60	1	1.7	5	0	-90

Table 14-7 1600N-Shocker variogram orientations and model parameters.

## 14.3.1.7 Block Model and Grade Estimation

A number of criteria including data spacing, geometry of mineralised domains and volume fill were the primary considerations considered when selecting an appropriate estimation block size. Data spacing varies within the mineralised domains, however, is dominated by 25 m spaced sections.

It is considered good geostatistical practice to use an estimation parent cell size that approaches the data spacing where possible, whilst at the same time being mindful of potential mine design and selectivity implications. After reviewing the data spacing and conceptual SMU relative to the mineralised zones, it was determined that a parent block size of 12.5 mN x 4 mE x 10 mRL, which can be sub-celled down to 6.25 mN x 1 mE x 2.5 mRL for volume resolution, would be most appropriate.

A single block model was created to cover the extents of both the historical 1600N and Shocker deposits (sh\_1600\_mre\_20201015.mdl). The definition for the block model is summarised below.

Туре	Y	X	Z
Minimum Coordinates	1,100	300	-600
Maximum Coordinates	2,150	1,204	50
Extent	1,050	904	650
User Block Size	12.50	4.00	10.00
Sub-block	6.25	1.00	2.50
Rotation	0	0	0

#### Table 14-8 Block Model Parameters - sh\_1600\_mre\_20201015.mdl.



Grade estimation utilised Ordinary Kriging (OK) of the downhole composite data for gold using the Cube ECX estimation add-on for Surpac mining software.

Three grade estimates were completed using the block model attributes "res\_au\_1m", "res\_au\_2m" and "gc\_au":

- res\_au\_1m estimate includes 1 m composited RD (RC and diamond) samples estimated with a parent block size of  $12.5 \text{ m}(Y) \times 4 \text{ m}(X) \times 10 \text{ m}(Z)$ .
- res\_au\_2m estimate includes 2 m composited RD (RC and diamond) samples estimated with a parent block size of  $12.5 \text{ m}(Y) \times 4 \text{ m}(X) \times 10 \text{ m}(Z)$ .
- gc\_au estimate includes the 2.5 m composited blast hole GC data and was estimated with a smaller parent block size of  $6.25 \text{ m}(Y) \times 2 \text{ m}(X) \times 5 \text{ m}(Z)$ . Although there is a small number of GC samples in the Shocker pit, the majority are in the 1600N pit and the gc\_au estimate was confined to this area only.

All domains were estimated as hard boundaries with the corresponding domain composites except for two of the high-grade sub domains (1120 and 1130). Domains 1120 and 1130 represent the continuous high-grade sub-domain within domain 1100, however 1120 represents a significantly higher-grade population compared to the adjacent 1130, which is clearly seen with the aid of the GC data (Figure 14-4). As a result, a one-way soft boundary for these domains was used, which meant that the lower grade 1130 sub domain was estimated with only the corresponding composites, while the much higher grade 1120 was estimated with the combined 1120 and 1130 composites.

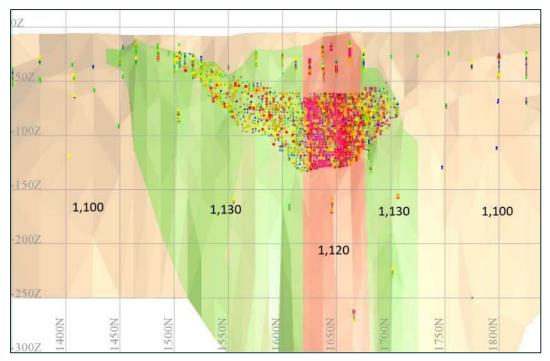
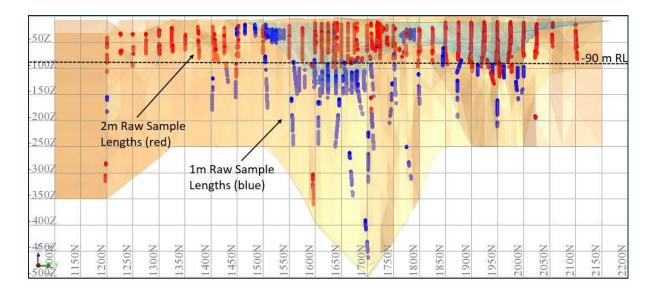


Figure 14-4 High-grade sub-domains 1120 and 1130 within the low-grade envelope 1100 - long-section looking west. Source: Westgold.



This approach significantly reduces the risk of extrapolation of high-grade estimates into the surrounding lower grade areas. The one-way soft boundary estimate could be considered conservative however, given the anisotropy applied in the steeply plunging orientation, this approach also has the effect of reducing the influence of the surrounding lower grade composites on the higher-grade sub-domain estimate.

The upper portion of the resource model is dominated by 2 m samples data and the lower portion by 1 m samples. The final grade estimate ("res\_au") was assigned the 2 m composite based estimate ("res\_au\_2m") above -90 mRL and was assigned the 1 m composite based estimate ("res\_au\_1m") below the -90 mRL.



#### Figure 14-5 Final grade estimate boundary position at -90 mRL between 1 m and 2 m composite Estimates Relative to the Raw Sample Length Data – Long section Looking West. Source: Westgold.

Variography has been used to characterise the spatial relationship of the data. Additional to this is the implementation of search strategies aimed at producing a robust block estimate, whilst at the same time minimising estimation error and conditional biases. Search neighbourhoods were optimised by undertaking Kriging Neighbourhood Analysis (KNA), which involves analysing estimation quality data such as Slope of Regression and Kriging weights for various search neighbourhoods and combining these with other primary considerations such as data spacing, the geometry of the mineralised domains and variogram models.

As data spacing at 1600N-Shocker is variable throughout the mineralised domains, KNA was undertaken on blocks representing poor and well-informed neighbourhoods. The aim of these tests is to optimise the kriging search neighbourhood and maximise the quality of the kriging when dealing with a non-exhaustive data set.

The search strategy resulted in the minimum number of samples being set to four or six and the maximum set between 12 or 22. The search distance for the first pass estimate was set to a distance ranging from 45 to 80 m, depending on the range of the corresponding variogram. A compilation of the parameters used are summarised below.



Domain	Min	Max	Dist.	Bearing	Plunge	Dip	Major/ Semi	Major/ Minor	Block Size	Descrit.
1100	6	18	60	0	0	-75	1	3	12.5x4x10	5x4x2
1110	6	18	60	256	74	18	2	6	12.5x4x10	5x4x2
1120	6	18	60	256	74	18	2	6	12.5x4x10	5x4x2
1130	6	18	60	256	74	18	2	6	12.5x4x10	5x4x2
1200	6	22	75	5	0	-75	1	4	12.5x4x10	5x4x2
1210	6	22	60	36	-79	-63	1.75	4	12.5x4x10	5x4x2
1220	6	22	60	36	-79	-63	1.75	4	12.5x4x10	5x4x2
1230	6	22	50	216	79	63	1.75	4	12.5x4x10	5x4x2
1240	6	22	50	216	79	63	1.75	4	12.5x4x10	5x4x2
1250	6	22	50	216	79	63	1.75	4	12.5x4x10	5x4x2
1300	6	22	60	5	0	-75	1	4	12.5x4x10	5x4x2
1310	6	22	60	275	75	0	1	4	12.5x4x10	5x4x2
1320	6	22	60	275	75	0	1	4	12.5x4x10	5x4x2
1330	6	22	60	275	75	0	1	4	12.5x4x10	5x4x2
1400	6	18	60	5	0	-75	1	4	12.5x4x10	5x4x2
1500	6	18	60	0	0	-75	1	3	12.5x4x10	5x4x2
2100	6	18	50	5	0	-55	1	3.75	12.5x4x10	5x4x2
2200	6	18	50	5	0	-55	1	3.75	12.5x4x10	5x4x2
2300	6	18	50	5	0	-55	1	3.75	12.5x4x10	5x4x2
9999	4	12	80	5	0	-90	1	3	12.5x4x10	5x4x2

Table 14-9 Estimation parameters – 1 m composite RD estimate.

Table 14-10 Estimation parameters – 2 m composite RD estimate.

Domain	Min	Max	Dist.	Bearing	Plunge	Dip	Major/ Semi	Major/ Minor	Block Size	Descrit.
1100	4	12	60	0	0	-75	1	3	12.5x4x10	5x4x2
1110	4	12	60	256	74	18	2	6	12.5x4x10	5x4x2
1120	4	12	60	256	74	18	2	6	12.5x4x10	5x4x2
1130	4	12	60	256	74	18	2	6	12.5x4x10	5x4x2
1200	4	12	75	5	0	-75	1	4	12.5x4x10	5x4x2
1210	4	12	60	36	-79	-63	1.75	4	12.5x4x10	5x4x2
1220	4	12	60	36	-79	-63	1.75	4	12.5x4x10	5x4x2
1230	4	12	50	216	79	63	1.75	4	12.5x4x10	5x4x2
1240	4	12	50	216	79	63	1.75	4	12.5x4x10	5x4x2
1250	4	12	50	216	79	63	1.75	4	12.5x4x10	5x4x2
1300	4	12	60	5	0	-75	1	4	12.5x4x10	5x4x2
1310	4	12	60	275	75	0	1	4	12.5x4x10	5x4x2
1320	4	12	60	275	75	0	1	4	12.5x4x10	5x4x2
1330	4	12	60	275	75	0	1	4	12.5x4x10	5x4x2
1400	4	12	60	5	0	-75	1	4	12.5x4x10	5x4x2
1500	4	12	60	0	0	-75	1	3	12.5x4x10	5x4x2
2100	4	12	50	5	0	-55	1	3.75	12.5x4x10	5x4x2
2200	4	12	50	5	0	-55	1	3.75	12.5x4x10	5x4x2
2300	4	12	50	5	0	-55	1	3.75	12.5x4x10	5x4x2
9999	4	12	80	5	0	-90	1	3	12.5x4x10	5x4x2



Domain	Min	Max	Dist.	Bearing	Plunge	Dip	Major/ Semi	Major/ Minor	Block Size	Descrit.
1100	4	12	60	5	0	-75	1	2.3	16.25x2x5	5x4x2
1130	4	12	60	256	74	18	2	4	16.25x2x5	5x4x2
1130	4	12	60	256	74	18	2	4	16.25x2x5	5x4x2
1200	4	12	60	230	76	45	2	4	16.25x2x5	5x4x2
1210	4	12	60	36	-79	-63	1.6	4	16.25x2x5	5x4x2
1220	4	12	60	36	-79	-63	1.6	4	16.25x2x5	5x4x2
1230	4	12	45	216	79	63	2	4	16.25x2x5	5x4x2
1240	4	12	45	216	79	63	2	4	16.25x2x5	5x4x2
1250	4	12	45	216	79	63	2	4	16.25x2x5	5x4x2
1300	4	12	60	216	79	63	1.2	3	16.25x2x5	5x4x2
1310	4	12	60	275	75	0	1	2.5	16.25x2x5	5x4x2
1320	4	12	60	275	75	0	1	2.5	16.25x2x5	5x4x2
1330	4	12	60	275	75	0	1	2.5	16.25x2x5	5x4x2
1400	4	12	40	5	0	-75	1.5	2	16.25x2x5	5x4x2
9999	4	12	60	5	0	-90	1.6	2	16.25x2x5	5x4x2

Table 14-11 Estimation parameters – 2.5 m composite GC estimate.

## 14.3.1.8 Model Validation

Block model validation was undertaken by the following means:

- Visual inspection of block estimates in relation to drilling and face sample data.
  - Global statistical comparisons of sample composites and block grades. •
  - Semi-local comparison of composite and block grades (by northing, easting and • RL) using Swath Plots.
  - Comparison to GC block estimates and historical mine production.

Global comparisons between the input composite data and the resultant grade estimates based on the 1m and 2m composites are summarised below. Overall, there is a good comparison when comparing the mean of the interpolated gold grades for each domain against the mean composite grade. Although the estimated and composite mean are not strictly comparable due to data clustering and volume influences, comparing these does provide a useful validation tool in detecting any major biases requiring further spatial investigation, whilst providing a global comparison of the input composite grade and the estimated block grade.

Domain	No. Comps	Mie.	Max.	Mean AUCUT	Declust. AUCUT	Std Dev AUCUT	CV AUCUT	No. Blocks	Min-	Max.	Mean aucut_ok	St.Dev.	cv	Wireframe Vol.	%Vol	Au %D9#	Au Declust %Diff
1100	2,179	0.01	8.00	0.40	0.42	0.69	1.72	141,791	0.01	3.03	0,40	0.23	0.59	2,306,913	25%	0%	-5%
1110	178	0.01	30.00	6.67	6.67	7.84	1.18	6,337	0.50	13.72	6.40	2.48	0.39	100,157	1%	-4%	-4%
1120	121	0.02	35.00	7.13	7.43	9.74	1.37	6,730	1,42	16.62	5.71	3.30	0.58	104,407	1%	-20%	-23%
1130	146	0.01	10.00	1.70	1.66	1.98	1.16	9,080	0.50	4.85	2.06	1.01	0.49	143,006	2%	21%	24%
1200	1,934	0.01	8.00	0.41	0.42	0.64	1.55	167,405	0.04	3.35	0.37	0.21	0.56	2,671,017	29%	-10%	-12%
1210	43	0.26	6.90	1.85	1.93	1.22	0.66	1,286	1.47	2.38	2.00	0.19	0.09	20,275	0%	8%	435
1220	304	0.08	16.90	1.99	1.94	2.11	1.06	12,546	0.61	3.82	1.99	0.68	0.34	193,010	2%	0%	3%
1230	425	0.02	20.00	2.24	2.25	3.29	1.47	34,672	0.59	6.73	1.91	0.84	0.44	538,930	6%	-15%	-15%
1240	16	0.45	5.28	1.81	1.81	1.12	0.62	698	1.52	2.11	1.87	0.13	0.07	10,761	0%	3%	3%
1250	115	0.02	12.00	1.82	1.80	2.20	1.21	9,571	0.50	4.34	1.56	0.68	0.44	149,415	2%	-14%	-13%
1300	1,095	0.01	8.00	0.40	0.40	0.76	1.87	104,720	0.06	2.58	0.39	0.18	0.46	1,661,571	18%	-3%	-3%
1310	159	0.11	9.16	1.68	1.72	1.48	0.88	8,998	0.71	3.12	1.91	0.39	0.20	140,709	2%	14%	11%
1320	35	0.19	7.92	1.40	1.58	1.67	1.19	2,495	0.80	3.77	1.89	0.70	0.37	46,089	1%	35%	20%
1330	64	0.02	11.80	2.05	2.28	2.44	1.19	5,026	0.92	5.16	2.32	1.02	0.44	78,258	1%	13%	2%
1400	493	0.01	5.00	0.47	0.51	0.69	1.48	44,073	0.07	2.88	0.54	0.32	0.60	706,218	8%	15%	6%
1500	90	0.01	2.00	0.24	0.26	0.26	1.10	9,795	0.08	0.77	0.27	0.09	0.35	152,435	2%	13%	4%
2100	290	0.01	8.00	0.81	0.84	1.39	1.70	5,506	0.01	2.68	0.83	0.44	0.53	89,837	1%	2%	-1%
2200	72	0.01	12.00	2.08	1.91	3.15	1.52	696	0.32	6.51	2.12	1.40	0.66	11,623	0%	296	11%
2300	28	0.01	4.60	0.99	0.99	1.28	1.30	705	0.26	1.62	0.92	0.30	0.33	11,890	0%	-7%	-7%
9999	6,581	0.00	2.00	0.08	0.08	0.12	1.46	2,071,715	0.01	0.97	0.09	0.11	1.24	37,272,044		13%	13%

Table 14-12 Comparison between composite data and block grade estimated with 1m composites.



Domain	No. Comps	Mie.	Max.	Mean AUCUT	Declust. AUCUT	Std Dev AUCUT	CV AUCUT	No. Blocks	Min.	Max.	Mean aucut_ok	St.Dev.	cv	Wireframe Vol.	%Vol	Au %Diff	Au Declust %Diff
1100	1,115	0.01	8.00	0.41	0.42	0.73	1.76	141,711	0,02	2.76	0,40	0.25	0.62	2,306,913	25%	-2%	-5%
1110	91	0.02	30.00	6.84	6.87	7.62	1.11	6,337	0.55	14.66	6.86	2.33	0.34	100,157	1%	0%	0%
1120	66	0.18	25.00	7.08	7.34	7.92	1.12	6,730	1.54	14.70	5.72	2.95	0.52	104,407	1%	-19%	-22%
1130	77	0.01	8.00	1.72	1.71	1.74	1.01	9,080	0.59	4.88	2.07	1.02	0.49	143,006	2%	20%	21%
1200	999	0.01	8.00	0.42	0.42	0.63	1.51	167,405	0.04	2.91	0.37	0.20	0.55	2,671,017	29%	-12%	-12%
1210	25	0.56	5.03	1.88	1.91	1.02	0.54	1,286	1.46	2.33	2.03	0.17	0.08	20,275	0%	8%	6%
1220	156	0.10	9.65	1.99	1.97	1.68	0.84	12,546	0.61	3.97	2.00	0.66	0.33	193,010	2%	1%	235
1230	219	0.05	15.00	2.20	2.18	2.66	1.21	34,672	0.48	6.27	1.93	0.86	0.45	538,930	6%	-12%	-11%
1240	8	0.90	3.94	1.81	1.82	1.02	0.56	698	1.54	2.11	1.85	0.12	0.07	10,761	0%	2%	2%
1250	61	0.06	10.98	1.91	1.87	2,08	1.09	8,952	0.50	5.68	1.82	0.93	0.51	149,415	2%	-5%	-3%
1300	570	0.02	5.00	0.40	0.40	0.59	1.45	104,720	0.07	1.93	0.40	0.18	0.45	1,661,571	18%	0%	0%
1310	83	0.20	5.88	1.70	1.72	1.16	0.68	8,578	0.72	3.05	1.91	0.36	0.19	140,709	2%	12%	11%
1320	19	0.21	4.87	1.36	1.53	1.36	1.00	2,097	0.75	2.92	1.58	0.40	0.75	46,089	1%	16%	3%
1330	34	0.06	6.98	2.04	2.24	1.83	0.90	5,026	1.00	5.25	2.17	0.88	0.41	78,258	1%	6%	-3%
1400	253	0.01	5.00	0.45	0.50	0.66	1.43	44,073	0.06	2.45	0.53	0.29	0.55	706,218	8%	15%	6%
1500	46	0.02	2.00	0.25	0.27	0.32	1.25	9,795	0.08	0.85	0.28	0.11	0.39	152,435	2%	12%	496
2100	146	0.01	8.00	0.81	0.83	1.38	1.70	5,506	0.01	2.55	0.82	0.41	0.50	89,837	1%	1%	-1%
2200	36	0.01	12.00	2.08	2.04	3.17	1.53	696	0.34	6.34	2.07	1.28	0.62	11,623	0%	0%	1%
2300	14	0.01	4.60	0.99	0.92	1.31	1.33	705	0.31	1.91	0.85	0.28	0.32	11,890	0%	-14%	-8%
9999	3,389	0.01	1.44	0.08	0.08	0.11	1.30	2,070,696	0.01	0.59	0.08	0.07	0.79	37,272,044		0%	694

Table 14-13 Comparison between composite data and block grade estimated with 2m composites.

To validate the appropriateness of the updated October 2020 MRE, it has been compared to the 2020 GC estimate and also historical production records.

**Figure 14-6** shows the volume in long section from the 1600 pit which was used to compare the updated MRE to the 2020 GC estimate. **Table 14-14** summaries the comparison between the two models at 0.3, 0.5 and 1.0 g/t cut-offs. Note that the 2020 GC estimate used the same domains as the October 2020 MRE but was estimated with the 2.5 m blast hole data, while the October 2020 MRE only used the RD composite data. Overall, the two estimates compare very well.

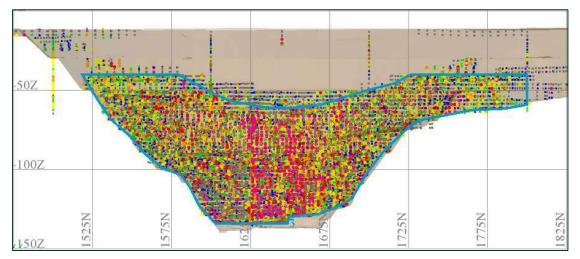


Figure 14-6 Volume within the 1600N pit to compare October 2020 MRE to GC estimate – long-section. Source: Westgold.

		2020 - GC			202	0 - 2m Res			Actua	al Diff		Relative_Diff			
Cutoff	Rescat	Tonnes	Res Au	Oz	Tonnes	Res Au	Oz	Tonnes	Res	Au	Oz	Tonnes	Res Au	Oz	
0.3	Ind	1,535,670	1.68	82,996	1,586,792	1.67	84,944	51,122	3	0.02	1,948	3%	-1%	2%	
	Inf	1,910	1.33	82	5,602	0.70	125	3,692	-	0.63	44	193%	-48%	54%	
	Unclass	206	0.40	3	38	0.54	1	- 168		0.14	- 2	-82%	35%	-75%	
	Total	1,537,786	1.68	83,080	1,592,432	1.66	85,070	54,646	-	0.02	1,990	4%	-1%	2%	
	Ind	1,180,260	2.07	78,654	1,035,276	2.35	78,206	- 144,984	8	0.28	- 448	-12%	13%	-1%	
0.5	Inf	1,421	1.64	75	4,240	0.80	109	2,819	-	0.84	34	198%	-51%	45%	
0.5	Unclass	206	0.40	3	38	0.54	1	- 168		0.14	- 2	-82%	35%	-75%	
	Total	1,181,887	2.07	78,732	1,039,554	2.34	78,316	- 142,333		0.27	- 415	-12%	13%	-19	
	Ind	714,198	2.95	67,801	817,599	2.80	73,732	103,401	15	0.15	5,931	14%	-5%	9%	
2	Inf	627	2.87	58	3,736	0.82	98	3,109	92	2.06	40	496%	-72%	69%	
1	Unclass	-	-	-	-	0.00	-	1		-	-	2.294.943.925			
	Total	714,825	2.95	67,859	821,335	2.80	73,830	106,510	-	0.16	5,972	15%	-5%	9%	

 Table 14-14 Comparison between October 2020 MRE and GC estimate.



**Table 14-15** compares the historical production records for the total mined material from the 1600-Shocker pits to the October 2020 MRE. A 1 g/t Au cut-off has been used to report the MRE as this was the ore / waste cut-off used during production. Above a 1 g/t Au cut-off, the MRE reports slightly less tonnes (-48 kt)) at a higher grade (+0.67) for more contained gold (20 koz). However, by applying nominal ore loss (15%) and dilution (20%), there is essentially no difference in tonnes and the difference in grade and contained metal are less than 10%, which is considered satisfactory.

Shocker / 1600 2020 MRE Rec	onciliation to	Prouducti	on
Pit Production	Tonnes	Grade	Ounces
1600 (1991)	480,000	1.80	25,500
Shocker (1994)	131,000	3.87	16,300
1600 / Shocker Cutback	559,638	2.58	46,428
Production Total	1,170,638	2.34	88,228
2020 MRE > 1g/t	1,122,582	3.01	108,718
15% Ore Loss	954,195	3.01	92,410
20% Dilution	1,145,034	2.51	92,410
2020 MRE > 1g/t (Ore loss + Dilution)	1,145,034	2.51	92,410
Relative difference	-2%	7%	5%

Table 14-15 Comparison between October 2020 MRE and historical production.

## 14.3.1.9 Mineral Resource Classification

No material has been classified as a Measured Mineral Resource. Blast hole sampling was predominantly used for grade control and therefore does not extend below the existing pit floor. Indicated Mineral Resources are defined typically by 25 m x 25 m drill spacing on average and are usually characterised by an average sample distance within the first pass estimate of less than 30 m. Inferred Mineral Resources include the majority of the remaining estimated mineralisation typically defined by 5 0m drill spacing. In some area Inferred Mineral Resources include the extrapolation of grade for up to 100 m down dip past the limit of the Indicated material.

Codes were assigned to blocks to illustrate the resource category (res\_cat\_n). These codes are as follows:

- Depleted: = 0
- Measured = 1
- Indicated = 2
- Inferred = 3
- Unclassified = 4
- Sterilised = 5
- Background = 0

Due to the geological uncertainty for the three minor Irishman's domains (2100 to 2300), the total interpreted mineralisation has been classified as Inferred.



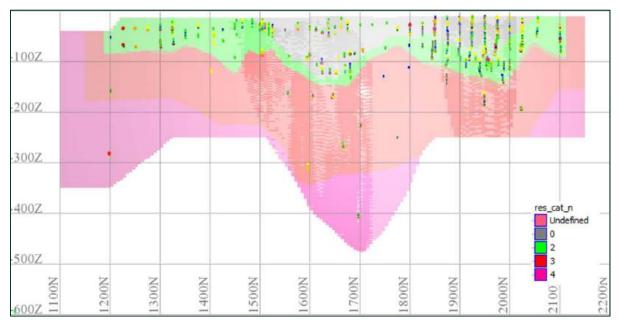


Figure 14-7 Classification for Domain 1100 – Long-Section. Source: Westgold.

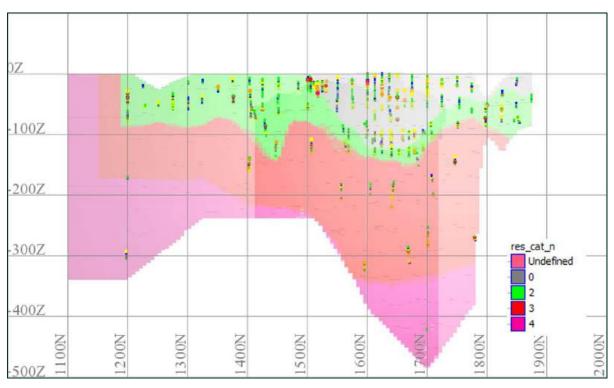


Figure 14-8 Classification for Domain 1200 – Long-Section. Source: Westgold.





Figure 14-9 Classification for Domain 1300 – Long-Section. Source: Westgold.

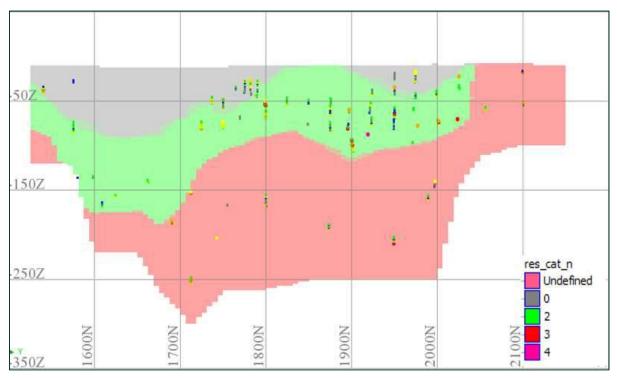


Figure 14-10 Classification for Domain 1400 – Long-Section. Source: Westgold.

The 1600N-Shocker Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.



#### 14.3.1.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price.

1600N-Shocker (Open Pit) Mineral Resource Statement - Rounded for Reporting 30/06/2024												
Measured         Indicated         Measured         Inferred										1		
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
1600N-Shocker OP	0	0.00	0	398	2.54	33	398	2.54	33	48	2.8	4
Total	0	0.00	0	398	2.54	33	398	2.54	33	48	2.8	4

Table 14-16 1600N - Shocker Open Pit Mineral Resource – CGO – as of June 30, 2024.

>= 0.7g/t Au; ABOVE DTM 1600-SH\_2500\_AT\_2300\_90T\_PIT11\_CNT.DTM; Above 1350mN; Not Above 2150mN

	1600N-Shocker (Underground) Mineral Resource Statement - Rounded for Reporting 30/06/2024											
Measured Indicated Measured and Indicated Inferred												
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
1600N-Shocker UG	0	0.00	0	125	3.23	13	125	3.23	13	914	3.21	94
Total	0	0.00	0	125	3.23	13	125	3.23	13	914	3.21	94

>=2.0g/t Au; NOT INSIDE CONSTRAINT OP\_ORE.CON (uses 1600-SH\_2500\_AT\_2300\_90T\_PIT11\_CNT.DTM); Above 1350mN; Not Above 2150mN.

> The 1600N-Shocker Mineral Resource estimate as set out in Table 14-16 and Table 14-17 is effective as of June 30, 2024.

1600N-Shocker Open Pit was reported using a 0.7 g/t cut-off grade and the 1600N-Shocker Underground Mineral Resource was reported using a 2.0 g/t cut-off grade depleted to end of mining.



- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

## 14.3.2 Big Bell

#### 14.3.2.1 Summary

The Big Bell deposit is located approximately 51 km west-northwest of the Tuckabianna Mill and is part of the Big Bell Project Area.



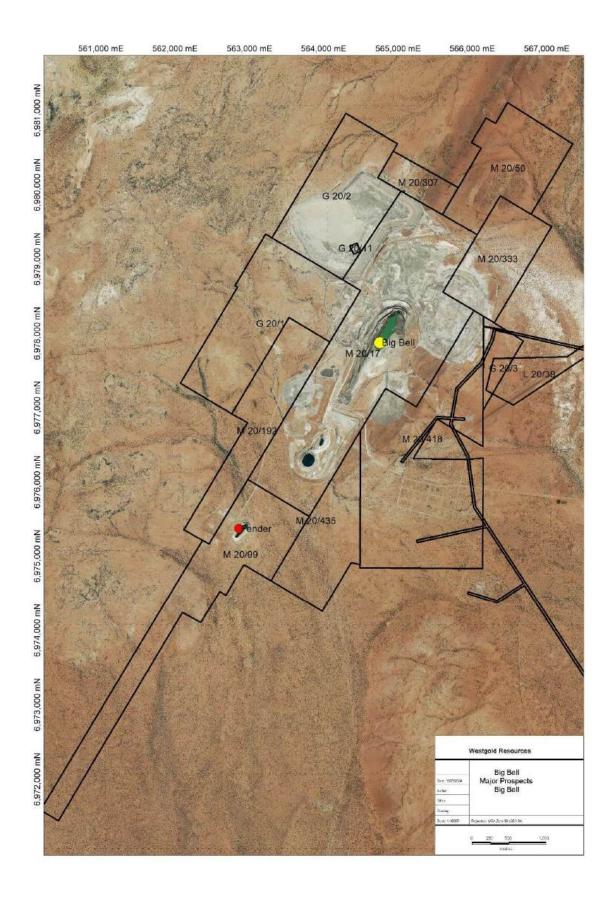


Figure 14-11 Big Bell location map. Source: Westgold.



#### 14.3.2.2 Modelling Domains

The Big Bell mineralised sequence is made up of two partially 'disseminated' zones of mineralisation. These are the footwall potassium feldspar schist (KPSH) and the hanging wall biotite schist (BISH). Within these two mineralisation domains are discrete waste domains.

The overall sequence is heavily gradational, with lithological units displaying varying degrees of inter-bedding. Mineralisation appears to be well constrained between the footwall and hanging wall waste units (AMPH and INSH). The lode graphitic shear in the footwall of the KPSH and FLVL units presents as a very convenient marker horizon for the beginning of the mine sequence. Both FW and HW lodes dip at 70-75° to the east, but localised small-scale undulations can be seen on the different development levels. The overall mine sequence strikes in a north-south orientation and has a shallow to moderate north plunge component.

There are a number of obvious structural influences on mineralisation, the most obvious being the large cross-cutting pegmatite's that introduce themselves at irregular intervals and deplete the overall grade.

Interpretation of new pegmatite intrusions and updated mineralisation domains was completed in Leapfrog Geo. The zones were flagged in the Lith\_Group\_Au\_Merged\_Table field "MINSEQ" where they could be used as base lithologies to create intrusions within the geological model. Each mineralisation domain is represented as an intrusion within the Big Bell geological model.

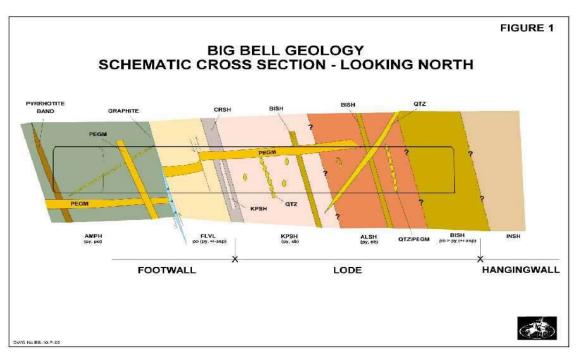
The mine sequence boundary (MINSEQ) has been modified with manual polylines to extend the periphery to match earlier interpretations of the Big Bell mineralised halo (previously, Domain 1000).



The mineralised component of the mining sequence was determined from modelling a grade shell using a cut off of 0.4 g/t Au, which is defined by the statistical distribution of the data and produces continuous shapes throughout the orebody. An internal dilution of 5 m was incorporated in the definition of the mineralised interval in order to improve the continuity of the mineralised zones.

The mineralised component of the MINSEQ solid as defined by the 0.4 g/t Au grade shell is further sub- divided into KPSH (+ALSH) = Domain 2000 and BISH = Domain 3000. The low-grade component of the MINSEQ solid i.e., the volume outside the 0.4 g/t grade shell is coded as Domain 8000.

The pegmatite interpretation was guided by structural measurements as defined within the database; this is exported as Domain 7000.



Export volumes are exported from Leapfrog Geo as Surpac dtm files and added to the "leapfrog\_zone\_ore\_ guide" file.

Figure 14-12 Schematic cross-section of Big Bell mine sequence geology. Source: Westgold.

# 14.3.2.3 Statistical Analysis and Compositing

A 'best fit' downhole composite method has been used for all domains with a composite length of 1.0 metre. Field D31 (cut au) is used for the estimation.

The analysis for top cut determination was conducted on all individual domains for the 1 m composited data. Several common measures of determining an appropriate top cut were reviewed:

- Log-probability analysis.
- Histogram review.
- Percentile review.



During this review, factors such as the number of composites cut, the percentage of data cut and the percentage of metal content cut were considered to ensure an appropriate value, if any, was chosen.

Top-cutting data eliminates anomalous and often erroneous data from the data set, preventing the over-estimation of metal. Top-cuts reduce the influence of these extreme values and minimise the risk of over-estimation. For some domains, highgrade cuts were not required where the grade variability relative to the mean was acceptable and spatial analysis of the high composite gold values did not indicate that they were outliers.

	Element1 Low Cut	Element1 High Cut
Zonecode	ppm	ppm
2000	0	30
3000	0	20
8000	0	7
9999	0	1
7000	0	0.01

Table 14-1	18 Top-cuts	applied to	each doma	əin.
10010 14 1	o rop outo	appaoato	ouon uonne	

14.3.2.4 Density

Bulk density data is available in the database following a 2019 campaign. This information was used in conjunction with historical bulk density data to arrive at the following bulk densities and applied to the reportable model.

Rock Type	Density (t/m <sup>3</sup> )
Cover	1.80
Oxide	2.00
Transitional	2.40
Fresh (BISH) – domains 3000 & 8000	2.83
Fresh (All Other)	2.75

14.3.2.5 Metallurgy

Big Bell underground ore had a recovery of 87%. The gold recovery on this ore tended to be grind-dependent. Higher antimony in the ore affected recovery. The percentage of Big Bell material in the overall plant blend also affected recovery e.g., once 50% of the blend was Big Bell, the tails grade would slowly increase. Ore blends and grind size were critical to the recovery when treating this ore.

#### 14.3.2.6 Variography

Variograms were analysed in Snowden Supervisor software. Normal scores transforms were applied to limit the influence of extreme grades. Composites within lodes that exhibited common style, geology and univariate statistics were grouped for variogram modelling.

A summary of variogram groupings and resulting parameters is shown below.



Line Number Domain Code Estimate # Structures C0 C1 a1 C2 a2 C2	1         2000         γ         3         0.39         0.36         8.00         0.09         36.00         0.15	2 <b>3000</b> <b>Y</b> 3 0.34 0.38 20.00 0.12	3 8000 Y 3 0.38 0.30 9.00	4 7000 Y 2 0.00	5 99999 Y 2 0.00
Estimate # Structures C0 C1 a1 C2 a2	Y         3           0.39         0.36           8.00         0.09           36.00         36.00	Y           3           0.34           0.38           20.00           0.12	Y         3           0.38         0.30	Y           2           0.00	<b>Y</b> 2
# Structures C0 C1 a1 C2 a2	3 0.39 0.36 8.00 0.09 36.00	3 0.34 0.38 20.00 0.12	3 0.38 0.30	2 0.00	2
C0 C1 a1 C2 a2	0.39 0.36 8.00 0.09 36.00	0.34 0.38 20.00 0.12	0.38 0.30	0.00	
C1 a1 C2 a2	0.36 8.00 0.09 36.00	0.38 20.00 0.12	0.30		0.00
a1 C2 a2	8.00 0.09 36.00	20.00 0.12			1 0.00
C2 a2	0.09 36.00	0.12	9.00	0.00	0.00
a2	36.00			0.00	0.00
			0.18	0.00	0.00
01	0.15	70.00	30.00	0.00	0.00
C3	0.10	0.15	0.13	0.00	0.00
a3	190.00	280.00	180.00	0.00	0.00
TOTAL SILL	1.00	1.00	1.00	0.00	0.00
1. Major : Semi Major	1	1	1	1	1
1. Major : Minor	1.333	5	2	1	1
2. Major : Semi Major	1	1	1	1	1
2. Major : Minor	3	10	2	1	1
3. Major : Semi Major	1	1.867	1	1	1
3. Major : Minor	9.5	28	8.571	1	1
				1	
SURPAC STRIKE	30.642	53.219	36.259	0	0
SURPAC PLUNGE	-54.469	-62.009	-58.392	0	0
SURPAC DIP	-53.948	-43.219	-49.264	0	0
		1		1	
Search					
Method	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID
Estimation Block Size (x,y,z)	3.125, 12.5, 12.5	3.125, 12.5, 12.5	3.125, 12.5, 12.5	3.125, 12.5, 12.5	3.125, 12.5, 12.5
Estimation Block Size X	3.125	3.125	3.125	3.125	3.125
Estimation Block Size Y	12.5	12.5	12.5	12.5	12.5
Estimation Block Size Z	12.5	12.5	12.5	12.5	12.5
Disc Point X	2	2	2	2	2
Disc Point Y	4	4	4	4	4
Disc Point Z	4	4	4	4	4
Grade Dependent Parameters	Y	Y	Y	N	N
Threshold Max	6.53	4.80	3.11		
Search Limitation	190	280	180		
					<u>.</u>
Limit Samples by Hole Id	N	N	N	N	N
Hole Id D Field	D2	D2	D2	D2	D2
Max Samps per Hole					
				1	
Pass1	Y	Y	Y	Y	Y



VARIOGRAPHY - BACKTRANSFORMED				Not Est	timated
Line Number	1	2	3	4	5
Min	8	7	8	0	0
Мах	14	14	13	0	0
Max Search	36	40	30	0	0
Major/Semi	1	1	1	0	0
Major/Minor	3	5	2	0	0
Run Pass2	Y	Y	Y	N	N
Factor	2	2	2	0	0
Major/Semi	1	1	1	0	0
Major/Minor	3	5	2	0	0
Min	8	7	8	0	0
Мах	14	14	13	0	0
Run Pass 3	Y	Y	Y	N	N
Factor	20	20	40	0	0
Major/Semi	1	2.15	1	0	0
Major/Minor	9.5	25.45	8.571	0	0
Min	2	2	2	0	0
Max	14	14	6	0	0

14.3.2.7 Block Model and Grade Estimation

A number of criteria including data spacing, geometry of mineralised domains and volume fill were the primary considerations considered when selecting an appropriate estimation block size. Data spacing varies within the mineralised domains, from face sample data at 3.5 m spaced northings to grade control data at 25 m x 25 m drillhole spacing to resource definition holes at greater than 100 x 100 m drillhole spacing.

It is considered good geostatistical practice to use an estimation parent cell size that approaches the data spacing where possible, whilst at the same time being mindful of potential mine design and selectivity implications. After reviewing the data spacing and conceptual SMU relative to the mineralised zones, it was determined that a parent block size of 12.5 mN x 3.125 mE x 12.5 mRL, which can be sub-celled down to 1.5625 mN x 1.5625 mE x 1.5625 mRL for volume resolution, would be most appropriate.

A single block model was created to cover the extents of the data (big\_bell\_gcx\_master\_240331.mdl). The definition for the block model is summarised below.

Туре	Y	X	Z
Minimum Coordinates	2,150	300	-1,500
Maximum Coordinates	4,300	1,100	62.5
Extent	2,150	800	1,612.5
User Block Size	12.50	3.125	12.50
Sub-block	1.5625	1.5625	1.5625
Rotation	0	0	0

 Table 14-21 Block model parameters – big\_bell\_gcx\_master\_240331.mdl.



Grade estimation utilised Ordinary Kriging (OK) of the downhole composite data for gold using the Cube ECX estimation add-on for Surpac mining software.

Three grade estimates were completed using the block model attributes "gc au".

All domains were estimated as hard boundaries.

Variography has been used to characterise the spatial relationship of the data. Additional to this is the implementation of search strategies aimed at producing a robust block estimate, whilst at the same time minimising estimation error and conditional biases. Search neighbourhoods were optimised by undertaking Kriging Neighbourhood Analysis (KNA), which involves analysing estimation quality data such as Slope of Regression and Kriging weights for various search neighbourhoods and combining these with other primary considerations such as data spacing, the geometry of the mineralised domains and variogram models.

As data spacing at Big Bell is variable throughout the mineralised domains, KNA was undertaken on blocks representing poor, moderate and well-informed neighbourhoods. The aim of these tests is to optimise the kriging search neighbourhood and maximise the quality of the kriging when dealing with a nonexhaustive data set.

The search strategy resulted in the minimum number of samples being set to 7 or 8 and the maximum set between 12 and 14. The search distance for the first pass estimate was set to a distance ranging from 30 to 40 m, depending on the range of the corresponding variogram. A compilation of the parameters used are summarised in Table 14-20.

## 14.3.2.8 Model Validation

Block model validation was undertaken by the following means:

- Visual inspection of block estimates in relation to drilling and face sample data.
- Global statistical comparisons of sample composites and block grades.
- Semi-local comparison of composite and block grades (by northing, easting and RL) using Swath Plots.
- Comparison to GC block estimates and historical mine production.

Global comparisons between the input composite data and the resultant grade estimates based on the 1 m composites are summarised below. Overall there is a good comparison when comparing the mean of the interpolated gold grades for each domain against the mean composite grade. Although the estimated and composite mean are not strictly comparable due to data clustering and volume influences, comparing these does provide a useful validation tool in detecting any major biases requiring further spatial investigation, whilst providing a global comparison of the input composite grade and the estimated block grade.



Domain	# Samples	Mean	Declus Mean	Block Mean	Mean %Diff	Declus Mean %Diff
2000	34029	3.18	3.00	3.11	-2%	3%
3000	16230	2.19	2.01	1.92	-12%	-4%
7000	3235	0.01				
8000 (LG)	10272	0.25	0.31	0.18	-27%	-37%

Table 14-22 Comparison between composite data and block grade estimated with 1 m Composites (Pass 1 & 2).

#### 14.3.2.9 Mineral Resource Classification

Big Bell is a large and consistent ore body that provides confidence in the ongoing geological and grade continuity of the mineralised system. To acknowledge this, areas within the resource have been categorised as follows.

- Areas with high confidence in geological continuity i.e., areas that have been drilled at approximately 25 m x 25 m drill spacing or are in close proximity to current development have been classified in the Measured resource category.
- Areas with high confidence in geological continuity or drilling at approximately 50 m x 50 m drill spacing or less, have been classified in the Indicated category.
- Areas that show geological continuity or those defined approximately by 100 m x 100 m drill spacing or less are classified as Inferred.

Mine depletions were updated. Depletions are correct to 30 June 2023 for mine development. Areas depleted are assigned the following codes:

- mined\_type\_n = 2 or 3 (Development or Stope). Insitu material has a • mined\_type\_n code = 1
- res\_cat\_n = 0 (depleted)

The Big Bell Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

#### 14.3.2.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations. At Big Bell, areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. These areas were adjacent to mined out stopes



as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.

Big Bell (Underground) Mineral Resource Statement - Rounded for Reporting 30/06/2024												
	Measured Indicated Measured and Indicated Inferred											
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell Underground	4,022	3.07	397	7,965	3.33	853	11,988	3.24	1,250	5,927	3.11	593
Total	4,022	3.07	397	7,965	3.33	853	11,988	3.24	1,250	5,927	3.11	593

Above Y Plane 3000; Not above Y Plane 4140; Above Z Plane -1300; Not above Z Plane -50; > res\_cat\_n 0; < res\_cat\_n 4; >= gc\_au 1.8

The Big Bell Mineral Resource estimate as set out in Table 14-23 is effective as of June 30, 2024.

Big Bell Underground was reported using a 1.8 g/t cut-off grade and depleted to end of mining as of 31<sup>st</sup> March 2024.

- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. 1 There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- Mineral Resources are depleted for mining as of June 30, 2024. 6
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

## 14.3.3 Big Bell South

## 14.3.3.1 Summary

The Big Bell South deposit is located approximately 51 km west-northwest of the Tuckabianna Mill and is part of the Big Bell Project Area.



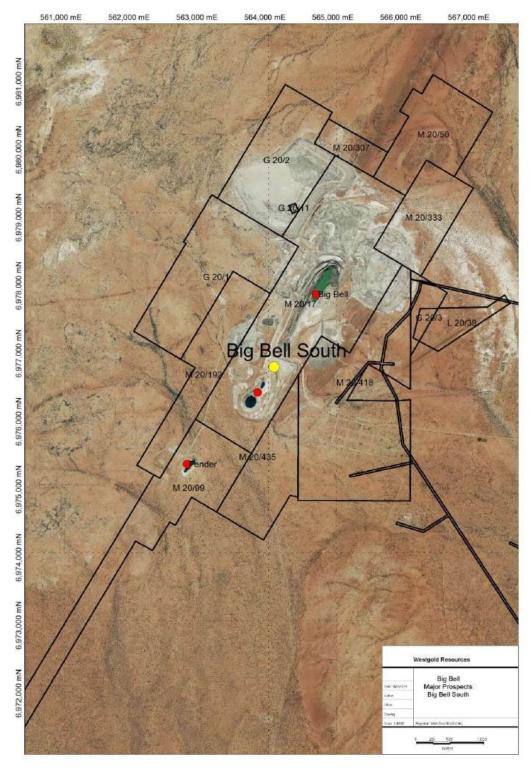


Figure 14-13 Big Bell South location map. Source: Westgold.



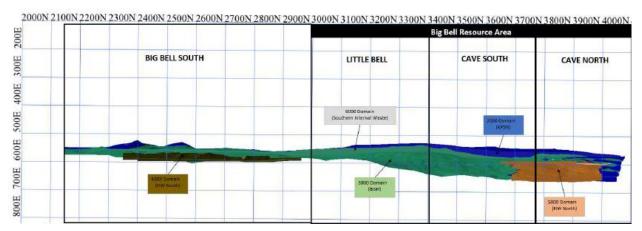


Figure 14-14 Big Bell South setting. Source: Westgold.

## 14.3.3.2 Modelling Domains

The Big Bell mineralised sequence is made up of two partially 'disseminated' zones of mineralisation. These are the footwall potassium feldspar schist (KPSH) and the hanging wall biotite schist (BISH). Within these two mineralisation domains are discrete waste domains.

The overall sequence is heavily gradational, with lithological units displaying varying degrees of inter-bedding. Mineralisation appears to be well constrained between the footwall and hanging wall waste units (AMPH and INSH). The lode graphitic shear in the footwall of the KPSH and FLVL units presents as a very convenient marker horizon for the beginning of the mine sequence. Both FW and HW lodes dip at 70-75° to the east, but localised small-scale undulations can be seen on the different development levels. The overall mine sequence strikes in a north-south orientation and has a shallow to moderate north plunge component.

There are a number of obvious structural influences on mineralisation, the most obvious being the large cross-cutting pegmatite's that introduce themselves at irregular intervals and deplete the overall grade.

Interpretation of new pegmatite intrusions and updated mineralisation domains was completed in Leapfrog Geo. The zones were flagged in the Lith Group Au Merged Table field "MINSEQ" where they could be used as base lithologies to create intrusions within the geological model. Each mineralisation domain is represented as an intrusion within the Big Bell geological model.

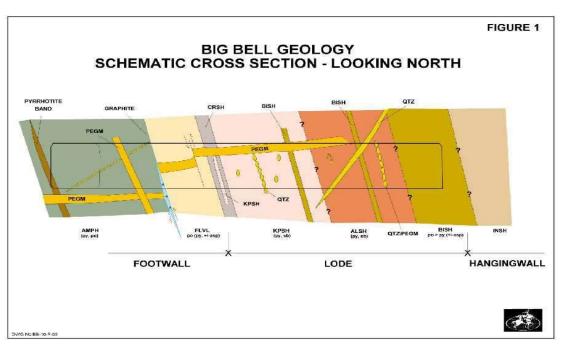
The mine sequence boundary (MINSEQ) has been modified with manual polylines to extend the periphery to match earlier interpretations of the Big Bell mineralised halo (previously, Domain 1000).



The mineralised component of the mining sequence was determined from modelling a grade shell using a cut off of 0.4 g/t Au, which is defined by the statistical distribution of the data and produces continuous shapes throughout the orebody. An internal dilution of 5 m was incorporated in the definition of the mineralised interval in order to improve the continuity of the mineralised zones.

The mineralised component of the MINSEQ solid as defined by the 0.4 g/t Au grade shell is further sub- divided into KPSH (+ALSH) = Domain 2000 and BISH = Domain 3000. The low-grade component of the MINSEQ solid i.e., the volume outside the 0.4 g/t grade shell is coded as Domain 8000.

The pegmatite interpretation was guided by structural measurements as defined within the database; this is exported as Domain 7000.



Export volumes are exported from Leapfrog Geo as Surpac dtm files and added to the "leapfrog\_zone\_ore\_ guide" file.

Figure 14-15 Schematic cross-section of Big Bell mine sequence geology. Source: Westgold.

# 14.3.3.3 Statistical Analysis and Compositing

A 'best fit' downhole composite method has been used for all domains with a composite length of 1.0 metre. Field D31 (cut au) is used for the estimation.

The analysis for top cut determination was conducted on all individual domains for the 1 m composited data. Several common measures of determining an appropriate top cut were reviewed:

- Log-probability analysis.
- Histogram review.
- Percentile review.



During this review, factors such as the number of composites cut, the percentage of data cut and the percentage of metal content cut were considered to ensure an appropriate value, if any, was chosen.

Top-cutting data eliminates anomalous and often erroneous data from the data set, preventing the over-estimation of metal. Top-cuts reduce the influence of these extreme values and minimise the risk of over-estimation. For some domains, highgrade cuts were not required where the grade variability relative to the mean was acceptable and spatial analysis of the high composite gold values did not indicate that they were outliers.

	Au Low Cut	Au High Cut
Zonecode	ppm	ppm
2000	0	35
3000	0	22
8000	0	11
9999	0	1
7000	0	0.01

Table 14-24 Top-cuts applied to each domain.
--

14.3.3.4 Density

Bulk density data is available in the database following a 2019 campaign. This information was used in conjunction with historical bulk density data to arrive at the following bulk densities and applied to the reportable model.

Table 14-25 In situ density assignment.

Rock Type	Density (t/m³)
Cover	1.80
Oxide	2.00
Transitional	2.40
Fresh (BISH) – domains 3000 & 8000	2.83
Fresh (All Other)	2.75

## 14.3.3.5 Metallurgy

Big Bell underground ore had a recovery of 87%. The gold recovery on this ore tended to be grind-dependent. Higher antimony in the ore affected recovery. The percentage of Big Bell material in the overall plant blend also affected recovery e.g., once 50% of the blend was Big Bell, the tails grade would slowly increase. Ore blends and grind size were critical to the recovery when treating this ore.

#### 14.3.3.6 Variography

Variograms were analysed in Snowden Supervisor software. Normal scores transforms were applied to limit the influence of extreme grades. Composites within lodes that exhibited common style, geology and univariate statistics were grouped for variogram modelling.

A summary of variogram groupings and resulting parameters is shown below.



VARIOGRAPHY - BACKTRANSFORMED				Not Es	stimated
Line Number	1	2	3	4	5
Domain Code	2000	3000	8000	7000	9999
Estimate	Y	Y	Y	Y	Y
# Structures	3	3	3	2	2
C0	0.39	0.34	0.38	0.00	0.00
C1	0.36	0.38	0.30	0.00	0.00
a1	8.00	20.00	9.00	0.00	0.00
C2	0.09	0.12	0.18	0.00	0.00
a2	36.00	70.00	30.00	0.00	0.00
C3	0.15	0.15	0.13	0.00	0.00
a3	190.00	280.00	180.00	0.00	0.00
TOTAL SILL	1.00	1.00	1.00	0.00	0.00
			·	•	
1. Major : Semi Major	1	1	1	1	1
1. Major : Minor	1.333	5	2	1	1
2. Major : Semi Major	1	1	1	1	1
2. Major : Minor	3	10	2	1	1
3. Major : Semi Major	1	1.867	1	1	1
3. Major : Minor	9.5	28	8.571	1	1
		1	1	1	1
SURPAC STRIKE	30.642	53.219	36.259	0	0
SURPAC PLUNGE	-54.469	-62.009	-58.392	0	0
SURPAC DIP	-53.948	-43.219	-49.264	0	0
	1	1	1	_1	-
Search					
Method	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID
Estimation Block Size (x,y,z)	3.125, 12.5, 12.5				
Estimation Block Size X	3.125	3.125	3.125	3.125	3.125
Estimation Block Size Y	12.5	12.5	12.5	12.5	12.5
Estimation Block Size Z	12.5	12.5	12.5	12.5	12.5
Disc Point X	2	2	2	2	2
Disc Point Y	4	4	4	4	4
Disc Point Z	4	4	4	4	4
Grade Dependent Parameters	Y	Y	Y	Ν	N
Threshold Max	6.53	4.80	3.11		
Search Limitation	190	280	180		
Limit Samples by Hole Id	N	N	N	N	N
Hole Id D Field	D2	D2	D2	D2	D2
Max Samps per Hole					
					1
Pass1	Y	Y	Y	Y	Y

VARIOGRAPHY - BACKTRANSFORMED				Not Es	timated
Line Number	1	2	3	4	5
Min	8	7	8	0	0
Мах	14	14	13	0	0
Max Search	36	40	30	0	0
Major/Semi	1	1	1	0	0
Major/Minor	3	5	2	0	0
Run Pass2	Y	Y	Y	N	N
Factor	2	2	2	0	0
Major/Semi	1	1	1	0	0
Major/Minor	3	5	2	0	0
Min	8	7	8	0	0
Мах	14	14	13	0	0
Run Pass 3	Y	Y	Y	N	N
Factor	20	20	40	0	0
Major/Semi	1	2.15	1	0	0
Major/Minor	9.5	25.45	8.571	0	0
Min	2	2	2	0	0
Max	14	14	6	0	0

#### 14.3.3.7 Block Model and Grade Estimation

A number of criteria including data spacing, geometry of mineralised domains and volume fill were the primary considerations considered when selecting an appropriate estimation block size. Data spacing varies within the mineralised domains, from face sample data at 3.5 m spaced northings to grade control data at 25 m x 25 m drillhole spacing to resource definition holes at greater than 100 x 100 m drillhole spacing.

It is considered good geostatistical practice to use an estimation parent cell size that approaches the data spacing where possible, whilst at the same time being mindful of potential mine design and selectivity implications. After reviewing the data spacing and conceptual SMU relative to the mineralised zones, it was determined that a parent block size of 12.5 mN x 3.125 mE x 12.5 mRL, which can be sub-celled down to 1.5625 mN x 1.5625 mE x 1.5625 mRL for volume resolution, would be most appropriate.

A single block model was created to cover the extents of the data (big\_bell\_gcx\_master\_240331.mdl). The definition for the block model is summarised in the table.

#### Table 14-27 Block model parameters – big\_bell\_gcx\_master\_240331.mdl.

Туре	Y	X	Z
Minimum Coordinates	2,150	300	-1,500
Maximum Coordinates	4,300	1,100	62.5
Extent	2,150	800	1,612.5
User Block Size	12.50	3.125	12.50
Sub-block	1.5625	1.5625	1.5625
Rotation	0	0	0



Grade estimation utilised Ordinary Kriging (OK) of the downhole composite data for gold using the Cube ECX estimation add-on for Surpac mining software.

Three grade estimates were completed using the block model attributes "gc au".

All domains were estimated as hard boundaries.

Variography has been used to characterise the spatial relationship of the data. Additional to this is the implementation of search strategies aimed at producing a robust block estimate, whilst at the same time minimising estimation error and conditional biases. Search neighbourhoods were optimised by undertaking Kriging Neighbourhood Analysis (KNA), which involves analysing estimation quality data such as Slope of Regression and Kriging weights for various search neighbourhoods and combining these with other primary considerations such as data spacing, the geometry of the mineralised domains and variogram models.

As data spacing at Big Bell is variable throughout the mineralised domains, KNA was undertaken on blocks representing poor, moderate and well-informed neighbourhoods. The aim of these tests is to optimise the kriging search neighbourhood and maximise the quality of the kriging when dealing with a nonexhaustive data set.

The search strategy resulted in the minimum number of samples being set to 7 or 8 and the maximum set between 12 and 14. The search distance for the first pass estimate was set to a distance ranging from 30 to 40 m, depending on the range of the corresponding variogram. A compilation of the parameters used are summarised in Table 14-26.

# 14.3.3.8 Model Validation

Block model validation was undertaken by the following means:

- Visual inspection of block estimates in relation to drilling and face sample data.
- Global statistical comparisons of sample composites and block grades.
- Semi-local comparison of composite and block grades (by northing, easting and RL) using Swath Plots.
- Comparison to GC block estimates and historical mine production.

Global comparisons between the input composite data and the resultant grade estimates based on the 1 m composites and are summarised below. Overall, there is a good comparison when comparing the mean of the interpolated gold grades for each domain against the mean composite grade. Although the estimated and composite mean are not strictly comparable due to data clustering and volume influences, comparing these does provide a useful validation tool in detecting any major biases requiring further spatial investigation, whilst providing a global comparison of the input composite grade and the estimated block grade.



Domain	# Samples	Mean	Declus Mean	Block Mean	Mean %Diff	Declus Mean %Diff
2000	34029	3.18	3.00	3.11	-2%	3%
3000	16230	2.19	2.01	1.92	-12%	-4%
7000	3235	0.01				
8000 (LG)	10272	0.25	0.31	0.18	-27%	-37%

Table 14-28 Comparison between composite data and block grade estimated with 1 m Composites.

## 14.3.3.9 Mineral Resource Classification

Big Bell South is a large and consistent mineralised body that provides confidence in the ongoing geological and grade continuity of the mineralised system. To acknowledge this, areas within the resource have been categorised as follows.

- Areas with high confidence in geological continuity i.e., areas that have been drilled at approximately 25 m x 25 m drill spacing or are in close proximity to current development have been classified in the Measured resource category.
- Areas with high confidence in geological continuity or drilling at approximately 50 m x 50 m drill spacing or less, have been classified in the Indicated category.
- Areas that show geological continuity or those defined approximately by 100 m x 100 m drill spacing or less are classified as Inferred.

Mine depletions were updated. Areas depleted are assigned the following codes:

- mined\_type\_n = 2 or 3 (Development or Stope). Insitu material has a • mined\_type\_n code = 1
- res\_cat\_n = 0 (depleted)

The Big Bell South Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

#### 14.3.3.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price.



Big Bell South OP Mineral Resource Statement - Rounded for Reporting 30/06/2024												
	Measured Indicated Measured			asured and Indicated		Inferred						
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Big Bell South OP	0	0.00	0	39	2.12	3	39	2.12	3	33	3.46	4
Total	0	0.00	0	39	2.12	3	39	2.12	3	33	3.46	4

Table 14-29 Big Bell South Open Pit (OP) Mineral Resource – CGO – as of June 30, 2024.

ABOVE DTM 3000\_AT\_2600\_INF\_250T180T\_PIT17.DTM; Above Y Plane 2150; Not above Y Plane 3000; Above Z Plane -200; >= gc\_au 1.8

The Big Bell South OP Mineral Resource estimate as set out in Table 14-29 is effective as of June 30, 2024.

The Big Bell South OP Resource was reported using a 0.7 g/t cut-off grade and depleted to end of mining.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).



# 14.3.4 Big Bell South Underground

The Mineral Resource estimate for Big Bell South Underground was completed in 2012 (bbt20120514.mdl) & 2020 (big bell gcx master 200415.mdl) and is used for the reporting period ended June 30<sup>th</sup>, 2024. Two models were used for reporting of the Big Bell South Underground; bbt20120514.mdl covers the area from 2,150 mN to 2,500 mN, while big\_bell\_gcx\_master\_200415.mdl covers the area from 2,500 mN to 3,000 mN.

The 2012 and 2020 model updates were based on a review and update of the regolith, lithology and mineralisation interpretations following a data harvest and review exercise for the deposit area. Grade estimation utilised Ordinary Kriging (OK) of the downhole composite data for gold using the Cube ECX estimation add-on for Surpac mining software. Grade estimation utilised Ordinary Kriging (OK) of the downhole composite data for gold using Surpac mining software.

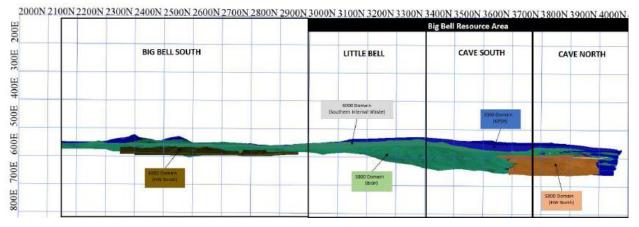


Figure 14-16 Big Bell South model extents relative to the Big Bell resource area (reported separately). Source: Westgold.

### 14.3.4.1 Modelling Domains

The Big Bell mineralised sequence is made up of two partially 'disseminated' zones of mineralisation. These are the footwall potassium feldspar schist (KPSH) and the hanging wall biotite schist (BISH). Within these two mineralisation domains are discrete waste domains.

The overall sequence is heavily gradational, with lithological units displaying varying degrees of inter-bedding. Mineralisation appears to be well constrained between the footwall and hanging wall waste units (AMPH & INSH). The lode graphitic shear in the footwall of the KPSH and FLVL units presents as a very convenient marker horizon for the beginning of the mine sequence. Both footwall and hangingwall lodes dip at 70-75° to the east, but localised small-scale undulations can be seen on the different development levels at Big Bell. The overall mine sequence strikes in a north-south orientation and has a shallow to moderate north plunge component.



There are a number of obvious structural influences on mineralisation, the most obvious being the large cross-cutting pegmatite's that introduce themselves at irregular intervals and deplete the overall grade.

The 2020 block model uses an overall grade and lithology based domain (domain 1000) to define the broad mineralisation shell. The 3999 boundary shape (dtm) is created, defining the transition from predominantly microcline – silica – muscovite rich lithologies to biotite rich schists. This boundary is used to outer-sect the 1000 domain into footwall (2000) and hangingwall (3000) domains.

The detailed modelling methodology used in the 2020 model update is outlined below:

- Deposit scale review of the GC database and informing drill holes.
  - Tidy-up of snapped drill holes and constraining of FW & HW grade/lithology boundaries.
- Exclusion (ResInvalid) of historical holes which have/had errors in their elevation or survey projections.
- Conversion of the existing Big Bell mineralisation domains from x-section to flitch interp;
  - Tidy-up of snapped drill holes and excess points that were 'clustering' triangles on the domain solids.
  - Removal of contradictory points that were snapped within mineralisation intersections rather than on the boundary of mineralisation intersections.
  - Snapping of 'mineralised envelope' points to lithology boundaries first and then a >0.5 g.t cut off shell as second priority (domain 1000). Grade cut offs mostly aligned with AMPH (footwall) and INSH (hangingwall) lithology boundaries.
  - Eliminated all the small and isolated domains from within the overall >0.50 g/t grade shell.
  - Digitised a footwall and hangingwall string for each lode using the site generated 'wireframing' Surpac profile and technique.



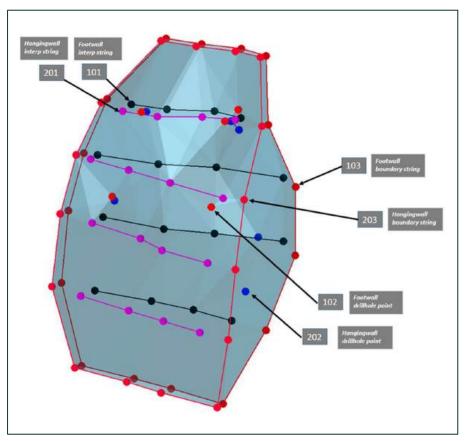


Figure 14-17 Example of hangingwall and footwall wireframe generation strings and points. Source: Westgold.

- The overall 1000 domain used in the 2012 and subsequent models remained relatively similar in the Apr-20 model except for localised refinements to footwall and hangingwall positions based on updated drilling information. The primary areas that required slight adjustments were on the extremities of the mineralisation with poor drill coverage.
- The smaller hanging wall mineralisation domains outside the main 1000 domain were also converted to a plan view interpretation:
  - 4000 domain (Southern hangingwall) 0
  - 5000 domain (Northern hangingwall) 0
- Review of the composite grades by lithology showed separate grade distributions between the BISH and KPSH units. This was investigated further, and a review of previous drilling indicated relatively robust continuity of the BISH and KPSH lithological margins, with the internal ALSH logging showing inconsistencies. From this review a boundary plane (3999) was constructed between the **BISH/KPSH** units.



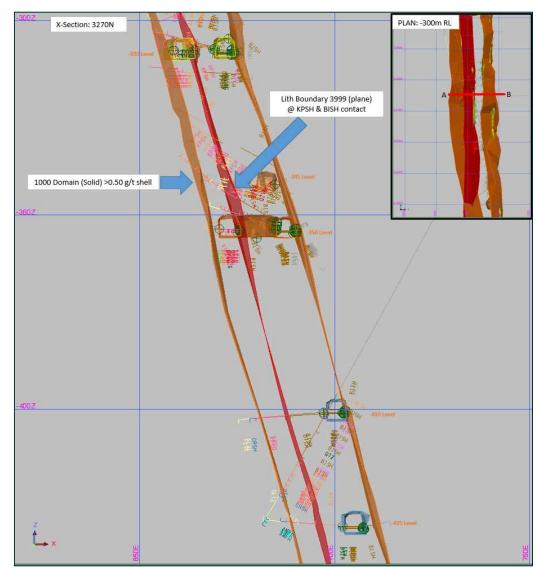


Figure 14-18 3999 lithological boundary between the hangingwall and footwall domains. Source: Westgold.

After review of the initial campaign model further optimisations to the domain shapes were made. An additional waste domain (6000) in the southern area of the mine sequence further constrained the internal waste dilution within the 1000 domain.

Due to several common boundaries and taking into consideration that this will become a 'live' GC model the wireframes inside the main mineralised envelope have been constructed differently.

- The 1000 domain working solid encompasses the main mineralised envelope.
- The 3999 pane defines the KPSH/BISH boundary.
- The 6999 solid defines the internal waste domain in the south.

To create the final 2000 (KPSH), 3000 (BISH) and 6000 (Waste) domains:

- The 6999 solid is intersected with the 1000 domain to create the 6000 domain.
- The 6999 solid is outer-sected with the 1000 domain to create the 1001 working solid.



• The 1001 working solid is sliced above and below the 3999 plane to create the 2000 and 3000 domains.

This results in three wireframes that conform to the 1000 domain externally and have no overlapping triangles internally. The process is easily repeatable if the 1000 and 3999 domains are continued to be used as working solids and planes respectively.

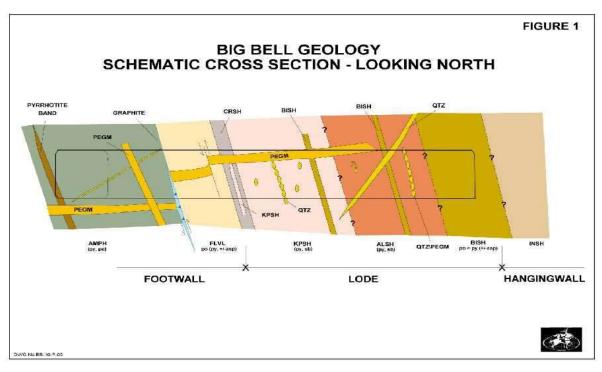


Figure 14-19 Schematic cross-section of Big Bell mine sequence geology. Source: Westgold.



The geological interpretation of the 2012 Big Bell (Trend) model was carried out using a systematic approach to ensure that the resultant estimated Mineral Resource figure was both sufficiently constrained, and representative of the expected subsurface conditions. In all aspects of resource estimation the factual and interpreted geology was used to guide the development of the model.

Initially a three-dimensional viewing of the data was undertaken to establish a feel for the basic form and continuity of the mineralisation. This was followed by sectional viewing of the mineralisation. Strings were digitised on section to establish a geologically constrained envelope around the BISH unit. As it is known that the mineralisation along the Big Bell Trend strikes sub-parallel to lithology, this lithology model was used as guide to the mineralisation interpretation, especially in zones of data sparsity. Strings were then digitised on section to establish a constrained mineralisation envelope using a nominal interpretation cut-off of 0.50 g/t. Generally, a maximum of two continuous metres of down-hole internal dilution was allowed (aside from modelled zones of internal waste), and in cases where geological knowledge of the deposit allowed, the interpretation strings were continued through zones of lower grade to assist in modelling mineralisation continuity, and to increase the level of along-strike / down-dip control on the location of the mineralised structure.

All strings were digitised in a clockwise direction, with a common base of interpretation of approximately -1,500mRL in the Big Bell South / Big Bell area. The base selected was dependent upon the depth at which drillhole information became so sparse as to render mineralised envelope interpretation impractical. Strings were snapped to drillholes at sample interval boundaries, with no artificial complexities introduced into the mineralisation geometry (although points were created between drillholes to ensure accuracy during wireframing).

Modelling was undertaken in Map Grid of Australia 1994, Zone 50, with a nominal sectional spacing of twenty-five metres used during interpretation.

Interpretation of Big Bell Trend mineralisation took the form of a major shear system sub-parallel to greenstone lithology. In general, the mineralisation is steeply dipping to the east, and ranges from a few metres up to circa 40 – 50 m in width. The overall interpretation is consistent with observations thought the extensive mining history of deposits along the Big Bell Trend.

## 14.3.4.2 Statistical Analysis and Compositing

A 'best fit' downhole composite method has been used for all the revised domains with a composite length of 1.0 metre.

The analysis for top cut determination was conducted on all individual domains for the 1m composited data. Several common measures of determining an appropriate top cut were reviewed:

- Log-probability analysis.
- Histogram review.
- Percentile review.



During this review, factors such as the number of composites cut, the percentage of data cut and the percentage of metal content cut were considered to ensure an appropriate value, if any, was chosen.

Top-cutting data eliminates anomalous and often erroneous data from the data set, preventing the over-estimation of metal. Top-cuts reduce the influence of these extreme values and minimise the risk of over-estimation. For some domains, highgrade cuts were not required where the grade variability relative to the mean was acceptable and spatial analysis of the high composite gold values did not indicate that they were outliers.

Zonecode	Element1 High Cut (ppm)
2000	40
3000	25
4000	7
5000	7
6000	5
9999	1
7000	0.01

A 35 g/t top cut was applied to the relevant Big Bell South domains (objects 4 and 13) in the 2012 model.

# 14.3.4.3 Density

Bulk density data was applied based on historical measurements to arrive at the following bulk densities and applied to the 2020 model.

### Table 14-31 In situ Density Assignment (2020 model).

Rock Type	Density (t/m <sup>3</sup> )
Cover	1.80
Oxide	2.00
Transitional	2.40
Fresh	2.75

The 2012 model had the following bulk densities applied:

- Cover 1.80t/m<sup>3</sup>
- Oxide 2.00t/m<sup>3</sup>
- Transitional 2.40t/m<sup>3</sup>
- Fresh BISH 2.90t/m<sup>3</sup>
- 2.75t/m<sup>3</sup> Fresh remainder

## 14.3.4.4 Metallurgy

Big Bell underground ore had a recovery of 87%. The gold recovery on this ore tended to be grind-dependent. Higher antimony in the ore affected recovery. The percentage of Big Bell material in the overall plant blend also affected recovery e.g., once 50% of the blend was Big Bell, the tails grade would slowly increase. Ore blends and grind size were critical to the recovery when treating this ore.



## 14.3.4.5 Variography

Variograms were analysed in Snowden Supervisor software. Normal scores transforms were applied to limit the influence of extreme grades. Composites within lodes that exhibited common style, geology and univariate statistics were grouped for variogram modelling.

A summary of variogram groupings and resulting parameters applied to the 2020 model is shown below. Note - domain 7000 (pegmatite domain) was not estimated.

Domain Code	2000	3000	4000	5000	6000
Estimate	Y	Y	Y	Y	Y
# Structures	3	3	2	2	3
C0	0.51	0.46	0.45	0.45	0.46
C1	0.17	0.33	0.05	0.05	0.33
a1	10.00	9.00	45.00	45.00	9.00
C2	0.12	0.08	0.50	0.50	0.08
a2	32.00	55.00	80.00	80.00	55.00
C3	0.20	0.13	0.00	0.00	0.13
a3	150.00	155.00	0.00	0.00	155.00
TOTAL SILL	1.00	1.00	1.00	1.00	1.00

Table 14-32 Big Bell variogram orientations and model parameters (2020 model).

1. Major : Semi Major	1	1	1	1	1
1. Major : Minor	1.429	1	1	1	1
2. Major : Semi Major	1	1	1	1	1
2. Major : Minor	3.556	5	1	1	5
3. Major : Semi Major	1	1	0	0	1
3. Major : Minor	6	12.92	0	0	12.92

SURPAC STRIKE	356.549	348.83	0	0	348.83
SURPAC PLUNGE	9.391	28.024	0	0	28.024
SURPAC DIP	-69.716	-67.204	0	0	-67.204

Search					
Method	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID
Estimation Block Size (x,y,z)	10, 20, 20	10, 20, 20	10, 20, 20	10, 20, 20	10, 20, 20
Estimation Block Size X	10	10	10	10	10
Estimation Block Size Y	20	20	20	20	20
Estimation Block Size Z	20	20	20	20	20
Disc Point X	4	4	4	4	4
Disc Point Y	4	4	4	4	4
Disc Point Z	4	4	4	4	4

Grade Dependent Parameters	Y	Y	N	N	N
Threshold Max	3.28	2.55			
Search Limitation	150	155			



Domain Code	2000	3000	4000	5000	6000
Estimate	Y	Y	Y	Y	Y
Limit Samples by Hole Id	N	N	Ν	N	Ν
Hole Id D Field	D2	D2	D2	D2	D2
Max Samps per Hole					
Pass1	Y	Y	Y	Y	Y
Min	6	8	6	6	8
Мах	20	20	20	20	20
Max Search	32	55	45	45	55
Major/Semi	1	1	1	1	1
Major/Minor	3.556	5	1	1	5
Run Pass2	Y	Y	Y	Y	Y
Factor	2	2	2	2	2
Major/Semi	1	1	1	1	1
Major/Minor	3.556	5	1	1	5
Min	6	8	6	6	8
Мах	20	20	20	20	20
Pup Page 2	V	V	V	V	V

Run Pass 3	Y	Y	Y	Y	Y
Factor	10	10	4	4	10
Major/Semi	1	1	1	1	1
Major/Minor	3.556	5	1	1	5
Min	2	2	2	2	2
Max	20	20	20	20	20

To determine the most appropriate search ellipse / interpolation parameters for use in the 2012 Big Bell Trend MRE, variogram modelling was undertaken on the composited assay data from within the domained wireframes as described previously. The outcomes of this analysis were coupled with geological observation to arrive at the interpolation parameters as presented in Table 14-32.



	Structure 2	2	
Major	124.50	Major / semi major	1.29
Semi-major	96.50	Major / minor	10.38
Minor	12.00		
	Structure 1		
Major	14.00	Major / semi major	2.15
Semi-major	6.50	Major / minor	2.33
Minor	6.00		
Nugget	0.524		
Sill 1	0.212		
Sill 2	0.265		
Total sill	1.000		
Pooring	004		
Bearing Dip	90		
Plunge	-40		
Pass 1 range	124.50		
Pass 2 range	249.00		
Minimum samples	5.00		
Maximum samples	20.00		
Dir 1	-40 / 004		
Dir 2	50 / 354		
Dir 3	05 / 090		

#### Table 14-33 Big Bell variogram orientations and model parameters (2012 model).

## 14.3.4.6 Block Model and Grade Estimation (2020 model)

A number of criteria including data spacing, geometry of mineralised domains and volume fill were the primary considerations considered when selecting an appropriate estimation block size. Data spacing varies within the mineralised domains, from face sample data at 3.5 m spaced northings (Big Bell mine) to grade control data at 25 m x 25 m drillhole spacing to resource definition holes at greater than 100 m x 100 m drillhole spacing.

It is considered good geostatistical practice to use an estimation parent cell size that approaches the data spacing where possible, whilst at the same time being mindful of potential mine design and selectivity implications. The definition for the 2020 block model is summarised below.



Туре	Y	Х	Z
Minimum Coordinates	2,500	300	-1,500
Maximum Coordinates	4,300	1,100	60
Extent	1,800	800	1,610
User Block Size	20	10	20
Sub-block	2.5	0.625	2.5
Rotation	0	0	0

Table 14-34 Block Model Parameters – big\_bell\_gcx\_master\_200415.mdl.

Grade estimation utilised Ordinary Kriging (OK) of the downhole composite data for gold using the Cube ECX estimation add-on for Surpac mining software. Three grade estimates were completed using the block model attributes "gc\_au". All domains were estimated as hard boundaries.

Variography has been used to characterise the spatial relationship of the data. Additional to this is the implementation of search strategies aimed at producing a robust block estimate, whilst at the same time minimising estimation error and conditional biases. Search neighbourhoods were optimised by undertaking Kriging Neighbourhood Analysis (KNA), which involves analysing estimation quality data such as Slope of Regression and Kriging weights for various search neighbourhoods and combining these with other primary considerations such as data spacing, the geometry of the mineralised domains and variogram models.

As data spacing at Big Bell is variable throughout the mineralised domains, KNA was undertaken on blocks representing poor, moderate and well-informed neighbourhoods. The aim of these tests is to optimise the kriging search neighbourhood and maximise the quality of the kriging when dealing with a nonexhaustive data set.

The search strategy resulted in the minimum number of samples being set to between 6 and 8 and the maximum set to 20. The search distance for the first pass estimate was set to a distance ranging from 32 to 55 m, depending on the range of the corresponding variogram. A compilation of the parameters used are summarised in Table 14-32.

# 14.3.4.7 Block Model and Grade Estimation (2012 model)

A number of criteria including data spacing, geometry of mineralised domains and volume fill were the primary considerations considered when selecting an appropriate estimation block size. Data spacing varies within the mineralised domains, from face sample data at 3.5 m spaced northings (Big Bell mine) to grade control data at 25 m x 25 m drillhole spacing to resource definition holes at greater than 100 m x 100 m drillhole spacing.

It is considered good geostatistical practice to use an estimation parent cell size that approaches the data spacing where possible, whilst at the same time being mindful of potential mine design and selectivity implications. The definition for the 2012 block model is summarised below.



Туре	Y	X	Z
Minimum Coordinates	-43.75	50	-1,490
Maximum Coordinates	4243.75	1,150	50
Extent	4,287.5	1,100	1,540
User Block Size	12.5	5	10
Sub-block	6.25	2.5	5
Rotation	0	0	0

#### Table 14-35 Block Model Parameters – bbt20120514.mdl.

Grade estimation utilised Ordinary Kriging (OK) of the downhole composite data for gold using Surpac mining software. All domains were estimated as hard boundaries.

Variography has been used to characterise the spatial relationship of the data. Additional to this is the implementation of search strategies aimed at producing a robust block estimate, whilst at the same time minimising estimation error and conditional biases. Search neighbourhoods were optimised by undertaking Kriging Neighbourhood Analysis (KNA), which involves analysing estimation quality data such as Slope of Regression and Kriging weights for various search neighbourhoods and combining these with other primary considerations such as data spacing, the geometry of the mineralised domains and variogram models.

As data spacing at Big Bell is variable throughout the mineralised domains, KNA was undertaken on blocks representing poor, moderate and well-informed neighbourhoods. The aim of these tests is to optimise the kriging search neighbourhood and maximise the quality of the kriging when dealing with a nonexhaustive data set.

The search strategy resulted in the minimum number of samples being set to 5 and the maximum set to 20. The search distance for the first pass estimate was set to a distance of 124.5 m and 249 m for the second pass. A compilation of the parameters used are summarised in **Table 14-33**.

# 14.3.4.8 Model Validation

Block model validation was undertaken by the following means:

- Visual inspection of block estimates in relation to drilling and face sample data.
- Global statistical comparisons of sample composites and block grades.
- Semi-local comparison of composite and block grades (by northing, easting and RL) using Swath Plots.
- Comparison to GC block estimates and historical mine production.

Global comparisons between the input composite data and the resultant grade estimates based on the 1 m composites and are summarised below. Overall there is a good comparison when comparing the mean of the interpolated gold grades for each domain against the mean composite grade. Although the estimated and composite mean are not strictly comparable due to data clustering and volume influences, comparing these does provide a useful validation tool in detecting any major biases requiring further spatial investigation, whilst providing a global comparison of the input composite grade and the estimated block grade.



			moucy.			
Domain	# Samples	Mean	Declus Mean	Block Mean	Mean %Diff	Declus Mean %Diff
2000	16,812	3.28	2.89	2.82	-14%	-2%
3000	8,488	2.54	2.24	1.77	-30%	-21%
4000	48	2.35	2.34	2.60	11%	11%
5000	172	2.15	2.00	2.23	4%	11%
6000	1,241	0.46	0.43	0.40	-13%	-6%

 Table 14-36 Comparison Between Composite Data and Block Grade Estimated with 1m Composites (2020 model).

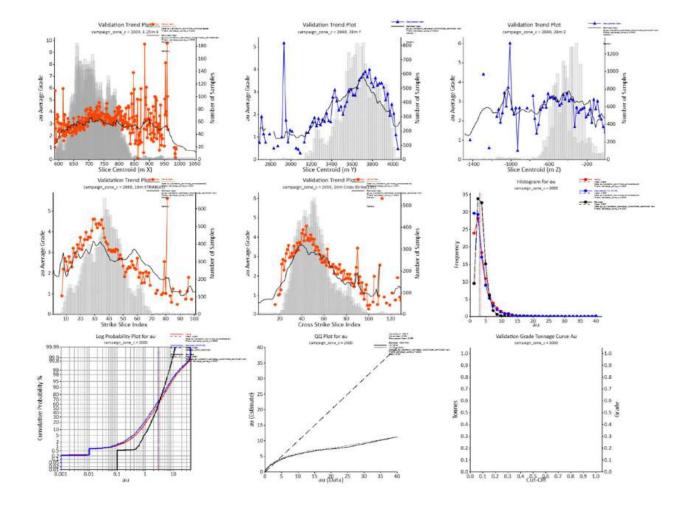
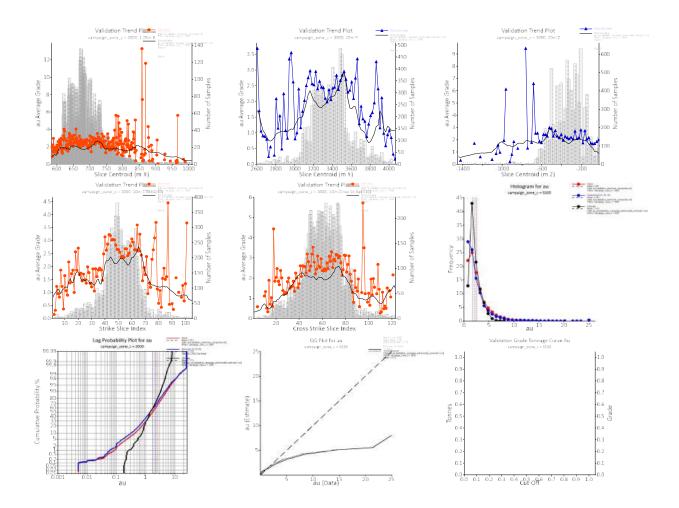
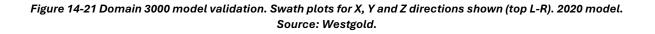


Figure 14-20 Domain 2000 model validation. Swath plots for X, Y and Z directions shown (top L-R). 2020 model. Source: Westgold.

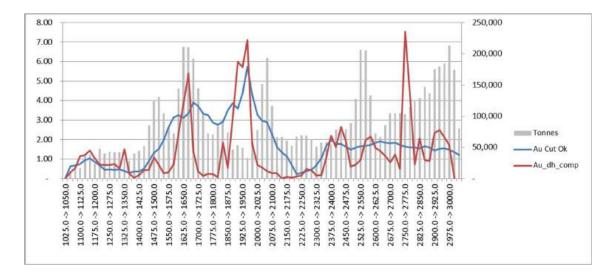




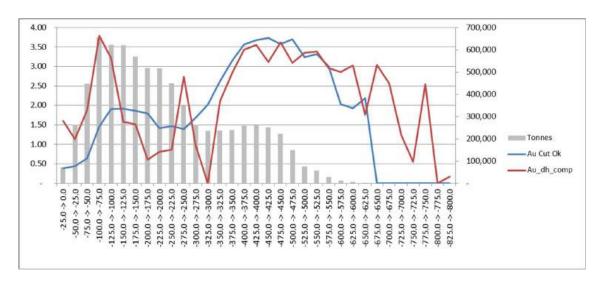


For the 2012 model validation, log probability plots, log histograms, Q-Q plots and box and whisker plots were all used to compare block outputs with the informing composite data. Swath plots were also used to validate the block model outputs.





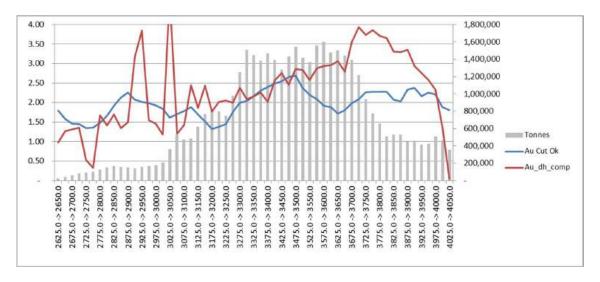
(a)



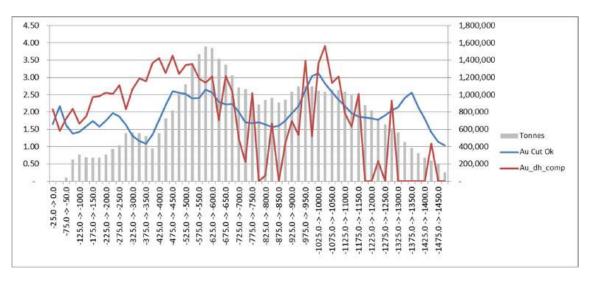
(b)

Figure 14-22 Object 4 Northing (a) and RL (b) trend analysis. Input and block model grades are seen to correlate well on a global-scale. Note that the disconnect between input and output grades between -245 mRL and -650 mRL in (b) is reflective of a lack of data in this area. Source: Westgold.

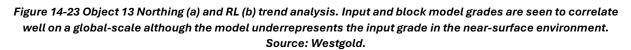








## (b)



## 14.3.4.9 Mineral Resource Classification

Big Bell is a large and consistent mineralised body that provides confidence in the ongoing geological and grade continuity of the mineralised system. To acknowledge this, areas within the 2020 resource have been categorised as follows.

- Areas with high confidence in geological continuity i.e., areas that have been drilled at approximately 25 m x 25 m drill spacing or are in close proximity to current development have been classified in the Measured resource category.
- Areas with high confidence in geological continuity or drilling at approximately 50 m x 50 m drill spacing or less, have been classified in the Indicated category.
- Areas that show geological continuity or those defined approximately by 100 m x 100 m drill spacing or less are classified as Inferred.



For the 2012 model, resource classification has proceeded based on the confidence of the form and continuity of the mineralisation. As the state of the data was assumed to be of sufficient quality to calculate a resource, and the confidence in the geological interpretation carried out using this data was deemed to be of sufficient quality to allow the Measured, Indicated and Inferred classes to be used.

The resource was then categorised on the following basis;

- All material within the defined drilled-out portion of the resource was classified as Indicated.
- All material partially defined by drilling classified as Inferred.
- All mineralised zones currently intersected on a single drilling section are considered Inferred.

Mine depletions were updated where applicable.

The Big Bell South Underground Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

#### 14.3.4.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations. At Big Bell South, areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. These areas were adjacent to mined out stopes as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.

Big Bell South UG Mineral Resource Statement - Rounded for Reporting 30/06/2024												
		Measured Indicated Measured and Indicated							Inferred			
Project	kt	g/t	koz	kt	t g/t koz kt g/t koz			kt	g/t	koz		
Big Bell South UG	0	0.00	0	25	2.23	2	25	2.23	2	736	2.70	64
Total	0	0.00	0	25	2.23	2	25	2.23	2	736	2.7	64

Table 14-37 Big Bell South Underground (UG) Mineral Resource – CGO – as of June 30, 2024.



Above Y Plane 2050; Not above Y Plane 3000; Above Z Plane -1510; Not above Z Plane - 200; > res\_cat\_n 0; < res\_cat\_n 4; >= gc\_au 2.0

The Big Bell South Underground Mineral Resource estimate as set out in **Table 14-37** is effective as of June 30, 2024.

The Big Bell South Underground Resource was reported using a 2.0 g/t cut-off grade and depleted to end of mining.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

## 14.3.5 Fender

14.3.5.1 Summary

The Fender deposit is located 3 km southwest of Big Bell and approximately 52 km west-northwest of the Tuckabianna Mill and is part of the Big Bell Project Area.



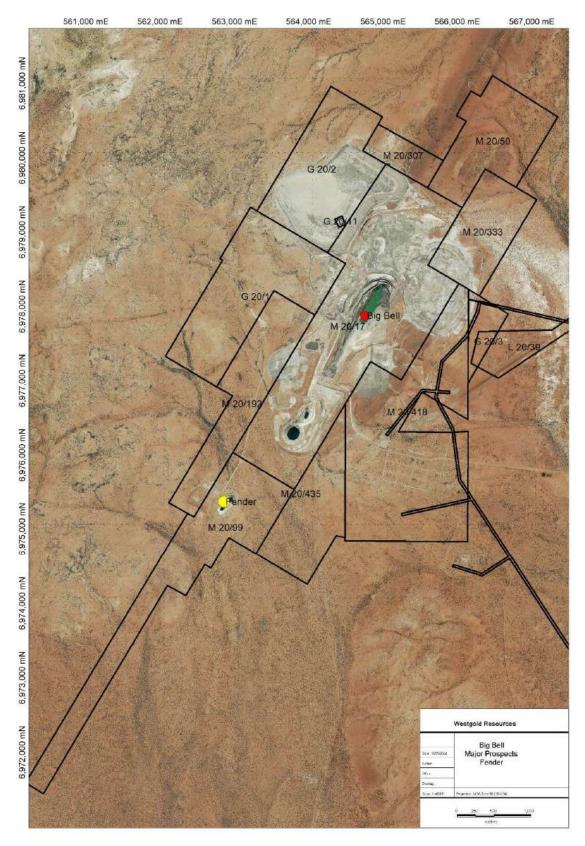


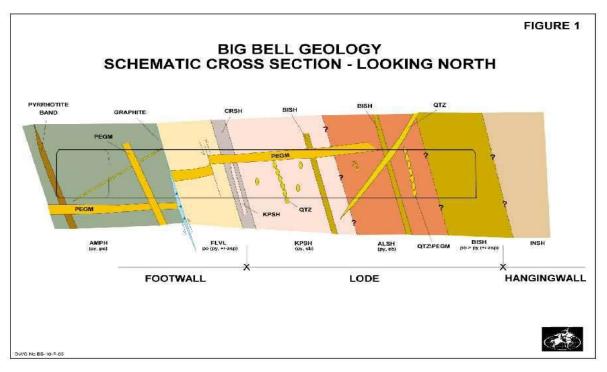
Figure 14-24 Fender location map. Source: Westgold.



An updated Mineral Resource estimate for Fender was completed in April 2024 following grade control drilling and underground mine development. Grade estimation utilised Ordinary Kriging (OK) of the downhole composite data for gold using the Cube ECX estimation add-on for Surpac mining software.

## 14.3.5.2 Modelling Domains

The Fender mineralised sequence is made up of two partially 'disseminated' zones of mineralisation. These are the altered schist (ALSH) and potassic feldspar schist (KPSH). Within these two mineralisation domains are discrete waste domains. The overall sequence is heavily gradational, with lithological units displaying varying degrees of inter-bedding. Mineralisation appears to be well constrained along the footwall garnet schist unit (GTSH), the hanging wall is less defined and is a more gradational contact which can be hosted in either ALSH or KPSH. The main Fender lode dips at 80-85° to the east, but localised small-scale undulations can be seen on the different development levels. The overall mine sequence strikes in a north-south orientation and has a moderate north plunge component. Minor pegmatite intrusions have been noted.



### Figure 14-25 Schematic cross-section of Big Bell/Fender mine sequence geology. Source: Westgold.

A lower COG of 0.6 g/t Au was used to define the mineralisation at Fender. This cut-off was selected as it represents an inflexion in the grade population on the log probability plot and enabled the mineralisation to be captured in a coherent envelope. A separate population appears to exist above 1.8 g/t Au (D2) on the log probability plot but is not discernible on the histogram as a bimodal population and has limited lateral extent for sub-domaining purposes. As a result, a separate HG subdomain was not created.



## 14.3.5.3 Statistical Analysis and Compositing

A 'best fit' downhole composite method has been used for all domains with a composite length of 1.0 metre. Field D31 (cut au) is used for the estimation. The analysis for top cut determination was conducted on all individual domains for the 1m composited data. Several common measures of determining an appropriate top cut were reviewed including log-probability analysis, histogram review and percentile review. During this review, factors such as the number of composites cut, the percentage of data cut and the percentage of metal content cut were considered to ensure an appropriate value, if any, was chosen. Top-cutting data eliminates anomalous and often erroneous data from the data set, preventing the over-estimation of metal. Top-cuts reduce the influence of these extreme values and minimise the risk of over-estimation. For some domains, high-grade cuts were not required where the grade variability relative to the mean was acceptable and spatial analysis of the high composite gold values did not indicate that they were outliers.

Zonecode	Au g/t Lower	Au g/t Upper
1001	0	20
1003	0	99
1004	0	2
1005	0	99
1006	0	99
1007	0	99
1008	0	99
1009	0	99
1010	0	99
1011	0	10
1012	0	99
1013	0	99
2001	0	4.15
2002	0	99
2003	0	99
9999	0	3

Table 14-38 Top-cuts applied to each domain.	Table	14-38	Top-cuts	applied to	each	domain.
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### 14.3.5.4 Density

Bulk density data is available in the database following a 2019 campaign at Big Bell. This information was used in conjunction with historical bulk density data to arrive at the following bulk densities and applied to the reportable model.

Rock Type	Density (t/m <sup>3</sup> )
Cover	1.80
Oxide	2.00
Transitional	2.40
Fresh (all domains)	2.75



## 14.3.5.5 Metallurgy

Big Bell underground ore had a recovery of 87%. The gold recovery on this ore tended to be grind-dependent. Higher antimony in the ore affected recovery. The percentage of Big Bell material in the overall plant blend also affected recovery e.g., once 50% of the blend was Big Bell, the tails grade would slowly increase. Ore blends and grind size were critical to the recovery when treating this ore. Similar assumptions can be made for Fender.

# 14.3.5.6 Variography

Variograms were analysed in Snowden Supervisor software. Normal scores transforms were applied to limit the influence of extreme grades. Composites within lodes that exhibited common style, geology and univariate statistics were grouped for variogram modelling.

A summary of variogram groupings and resulting parameters is shown below.

Domain Code	1001	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	2001	2002	2003	9999
Estimate	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
# Structures	3	3	3	3	3	3	2	3	3	3	3	3	2	2	2	3
CO	0.25	0.27	0.25	0.27	0.29	0.23	0.26	0.24	0.24	0.28	0.30	0.26	0.31	0.31	0.31	0.25
C1	0.19	0.19	0.16	0.19	0.20	0.16	0.27	0.17	0.17	0.20	0.20	0.19	0.36	0.36	0.36	0.19
a1	12.00	12.00	12.00	12.00	12.00	12.00	65.00	12.00	12.00	12.00	12.00	12.00	20.00	20.00	20.00	12.00
C2	0.38	0.37	0.39	0.36	0.35	0.40	0.47	0.38	0.39	0.35	0.34	0.38	0.33	0.33	0.33	0.38
a2	40.00	40.00	40.00	40.00	40.00	40.00	90.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
C3	0.18	0.17	0.21	0.17	0.16	0.22		0.20	0.20	0.16	0.16	0.18				0.18
a3	110.00	110.00	110.00	110.00	110.00	110.00		110.00	110.00	110.00	110.00	110.00				110.00
TOTAL SILL	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1. Major : Semi Major	1	1	1	1	1	1	2.6	1	1	1	1	1	1	1	1	1
1. Major : Minor	6	6	6	6	6	6	6.5	6	6	6	6	6	2	2	2	6
2. Major : Semi Major	2.222	2.222	2.222	2.222	2.222	2.222	2	2.222	2.222	2.222	2.222	2.222	1	1	1	2.222
2. Major : Minor	8	8	8	8	8	8	4.5	8	8	8	8	8	2	2	2	8
3. Major : Semi Major	2	2	2	2	2	2		2	2	2	2	2	0	0	0	2
3. Major : Minor	13.75	13.75	13.75	13.75	13.75	13.75		13.75	13.75	13.75	13.75	13.75	0	0	0	13.75
															-	
SURPAC STRIKE	20.93	20.93	20.93	20.93	20.93	20.93	18.29	20.93	20.93	20.93	20.93	20.93	270	270	270	20.93
SURPAC PLUNGE	-49.741	-49.741	-49.741	-49.741	-49.741	-49.741	-39.273	-49.741	-49.741	-49.741	-49.741		2/0			
SURPAC DIP	-45.741	-82.249	-82.249	-49.741	-49.741	-82.249	-77.038	-49.741	-49.741	-82.249	-49.741					
JOINTAC DIF	-02.249	-02.249	-02.249	-02.245	-02.249	-02.249	-77.050	-02.245	-02.245	-02.245	-02.249	-02.245			1 0	-02.245
Search														1		
Method	ELLIPSOID															
Estimation Block Size (x,y,z)	2.5, 5, 5	2.5, 5, 5	2.5, 5, 5	2.5, 5, 5		2.5, 5, 5	2.5, 5, 5		2.5, 5, 5		2.5, 5, 5	2.5, 5, 5	2.5, 5, 5	2.5, 5, 5	2.5, 5, 5	2.5, 5, 5
Estimation Block Size (x, y, z)	2.5, 5, 5	2.5, 5, 5	2.5, 5, 5			2.5, 5, 5	2.5, 5, 5	2.5, 5, 5			2.5, 5, 5	2.5, 5, 5		2.5, 5, 5		2.5, 5, 5
Estimation Block Size X Estimation Block Size Y	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5			2.5	
Estimation Block Size 7	5	5	5	5	5	5	5	5	5	5	5				5	5
Disc Point X	3	3	5	3	3	3	5	5	3	3	3		-	-	4	5
	3	3	3	3		3	3	3	3	3	3	3			4	3
Disc Point Y	5	5	5	5	5	5	5	5	5	5	5	5			4	5
Disc Point Z	5	5	5	5	5	5	5	5	5	5	5	5	4	4	4	5
Grade Dependent Parameters Threshold Max	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Search Limitation																
Limit Samples by Hole Id	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Hole Id D Field	D2															
Max Samps per Hole																
Pass1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Min	8	8	8	8	8	8	6	8	8	8	8	8		8	8	4
Max	15	15			15			15	15	15	15			20	20	8
Max Search	40				40			40	40					40	40	20
Major/Semi	2	2	2	2	2	2	2	2	2	2	2		-	1	1	2
Major/Minor	8	8	8	8	8	8	4.5	8	8	8	8	8	2	2	2	8
Run Pass2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Factor	2	2	2	2	2	2	2	2	2	2	2	2		2	2	2
Major/Semi	2	2	2	2	2		2	2	2	2				1	1	2
Major/Minor	8	8		8	8		4.5	8	8	8	8			2	2	8
Min	8				8			8	8	8				8	8	8
Max	15	15	15	15	15	15	12	15	15	15	15	15	20	20	20	15
Run Pass 3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Factor	10	10	10	10	10	10	10	10	10	10	10	10	4	4	4	10
Major/Semi	1	1			1			1		1				1	1	1
Major/Minor	4	4	4	4	4	4	2	4	4	4	4	4		2	2	4
Min	2	2	2	2	2	2	2	2	2	2	2	2		2	2	2
Max	15	15	15	15	15		12	15	15	15	15			20	20	15
	15		15	15	15	15		15	15	15	15	15				15

#### Table 14-40 Fender variogram orientations and model parameters.



## 14.3.5.7 Block Model and Grade Estimation

A number of criteria including data spacing, geometry of mineralised domains and volume fill were the primary considerations considered when selecting an appropriate estimation block size. It is considered good geostatistical practice to use an estimation parent cell size that approaches the data spacing where possible, whilst at the same time being mindful of potential mine design and selectivity implications. After reviewing the data spacing and conceptual SMU relative to the mineralised zones, it was determined that a parent block size of 5 mN x 2.5 mE x 5 mRL, which can be subcelled down to 1.25 mN x 0.625 mE x 1.25 mRL for volume resolution, would be most appropriate for the primary domains.

A single block model was created to cover the extents of the data (fender\_gcx\_master\_240419.mdl). The definition for the block model is summarised below.

Туре	Y	X	Z
Minimum Coordinates	0	100	-500
Maximum Coordinates	600	600	55
Extent	600	500	555
User Block Size	5	2.5	5
Sub-block	1.25	0.625	1.25
Rotation	0	0	0

#### Table 14-41 Block model parameters – fender\_gcx\_master\_240419.mdl.

Grade estimation utilised Ordinary Kriging (OK) of the downhole composite data for gold using the Cube ECX estimation add-on for Surpac mining software.

Three grade estimates were completed using the block model attributes "gc\_au".

All domains were estimated as hard boundaries.

Variography has been used to characterise the spatial relationship of the data. Additional to this is the implementation of search strategies aimed at producing a robust block estimate, whilst at the same time minimising estimation error and conditional biases. Search neighbourhoods were optimised by undertaking Kriging Neighbourhood Analysis (KNA), which involves analysing estimation quality data such as Slope of Regression and Kriging weights for various search neighbourhoods and combining these with other primary considerations such as data spacing, the geometry of the mineralised domains and variogram models.

As data spacing at Fender is variable throughout the mineralised domains, KNA was undertaken on blocks representing poor, moderate and well-informed neighbourhoods. The aim of these tests is to optimise the kriging search neighbourhood and maximise the quality of the kriging when dealing with a nonexhaustive data set.



The search strategy resulted in the minimum number of samples being set to between 4 and 8 and the maximum set between 8 and 20. The search distance for the first pass estimate was set to a distance ranging from 20 to 90 m, depending on the range of the corresponding variogram. A compilation of the parameters used are summarised in Table 14-40.

## 14.3.5.8 Model Validation

Block model validation was undertaken by the following means:

- Visual inspection of block estimates in relation to drilling and face sample data.
- Global statistical comparisons of sample composites and block grades.
- Semi-local comparison of composite and block grades (by northing, easting and RL) using Swath Plots.
- Comparison to GC block estimates and historical mine production.

Global comparisons between the input composite data and the resultant grade estimates based on the 1 m composites and are summarised below. Overall, there is a good comparison when comparing the mean of the interpolated gold grades for each domain against the mean composite grade. Although the estimated and composite mean are not strictly comparable due to data clustering and volume influences, comparing these does provide a useful validation tool in detecting any major biases requiring further spatial investigation, whilst providing a global comparison of the input composite grade and the estimated block grade.

Domain	# Samples	Min	Max	Mean	Declus Mean	# Blocks	Block Mean	Mean %Diff	Declus Mean %Diff
1001 au	1862	0.009	20	2.82	2.77	511,883	2.72	-3%	-2%
1003 au	12	0.63	2.94	1.07	1.08	1,187	1.04	-3%	-4%
1004 au	9	0.02	2	0.89	0.91	1,840	0.90	1%	-1%
1005 au	9	0.56	4.69	1.50	1.51	1,762	1.55	3%	3%
1006 au	27	0.03	6.55	1.32	1.25	4,992	1.14	-13%	-9%
1007 au	19	0.02	2.54	0.85	0.84	2,064	0.92	8%	9%
1008 au	69	0.04	7.88	1.62	1.64	32,701	1.39	-14%	-15%
1009 au	4	0.05	2.05	0.97	0.95	3,315	0.97	0%	2%
1010 au	7	0.59	6.59	2.74	2.74	11,550	3.52	28%	28%
1011 au	72	0.333	10	2.41	2.48	6,079	2.38	-1%	-4%
1012 au	23	0.1	6.878	1.33	1.35	5,481	1.22	-8%	-9%
1013 au	18	0.43	1.964	0.78	0.80	3,495	0.80	3%	0%
2001 au	86	0.32	4.15	1.31	1.28	20,503	1.30	-1%	2%
2002 au	29	0.19	7.01	1.99	1.95	6,808	1.96	-1%	1%
2003 au	13	0.35	3	1.03	0.99	3,584	1.10	7%	11%
9999 au	16744	0.001	3	0.10	0.10				

Table 14-42 Comparison between composite data and block grade estimated with 1 m composites.

### 14.3.5.9 Mineral Resource Classification

Fender is a large and consistent mineralised body that provides confidence in the ongoing geological and grade continuity of the mineralised system. To acknowledge this, areas within the resource have been categorised as follows.

Areas with high confidence in geological continuity i.e., areas that have been drilled at approximately 10 m x 10 m drill spacing or are in close proximity to current development have been classified in the Measured resource category.



- Areas with high confidence in geological continuity or drilling at approximately 25 m x 25 m drill spacing or less, have been classified in the Indicated category.
- Areas that show geological continuity or those defined approximately by 50 m x 50 m drill spacing or less are classified as Inferred.

Mine depletions were updated. Depletions are correct to 30 June 2023 for mine development. Areas depleted are assigned the following codes:

- mined\_type\_n = 2 or 3 (Development or Stope). Insitu material has a mined\_type\_n code = 1
- res\_cat\_n = 0 (depleted)

The Fender Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Oualified Person shows no material differences.

#### Mineral Resource Statement 14.3.5.10

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations. At Fender, areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. These areas were adjacent to mined out stopes as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.

Fender (Open Pit) Mineral Resource Statement - Rounded for Reporting 30/06/2024													
	Measured			I	Indicated			Measured and Indicated			Inferred		
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	
Fender Open Pit	60	2.81	5	125	2.36	9	185	2.51	15	10	1.12	0	
Total	60	2.81	5	125	2.36	9	185	2.51	15	10	1.12	0	

### Table 14-43 Fender Open Pit Mineral Resource – CGO – as of June 30, 2024.

campaign\_zone\_n !=9999; campaign\_zone\_n !=0; mined\_type\_n=1; gc\_au >=0.7; Not above Y=500; Above Y=150; Above Z=-130



Fender (Underground) Mineral Resource Statement - Rounded for Reporting 30/06/2024												
	Measured			Indicated			Measured and Indicated			Inferred		
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Fender Underground	95	3.22	10	201	3.05	20	297	3.10	30	345	3.33	37
Total	95	3.22	10	201	3.05	20	297	3.10	30	345	3.33	37

#### Table 14-44 Fender Underground Mineral Resource – CGO – as of June 30, 2024.

campaign\_zone\_n !=9999; campaign\_zone\_n !=0; mined\_type\_n=1; gc\_au >=2; Not above Y=600; Above Y=150; Not above Z=-130

The Fender Mineral Resource estimate as set out in Table 14-43 and Table 14-44 is effective as of June 30, 2024.

Fender Open Pit was reported using a 0.7 g/t cut-off grade and the Fender Underground Mineral Resource was reported using a 2.0 g/t cut-off grade depleted to end of mining as of 30 June 2024.

- Mineral Resources that are not Mineral Reserves do not have demonstrated economic 1 viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 5 Mineral Resources are depleted for mining as of June 30, 2024.
- 6 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 7 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 8 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 9 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

#### 14.4 **CUDDINGWARRA**

The Cuddingwarra project area is located within the Archaean Meekatharra-Wydgee Greenstone Belt. The greenstone belt is comprised of thick sequences of mafic and ultramafic rocks, with banded iron formation and felsic volcanic rocks. Felsic porphyries have intruded the layered sequence.



The Cuddingwarra Project area encloses three lithological sequences, generally separated from each other by sub-concordant strike faults trending northerly to northnortheast.

- A high-Mg basalt and basalt sequence in the west.
- Intercalated komatiites and high-Mg basalts with minor tholeiitic basalts and dolerite in the centre of the project area.
- A sequence of sediments and volcaniclastics in the east.
- The Cuddingwarra area has been worked since around the turn of the century. Several gold mines were in production from 1897 to 1939 and numerous shafts and underground workings testify to considerable prospecting activity. Gold mineralisation at City of Sydney and Golden Gate was worked around the turn of the century and later in the 1990's.
- Between 1897 and 1901 three mineralisation lenses within a "felsite" dyke were worked at Golden Gate by Cuddingwarra Gold Mines Ltd (Woodward, 1907). The workings consisted of a main 190 ft (57.9 m) vertical shaft with a drive at 110 ft (33.5 m) level that ran for 425 ft (129.6 m) north and 265 ft (80.8 m) south. In addition, there were a number of shallow drives at 40 ft (12.2 m) level over a strike length of 300 ft (91.5 m) many of these were stopped to the surface. In total 4195.5t of ore was produced for 3,987.55 oz of gold at 0.95 oz/t.
- The mine was subsequently passed on to Fingall Proprietary Limited who • undertook little activity between 1902 and 1903, producing 257 t of ore for 157.28 oz of gold at 0.61 oz/t. The mine was then operated under the name Scotia from 1904 to 1905 when 932 t of ore was produced for 273.67 oz of gold at 0.29 oz/t.
- There is no documented ore extraction from the Golden Gate and Black Swan deposits between 1905 and the early 1990's.
- A small open cut was worked to the south of the Golden Gate ridge during the early 1990's by G. Cavan, a local prospector. Production figures are vague but suggest 4,000 to 8,000 tonnes of ore was extracted grading 6-12 g/t for approximately 1,200 to 2,400 ounces of gold.
- Large-scale extraction of ore within Golden Gate began in early 2000 with Normandy Mining, New Hampton Goldfields Ltd and subsequently Harmony Gold Australia, mining a total of 384,295 t at 2.09 g/t for 25,883 oz Au.
- For Black Swan, mining commenced in February 1999 and historical documents report a total of 256,151 t at 5.663 g/t for a total of 46,341 oz Au at the end of April 2001.
- Open pit mining commenced at Cuddingwarra at the Black Swan, Black Swan • South, Rheingold and Golden Gate prospects during 2000. A total of 1,131,995 t of surface ore was mined at an average grade of 2.6 g/t Au (as of 31 December 2000). A total of 993,783 t of ore was milled at an average grade of 2.6 g/t Au, producing a total of 82,228 ozs of gold.



The Cuddingwarra Project contains numerous deposits of which only the largest, Black Swan South and Emily Well, are reported in this Technical Report.

The Cuddingwarra open pit deposits are reported within pit shells, with the exception of Emily Well which is only constrained by a cut-off grade.

## 14.4.1 Black Swan South

## 14.4.1.1 Summary

The Black Swan South (BSS) deposit is located at Cuddingwarra which is an old mining centre situated 10 km west-northwest of Cue in Western Australia and 35 km westnorthwest of the Tuckabianna mill. BSS comprises of seven open pits (pit #1, pit #2, pit # 3, pit #4, pit #5 East, pit #5 West and pit #5 Junior).



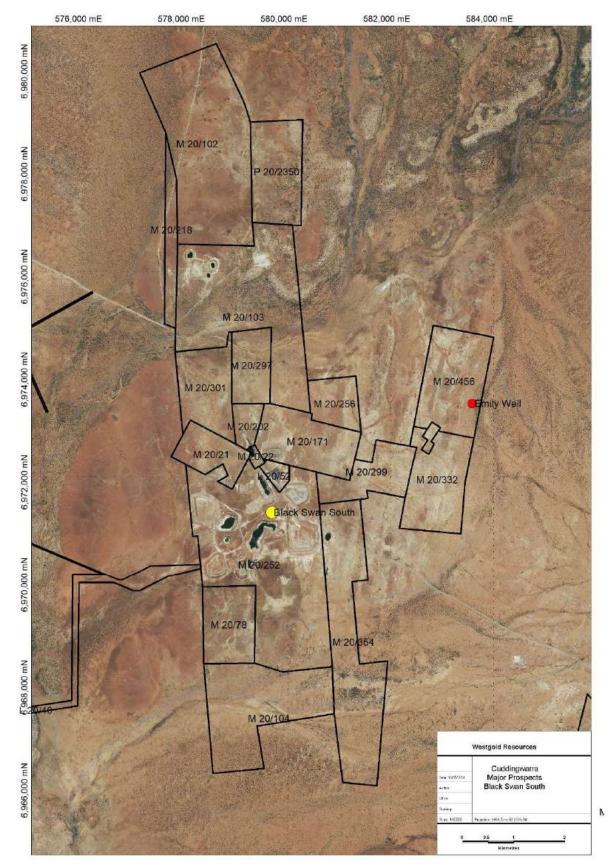


Figure 14-26 Black Swan South location map. Source: Westgold.



An updated Mineral Resource estimate for Black Swan South was completed in May 2020. The BSS MRE was undertaken using all available data which is dominated by historical resource definition and grade control drilling but also includes a small amount of drilling completed by WGX during 2017. The MRE includes a complete update to the interpretation of the main geological units, regolith and the estimation domains. The interpreted mineralisation is strongly associated with the typically steep dipping north-south striking porphyry intrusions within the dominantly mafic and ultramafic rocks of the Gabanintha Formation.

Grade estimation utilised a combination of Localised Uniformed Conditioning (LUC) within all estimation domains defined by resource definition (RD) drilling. Where the interpretation is defined by close spaced grade control (GC) drilling, Ordinary Kriging (OK) directly into the selective mining unit (SMU) was undertaken.

## 14.4.1.2 Modelling Domains

The lithology at Black Swan South consists of thin north-south striking interlayered mafic and ultramafics that are crosscut by northeast-southwest striking quartzofeldspathic porphyry. The intrusions and the mafic layers dip steeply to the east and plunge gently to the north.

Mineralisation is mainly confined to the porphyry intrusions and therefore the lithology model was interpreted first and used as the basis for the subsequent mineralisation interpretation.

A preliminary lithology model was created with the aid of implicit modelling via Leapfrog Geo software. This was used as a guide for the final sectional interpretation created in Surpac software. The interpretation was created with digitised polygons snapped where possible on 20 m spaced East-West sections from 27,500 mN to 29,040 mN. Due to the large historical database, there are various logging codes used to describe the dominant lithology types however the key logging codes used for the interpretation are summarised below.

Lithology	Logging Codes
Porphyry	PORP, GRAN, IPO and FEO
Mafic	MAFC, BSLT
Ultramafic	UMFC

#### Table 14-45 Cuddingwarra lithology logging codes.

No differentiation has been made between the interlayered mafic and ultramafics and this combined lithology represents the background rock type. The steeply east dipping porphyry intrusions are characterised by variable thickness but are generally between 5 and 20 m while the thickest porphyries at the northern end of BSS are approximately 50 m wide.



A total of forty-three individual porphyries were interpreted and converted from interpretation polylines to validated 3D solid wireframes. Figure 14-27 shows the porphyry interpretations in plan view, with the larger and more dominant porphyries labelled as 100 series objects. A typical cross-section of the porphyry interpretation is shown in Figure 14-28 at 28,520 mN.

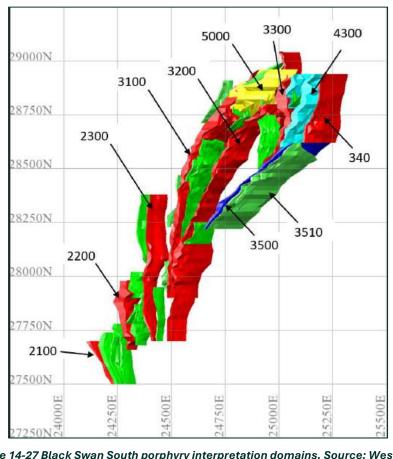


Figure 14-27 Black Swan South porphyry interpretation domains. Source: Westgold.

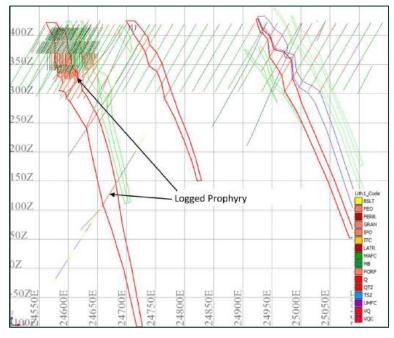


Figure 14-28 Black Swan South porphyry interpretation – cross-section at 28,520 mN +/-20 m. Source: Westgold.



Minor supergene enrichment of gold has occurred at the oxidation front between weathered and fresh rock and has resulted in elevated gold in the oxide relative to fresh rock. Laterite mineralisation occurs in the far northern and southern part of the prospect, with economic grade thicknesses of up to 8 m in places.

Given the strong relationship between the porphyry intrusions and gold mineralisation, the porphyry interpretations were used as the primary basis for the mineralisation interpretations. In addition, the interpretations were often widened slightly to include mineralisation location at the boundary of the porphyry but locally positioned more within the adjacent mafic rock.

Overall, the mineralisation domaining selection criteria was based on:

- Presence of porphyry, and,
- >0.25 g/t Au threshold based on log-probability plot analysis.

There was also a small number of domains not directly related to a porphyry which appear to be flatter and structurally controlled.

The mineralisation interpretations were based on varying section spacing ranging from 5 m to 20 m east-west sections to account for both the resource definition and grade control drilling. Every attempt was made to snap the interpretations to both the resource definition and grade control drilling.

A total of 64 (Figure 14-29) estimation domains were interpreted within the BSS mineralised area. This includes 58 primary domains and 6 laterite domains. The domain numbering is similar to the porphyry interpretation numbering where the mineralisation domain is based on the corresponding porphyry number. The laterite domains have been assigned a 9000 series number.



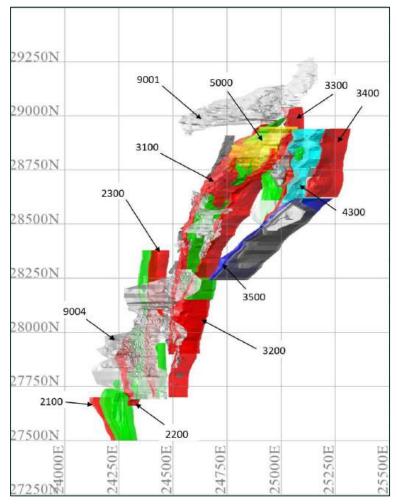


Figure 14-29 Estimation domains for the Black Swan South mineralised area (only the main domains and laterites have been labelled. Source: Westgold.

Throughout the BSS area there appears to be a zone near surface which has been depleted of gold mineralisation. Because it does not consistently correspond to the regolith model, a surface was digitised to represent the base of this depleted horizon. This was interpreted on 20 m sections and then converted into a surface DTM and a 3DM solid. This surface was used to sub-domain all primary domains and acted as a hard boundary during grade estimation between the upper depleted sub-domain and the lower non-depleted sub-domain. **Figure 14-30** below is an example of the interpreted surface representing the base of the depleted horizon and the creation of two sub-domains for domain 3100.



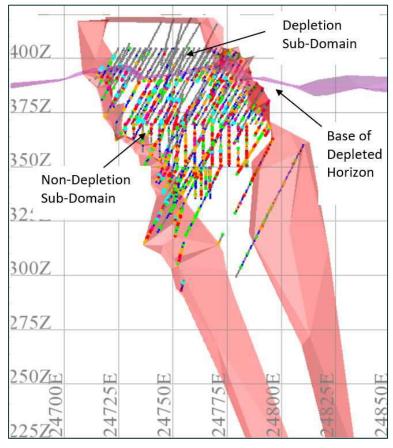


Figure 14-30 Black Swan South interpreted base of depleted mineralisation horizon – Domain 3100 at cross section 28,780 mN +/- 10 m. Source: Westgold.

Finally, to account for the large volume of grade control drilling, a surface and 3DM solid was created to represent an upper volume of material characterised by grade control drilling and the volume below the surface as defined by resource definition drilling. This grade control volume was used during grade estimation as a soft boundary between the two estimation methodologies and associated block size appropriate for the given data spacing Figure 14-31.

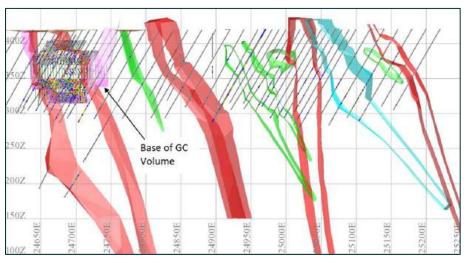


Figure 14-31 Black Swan South base of grade control drilling volume – domain 3100 at cross section 28,680 mN +/- 10 m. Source: Westgold.



## 14.4.1.3 Statistical Analysis and Compositing

A unique code for all drill intercepts within each of the mineralised domains was added to the "zonecode" table within the database. The process of coding the database was carried out by automatically flagging the intersection table with the relevant wireframe domain code for all drillholes. In some instances, there is an overlap between domain interpretations and the order in which the coding was completed was set to ensure priority was given to the dominant domains.

Once the preliminary coding was completed, the coded intersections were reviewed in graphics and in some instances manually edited to ensure the appropriate downhole intervals are coded according to the domain wireframes.

This coded interval was used to control the compositing process whilst extracting sample and composite data for statistical analysis and subsequent estimation.

For the combined resource definition and grade control sampling within the mineralised domains, over 95% of the raw sample length is 1 m or less and therefore, a downhole composite length of 1 m was selected for sample intervals within the estimation domains.

All samples have been used for the construction of the geological domains, however only the samples for which the Validated\_Code in the collar table is either "Valid" or "Invalid GC" are used for the estimation. The "Invalid\_GC" code flags the grade control (GC) samples which are considered suitable for estimation purposes.

Top-cutting data eliminates anomalous and often erroneous data from the data set, preventing the over-estimation of metal. Top-cuts reduce the influence of these extreme values and minimise the risk of over-estimation. For some domains, highgrade cuts were not required where the grade variability relative to the mean was acceptable and spatial analysis of the high composite gold values did not indicate that they were outliers.



		Un	Incut RD and GC						
Domain	No.	Min.	Max.	Mean	CV	Top Cut	No. Cut	and GC Mean	cv
2100	376	0.01	8.12	0.11	5.14	0.9	4	0.07	2
2110	431	0.01	3.2	0.03	4.64	0.5	1	0.03	1.53
2120	109	0.01	10.3	0.26	4.57	1.2	3	0.12	2.01
2130	316	0.01	1.8	0.07	2.29	0.8	5	0.07	1.82
2200	1722	0.01	71.3	0.25	8.43	11	2	0.2	3.71
2210	296	0	9.14	0.31	2.59	5.5	1	0.3	2.31
2220	346	0.01	12.8	0.28	4.17	0.8	10	0.16	1.13
2230	432	0	2.83	0.18	1.5	1.8	1	0.17	1.4
2240	328	0	74.4	1.13	4.92	11	5	0.74	2.55
2250	95	0.01	3.48	0.17	2.23	1	1	0.14	1.3
2300	2410	0	152	1.04	4.37	30	9	0.95	2.9
2310	427	0.01	8.75	0.35	2.28	3	6	0.31	1.67
2320	44	0.05	5.76	0.54	1.75	1.3	2	0.4	0.88
2330	243	0.01	5.48	0.33	2.3	3.5	4	0.3	2.05
3030	887	0	19.34	0.42	2.55	5	7	0.39	1.96
3035	90	0.01	81.4	1.36	6.29	6	1	0.52	1.88
3040	223	0.01	7.34	0.36	2.56	3	6	0.3	2.08
3045	37	0.01	5.35	0.42	2.18	2	2	0.33	1.47
3050	1095	0.01	20.3	0.43	2.19	6	4	0.41	1.69
3060	453	0.01	29.2	0.33	4.52	4	3	0.26	1.97
3070	28	0.02	4.39	0.88	1.13	999	0	0.88	1.13
3080	224	0.01	8.86	0.69	1.59	6	1	0.68	1.5
3100	59573	0.01	846.67	1.02	6.81	45	96	0.93	3.38
3110	1260	0.01	45.44	0.46	4.07	10	5	0.41	2.6
3120	4095	0.01	88.9	0.81	3.07	10	39	0.74	2.06
3125	362	0.01	8.05	0.35	2.3	4	4	0.33	1.98
3130	89	0.01	0.91	0.09	1.6	0.5	2	0.09	1.26
3150	295	0.01	67.61	0.78	5.4	8	5	0.53	2.34
3160	190	0.01	17.86	0.71	2.54	5	3	0.58	1.59
3170	1259	0.01	32.03	0.58	3.21	7	20	0.51	2.35
3180	11	0.21	24.07	4.39	1.6	10	1	3.11	1.12
3200	12522	0.01	1463.51	0.81	17.59	30	17	0.61	3.36
3210	97	0.01	1.53	0.1	2.31	0.6	4	0.08	1.81
3250	761	0.01	7.94	0.26	1.97	2	9	0.24	1.49
3260	409	0.01	3.8	0.22	1.73	2	4	0.21	1.54
3270	126	0.01	29.1	1.38	2.76	10	3	1.07	1.98
3300	13056	0.01	257.49	0.55	7.57	30	23	0.48	3.85
3310	117	0.01	4.28	0.2	2.66	2	2	0.18	2.19
3320	150	0.01	5.01	0.45	1.67	2.5	3	0.41	1.37
3400	655	0.01	47.1	0.55	4.06	15	1	0.5	2.8
3410	17	0.06	13.9	1.77	1.91	6	1	1.31	1.37
3420	23	0.03	29.1	2.05	2.91	6	1	1.05	1.35
3430	9	0.06	1.38	0.67	0.69	999	0	0.67	0.69
3440	19	0.02	1.99	0.41	1.22	999	0	0.41	1.22
3450	727	0.01	25	0.54	2.71	6	2	0.49	1.69
3460	531	0.01	8.69	0.49	1.56	4	2	0.47	1.41
3470	1863	0.01	36.5	0.92	1.79	10	8	0.9	1.5
3480	1984	0.01	351.39	2.07	6.53	30	17	1.33	2.81
3485	140	0.01	5.71	0.47	1.55	2	3	0.41	1.06
3490	166	0.01	184.28	6.08	4.14	30	7	2.51	2.75
3500	1225	0.01	21.4	0.21	4.07	5	5	0.19	2.84
3510	494	0.01	5.84	0.19	2.71	2.5	4	0.17	2.25
3520	275	0.01	6.53	0.27	2.4	3	3	0.25	2.04
3700	1688	0.01	87.01	1.4	3.49	15	23	1.12	2.17
3710	73	0.05	2.46	0.7	0.92	999	0	0.7	0.92
4200	1553	0.01	85.11	0.46	5.37	10	6	0.39	2.55
4300	2904	0.01	9.69	0.2	2.45	4	7	0.19	2.24
5000	22826	0.01	98.2	0.47	4.73	15	68	0.42	3.1
								=	

#### Table 14-46 Top-cuts applied to each domain.



Local top cuts are also applied when required, based on the distance between the composite to cut and the block to be estimated. The values are chosen carefully by the analysis of the log-probability plots where secondary population breaks are present. Also, preliminary grade estimates are reviewed and the need for limiting the extrapolation of high-grade material may become apparent. The use of distance based top cuts allows the higher grades composites to be represented locally in the grade estimate without introducing the risk of high-grade extrapolation. Values used for the distance-based top-cuts applied by domain are displayed below.

Domain	Threshold g/t	Distance m
2300	2	40
3100	3	40
3200	2	40
3300	2	40
3400	2	40
5000	2	40

#### Table 14-47 Black Swan South distance based top-cuts.

14.4.1.4 Density

There is almost no available density information for Black Swan South. The assigned density is based on historical MRE's with no supporting documentation. It has been assigned according to the interpreted regolith only and does not consider rock types. The in-situ density assigned to the updated MRE are summarised below are appropriate for the lithology types at Black Swan South in the absence of density determination data.

#### Table 14-48 Black Swan South in-situ density assignment.

Regolith Type	Density (t/m³)
2 (Oxide)	2.10
3 (Transitional)	2.45
4 (Fresh)	2.70

14.4.1.5 Metallurgy

Cyanidation testing by Saint Barbara in 1994 included 4 samples. Results are listed below.

#### Table 14-49 Black Swan South metallurgical samples – 1994.

Hole ID	Depth (m)	Au (g/t)	Recovery (%)
CBS125	60-70	3.60	95.3
CBS138	106-115	2.15	96.3
CBS154	69-79	2.40	89.6
CBS210	62-74	2.21	98.6

A report summarising the results of nine samples subjected to metallurgical test-work by Saint Barbara Mines Limited in 1995 indicates the possibility the primary ore is refractory at Black Swan South. Subsequent open pit production did not show this to be the case.



Table 14-50 Black Swan South metallurgical samples – 1995.
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Sample No.	Hole ID	Depth (m)	Au (g/t)	Recovery (%)
1	CBS152	56-65	2.66	98.34
2	CBS210	62-74	2.03	98.44
3	CBS125	60-70	3.40	90.46
4	CBS406	77-88	1.54	94.94
5	CBS404	117-126	2.19	96.28
6	CBS365	82-90	3.06	95.10
7	CBS385	128-134	3.25	30.58
8	CBS138	106-115	2.24	93.20
9	CBS364	93-106	4.63	22.79

Mineragraphic review was completed soon after the metallurgical testing mentioned above. This work focussed on the two samples with poor recovery which included CBS385 and CBS364. General comments "suggests that the gold is of the refractory variety". Sulphide minerals typically include pyrite and arsenopyrite.

Cyanidation testing by Saint Barbara in 1997 included samples from Black Swan South (and other Cuddingwarra projects).

Hole ID	Depth (m)	Au (g/t)	Recovery (%)
CBS247	83-90	4.20	96.53
CBS249	99-109	4.91	92.98
CBS271	36-44	2.06	98.20
CBS403	34-40	7.58	99.05
CBS586	32-41	3.79	98.98
CBS701	85-91	2.22	95.74
CBS702	54-61	6.13	96.28
CBS1435	61-70	2.88	89.12
CBS1473	28-31	10.53	99.91

#### Table 14-51 Black Swan South metallurgical samples – 1997.

## 14.4.1.6 Variography

Variography for gold grade was undertaken on the 1 m cut composite data for the combined RD and GC drilling data. Variograms were produced by transforming the capped composite data to Gaussian space, modelling the spatial structure, and then back-transforming the model to real space for use in estimation. This process reduces the impact of outliers on the experimental variogram calculation, allowing for elucidation of the true underlying spatial structure.

Variograms were modelled for the most sampled domains. Variogram modelling for the more sparsely sampled domains was difficult and not considered appropriate for use, as the number of composite samples was limited. Cube adopted the modelled variogram parameters for the remaining mineralised domains.



During grade estimation, the rotation of the variogram models was adjusted to follow the orientation of the search ellipsoid and better fit the orientation of each individual mineralised domain. This was achieved by estimating the dip and strike based on the orientation of DTM trend plane representing the general trend of mineralisation for each domain.

Variogram models are summarised below.

GAUSSIAN VARIOGRAMS - Au Spherical 1 Spherical 2 Isatis Rot. (Geol. Plane													
Domain	Nugget			-									
		sill	major	semi	minor	sill	major	semi	minor	A	+X	-Z	
2100	0.41	0.34	20	15	5	0.25	144	94	10	-20	70	120	
2110	0.37	0.1	42	20	10	0.53	90	37	28	-20	70	25	
2120	0.24	0.17	15	6	5	0.59	88	35	10	-10	50	170	
2130	0.27	0.2	16	12	5	0.53	87	71	10	-10	70	30	
2200	0.33	0.24	24	21	5	0.43	72	57	31	-15	70	165	
2210	0.51	0.24	30	9	3	0.25	127	72	7	200	100	115	
2220	0.45	0.05	20	18	4	0.5	81	56	12	180	145	125	
2230	0.38	0.43	28	14	8	0.19	62	28	15	200	105	160	
2240	0.28	0.35	8	8	5	0.37	45	45	10	20	70	140	
2250	0.38	0.18	20	20	5	0.44	68	44	10	205	110	75	
2300	0.26	0.39	20	19	5	0.35	145	40	7	-20	70	-130	
2310	0.32	0.32	17	15	5	0.36	95	53	10	-10	70	160	
2320	0.6	0.08	11	10	5	0.32	27	20	10	-40	75	110	
2330	0.31	0.04	25	20	5	0.65	100	88	10	-5	80	60	
3030	0.36	0.31	8	8	4	0.33	41	22	6	180	105	-160	
3035	0.23	0.37	7	7	5	0.4	58	44	10	200	100	175	
3040	0.3	0.14	13	7	5	0.56	68	24	10	195	100	80	
3045	0.3	0.14	13	7	5	0.56	68	24	10	195	120	80	
3050	0.43	0.37	9	9	7	0.2	24	16	9	210	100	150	
3060	0.4	0.3	8	5	5	0.3	50	13	8	190	125	120	
3070	0.23	0.37	7	7	5	0.4	58	44	10	200	110	135	
3080	0.38	0.19	16	4	4	0.43	44	14	10	-10	60	10	
3100	0.4	0.35	8	7	2	0.25	80	40	4	220	110	10	
3110	0.4	0.35	15	10	2	0.25	80	50	4	210	110	170	
3120	0.42	0.3	6	6	3	0.28	60	24	6	195	110	170	
3125	0.36	0.41	7	7	2	0.23	23	16	4	200	120	-10	
3130	0.25	0.64	13	7	5	0.11	59	24	10	200	100	80	
3150	0.34	0.17	30	7	5	0.48	40	32	11	-40	70	130	
3160	0.3	0.37	18	17	5	0.33	72	28	11	10	90	130	
3170	0.15	0.38	7	7	6	0.47	88	33	15	230	90	45	
3180	0.48	0.24	17	9	6	0.28	47	24	9	-61	79	117	
3200	0.35	0.33	5	5	2	0.32	39	21	7	210	100	150	
3210	0.18	0.36	5	5	2	0.46	39	21	7	205	105	150	
3250	0.38	0.1	18	12	6	0.52	63	17	9	170	110	-150	
3260	0.4	0.16	22	12	6	0.44	63	27	9	10	55	150	
3270	0.48	0.24	17	9	6	0.28	47	24	9	177	95	80	
3300	0.36	0.49	7	7	2	0.15	24	24	15	190	100	80	
3310	0.36	0.22	8	8	4	0.42	35	22	6	180	100	-170	
3320	0.32	0.26	8	8	4	0.42	37	19	6	200	100	-170	
3400	0.41	0.1	30	8	4	0.49	90	46	33	205	110	40	
3410	0.3	0.18	24	19	5	0.52	96	30	10	240	110	10	
3420	0.41	0.17	29	8	4	0.42	90	52	33	205	110	10	
3430	0.41	0.17	29	8	4	0.42	90	52	33	105	110	10	
3440	0.41	0.17	29	8	4	0.42	90	52	33	105	110	10	
3450	0.49	0.1	10	6	3	0.41	30	22	8	200	145	35	
3460	0.37	0.27	7	6	3	0.36	22	16	7	220	155	-170	
3470	0.47	0.36	8	5	4	0.17	30	30	7	215	70	-170	
3480	0.47	0.32	6	4	4	0.21	25	20	7	99	3	-20	
3485	0.5	0.07	18	11	5	0.43	56	37	10	190	130	150	
3490	0.5	0.25	10	10	5	0.25	20	20	10	150	0	0	
3500	0.25	0.25	28	9	5	0.5	50	27	10	230	120	40	
3510	0.3	0.07	24	15	5	0.63	96	36	10	240	110	10	
3520	0.36	0.2	41	15	5	0.44	120	50	10	230	120	120	
3700	0.4	0.4	6	6	5	0.2	28	21	15	230	120	120	
3710	0.37	0.27	24	6	5	0.36	41	18	15	200	120	50	
4200	0.25	0.33	7	6	6	0.42	30	21	12	210	140	150	
4300	0.27	0.5	29	11	6	0.23	71	22	19	200	130	-170	
5000	0.35	0.46	8	4	4	0.19	38	22	11	230	120	10	

Table 14-52 Black Swan South variogram (	models – Gaussian.
	nouoto ouussium



		BA	CK-TRANS	FORME	D VARIO	GRAMS - A	u - NORM	IALISED	SILLS			
Domain	Nugget		Spher				Spheri			Isatis Ro	· ·	I. Plane
		sill	major (m			sill	major (m)			A	+X	-Z
2100	0.62	0.25	20	15	5	0.13	134	88	9	-20	70	120
2110	0.56	0.16	31	15	8	0.28	86	35	27	-20	70	25
2120	0.37	0.24	15	6	4	0.39	84	33	9	-10	50	170
2130	0.44	0.24	17	12	4	0.32	84	68	9	-10	70	30
2200	0.59	0.26	21	17	5	0.16	64	52	28	-15	70	165
2210	0.69	0.17	27	9	3	0.13	118	69	6	200	100	115
2220	0.51	0.10	22	20	6	0.39	80	55	12	180	145	125
2230 2240	0.52	0.36	28	13	7	0.12	60 42	28 42	15	200	105 70	160 140
2240	0.53 0.49	0.26	8 22	8 20	5	0.21 0.35	67	42	10 10	20 205	110	75
2230	0.49	0.10	19	17	4	0.33	137	38	7	-203	70	-130
2310	0.40	0.30	13	17	5	0.17	91	51	10	-10	70	160
2320	0.43	0.08	12	14	8	0.23	27	20	10	-40	75	110
2330	0.46	0.00	31	26	5	0.42	95	83	10	-5	80	60
3030	0.40	0.12	8	8	4	0.42	41	22	6	180	105	-160
3035	0.49	0.30	7	7	5	0.31	56	43	10	200	100	175
3040	0.32	0.38	13	7	5	0.31	68	24	10	195	100	80
3040	0.36	0.21	13	7	5	0.30	68	24	10	195	120	80
3050	0.50	0.24	9	9	7	0.33	24	16	9	210	120	150
3060	0.51	0.30	8	5	6	0.10	50	13	8	190	125	120
3070	0.33	0.33	7	7	5	0.34	58	44	10	200	110	135
3080	0.45	0.23	16	5	5	0.32	44	14	10	-10	60	10
3100	0.56	0.26	8	7	2	0.18	80	40	4	220	110	10
3110	0.57	0.26	15	10	2	0.17	80	50	4	210	110	170
3120	0.55	0.24	6	6	3	0.21	60	24	6	195	110	170
3125	0.49	0.36	7	7	2	0.15	23	16	4	200	120	-10
3130	0.36	0.58	13	7	5	0.06	59	24	10	200	100	80
3150	0.44	0.28	30	7	5	0.28	40	32	11	-40	70	130
3160	0.39	0.37	18	17	5	0.25	72	28	11	10	90	130
3170	0.38	0.32	7	7	6	0.30	88	33	15	230	90	45
3180	0.52	0.24	15	9	6	0.23	47	24	9	-61	79	117
3200	0.53	0.26	5	5	2	0.21	39	21	7	210	100	150
3210	0.44	0.27	5	5	2	0.29	39	19	7	205	105	150
3250	0.49	0.18	18	10	6	0.33	63	17	9	170	110	-150
3260	0.50	0.23	22	12	6	0.28	63	27	9	10	55	150
3270	0.57	0.24	17	9	6	0.19	47	24	9	177	95	80
3300	0.62	0.31	7	7	2	0.07	24	24	15	190	100	80
3310	0.55	0.23	8	8	4	0.22	35	22	6	180	100	-170
3320	0.41	0.29	8	8	4	0.31	37	19	6	200	100	-170
3400	0.52	0.14	28	8	4	0.34	90	46	33	205	110	40
3410	0.41	0.19	24	19	5	0.40	96	30	10	240	110	10
3420	0.48	0.15	29	8	4	0.37	88	50	32	205	110	10
3430	0.45	0.17	29	8	4	0.38	88	50	32	105	110	10
3440	0.48	0.17	29	8	4	0.35	88	50	32	105	110	10
3450	0.57	0.12	10	6	3	0.30	30	22	8	200	145	35
3460	0.50	0.21	7	6	3	0.29	22	16	7	220	155	-170
3470 3480	0.60	0.27	8 6	5 4	4	0.13	30 25	30 20	7	215 99	70 3	-170
3480	0.61	0.23	18	4	4 5	0.16	25 54	35	10	99 190	3 130	-20 150
3485	0.60	0.07	10	10	5	0.33	20	20	10	190	0	0
3500	0.39	0.20	25	9	5	0.21	50	20	10	230	120	40
3510	0.38	0.38	25	15	5	0.23	96	36	10	230	120	40
3520	0.43	0.17	41	15	5	0.40	120	50	10	230	120	120
3700	0.48	0.24	6	6	5	0.28	28	21	10	230	120	120
3710	0.33	0.33	24	6	5	0.14	41	18	15	200	120	50
4200	0.42	0.30	7	6	6	0.28	30	21	13	200	140	150
4200	0.44	0.30	29	11	6	0.20	71	21	12	200	130	-170
5000	0.53	0.35	8	4	4	0.11	38	22	11	230	120	10
3000	0.00	0.55	- <sup>0</sup>	-7	-	0.11	JU JU			230	120	10

#### Table 14-53 Black Swan South variogram models – Back Transformed.

#### 14.4.1.7 Block Model and Grade Estimation

The final block model for Black Swan South was created in Surpac (.mdl) format, although the grade interpolation work was undertaken in Isatis. The block model has been created in POSGOLD grid and the definition is shown below.



The ultimate SMU estimation block size was set at 5 mE × 5 mN × 2.5 mRL. The criteria considered for the determination of the block size were as follows:

- Mineralised body geometry a significant portion of the mineralisation is associated with the wide porphyry hosted domains and therefore a square block (in plan) was selected.
- Practical mining considerations realistically, it was determined that mining selectivity was unlikely at a scale less than 5 mE × 5 mN, and the block height equals a likely bench height.

	Y	X	Z
Minimum	27,110	24,000	-200
Maximum	29,410	25,400	450
Parent Cell	5	5	2.5
Sub-Cell	2.5	2.5	1.25
Rotation	None		

Table 14-54 Black Swan South block model parameters – bss wgx 20200513.mdl.

The block model "bss\_wgx\_20200513.mdl" represents the final block model estimate which has been flagged and into which estimated grades are reported.

Note, estimation grids vary depending on the drill spacing and estimation method.

The QKNA was performed in Supervisor and Isatis software packages. Minimum and maximum number of samples, number of sectors and number of samples per drill hole are optimised for each domain for each support to allow for the best local and global estimate. Global estimated means are compared with declustered composite means and estimated informed cells means are compared with moving average composite means. Differences within ±5% are deemed acceptable. Due to the extrapolation of high / low grades within poorly informed areas, it was sometimes not possible to have a relative difference lower than 5% and all the efforts have been made to achieve the best estimate.

All estimation work was carried out using a combination of Surpac mining software and Isatis geostatistical software. Grade interpolation for gold within areas defined by Grade Control (GC) drilling was undertaken using Ordinary Kriging (OK) of 1 m downhole composited drilling data into a three-dimensional block model, with an ultimate SMU block size of 5 mE × 5 mN × 2.5 mRL. Outside of the GC volume, in areas informed by relatively wide-spaced Resource Development (RD) drilling, Localised Uniform Conditioning (LUC) was applied to produce a model suitable for reporting above grade cut-offs and for mine planning purposes based on the same SMU size. The LUC estimate also incorporated an Information Effect correction to allow for some effect of incomplete information on the local recoverable model.



LUC was selected over OK because:

- LUC better represents the selectivity likely to be achievable during grade control compared to the OK estimate.
- LUC honours the local high grade and low-grade regions better than the OK estimate.
- Linking of the internal high grade and low-grade regions within the porphyry lithology is difficult and not predicable given the current drilling resolution.
- Visually the LUC estimate produces a grade architecture that is more realistic than the OK estimates within the estimation domains.

The final estimation strategy included:

- OK estimation in Isatis based on the SMU block size using all composites (GC + RD). This used hard boundaries between domains and above and below the depleted horizon.
- LUC estimation in Isatis based on an OK panel estimate and SMU support using all composites (GC + RD). This used a combination of hard and soft boundaries between domains and a hard boundary above and below the depleted horizon.

Trend surfaces which approximate the orientation of mineralisation within each domain were created in Surpac and used to guide the dynamic search.

The combined GC and RD cut 1 m composite data were used to estimate gold grade, with an OK interpolator using hard boundaries between estimation domains. This estimate was undertaken directly into the 5 mE × 5 mN × 2.5 mRL SMU blocks which were discretised to  $5(E) \times 5(N) \times 4(RL)$ . The search parameters used are listed in **Table** 14-55. For all the estimates undertaken, dynamic local rotations were used to set the variogram and search orientations - the interpreted surface files used to produce these rotation parameters were modelled in Surpac, based on visual cross-sectional observations of grade continuity.



#### Table 14-55 OK GC Estimation Parameters for Gold Grade.

					Samples	per Estimate		Distance Ba	sed Top Cut		Search	Veighbourhoo	d	Desc	cretisa	tion
										Max Search		Major/	Major/			
Туре	Sub-Domain	Est. Attribute	Data	Min	Sectors	Max per Sect	Max	Distance	Topcut	Radius	Bearing Plunge Di	Semi Ratio	Minor	x	у	z
OK GC	2200_All	gc_smu_au_ppm	All GC	6	4	5	20	2	20	480	Dynamic	1.26	2.30	5	5	4
OK GC	2210_All	gc_smu_au_ppm	All GC	4	1	16	16	9999	9999	53	Dynamic	1.77	17.36	5	5	4
OK GC	2230_All	gc_smu_au_ppm	All GC	4	1	15	15	9999	9999	74	Dynamic	2.21	4.04	5	5	4
OK GC	2240_All	gc_smu_au_ppm	All GC	6	4	5	20	2	20	135	Dynamic	1.00	4.53	5	5	4
OK GC	2300_All	gc_smu_au_ppm	All GC	6	4	5	20	2	20	144	Dynamic	3.63	19.82	5	5	4
OK GC	2310_All	gc_smu_au_ppm	All GC	4	1	15	15	2	20	135	Dynamic	1.79	9.53	5	5	4
OK GC	3030_NonDepl	gc_smu_au_ppm	RD GC Non-Depl	6	4	5	20	2	20	135	Dynamic	1.88	2.30	5	5	4
OK GC	3030_Depl	gc_smu_au_ppm	RD GC Depl	6	4	5	20	2	20	135	Dynamic	1.88	2.30	5	5	4
OK GC	3040_AII	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	45	Dynamic	2.83	3.40	5	5	4
OK GC	3045_All	gc_smu_au_ppm	All GC	4	1	15	15	9999	9999	33	Dynamic	2.83	6.80	5	5	4
OK GC	3050_All	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	45	Dynamic	1.50	2.67	5	5	4
OK GC	3060_All	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	38	Dynamic	3.80	6.25	5	5	4
OK GC	3080_All	gc_smu_au_ppm	All GC	4	1	15	15	9999	9999	84	Dynamic	3.14	4.40	5	5	4
OK GC	3100_NonDepl	gc_smu_au_ppm	RD GC Non-Depl	6	1	16	16	3	20	30	Dynamic	2.00	10.00	5	5	4
OK GC	3100_Depl	gc_smu_au_ppm	RD GC Depl	6	4	5	20	3	20	100	Dynamic	2.00	10.00	5	5	4
OK GC	3110_NonDepl	gc_smu_au_ppm	RD GC Non-Depl	6	4	5	20	2	20	144	Dynamic	1.60	20.00	5	5	4
OK GC	3110_Depl	gc_smu_au_ppm	RD GC Depl	6	4	5	20	2	20	180	Dynamic	1.60	20.00	5	5	4
OK GC	3120_NonDepl	gc_smu_au_ppm	RD GC Non-Depl	6	4	5	20	2	20	42	Dynamic	2.50	4.74	5	5	4
OK GC	3120_Depl	gc_smu_au_ppm	RD GC Depl	6	4	5	20	2	20	62	Dynamic	2.50	4.74	5	5	4
OK GC	3125_All	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	45	Dynamic	1.46	5.83	5	5	4
OK GC	3150_All	gc_smu_au_ppm	All GC	4	1	15	15	2	20	107	Dynamic	1.25	3.53	5	5	4
OK GC	3200_NonDepl	gc_smu_au_ppm	RD GC Non-Depl	6	4	5	20	2	20	600	Dynamic	1.86	5.57	5	5	4
OK GC	3200_Depl	gc_smu_au_ppm	RD GC Depl	6	4	5	20	2	20	117	Dynamic	1.86	5.57	5	5	4
OK GC	3260_All	gc_smu_au_ppm	All GC	4	1	15	15	9999	9999	126	Dynamic	2.33	7.00	5	5	4
OK GC	3270_All	gc_smu_au_ppm	All GC	4	1	15	15	9999	9999	71	Dynamic	1.97	5.07	5	5	4
OK GC	3300_NonDepl	gc_smu_au_ppm	RD GC Non-Depl	6	1	16	16	2	20	36	Dynamic	1.00	1.57	5	5	4
OK GC	3300_Depl	gc_smu_au_ppm	RD GC Depl	6	1	16	16	2	20	36	Dynamic	1.00	1.57	5	5	4
OK GC	3440_AII	gc_smu_au_ppm	All GC	2	1	10	10	9999	9999	270	Dynamic	1.73	2.73	5	5	4
OK GC	3450_All	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	45	Dynamic	1.36	3.75	5	5	4
OK GC	3460_AII	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	33	Dynamic	1.38	3.00	5	5	4
OK GC	3470_All	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	45	Dynamic	1.00	4.09	5	5	4
OK GC	3480_All	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	38	Dynamic	1.27	3.45	5	5	4
OK GC	3490_AII	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	30	Dynamic	1.00	2.00	5	5	4
OK GC	3700_All	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	42	Dynamic	1.31	1.83	5	5	4
OK GC	4200_All	gc_smu_au_ppm	All GC	6	4	5	20	9999	9999	45	Dynamic	1.41	2.50	5	5	4
OK GC	5000_NonDepl	gc_smu_au_ppm	RD GC Non-Depl	6	4	5	20	2	20	57	Dynamic	1.73	3.35	5	5	4
OK GC	5000_Depl	gc_smu_au_ppm	RD GC Depl	6	4	5	20	2	20	57	Dynamic	1.73	3.35	5	5	4



Ordinary Kriging (OK) interpolation was undertaken into relatively large 'Panel' sized blocks for gold grade. This Panel block estimate is just a precursor step to a Localised Uniform Conditioning (LUC) estimate at a smaller 'SMU' block size. The Panel block size of 10 mE × 20 mN × 5 mRL was chosen such that the block dimensions is, at minimum, between one-third and one-half of the nominal informing data spacing. Also considered was the requirement for the Panel size to be a multiple of the final SMU size.

An initial grade estimate using only the RD data was completed for the larger domain 3100 where both RD and GC data exist. The aim of this exercise was to compare the resultant LUC estimate based on RD data only against the GC SMU estimate. This enabled the LUC estimate (based on RD data only) to be validated against a ground truth model (GC data at an SMU scale). This process of comparing an LUC estimate with RD data only to the equivalent GC estimate can allow some level of calibration through slight modifications to the estimation parameters such as the use of distance limiting of high-grade composites. The volume used to compare the GC and LUC estimates is displayed below. An example cross section through both estimates shows a good visual comparison (**Figure 14-33**) and this is further confirmed with the grade tonnage comparison in **Table 14-56**.

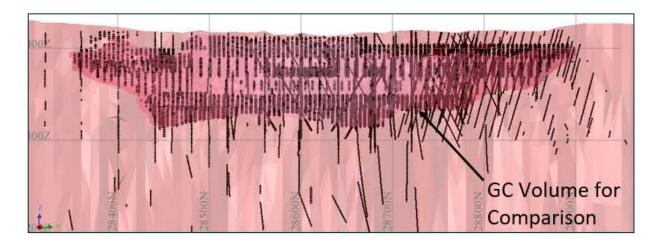
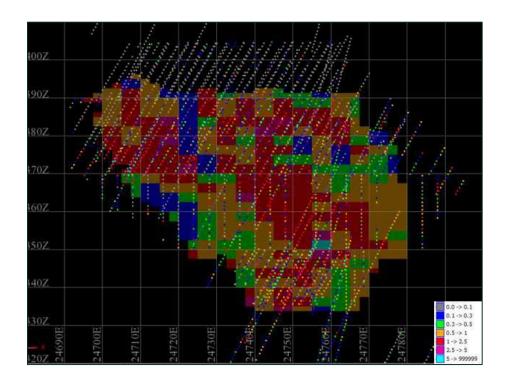
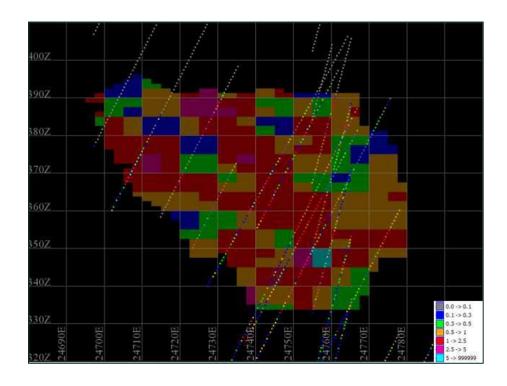


Figure 14-32 Black Swan South domain 3100 grade control volume for comparing grade control v. Localised Uniform Conditioning – long-section view. Source: Westgold.





(a)



(b)

Figure 14-33 Black Swan South domain 3100 grade control volume for comparing grade control (a) vs LUC (b) – cross-section at 28,760 mN. Source: Westgold.



	GC Estima	te (GC O	nly Data)	RD Estima	ate (RD On	ly Data)	Acti	ual Differe	nce	Rela	tive Differe	ence
Cut-Off	Tonnes	Au (g/t)	Au (Oz)	Tonnes	Au (g/t)	Au (Oz)	Tonnes	Au (g/t)	Au (Oz)	Tonnes	Au (g/t)	Au (Oz)
0	3,068,630	1.03	101,618	3,068,630	1.04	102,704	-	0.01	1,085	0%	1%	1%
0.1	2,973,463	1.06	101,431	2,995,009	1.07	102,551	21,546	0.00	1,120	1%	0%	1%
0.2	2,753,724	1.13	100,398	2,832,184	1.12	101,802	78,460	-0.02	1,404	3%	-1%	1%
0.3	2,506,621	1.22	98,400	2,583,501	1.20	99,840	76,880	-0.02	1,440	3%	-2%	1%
0.4	2,239,873	1.32	95,346	2,305,044	1.31	96,786	65,171	-0.02	1,440	3%	-1%	2%
0.5	1,986,692	1.44	91,723	2,032,357	1.42	92,851	45,665	-0.01	1,128	2%	-1%	1%
0.6	1,738,543	1.56	87,365	1,803,955	1.53	88,738	65,412	-0.03	1,373	4%	-2%	2%
0.7	1,519,723	1.69	82,769	1,596,816	1.65	84,504	77,093	-0.05	1,734	5%	-3%	2%
0.8	1,333,964	1.83	78,313	1,402,907	1.77	79,970	68,943	-0.05	1,657	5%	-3%	2%
0.9	1,173,843	1.96	73,933	1,232,998	1.90	75,399	59,155	-0.06	1,466	5%	-3%	2%
1	1,027,604	2.10	69,479	1,076,031	2.04	70,609	48,427	-0.06	1,129	5%	-3%	2%
1.2	806,161	2.38	61,712	844,681	2.30	62,434	38,520	-0.08	722	5%	-3%	1%
1.4	656,820	2.63	55,496	680,761	2.54	55,549	23,941	-0.09	53	4%	-3%	0%
1.6	537,093	2.88	49,749	552,988	2.78	49,390	15,895	-0.10	-359	3%	-4%	-1%
1.8	452,644	3.10	45,143	450,484	3.02	43,798	-2,160	-0.08	-1,345	0%	-3%	-3%
2	378,730	3.34	40,645	375,600	3.25	39,258	-3,130	-0.09	-1,387	-1%	-3%	-3%
2.5	254,267	3.88	31,743	235,363	3.88	29,330	-18,904	-0.01	-2,413	-7%	0%	-8%
3	174,110	4.42	24,725	158,454	4.46	22,711	-15,656	0.04	-2,014	-9%	1%	-8%
3.5	120,542	4.94	19,157	92,472	5.36	15,921	-28,070	0.41	-3,236	-23%	8%	-17%
4	84,857	5.45	14,880	67,081	5.95	12,828	-17,776	0.49	-2,052	-21%	9%	-14%
4.5	57,996	6.02	11,219	51,711	6.45	10,727	-6,285	0.44	-493	-11%	7%	-4%
5	41,005	6.55	8,629	35,459	7.20	8,208	-5,546	0.66	-420	-14%	10%	-5%

# Table 14-56 Grade - tonnage comparison for grade control volume in domain 3100 between grade control (GC data) vs LUC (RD data).

Once the estimation method had been validated and finalised in the initial LUC RD process, the complete LUC estimation process incorporating all available RD and GC data was undertaken. The estimation search parameters used for Panel OK estimate are listed below. The dynamic rotations mentioned previously were used for the Panel OK estimate.

A soft boundary approach for eight domains was used where the mineralisation boundary (based on porphyry interpretation) is not clear. This was achieved by including the composites within a ~10m halo of the neighbouring domain to be used during estimation. The list of domains that used a soft boundary and the neighbouring(s) are:

- 3100 with 5000
- 3150 with 5000
- 3160 with 5000
- 3170 with 5000
- 3200 with 3300 and 5000
- 3300 with 3200, 4200 and 5000
- 4200 with 3300
- 5000 with 3100, 3150, 3160, 3170, 3200 and 3300.



					Samples	per Estimate		Distance Ba	sed Top Cut		Search N	eighbourhoo	d	Desc	retisa	ation
										Max Search		Major/	Major/			
Domain	Sub-Domain	Est. Attribute	Data	Min	Sectors	Max per Sect	Max	Distance	Topcut	Radius	Bearing Plunge Dip	Semi Ratio	Minor	х	у	z
2100	2100_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	201	Dynamic	1.52	3.72	5	5	4
2110	2110_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	172	Dynamic	2.46	3.19	5	5	4
2120	2120_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	168	Dynamic	2.55	3.73	5	5	4
2130	2130_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	168	Dynamic	1.24	3.73	5	5	4
2200	2200_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	2	40	128	Dynamic	1.23	2.29	5	5	4
2210	2210_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	295	Dynamic	1.71	5.46	5	5	4
2220	2220_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	295	Dynamic	1.71	5.46	5	5	4
2230	2230_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	120	Dynamic	2.14	2.67	5	5	4
2240	2240_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	2	40	84	Dynamic	1.00	2.10	5	5	4
2250	2250_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	134	Dynamic	1.60	2.68	5	5	4
2300 2310	2300_NonDepl 2310 NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16 16	2	40 40	274 154.7	Dynamic	2.88 1.78	4.89 3.09	5	5 5	4
2310	2310_NonDepl 2320_NonDepl	au_ppm	RD GC Non-Depl RD GC Non-Depl	4	4	4	16	2 9999	40 9999	81	Dynamic Dynamic	1.78	2.03	5	5	4
2320	2320_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	142.5	Dynamic	1.55	2.05	5	5	4
3030	3030 NonDepl	au_ppm au_ppm	RD GC Non-Depl	4	4	4	16	2	40	142.5	Dynamic	1.14	2.85	5	5	4
3040	3035 NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	123	Dynamic	1.30	2.95	5	5	4
3045	3040 NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	136	Dynamic	2.83	2.72	5	5	4
3045	3050 NonDepl	au_ppm au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	72	Dynamic	1.50	2.00	5	5	4
3060	3060 NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	100	Dynamic	3.85	2.50	5	5	4
3070	3070_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	116	Dynamic	1.32	2.90	5	5	4
3080	3080_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	88	Dynamic	3.14	2.93	5	5	4
3100	3100 NonDepl	au_ppm	RD GC Non-Depl - Soft Bdy	4	4	4	16	3	40	160	Dynamic	2.00	4.00	5	5	4
3110	3110 NonDepl	au ppm	RD GC Non-Depl	4	4	4	16	2	40	136	Dynamic	1.60	3.78	5	5	4
3120	3120_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	2	40	180	Dynamic	2.50	4.29	5	5	4
3130	3130_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	118	Dynamic	2.46	2.95	5	5	4
3150	3150 NonDepl	au_ppm	RD GC Non-Depl - Soft Bdy	4	4	4	16	2	40	80	Dynamic	1.25	1.82	5	5	4
3160	3160_NonDepl	au_ppm	RD GC Non-Depl - Soft Bdy	4	4	4	16	9999	9999	122.4	Dynamic	2.57	2.78	5	5	4
3170	3170_NonDepl	au_ppm	RD GC Non-Depl - Soft Bdy	4	4	4	16	2	40	149.6	Dynamic	2.67	3.32	5	5	4
3200	3200_NonDepl	au_ppm	RD GC Non-Depl - Soft Bdy	4	4	4	16	2	40	117	Dynamic	1.86	2.79	5	5	4
3210	3210_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	117	Dynamic	2.05	3.34	5	5	4
3250	3250_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	189	Dynamic	3.71	4.20	5	5	4
3260	3260_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	157.5	Dynamic	2.33	3.50	5	5	4
3270	3270_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	117.5	Dynamic	1.96	3.26	5	5	4
3300	3300_NonDepl	au_ppm	RD GC Non-Depl - Soft Bdy	4	4	4	16	2	40	72	Dynamic	1.00	1.60	5	5	4
3310	3310_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	87.5	Dynamic	1.59	2.92	5	5	4
3320	3320_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	92.5	Dynamic	1.95	3.08	5	5	4
3400	3400_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	2	40	180	Dynamic	1.96	2.73	5	5	4
3410	3410_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	144	Dynamic	3.20	3.60	5	5	4
3420	3420_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	132	Dynamic	1.76	2.75	5	5	4
3430	3430_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	132	Dynamic	1.76	2.75	5	5	4
3440	3440_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	132	Dynamic	1.76	2.75	5	5	4
3450 3460	3450_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999 9999	9999	90	Dynamic	1.36 1.38	2.25	-	5	4
3460	3460_NonDepl 3470 NonDepl	au_ppm	RD GC Non-Depl RD GC Non-Depl	4	4	4	16 16	9999	9999 9999	66 90	Dynamic Dynamic	1.38	1.89 2.57	5	5 5	4
3470	3470_NonDepl 3480_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	90	Dynamic	1.00	2.57	5	5	4
3480	3480_NonDepl 3485 NonDepl	au_ppm au_ppm	RD GC Non-Depi RD GC Non-Depi	4	4	4	16	9999	9999	108	Dynamic	1.25	2.14	5	5	4
3485	3485_NonDepl 3500 NonDepl	au_ppm au_ppm	RD GC Non-Depl	4	4	4	16	2	40	108	Dynamic	1.54	2.70	5	5	4
3510	3510 NonDepl	au_ppm au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	125	Dynamic	2.67	4.80	5	5	4
3520	3520 NonDepl	au_ppm au_ppm	RD GC Non-Depl	4	4	4	16	2	40	204	Dynamic	2.40	4.00	5	5	4
3700	3700 NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	2	40	84	Dynamic	1.33	1.87	5	5	4
3710	3710 NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	102.5	Dynamic	2.28	2.28	5	5	4
4200	4200 NonDepl	au_ppm	RD GC Non-Depl - Soft Bdy	4	4	4	16	9999	9999	90	Dynamic	1.43	2.50	5	5	4
4300	4300_NonDepl	au_ppm	RD GC Non-Depl	4	4	4	16	9999	9999	177.5	Dynamic	3.23	3.11	5	5	4
5000	5000_NonDepl	au_ppm	RD GC Non-Depl - Soft Bdy	4	4	4	16	2	40	114	Dynamic	1.73	2.59	5	5	4
5000	5000_NonDepl	au_ppm	RD GC Non-Depl - Soft Bdy	4	4	4	16	2	40	114	Dynamic	1.73	2.59	5	5	

#### Table 14-57 Black Swan South OK panel estimation parameters for gold grade – below the depleted horizon.

					Samples	per Estimate		Distance Ba	sed Top Cut		Search N	leighbourhoo	d	Desc	retisa	ation
										Max Search		Major/	Major/			
Domain	Sub-Domain	Est. Attribute	Data	Min	Sectors	Max per Sect	Max	Distance	Topcut	Radius	Bearing Plunge Dip	Semi Ratio	Minor	x	у	z
2100	2100_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	216	Dynamic	1.53	7.20	5	5	4
2110	2110_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	135	Dynamic	2.41	3.21	5	5	4
2120	2120_Depl	au_ppm	RD GC Depl	4	1	16	16	9999	9999	132	Dynamic	2.49	4.40	5	5	4
2130	2130_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	131	Dynamic	1.22	4.37	5	5	4
2200	2200_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	108	Dynamic	1.26	2.30	5	5	4
2210	2210_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	381	Dynamic	1.76	6.80	5	5	4
2230	2230_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	122	Dynamic	2.21	4.04	5	5	4
2240	2240_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	93	Dynamic	1.00	4.53	5	5	4
2300	2300_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	68	Dynamic	3.63	19.82	5	5	4
2310	2310_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	340	Dynamic	1.79	9.53	5	5	4
2330	2330_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	218	Dynamic	1.14	10.00	5	5	4
3030	3030_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	143	Dynamic	1.88	2.30	5	5	4
3035	3035_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	41	Dynamic	1.32	2.90	5	5	4
3040	3040_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	150	Dynamic	2.83	6.80	5	5	4
3050	3050_Depl	au_ppm	RD GC Depl	4	1	16	16	9999	9999	62	Dynamic	1.50	2.67	5	5	4
3100	3100_Depl	au_ppm	RD GC Depl - Soft Bdy	6	1	16	16	9999	9999	87	Dynamic	2.00	10.00	5	5	4
3110	3110_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	340	Dynamic	1.60	6.67	5	5	4
3120	3120_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	102	Dynamic	2.50	5.00	5	5	4
3130	3130_Depl	au_ppm	RD GC Depl	4	1	16	16	9999	9999	120	Dynamic	2.46	5.90	5	5	4
3150	3150_Depl	au_ppm	RD GC Depl - Soft Bdy	4	1	16	16	9999	9999	400	Dynamic	1.25	3.53	5	5	4
3160	3160_Depl	au_ppm	RD GC Depl - Soft Bdy	6	1	16	16	9999	9999	87	Dynamic	2.57	6.35	5	5	4
3170	3170_Depl	au_ppm	RD GC Depl - Soft Bdy	6	1	16	16	9999	9999	66	Dynamic	2.64	5.74	5	5	4
3200	3200_Depl	au_ppm	RD GC Depl - Soft Bdy	6	1	16	16	9999	9999	320	Dynamic	1.67	2.50	5	5	4
3210	3210_Depl	au_ppm	RD GC Depl	4	1	16	16	9999	9999	800	Dynamic	1.86	5.57	5	5	4
3250	3250_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	600	Dynamic	3.65	6.79	5	5	4
3260	3260_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	35	Dynamic	2.33	7.00	5	5	4
3300	3300_Depl	au_ppm	RD GC Depl - Soft Bdy	6	1	16	16	9999	9999	295	Dynamic	1.00	1.92	5	5	4
3310	3310_Depl	au_ppm	RD GC Depl	4	1	16	16	9999	9999	60	Dynamic	1.61	5.89	5	5	4
3320	3320_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	108	Dynamic	1.95	6.17	5	5	4
3400	3400_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	132	Dynamic	1.96	2.70	5	5	4
3500	3500_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	71	Dynamic	1.85	5.00	5	5	4
3510	3510_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	500	Dynamic	2.67	7.20	5	5	4
3520	3520_Depl	au_ppm	RD GC Depl	4	1	16	16	9999	9999	78	Dynamic	2.40	12.00	5	5	4
4200	4200_Depl	au_ppm	RD GC Depl - Soft Bdy	6	1	16	16	9999	9999	95	Dynamic	1.41	2.50	5	5	4
4300	4300_Depl	au_ppm	RD GC Depl	6	1	16	16	9999	9999	126	Dynamic	3.24	3.69	5	5	4
5000	5000_Depl	au_ppm	RD GC Depl - Soft Bdy	6	1	16	16	9999	9999	71	Dynamic	1.50	2.00	5	5	4

Table 14-58 Black Swan South OK panel estimation parameters for gold grade – above the depleted horizon.

The LUC estimation process is preceded by a standard Uniform Conditioning (UC) estimate of recoverable resources. The UC resource estimation process attempts to estimate the recoverable tonnage and grade based on the dimensions of the SMU, which is regarded as being practically achievable during actual mining. UC postprocessing of the OK results for gold was implemented for 5 mE × 5 mN × 2.5 mRL sized SMUs and incorporated an Information Effect correction based on an assumed ultimate GC drill hole spacing of 5 mX × 10 mY × 1 mRL. The Information Effect is a theoretical 'penalty' adjustment to the SMU grade tonnage distribution to account for anticipated ore loss and dilution incurred when making mining selectivity decisions based on likely GC spaced data - the impact of this correction is typically small. The result of the UC process is an estimate, per Panel, of the recoverable metal, tonnes and grade at various grade cut-offs, assuming that SMU sized blocks are ultimately selected during mining. However, the reader should note that the UC process does not assign grade estimates to individual SMUs within a panel. The UC grade estimates at a cut-off of 0.0 g/t should conform to the OK estimates per Panel, and this property was used to validate the UC block model.

The UC process applies a Change of Support correction based on the composite sample distribution and variogram model, conditioned to the Panel grade estimate, to predict the likely grade tonnage distribution at the SMU selectivity.

LUC is a post-processing step that can be applied to UC estimates to provide indicative SMU scale estimates within each panel (Abzalov, 2006). The results of the LUC are consistent with the underlying UC estimate on a per-panel basis. LUC requires initially that local "ranking" SMU estimates are made by some chosen estimation method. In this case OK, with the same search parameters used for the Panel OK estimate listed below was implemented.

The local SMU estimates within each panel are ranked in order of increasing grade. A quantile-quantile type matching of the SMU grade distribution, as determined by UC, with the ranked SMU's is then made. The OK "ranking" SMU grades are finally replaced by the corresponding grades from the UC grade distribution. This yields the LUC SMU-scale grade estimates, which conform exactly to the SMU grade distribution predicted by the UC in panels.

It should be clearly noted that the LUC estimates are typically based on relatively wide spaced data and are therefore of low confidence at the local scale. They should be considered to be indicative of the SMU grade variability that will eventuate when the deposit is grade controlled and mined. The individual SMU grade estimates are simply a probabilistic realisation of the grade at this scale and provide a result which simplifies the mining studies. It would, however, be highly inadvisable to rely on the LUC estimates for short term mine planning purposes. LUC estimates are generally only applicable to open pit scenarios and are typically unsuitable for underground mining studies where local selectivity is limited.



## 14.4.1.8 Model Validation

The validation of the estimation was done by domain, comparing the composite data verses the final grade estimate. Validation is performed both locally and globally, by comparing statistics, swath plots and visual checks on cross-sections.

The validation plots and figures presented in this section focus on the main domains 2200, 2300, 3100, 3200, 3300, 4300, and 5000.

The global statistical comparison between the estimated mean for each domain and the informing composite data is summarised below.

		Cut RD + G	iC Comps	-		Cu	t RD Only (	Comps			Block	Model Esti	mate		BM vs	RD+GC	BM vs I	RD Only	BM vs I	RD_Decl
Domain	No.	Min.	Max.	Mean	No.	Min.	Max.	Mean	Mean_Decl	No.	Min.	Max.	Mean	Vol. Prop.	Diff.	Rel. Diff	Diff.	Rel. Diff	Diff.	Rel. Diff
2100	376	0.01	0.90	0.07	376	0.01	0.90	0.07	0.07	91,880	0.00	0.57	0.05	2.6%	-0.02	-29%	-0.02	-29%	-0.02	-25%
2110	431	0.01	0.50	0.03	431	0.01	0.50	0.03	0.03	93,206	0.00	0.27	0.03	2.6%	0.00	0%	0.00	0%	0.00	-3%
2120	109	0.01	1.20	0.12	109	0.01	1.20	0.12	0.10	20,580	0.02	1.00	0.10	0.6%	-0.02	-17%	-0.02	-17%	0.00	-1%
2130	316	0.01	0.80	0.07	316	0.01	0.80	0.07	0.08	44,388	0.00	0.51	0.07	1.3%	0.00	0%	0.00	0%	0.00	-7%
2200	1,722	0.01	11.00	0.20	1,516	0.01	11.00	0.21	0.20	192,424	0.00	5.46	0.18	5.5%	-0.02	-10%	-0.03	-14%	-0.02	-9%
2210 2220	296 346	0.00	5.50	0.30	214	0.01	5.50 0.80	0.37	0.35	17,616 23,185	0.03	1.77 0.56	0.35	0.5%	0.05 -0.01	17%	-0.02	-5%	0.00	-1% 2%
2220	432	0.01	0.80	0.16	346 404	0.01	1.80	0.16	0.15	23,185	0.00	1.16	0.15	0.7%	-0.01	-6% -6%	-0.01	-6% -11%	-0.02	-9%
2230	328	0.00	11.00	0.17	216	0.01	11.00	0.18	0.18	14,985	0.00	6.07	0.10	0.8%	-0.01	-8%	-0.02	-24%	-0.14	-17%
2250	95	0.00	1.00	0.14	89	0.01	1.00	0.05	0.15	4,712	0.00	0.47	0.00	0.1%	0.00	0%	-0.01	-7%	-0.01	-5%
2300	2,410	0.00	30.00	0.95	1,219	0.01	30.00	0.81	0.69	109,373	0.01	13.53	0.63	3.1%	-0.32	-34%	-0.18	-22%	-0.06	-9%
2310	427	0.01	3.00	0.31	396	0.01	3.00	0.32	0.31	42,948	0.02	2.24	0.29	1.2%	-0.02	-6%	-0.03	-9%	-0.02	-8%
2320	44	0.05	1.30	0.40	44	0.05	1.30	0.40	0.36	2,898	0.20	0.74	0.40	0.1%	0.00	0%	0.00	0%	0.04	10%
2330	243	0.01	3.50	0.30	243	0.01	3.50	0.30	0.29	29,565	0.02	2.16	0.25	0.8%	-0.05	-17%	-0.05	-17%	-0.04	-13%
3030	887	0.00	5.00	0.39	590	0.01	5.00	0.43	0.46	31,557	0.00	2.35	0.42	0.9%	0.03	8%	-0.01	-2%	-0.04	-8%
3035	90	0.01	6.00	0.52	90	0.01	6.00	0.52	0.67	5,984	0.02	2.49	0.60	0.2%	0.08	15%	0.08	15%	-0.07	-11%
3040	223	0.01	3.00	0.30	90	0.01	3.00	0.33	0.31	4,096	0.02	1.83	0.24	0.1%	-0.06	-20%	-0.09	-27%	-0.07	-23%
3045	37	0.01	2.00	0.33	5	0.13	0.50	0.34	0.34	125	0.10	0.79	0.37	0.0%	0.04	12%	0.03	9%	0.03	8%
3050	1,095	0.01	6.00	0.41	747	0.01	6.00	0.39	0.33	29,397	0.02	2.20	0.36	0.8%	-0.05	-12%	-0.03	-8%	0.03	8%
3060 3070	453 28	0.01	4.00 4.39	0.26	226 28	0.01	2.95 4.39	0.25	0.24	7,875 1,651	0.00	6.82 2.11	0.26	0.2%	0.00	0% -5%	0.01 -0.04	4% -5%	-0.05	11% -6%
3070	28	0.02	4.39	0.68	28 141	0.02	4.39	0.88	0.89	1,651	0.00	2.11	0.84	0.0%	-0.04	-5%	-0.04	-5%	0.05	-6%
3100	59,573	0.01	45.00	0.08	16,135	0.01	45.00	0.83	0.80	881,466	0.00	14.64	0.83	25.0%	-0.24	-26%	-0.14	-17%	-0.08	-10%
3110	1,260	0.01	10.00	0.33	477	0.01	10.00	0.35	0.38	18,735	0.00	2.81	0.54	0.5%	0.13	32%	0.19	54%	0.16	42%
3120	4,095	0.01	10.00	0.74	1,074	0.01	10.00	0.69	0.66	58,750	0.00	4.11	0.63	1.7%	-0.11	-15%	-0.06	-9%	-0.03	-5%
3125	362	0.01	4.00	0.33	51	0.01	4.00	0.34	0.31	1,069	0.03	1.59	0.28	0.0%	-0.05	-15%	-0.06	-18%	-0.03	-11%
3130	89	0.01	0.50	0.09	89	0.01	0.50	0.09	0.09	4,675	0.00	0.32	0.08	0.1%	-0.01	-11%	-0.01	-11%	-0.01	-8%
3150	295	0.01	8.00	0.53	242	0.01	2.86	0.29	0.29	9,737	0.03	4.33	0.44	0.3%	-0.09	-17%	0.15	52%	0.15	50%
3160	190	0.01	5.00	0.58	190	0.01	5.00	0.58	0.56	4,795	0.00	2.74	0.44	0.1%	-0.14	-24%	-0.14	-24%	-0.12	-22%
3170	1,259	0.01	7.00	0.51	1,259	0.01	7.00	0.51	0.42	29,718	0.00	2.92	0.49	0.8%	-0.02	-4%	-0.02	-4%	0.07	17%
3180	11	0.21	10.00	3.11	11	0.21	10.00	3.11	3.03	1,310	0.00	0.00	0.00	0.0%	-3.11	-100%	-3.11	-100%	-3.03	-100%
3200	12,522	0.01	30.00	0.61	6,377	0.01	30.00	0.52	0.48	276,868	0.00	6.12	0.36	7.8%	-0.25	-41%	-0.16	-31%	-0.12	-24%
3210	97	0.01	0.60	0.08	97	0.01	0.60	0.08	0.08	7,074	0.00	0.42	0.10	0.2%	0.02	25%	0.02	25%	0.02	30%
3250	761	0.01	2.00	0.24	761	0.01	2.00	0.24	0.25	44,061	0.00	1.57	0.26	1.2%	0.02	8%	0.02	8%	0.01	6%
3260 3270	409 126	0.01	2.00	0.21	367 45	0.01	2.00	0.21	0.18	22,236 2,022	0.01	1.24 3.15	0.18	0.6%	-0.03 0.56	-14% 52%	-0.03 0.22	-14% 16%	0.00	-2% 11%
3270 3300	13,056	0.01	30.00	0.48	6,070	0.01	30.00	0.36	0.30	321,490	0.08	6.69	0.23	9.1%	-0.25	-52%	-0.13	-36%	-0.07	-24%
3310	117	0.01	2.00	0.18	116	0.01	2.00	0.18	0.18	173	0.00	0.70	0.07	0.0%	-0.11	-61%	-0.13	-61%	-0.11	-62%
3320	150	0.01	2.50	0.41	150	0.01	2.50	0.41	0.32	3,146	0.02	1.43	0.33	0.1%	-0.08	-20%	-0.08	-20%	0.01	3%
3400	655	0.01	15.00	0.50	655	0.01	15.00	0.50	0.42	95,358	0.00	3.00	0.35	2.7%	-0.15	-30%	-0.15	-30%	-0.07	-16%
3410	17	0.06	6.00	1.31	17	0.06	6.00	1.31	1.57	463	0.00	2.38	0.88	0.0%	-0.43	-33%	-0.43	-33%	-0.69	-44%
3420	23	0.03	6.00	1.05	19	0.04	6.00	1.00	0.92	472	0.00	2.26	0.98	0.0%	-0.07	-7%	-0.02	-2%	0.06	6%
3430	9	0.06	1.38	0.67	9	0.06	1.38	0.67	0.67	223	0.00	0.93	0.70	0.0%	0.03	4%	0.03	4%	0.03	4%
3440	19	0.02	1.99	0.41	4	0.06	1.99	0.61	0.54	40	0.00	0.00	0.00	0.0%	-0.41	-100%	-0.61	-100%	-0.54	-100%
3450	727	0.01	6.00	0.49	116	0.01	6.00	0.57	0.47	2,319	0.04	1.66	0.49	0.1%	0.00	0%	-0.08	-14%	0.02	5%
3460	531	0.01	4.00	0.47	76	0.01	2.84	0.48	0.50	1,929	0.01	1.64	0.50	0.1%	0.03	6%	0.02	4%	0.00	0%
3470	1,863	0.01	10.00	0.90	295	0.01	10.00	0.89	0.81	5,016	0.17	3.77	0.98	0.1%	0.08	9%	0.09	10%	0.17	21%
3480 3485	1,984 140	0.01	30.00 2.00	1.33 0.41	315 140	0.01	30.00 2.00	0.96	0.98	5,109	0.05	12.01 1.62	1.27 0.45	0.1%	-0.06	-5% 10%	0.31	32% 10%	0.29	30% 7%
3485	140 166	0.01	30.00	2.51	140	0.01	2.00	0.41	0.42	7,331 571	0.00	1.62 9.08	2.74	0.2%	0.04	10%	2.52	10%	2.46	7% 879%
3490	1,225	0.01	5.00	0.19	1,225	0.01	5.00	0.22	0.28	121,289	0.15	2.85	0.17	3.4%	-0.02	-11%	-0.02	-11%	-0.01	-7%
3510	494	0.01	2.50	0.19	494	0.01	2.50	0.19	0.18	50,035	0.00	1.97	0.17	3.4%	-0.02	-11%	-0.02	-11%	-0.01	-14%
3520	275	0.01	3.00	0.17	275	0.01	3.00	0.17	0.13	23,466	0.01	2.17	0.10	0.7%	-0.01	-20%	-0.01	-20%	-0.03	-14%
3700	1,688	0.01	15.00	1.12	666	0.01	15.00	0.96	0.96	13,583	0.00	5.91	0.74	0.4%	-0.38	-34%	-0.22	-23%	-0.22	-23%
3710	73	0.05	2.46	0.70	73	0.05	2.46	0.70	0.65	3,893	0.13	1.90	0.71	0.1%	0.01	1%	0.01	1%	0.06	9%
4200	1,553	0.01	10.00	0.39	1,278	0.01	10.00	0.35	0.37	71,357	0.00	2.32	0.26	2.0%	-0.13	-33%	-0.09	-26%	-0.11	-29%
4300	2,904	0.01	4.00	0.19	2,904	0.01	4.00	0.19	0.21	238,373	0.00	2.60	0.20	6.8%	0.01	5%	0.01	5%	-0.01	-6%
5000	22,826	0.01	15.00	0.42	10,468	0.01	15.00	0.43	0.40	401,677	0.00	5.36	0.42	11.4%	0.00	0%	-0.01	-2%	0.02	6%

Table 14-59 Black Swan South global statistical validation.

The comparison includes mean statistics for both the combined GC and RD composite data and RD data alone. Both composite statistics have been included, given the combined GC and RD data was used for the grade estimate however, the GC data only informs the shallower portions of the resource compared to the RD data which spans the limits for the whole interpreted resource. For the RD composite data, both the raw and declustered mean have been stated given the inherent clustering of closer-spaced



RD in the shallower portions of the resource. The block model statistics are based on the resource without depletion and the proportion of each domain by volume has been stated and the largest domains highlighted below. In most instances the block model represents a slightly lower mean grade compared to the declustered RD composites. This is partly due to the clustering of higher-grade samples which has not been fully accounted for in the declustered statistics, plus the measured use of distance base top cutting has lowered the influence of higher-grade composites into poorly informed areas.

Swath plots comparing the RD cut composites and block model estimates are presented below for the main domains 2200, 2300, 3100, 3200, 3300, 4300, and 5000.

The Swath plots generally show very good correlation between the block estimate and the composite mean. As expected, the estimated grade is more smoothed compared to the often-variable composite mean grades. The greatest differences occur in poorly sampled areas and where the composites display high degrees of local variation.

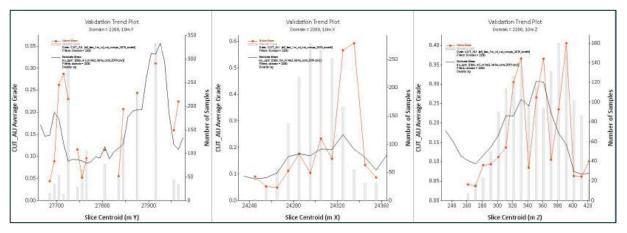


Figure 14-34 Black Swan South swath plots for domain 2200. Source: Westgold.

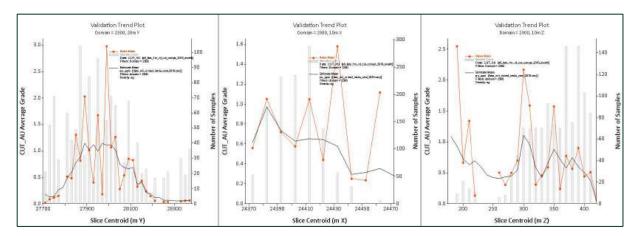


Figure 14-35 Black Swan South swath plots for domain 2300. Source: Westgold.



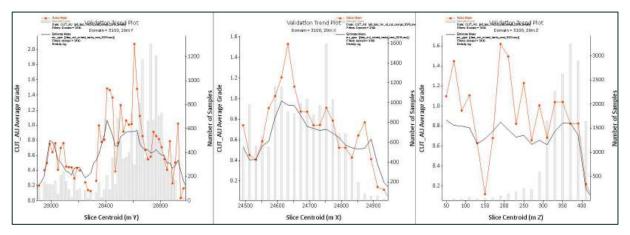


Figure 14-36 Black Swan South swath plots for domain 3100. Source: Westgold.

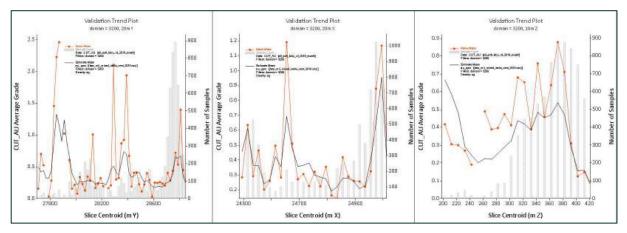


Figure 14-37 Black Swan South swath plots for domain 3200. Source: Westgold.

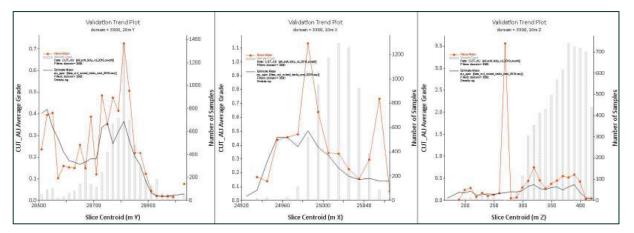


Figure 14-38 Black Swan South swath plots for domain 3300. Source: Westgold.



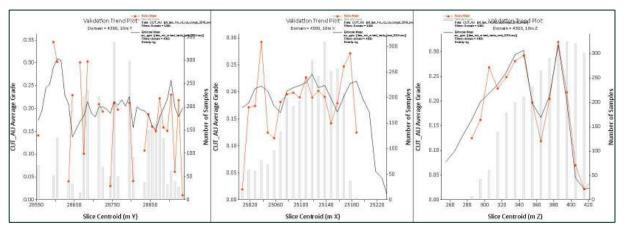


Figure 14-39 Black Swan South swath plots for domain 4300. Source: Westgold.

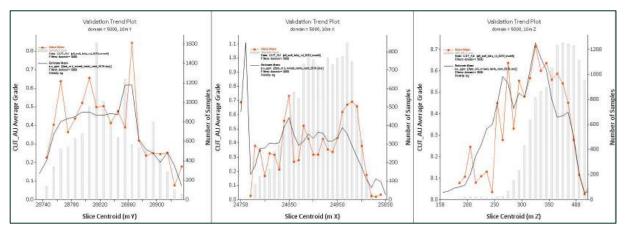


Figure 14-40 Black Swan South swath plots for domain 5000. Source: Westgold.

# 14.4.1.9 Mineral Resource Classification

The classification is based on a combination of geological continuity, mineralisation continuity and style, drill spacing and representation, sample support and estimation quality in order to define resource confidence categories.

As with any non-rigidly defined classification, there will always be some blocks within categories that depart from the defined criteria, however the final outcome must reflect a practical combination of both geological knowledge and estimation quality parameters that may be more numerical in nature. This approach to classification aims to avoid creating a complex numerically based "mosaic" distribution of classified blocks.

The categories of Mineral Resource as outlined by the code are as follows:

**Measured:** Confidence in the geological interpretation and zones of high drilling density allow the classification of 428,359 t at 1.45 g/t Au for 20,011 oz Au\*. of the Black Swan South resource as Measured.



**Indicated:** Confidence in the geological interpretation and zones of adequate drilling density allow the classification of 4,889,591 t at 1.29 g/t Au for 202,321 oz Au\*. of the Black Swan South resource as Indicated.

**Inferred:** Zones of data paucity have resulted in of 4,485,152 t at 1.14 g/t Au for 164,822 oz Au\*. of the Black Swan South resource to be considered as Inferred.

\*Reported at 0.7 g/t cut-off post mining depletion and not constrained by any depth extent.

## 14.4.1.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of Mineral Resources resources this is generally further refined by geotechnical and depth considerations. At Black Swan South, areas considered sterilised by historical mining activities were removed from the Mineral Resource Estimation. These areas were adjacent to mined out stopes as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.

Black Swan South Mineral Resource Statement - Rounded for Reporting 30/06/2024												
Measured Indicated Measured and Indicated Inferred							1					
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Black Swan South	0	0.00	0	1,121	1.53	55	1,121	1.53	55	69	1.15	3
Total	0	0.00	0	1,121	1.53	55	1,121	1.53	55	69	1.15	3

Table 14-60 Black Swan South Mineral Resource – CGO – as of June 30, 2024.

ABOVE DTM: 2400\_190T\_140T\_INF\_PIT16\_SPLIT.DTM; >= 0.7g/t

The Black Swan South Mineral Resource estimate as set out in **Table 14-60** is effective as of June 30, 2024.

Black Swan South was reported using a 0.7 g/t cut-off grade within a A\$2400 optimised pit shell and depleted to end of mining.



- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

# 14.4.2 Emily Well

## 14.4.2.1 Summary

The Emily Well deposit is located at Cuddingwarra which is an old mining centre situated 10 km west-northwest of Cue in Western Australia and 35 km west-northwest of the Tuckabianna mill. The Emily Well deposit has not previously been mined.



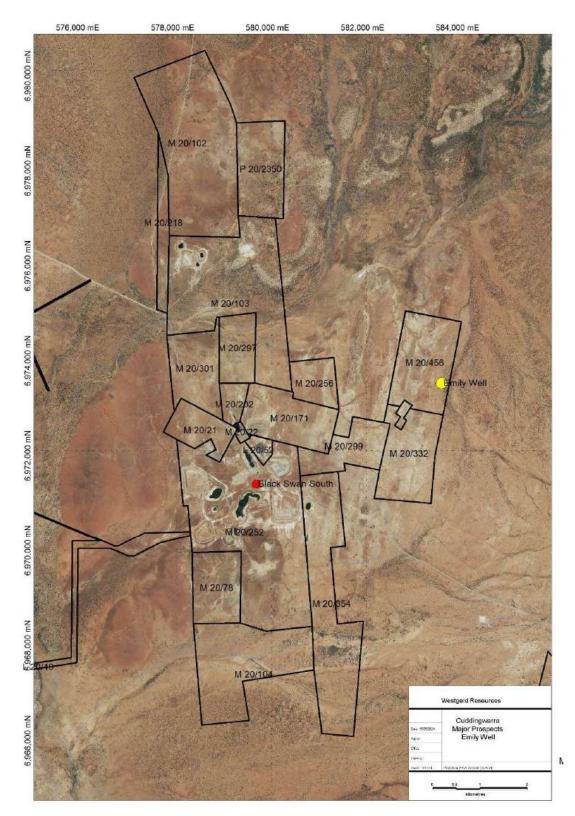


Figure 14-41 Emily Well location map. Source: Westgold.



An updated Mineral Resource estimate for Emily Well was completed in December 2012. The Emily Well MRE was undertaken using all available data. The MRE includes a complete update to the interpretation of the main geological units, regolith and the estimation domains.

Grade estimation utilised the inverse distance (squared) method.

# 14.4.2.2 Modelling Domains

Geological interpretation of the deposit was carried out using a systematic approach to ensure that the resultant estimated Mineral Resource figure was both sufficiently constrained, and representative of the expected sub-surface conditions. In all aspects of resource estimation, the factual and interpreted geology was used to guide the development of the interpretation. Sectional interpretation of the mineralised body within Surpac was conducted using a lower grade cut-off envelope of 0.5 g/t. There are three distinct mineralisation systems within the Emily Well trend which are each 150-300 m+ in strike length. The system is relatively shallow dipping (35°) with mineralisation penetrating ~70 m below the surface.

A minimum downhole length of 2 m was used with no edge dilution. To allow for continuity, up to 2 m of internal dilution was included in some intersections. In situations where the structural continuity of the lode was interpreted to persist, lower grade assays were included.

The wireframes were set as solids after being validated using Surpac mining software.

The base of complete oxidation (BOCO) and top of fresh rock (TOFR) surfaces were generated in Surpac from the geological logging.

# 14.4.2.3 Statistical Analysis and Compositing

The wireframes of the gold mineralised lodes were used to code the drill hole intersection into the database to allow identification of the resource intersections. Surpac mining software was used to extract downhole gold composites within the different resource domains. Holes were composited to 1 m. The composites were checked for spatial correlation with the objects, the location of the rejected composites, and zero composite values. Individual composite files were created for each of the domains in the wireframe models. Top cut analysis determined an upper statistical cut off value of 5.00 g/t.

## 14.4.2.4 Density

Due to the absence of density determinations at Emily Well, bulk densities have been assumed from nearby comparable Westgold operations with extensive mining history.



#### Table 14-61 Bulk Density determinations at Emily Well.

Density:	
>topo	0
void	null
boco>x <topo< td=""><td>2.00</td></topo<>	2.00
tofr>x <boco< td=""><td>2.40</td></boco<>	2.40
<tofr< td=""><td>2.70</td></tofr<>	2.70

## 14.4.2.5 Metallurgy

No known metallurgical test work exists for the Emily Well deposit.

## 14.4.2.6 Variography

Understanding the grade continuity and determining its extent and orientation is achieved through interpreting and modelling the experimental variogram. The experimental variogram requires sufficient sample data to provide a reliable measure of the grade continuity.

The downhole variogram provides the best estimate of the true nugget. For the 2012 Emily Well MRE no valid variograms were generated due to insufficient sample data. As a result, the ID2 estimation method was chosen.

# 14.4.2.7 Block Model and Grade Estimation

The block model was originally created in December 2012 using Surpac mining software to encompass the full extent of the deposit. A parent block size of 20 m NS x 2 m EW x 5 m vertical with sub-blocking to 10 m x 1 m x 2.5 m was used. The parent block size was based on half the drill hole spacing (NS). Inverse Distance (ID<sup>2</sup>) was used for the grade estimation as it allowed for block interpolation weighted towards sample points closest to the block centroid. The wireframes were used as a hard boundary for the grade estimation of each domain. That is, only grades inside each lode were used to interpolate the blocks inside the lode. An 'ellipsoid' search orientated to reflect the geometry of the individual lodes was used to select data for interpolation. Three estimation passes were used for the interpolations with parameters based on the drill spacing. The first pass search distance was set to 100 m (2.5 x nominal drill spacing of 40 m), the second pass search distance set to 140 m and the third pass set to 180 m. The minimum number of informing composites was set to 4 and the maximum number of samples set to 16.

#### 14.4.2.8 Model Validation

The following three-step process was used to validate the estimate through the entire deposit:

- A visual assessment was completed by slicing sections through the block model in positions coincident with drilling.
- A quantitative assessment was completed by comparing the average grades of the composite file input against the block model output for all the lodes.



• For the main domains, trend swath plots were generated in various orientations across strike, along strike and at elevation.

The validation indicates that the mineral resource model replicates the source input data well in regions of higher density drilling. Smoothing is evident in domains with limited input data. However, the estimate is considered appropriate as the trends in the data are adequately reproduced.

# 14.4.2.9 Mineral Resource Classification

The Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

The deposit has been classified as Measured, Indicated or Inferred Mineral Resource based on a combination of quantitative and qualitative criteria which included geological continuity and confidence in volume models, data quality, sample spacing, lode continuity and estimation parameters. The entire Emily Well deposit has been classified as Inferred Mineral Resource.

# 14.4.2.10 Mineral Resource Reporting

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource estimate is effective as of June 30, 2024. The Mineral Resource at the Emily Well deposit has been reported using a cut-off at 0.7 g/t Au. No mining has taken place at Emily Well.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resource are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resource this is generally further refined by geotechnical and depth considerations.

		Mine	ral Reso	ource St	Emily V tatement 30/06/2	- Round	led for Re	porting				
Measured Indicated Measured and Indicated Inferred												
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Emily Well	0	0.00	0	0	0.00	0	0	0.00	0	347	1.41	16
Total	0	0.00	0	0	0	0	0	0.00	0	347	1.41	16

Table 14-62 Emily Well Mineral Resource – CGO – as of June 30, 2024.

The Emily Well Mineral Resource estimate as set out in **Table 14-62** is effective as of June 30, 2024.



- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimate of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

# 14.5 DAY DAWN

The Day Dawn project area is situated within the Meekatharra-Wydgee Greenstone Belt, in the Murchison Province of the Archaean Yilgarn Craton of Western Australia (Myers, 1992). Within the Day Dawn project area, the Greenstone Belt consists of intrusive and extrusive mafic and ultramafic units, felsic volcanics and volcaniclastics, sediments and quartz-haematite banded iron formation (BIF) belonging to the Gabanintha Formation, one of four laterally extensive litho-stratigraphic formations comprising the Luke Creek Group (Martin, 1993b). The Gabanintha Formation overlies sedimentary rocks of the Golconda Formation.

The Great Fingall Dolerite (GFD) unit hosts the major gold mineralisation in the Day Dawn area. The Day Dawn Project contains numerous deposits of which 3210, Brega Well, Golden Crown, Great Fingall, Mount Fingall, Rubicon and Try Again, are reported in this Technical Report.

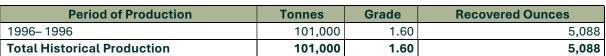
The Day Dawn open pit deposits are reported within pit shells, with the exception of 3210, Brega Well, Mount Fingall and Rubicon which are constrained by a cut-off grade only.

# 14.5.1 3210

## 14.5.1.1 Summary

The 3210 deposit is situated approximately 3 km south of the town of Cue, Western Australia and 30 km west of the Tuckabianna mill. The central 3210 deposit was mined by Normandy Pty. Ltd. during the mid-1990's as an open pit.





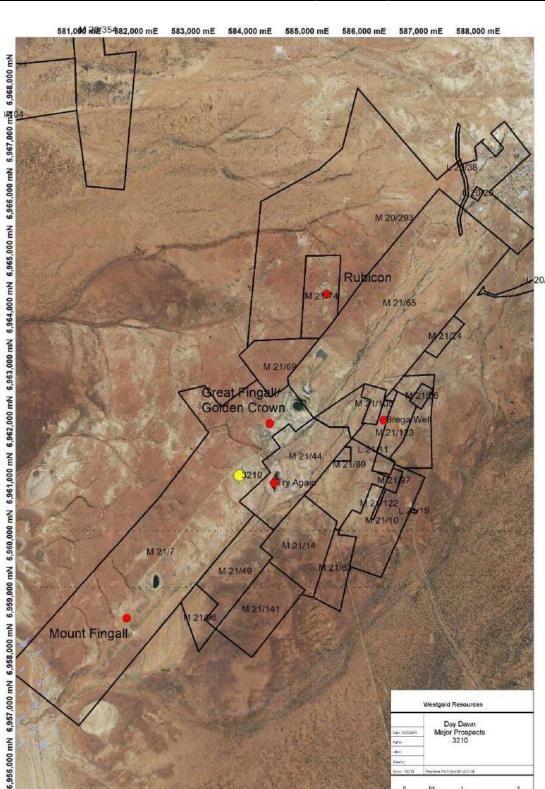


Table 14-63 Historical production figures for 3210 as detailed in Cox (1999).

Figure 14-42 3210 location map. Source: Westgold.

M 21/14

M 21/49

21

M 21/14

M 21/7

Mount Fingall



Westgold Resources

Day Dawn Major Prospects 3210

An updated Mineral Resource estimate for 3210 was completed in December 2011. The 3210 MRE was undertaken using all available data. The MRE includes a complete update to the interpretation of the main geological units, regolith and the estimation domains. Grade estimation utilised Ordinary Kriging (OK) for the main reef and inverse distance (squared) for the footwall splays.

## 14.5.1.2 Modelling Domains

Geological interpretation of the 3210 deposit was carried out using a systematic approach to ensure that the resultant MRE figure was both sufficiently constrained, and representative of the expected subsurface conditions.

Initially a three-dimensional viewing of the data was undertaken to establish a feel for the basic form and continuity of the mineralisation. This was followed by sectional viewing of the mineralisation. Strings were digitised on section to establish a 0.50 g/t cut-off envelope around the interpreted mineralisation. A maximum of two metres of downhole internal dilution was allowed, and in cases where geological knowledge of the deposit allowed, the interpretation strings were continued through zones of lower grade to assist in modelling mineralisation continuity, and to increase the level of along strike control on the location of the mineralised structure. All strings were digitised in a clockwise direction; with a common base of interpretation of approximately 720 mRL selected (the base selected was dependent upon the depth at which drillhole information became so sparse as to render mineralisation surface interpretation impractical). Strings were snapped to drillholes at sample interval boundaries, with no points created between drillholes, ensuring that no artificial complexities were introduced into the mineralisation geometry.

Wireframing of mineralisation sectional perimeters was performed via the linking of appropriate perimeters on adjacent sections. The wireframes were sealed by triangulation within the end member perimeters, leading to the creation of a volume model.

This mineralisation volume model was then used to create an intersection table within the database by marking for extraction all intervals of drillholes enclosed by the volume model. These intervals were then extracted for use in domain analysis, and later grade estimations. Each intersection was flagged according to the object of the mineralisation it intersected, with numerical codes assigned to each intersection as appropriate.

The modelled primary 3210 quartz reef strikes approximately east-west, and dips approximately forty-five degrees to the south.

# 14.5.1.3 Statistical Analysis and Compositing

One metre composites of the downhole assay results from the one hundred holes in the project area were used in the statistical analysis, and ultimate Mineral Resource estimation. Composites were taken from within the interpreted mineralised envelope, with the composite length chosen based on the dominant sample length within the database (i.e. one metre). 23% of the total data population was therefore composted before statistical analysis.



Statistical analysis of all composites within the combined 3210 dataset resulted in the removal of the footwall spays as a separate domain. Basic statistics between the main reef and the footwall splay datasets indicates that there is a distinction between the two populations.

	Main Reef	FW Splays
Statistic	Domain *** AU	Domain *** AU
Samples	357	133
Minimum	0.005	0.02
Maximum	29.22	14.6
Mean	2.23	1.07
Standard deviation	3.25	1.47
CV	1.46	1.37
Variance	10.56	2.15
Skewness	4.96	6.59
Log samples	357.00	133.00
Log mean	0.12	-0.36
Log variance	1.85	0.97
Geometric mean	1.13	0.70

Table 14-64 Univariate statistics for the 3210 main reef and footwall splays.

A top-cut analysis was performed for data included in the resource estimation. The one metre composite files of downhole assay data were ranked. Datasets were then graphed and analysed for disintegrations, which is defined as the first significant increase in percentage difference between adjacent values (i.e. the first change in value greater than 10%) for assay values sufficiently above the mean assay value for the dataset.

From this analysis a top cut of 11 g/t for 3210 main reef was determined. Cutting the dataset to 11 g/t affects 8 values (2.24% of the population) and a total of 8.14% of the metal is cut. The footwall splays were cut to 6.00 g/t which affected 2 values (1.5% of the data) and cuts a total of 6.16% from the data population.

## 14.5.1.4 Density

Densities assigned to the current resource model were assigned based upon geologically logged oxidation boundaries.

Due to the lack of density data available for 3210, densities applied to the current model were taken from values recorded in corresponding oxidation conditions in the footwall basalts (as rock types should be compositionally identical for the majority of cases). In order to ensure an overestimation of tonnage does not occur for mineralisation in fresh material an SG of 2.65 t/m<sup>3</sup> (quartz) has been assigned to all cells within the mineralisation wireframes below the TOFR interface.

•	Surface to the base of complete oxidation	2.00 t/m <sup>3</sup> .
---	---	-------------------------

- Base of complete oxidation to top of fresh rock 2.40 t/m<sup>3</sup>.
- $\bullet \qquad Below the top of fresh rock. \qquad 2.70 \ t/m^3.$
- Mineralisation below the top of fresh rock 2.65 t/m<sup>3</sup>.



# 14.5.1.5 Metallurgy

No known metallurgical test work exists for the 3210 deposit. However, 3210 mineralisation is not expected to present any problems in terms of milling as none were reported during the milling of 3210 ore during 1995 and 1996 at Normandy's Big Bell operation.

# 14.5.1.6 Variography

Variograms were analysed in Isatis software. Geostatistical analysis was conducted on the 3210 main reef structure (object 3) as this contained the best sample density (73% of the total data population). Variographic analysis of the composite resulted in the following search ellipse parameters.

- Bearing: 90°
- Dip: -45°
- Plunge: 0° [insufficient data to establish true plunge component]

The major axis modelled for this object indicates the possible presence of 2 datasets [note the "spiky" variogram model (**Figure 14-43**). This has been attributed to the possible grade variations within the mineralisation wireframe. This may be a function of the mineralisation style and not necessarily data validation errors within the estimate. Given the nuggety nature of high-grade quartz vein hosted gold deposits and the number of informing sample pairs within this object there is no justification to disregard any data points as erroneous.



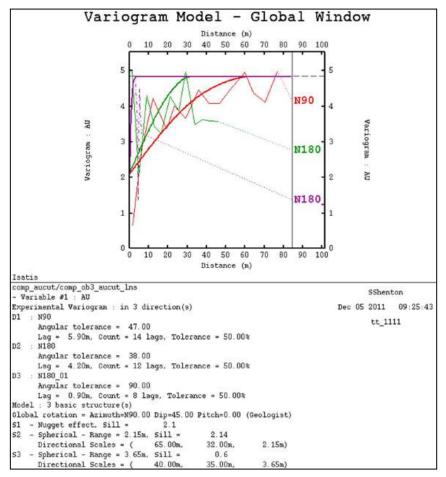


Figure 14-43 Global variogram model for the 3210 main reef (object 3). Source: Westgold.

## 14.5.1.7 Block Model and Grade Estimation

The ordinary kriging (OK) interpolation method was used to fill the 3210 main reef block model. This method carries out block interpolation based on the average of the value of nearby sample points. It weights the sample points by the semi-variance of the distance between each of the sampled points and the un-sampled location, and the semi-variances of the distances among all paired combinations of sample points (i.e. it considers grade continuity). Ordinary kriging is considered to be an appropriate technique to apply to the estimation of the 3210 resource.

The interpolation was constrained within the wireframe generated from the geological sectional interpretation of the mineralisation (i.e. within the plane of mineralisation) and carried out in a three estimation passes. The basic parameters of the interpolation are presented below.

In an attempt to reduce smearing a maximum of twenty informing samples was chosen, with a minimum of six required for block estimation. It is recognised that the use of this low minimum and maximum number of informing samples may not be best practice. However, this approach ensured that the extremities of the mineralisation, which are poorly defined by drilling, are represented within the resource model without being unduly influenced by proximal high-grade results. In an effort to minimise the risk associated with using this reduced number of informing samples, generally in these poorly informed parts of the estimate the mineralisation is classified as Inferred.



The inverse distance to a power of two interpolation (ID<sup>2</sup>) method was used to fill the 3210 footwall splays resource model. This method was adopted as it allows for block interpolation based on the values of the sample points closest to the block centroid. The weighting of the surrounding samples is calculated based on the inverse of their distance to the block centroid raised to the second power.

The estimation parameters used within the modelling of the 3210 model can be seen below.

Search ellipse parameters for the ID<sup>2</sup> estimate were defined by 2 x the nominal drill spacing within the corresponding mineralised domains. The ratios between the axes in the main reef were taken from the variogram modelling as defined above, whereas an isotropic search ellipse was employed for the footwall.

Basic Interpolation Parameters								
Deposit:	Main Reef	FW_Splays						
Estimation Method	ОК	ID2						
Minimum number of informing samples	6	6						
Maximum number of informing samples	20	20						
Maximum search distances along strike								
Pass 1	65	40						
Pass 2	100	80						
Pass3	200	120						
Maximum vertical search distance	9999	9999						
Discretisation	3x3x3	3x3x3						
Search Ellipse								
Major : Semi-Major	2.0	1.0						
Major : Minor	10	10						

Table 14-65 Basic interpolation parameters used within the 3210 Mineral Resource.

Table 14-66 Summary of the block model parameters used in the 3210 Mineral Resource estimate 3.

Block Model Parameters							
	Y	х	z				
Minimum Co-ordinates	12750	5050	700				
Maximum Co-ordinates	13500	5450	1010				
User Block Size	2.0	10.0	5.0				
Min Block Size	1.0	5.0	2.5				
Rotation	0.00	0.00	0.00				

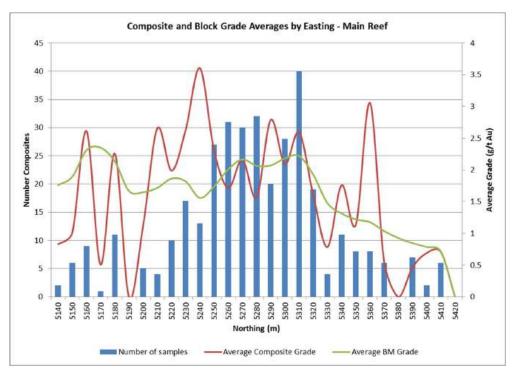


## 14.5.1.8 Model Validation

Global comparisons of grade estimates versus input composites were completed by statistical analysis and visual comparisons. The block volume of each domain was also compared to the corresponding wireframes allowed for accurate representation of the mineralisation volumes.

Sectional and elevation trend swath plots were generated for each lode. The profiles compared the volume-weighted average of the block grades to the length-weighted mean of the input composite grades for northing, easting and elevation slices through the block model. The plots assist in the assessment of the reproduction of local mean grades and are used to validate grade trends in the model.

Review of this data has indicated that on a deposit-scale the interpolation is reasonably robust, although due to the estimation techniques employed, smearing in areas of data paucity is observed.



(a)



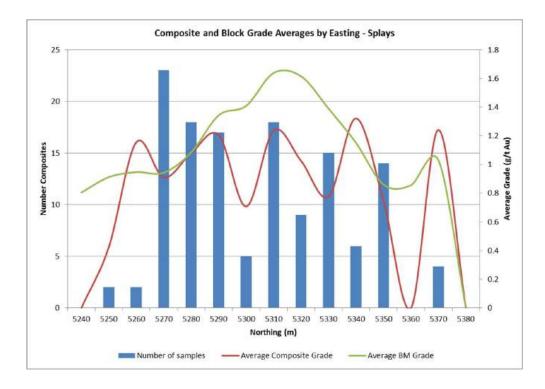




Figure 14-44 Composite and block grade averages by easting for (a) the 3210 main shear zone (object 3); (b) The 3210 footwall splays. Source: Westgold.

The overestimation of the footwall splays is due to a high-grade intersection within GCRC0223 (2 m at 10.0 g/t Au). This has an undue influence over blocks +- 40 m from the composite point. An appropriate resource classification has been assigned to this object to reduce the economic risk.

# 14.5.1.9 Mineral Resource Classification

The Mineral Resource classifications for each domain, or part thereof, were assigned with consideration for the confidence in the tonnage / grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data, using the guidelines listed in Table 1 of the JORC Code. The 3210 Mineral Resource was classified in the model on the following basis:

As the state of the data was assumed to be of sufficient quality to estimate a Mineral Resource, and the confidence in the geological interpretation carried out using this data was deemed to be of sufficient quality to allow the Indicated and Inferred classes to be used, the Mineral Resource was then categorised using a combination of the following:

- Drill hole spacing / data density:
  - o 10 m x 10 m Indicated
  - o 20 m x 20 m + Inferred
- Estimation pass:
  - Pass 1 Indicated
  - o Pass 2 Inferred
  - Pass 3+ Unclassified / Mineral Potential



• Number of informing samples:

0	<10	Indicated

o <10 Inferred

The 3210 Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

# 14.5.1.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resource s are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries.

The 3210 Mineral Resource estimate is effective as of June 30, 2024. The Mineral Resource at the 3210 deposit has been reported using a cut-off at 0.7 g/t Au. The MRE has been depleted for end of mining.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resource are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resource this is generally further refined by geotechnical and depth considerations. At 3210, areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. The remaining blocks represent the current in situ Mineral Resource.

3210 Mineral Resource Statement - Rounded for Reporting 30/06/2024												
	Measured			Indicated			Measured and Indicated			Inferred		
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
3210	0	0.00	0	197	1.63	10	197	1.63	10	9	2.78	1
Total	0	0.00	0	197	1.63	10	197	1.63	10	9	2.78	1

#### Table 14-67 3210 Mineral Resource – CGO – as of June 30, 2024.

The 3210 Mineral Resource estimate as set out in **Table 14-67** is effective as of June 30, 2024.



- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

## 14.5.2 Brega Well

#### 14.5.2.1 Summary

The Brega Well deposit is situated approximately 4 km south of the town of Cue, Western Australia and 27 km west of the Tuckabianna mill. There are small shafts and minor voids within Brega Well indicating historic extraction has occurred on a small scale. The Brega Well homestead lies over a portion of the deposit.



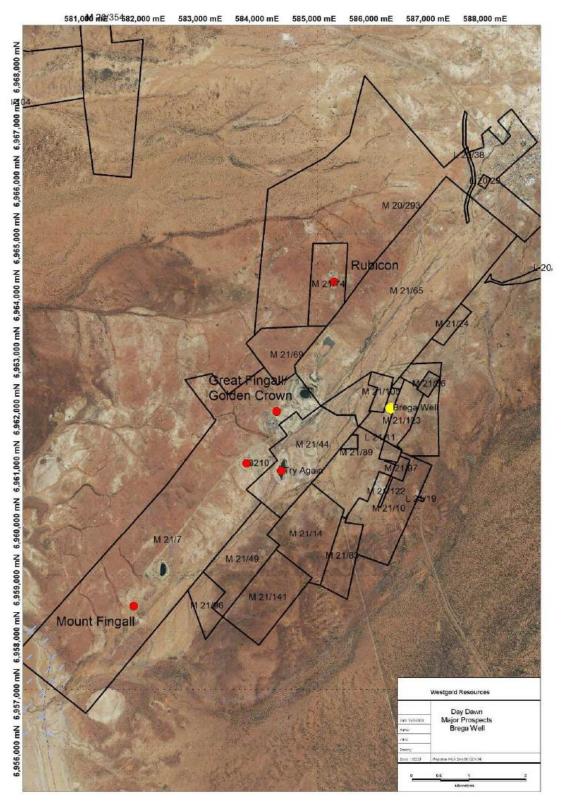


Figure 14-45 Brega Well location map. Source: Westgold.

An updated Mineral Resource estimate for Brega Well was completed in May 2012. The Brega Well MRE was undertaken using all available data. The MRE includes a complete update to the interpretation of the main geological units, regolith and the estimation domains.

Grade estimation utilised inverse distance (squared) for all domains.



#### 14.5.2.2 Modelling Domains

Geological interpretation of the Brega Well deposit was carried out using a systematic approach to ensure that the resultant MRE figure was both sufficiently constrained, and representative of the expected subsurface conditions.

Initially a three-dimensional viewing of the data was undertaken to establish a feel for the basic form and continuity of the mineralisation. This was followed by sectional viewing of the mineralisation. Strings were digitised on section to establish a 0.50 g/t cut-off envelope around the interpreted mineralisation. A maximum of two metres of downhole internal dilution was allowed, and in cases where geological knowledge of the deposit allowed, the interpretation strings were continued through zones of lower grade to assist in modelling mineralisation continuity, and to increase the level of along strike control on the location of the mineralised structure. All strings were digitised in a clockwise direction; with a common base of interpretation selected (the base selected was dependent upon the depth at which drillhole information became so sparse as to render mineralisation surface interpretation impractical). Strings were snapped to drillholes at sample interval boundaries, with no points created between drillholes, ensuring that no artificial complexities were introduced into the mineralisation geometry.

Wireframing of mineralisation sectional perimeters was performed via the linking of appropriate perimeters on adjacent sections. The wireframes were sealed by triangulation within the end member perimeters, leading to the creation of a volume model.

This mineralisation volume model was then used to create an intersection table within the database by marking for extraction all intervals of drillholes enclosed by the volume model. These intervals were then extracted for use in domain analysis, and later grade estimations. Each intersection was flagged according to the object of the mineralisation it intersected, with numerical codes assigned to each intersection as appropriate.

The Brega Well mineralised trend has a strike length greater than 500 m, and extends to a depth 80 m below the surface (currently open). The system is interpreted as an anastomosing shear system thus the dimensions of individual mineralised zones vary significantly.

# 14.5.2.3 Statistical Analysis and Compositing

One metre composites of the downhole assay results from the valid holes in the project area were used in the statistical analysis, and ultimate Mineral Resource estimation. Composites were taken from within the interpreted mineralised envelope, with the composite length chosen based on the dominant sample length within the database (i.e. one metre).

A top-cut analysis was performed for data included in the resource estimation.

The one metre composite files of downhole assay data were ranked. Datasets were then graphed and analysed for disintegrations, which is defined as the first significant increase in percentage difference between adjacent values (i.e. the first change in value greater than 10%) for assay values sufficiently above the mean assay value for the dataset.



From this analysis a top cut of 10 g/t was determined Cutting the dataset to 10 g/t affects 2 values (0.65% of the population) and a total of 5.47% of the metal is cut for the north-south striking domains. The 60 degree-striking domains were cut to 10 g/t which affected 8 values (3.42% of the data) and cuts a total of 21.62% metal from the domains.

#### 14.5.2.4 Density

Densities assigned to the current resource model were assigned based upon geologically logged oxidation boundaries.

Due to the lack of density data available for Brega Well, densities applied to the current model were taken from values recorded in corresponding oxidation conditions in the footwall basalts (as rock types should be compositionally identical for the majority of cases).

•	Surface to the base of complete oxidation	2.10 t/m <sup>3</sup> .
•	Base of complete oxidation to top of fresh rock	2.40 t/m <sup>3</sup> .
•	Below the top of fresh rock.	2.70 t/m <sup>3</sup> .

## 14.5.2.5 Metallurgy

No known metallurgical test work exists for Brega Well.

## 14.5.2.6 Variography

Understanding the grade continuity and determining its extent and orientation is achieved through interpreting and modelling the experimental variogram. The experimental variogram requires sufficient sample data to provide a reliable measure of the grade continuity.

The downhole variogram provides the best estimate of the true nugget. For the 2012 Brega Well MRE no valid variograms were generated due to insufficient sample data. As a result, the ID<sup>2</sup> estimation method was chosen.

## 14.5.2.7 Block Model and Grade Estimation

The block model was originally created in December 2012 using Surpac mining software to encompass the full extent of the deposit. A parent block size of 10 m NS x 4 m EW x 10 m vertical with sub-blocking to 5 m x 2 m x 5 m was used. Inverse Distance  $(ID^2)$  was used for the grade estimation as it allowed for block interpolation weighted towards sample points closest to the block centroid. The wireframes were used as a hard boundary for the grade estimation of each domain. That is, only grades inside each lode were used to interpolate the blocks inside the lode. An 'ellipsoid' search orientated to reflect the geometry of the individual lodes was used to select data for interpolation. Three estimation passes were used for the interpolations with parameters based on the drill spacing. The first pass search distance was set to 60 m (1.5 x nominal drill spacing of 40 m), the second pass search distance set to 100 m and the third pass set to 150 m. The minimum number of informing composites was set to 4 and the maximum number of samples set to 16.



## 14.5.2.8 Model Validation

The following three-step process was used to validate the estimate through the entire deposit:

- A visual assessment was completed by slicing sections through the block model in positions coincident with drilling.
- A quantitative assessment was completed by comparing the average grades of the composite file input against the block model output for all the lodes.
- For the main domains, trend swath plots were generated in various orientations across strike, along strike and at elevation.

The validation indicates that the Mineral Resource model replicates the source input data well in regions of higher density drilling. Smoothing is evident in domains with limited input data; however, the estimate is considered appropriate as the trends in the data are adequately reproduced.

# 14.5.2.9 Mineral Resource Classification

The Mineral Resource classifications for each domain, or part thereof, were assigned with consideration for the confidence in the tonnage / grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data, using the guidelines listed in Table 1 of the JORC Code. Given the wide spaced historical drilling a large portion of the Brega Well estimate has been classified as Inferred. In areas of significant risk, the model has been assigned a classification and is therefore excluded from the resource.

The Brega Well Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

#### 14.5.2.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F.

The Mineral Resource estimate is effective as of June 30, 2024. The Mineral Resource at the Brega Well deposit has been reported using a cut-off at 0.7 g/t Au. There are small shafts and minor voids within Brega Well indicating historic extraction has occurred on a small scale, however, no depletion has been coded into the block model.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resource are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground mineral resources this is generally further refined by geotechnical and depth considerations.



Brega Well Mineral Resource Statement - Rounded for Reporting												
					30/06	/2024						
	Measured Indicated Measured and Indicated							Inferred				
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Brega Well	0	0.00	0	0	0.00	0	0	0.00	0	513	1.53	25
Total	0	0.00	0	0	0	0	0	0.00	0	513	1.53	25

#### Table 14-68 Brega Well Mineral Resource – CGO – as of June 30, 2024.

The Brega Well Mineral Resource estimate as set out in **Table 14-68** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

# 14.5.3 Great Fingall / Golden Crown

#### 14.5.3.1 Summary

The Great Fingall and Golden Crown deposits are located approximately five hundred and fifty kilometres north northeast of Perth and about five kilometres southwest of Cue in the Murchison Province of Western Australia. Great Fingall sits to the immediate north of the existing Golden Crown underground mine.



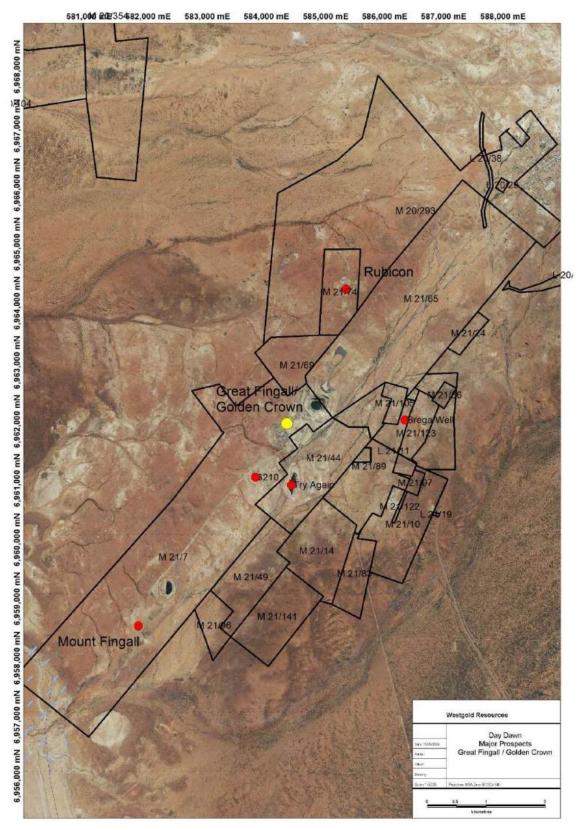


Figure 14-46 Great Fingall – Golden Crown location map. Source: Westgold.

Mining at Great Fingall commenced in 1891 and officially closed for the first time in 1918. Minor production slowly continued until 1929 but only recovered 1,039 oz. of gold (Cox 1999) Total production totals 1,224,473 oz from 1,881,842 tonnes ore for a recovered grade of 19.5 g/t. Twenty levels were developed underground to a depth of 786 metres below the surface, although below the 10 Level the reef was selectively mined.

Mining recommenced at Great Fingall in 1995 via open pit methods focusing on extracting the stockwork vein system in the footwall of the Great Fingall Reef. Normandy undertook mining, using five metre benches and two and a half metre flitches, trucking the ore to the Big Bell mill. The open pit mine, up until March 1999, yielded 82,476 oz gold from 1,767,135 t ore, for a recovered grade of 1.45 g/t. Mining was discontinued due to the 87% reconciliation of reserve ounces to mill credited ounces, and the feeling that the concept of incremental tonnes sourced from Great Fingall contributing to the economic position of the Big Bell operations was flawed due to the wear and tear of the ore on the mill (due to its abrasive nature), the lower than expected recovery achieved, and the longer residence time required for Great Fingall ore in the milling circuit (Mattinson, 1999).

In 2001 Harmony Gold recommenced open pit mining following their takeover of New Hampton Goldfields, with operations suspended in November 2002 after production of a further 437,041 t at 2.08 g/t for 29,226 oz.

Westgold Resources commenced a cut back on the existing Great Fingall open pit in 2018 with ore hauled from August 2018 to May 2020. Total production was 620,353 t at 1.28 g/t for 25,536 oz with the pit floor now at the 830 mRL.

Underground development has been completed by Westgold at Great Fingall with decline development down to the 843 mRL.

Historical production from the Golden Crown underground is reported at 648,427 t at 13.8 g/t for 288,017 oz.

Mining Operation	Host Geology	Tonnes	Grade Au g/t	Au Ounces
Great Fingall Underground	Great Fingall Dolerite	1,881,842	20.27	1,224,473
Great Fingall Open Pit (pre- Harmony)	Great Fingall Dolerite	1,767,135	1.45	82,476
Great Fingall Open Pit (Harmony)	Great Fingall Dolerite	437,041	2.08	29.311
Great Fingall Open Pit (Westgold)	Great Fingall Dolerite	620,353	1.28	25,536
Golden Crown Underground	Great Fingall Dolerite	648,427	13.80	288,017
Mountain View Underground	Mt View Dolerite	27,557	55.4	49,083
3210 Open Pit	Great Fingall Dolerite	101,000	1.60	5,088
Try Again Open Pit	Footwall Basalts	176,749	3.70	20,855
Yellow Taxi Open Pit	Great Fingall Dolerite	191,000	2.10	12,926
Mount Fingall Open Pit	Great Fingall Dolerite	68,000	1.40	3,116
Total		5,298,751	10.08	1,686,063

Table 14-69 Historical Production for Great Fingall – Golden Crown Area.



An updated Mineral Resource estimate for the Great Fingall and Golden Crown MRE was completed in August 2024. The update was undertaken using all available data.

Grade estimation utilised a combination of 2D and 3D Ordinary Kriging (OK) for all domains.

#### 14.5.3.2 Modelling Domains

Interpretation of the Great Fingall and Golden Crown reefs and associated selvedges was completed in Leapfrog Geo and was guided by the presence of logged veining (100% for the reefs) and structural measurements. All Great Fingall reef intersections were validated using core tray photographs where available.

Interpretation of the other mineralised domains within the Great Fingall and Golden Crown project areas was completed either in Leapfrog Geo or Surpac and guided by a combination of both assay, geological information and structural measurements (where available). In Surpac, interpretation was completed in section with a nominal 20 m (easting) section spacing and snapped to drill hole intercepts. Wireframing was completed via linking and triangulation of individual sections combined with enclosed intermediate section 'end plates' to enable formation of enclosed solids and the resultant volume model.

Interpretation of the AGF2, 3, 4 and 5 units was completed in Leapfrog Geo using logged lithology. A best-fit approach was used for the gradational AGF boundaries due to inconsistent logging between drill programs/ different geologists. As such, holes were selected/ ignored as deemed appropriate. Where available, core tray photographs were utilised in the interpretation of these boundaries.

For non-reef domains, construction of Hangingwall and footwall surfaces for each domain was completed by a manual split of each triangulation followed by validation in the intended 2D orientation plane (width calculation direction). The 2D orientation plane used for each domain is the closest cartographic plane given the spatial orientation of the domain. For the majority of vertical or near vertical lodes this was a cross-section or Z-X cartographic plane, while domains with a more horizontal orientation used a horizontal or X-Y cartographic plane.



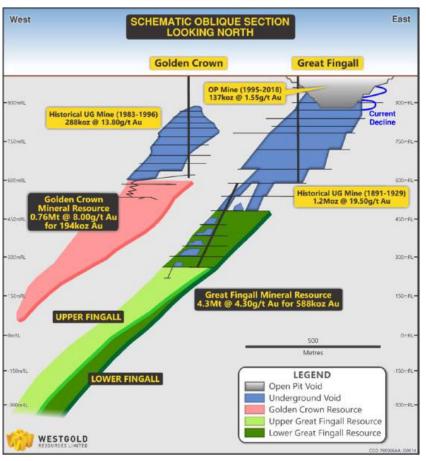


Figure 14-47 Schematic Great Fingall and Golden Crown deposits. Source: Westgold.

The main domains in the updated model include:

- Lower Fingall Reef (5004).
- Lower Fingall Reef HW Selvedge (5002)
- Lower Fingall Reef FW Selvedge (5003)
- Upper Fingall Reef (5104).
- Upper Fingall Reef HW Selvedge (5102)
- Upper Fingall Reef FW Selvedge (5103)
- Lower Fingall Footwall Lodes (2000 Series)
- Sovereign Reef (7000)

Mineralisation domains followed a methodology consistent with narrow vein underground mining and a 2D estimation technique. A 0.5 g/t Au cut-off combined with a minimum mineralisation width of 2 m and a maximum of two metres downhole internal dilution was utilised in the majority of domains with geological input used to aid continuity in areas of below threshold mineralisation.

Reef interpretation focussed on high grade logged reef / quartz intercepts with the selvedge domain encompassing lower grade non-reef mineralisation above a 0.5 g/t cut-off and having a minimum thickness of 0.5 m (1.0 m for the Golden Crown Reef selvedge). Selvedge mineralisation at Great Fingall and Golden Crown consists of a discontinuous footwall and hangingwall selvedge.



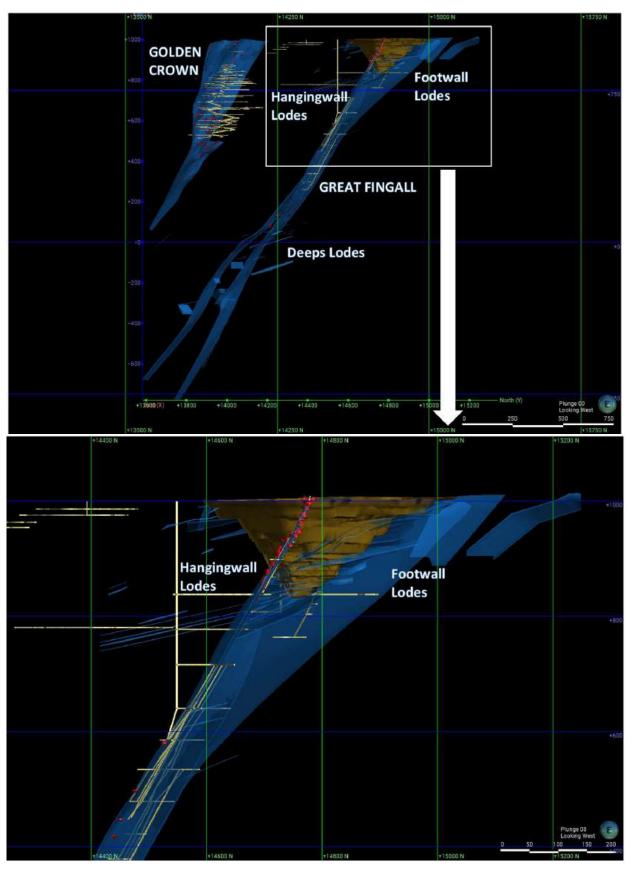


Figure 14-48 Great Fingall Domaining – Overview. Source: Westgold.



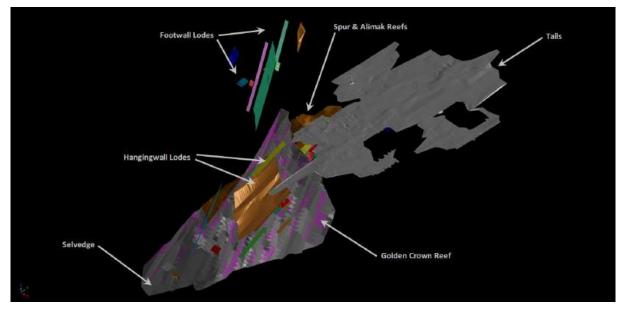


Figure 14-49 Golden Crown Domaining – Overview. Source: Westgold.

# 14.5.3.3 Statistical Analysis and Compositing

The interpreted mineralisation wireframes were used to create an intersection table within the database by marking for extraction all intervals of drill holes enclosed by the volume model. Each intersection was flagged according to the object in which it intersected, with numerical codes assigned as appropriate.

Compositing for the 2D domains utilised a geological compositing routine, creating a single intercept point per drill hole-domain intersection. For the non-Reef domains, each composite point was then draped over both footwall and hangingwall surfaces to generate either a horizontal or vertical thickness depending on the 2D plane applied to the domain. The calculated thickness is used for computation of an accumulation value for each composite. The Reef and Selvedge domains were 2D composited in Leapfrog using the true thickness option during creation of Economic Composites. Enabling this option requires the compositing algorithm to composite using true thickness measured perpendicular to a specified reference plane. Dip and Dip Azimuth specify the orientation of this reference plane, which approximates the mineralisation orientation. For the minor domains where a 2D estimate was deemed inappropriate a 3D downhole compositing routine was utilised with a composite length of 1 metre. The horizontal width applied for the underground production data at both Great Fingall and Golden Crown utilised the true sample width under the premise that for particularly the face data, the sample length represented the true horizontal width of the vein.

Statistical analysis of all updated 2D and 3D composites within the Great Fingall and Golden Crown MRE was undertaken. The results of which are presented below. A topcut analysis was performed for data included in the Mineral Resource Estimate, with the accumulate value being analysed for cutting in 2D estimated domains and gold analysed for cutting in 3D estimated domains. No cutting was applied to the thickness variable for 2D estimated domains.



The composite values were analysed via number of techniques, including disintegration (significant increase in percentage difference via ranking), mean and variance top-cut analysis, log probability and histogram plots. Domains with low numbers of informing samples used an appropriate domain population analogue to ensure consistency in top cutting parameters.

During this review factors such as the number of composites cut, the percentage of data cut and the percentage of metal content cut were considered to ensure an appropriate value, if any, was chosen.

DOMAIN				ACCUM			
Filters	Samples	Minimum	Maximum	Mean	Standard deviation	cv	Variance
5002 D33	114	0	21	5.33	5.69	1.07	32.41
5003 D33	143	0.04	18	4.22	4.87	1.15	23.74
5004 D33	7069	0	250	20.08	31.18	1.55	972.14
5102 D33	24	0.06	9	4.15	3.44	0.83	11.87
5103 D33	32	0.24	19	6.55	5.86	0.89	34.37
5104 D33	33	0.92	60	22.81	22.27	0.98	496.03

Table 14-70 Updated Accumulation Basic Statistics (cut) for Great F	ingall Maior Domains.
	ingatti iajoi Boinamot

Domain	D33	5001	5002	5004	5005	5109	6108
Assay	D33						
Filters	D33	5001 D33	5002 D33	5004 D33	5005 D33	5109 D33	6108 D33
Samples	13819	40	231	7074	26	182	6270
	13819	13819	13819	13819	13819	182	627
Minimum		0.12	0.02		0.86		<b>7</b> 1
Maximum	300.00	25.00	30.00	250.00	50.00	10.00	300.00
Mean	19.87	5.32	4.20	20.06	17.76	1.04	20.83
Standard deviation	37.08	6.63	5.90	31.04	17.09	1.52	43.77
CV	1.87	1.25	1.40	1.55	0.96	1.46	2.10
Variance	1,375.02	43.96	34.81	963.74	291.95	2.32	1,915.48
Skewness	4.10	1.56	2.41	3.63	0.88	3.37	3.95
Log samples	13819	40	231	7074	26	182	627
Log mean	1.75	0.86	0.46	2.12	2.25	- 0.60	1.46
Log variance	3.35	1.84	2.63	2.37	1.63	1.36	4.09
Geometric mean	5.78	2.35	1.58	8.29	9.45	0.55	4.31
0.10	0.53	0.43	0.18	1.23	1.03	0.15	0.33
0.20	1.45	0.64	0.49	2.93	2.00	0.22	0.87
0.30	2.74	1.01	0.80	4.77	5.56	0.31	1.67
0.40	4.48	1.60	1.30	6.83	8.22	0.39	2.75
0.50	6.87	2.02	1.72	9.54	10.85	0.49	4.51
0.60	10.43	2.87	2.85	13.15	13.42	0.65	7.47
0.70	16.00	5.90	3.91	18.63	16.62	0.92	13.28
0.80	26.52	9.47	5.96	27.91	36.97	1.24	26.39
0.90	48.81	15.16	11.56	45.85	47.38	2.72	56.28
0.95	85.61	19.41	15.72	77.60	50.00	3.97	99.26
0.98	129.78	23.06	21.75	118.05	50.00	4.97	151.89
0.99	196.45	24.22	29.99	171.14	50.00	8.10	265.24

Table 14-71 Updated Accumulation Basic Statistics (cut) for Great Fingall Footwall Lodes



## 14.5.3.4 Density

Bulk Density (BD) values used in this model were assigned to the model based upon values found in literature and determined from mining in the Golden Crown area for oxide and transitional material and based on test-work performed on mafic diamond core and RC chips for fresh material. Values applied are consistent with the previous resource models.

BD values have been allocated as follows:

- Air: 0.00
- Depleted: 0.00
- Cover 1.80
- Oxide 2.00
- Transitional: 2.40
- Fresh: 2.87
- Fresh Ore\* 2.65
- Tails 1.30

\*Includes Great Fingall Reef, Golden Crown Reef, Spur Reef, Footwall Reef.

## 14.5.3.5 Metallurgy

Limited metallurgical test work information can be found on the Great Fingall ore. A 2012 document (11793 0403\_B DFS GRES 2012) reports an overall recovery of 93.1%. The previous mining history of the deposit indicates no negative metallurgical aspects.

#### 14.5.3.6 Variography

The spatial continuity of the estimation domains was conducted within Snowden's Supervisor. All estimation domains displayed a skewed distribution and normal scores transformation was used to obtain interpretable experimental estimation domains. Exploratory data analysis (EDA) was performed on all estimation domains and variographic analysis was conducted for estimation domains with significant numbers of samples.

Experimental variograms for the 2D domains (Accumulation and Horizontal Width) as well as the 3D domains (Au) were generated using a combination of DD, RC hole information (with face and rise data utilised on the Great Fingall, Golden Crown, Spur and Alimak and Footwall Reefs), with a number of estimation domains being assigned the variogram parameters of associated major domains based on the minor domains orientation, sample population and proximity to the major reference domain.

Variogram modelling for the 2D domains was completed with geological composites pressed onto the cartographic plane occupied by the 2D block model, whilst variogram modelling for the 3D domains was completed with downhole composites in-situ.



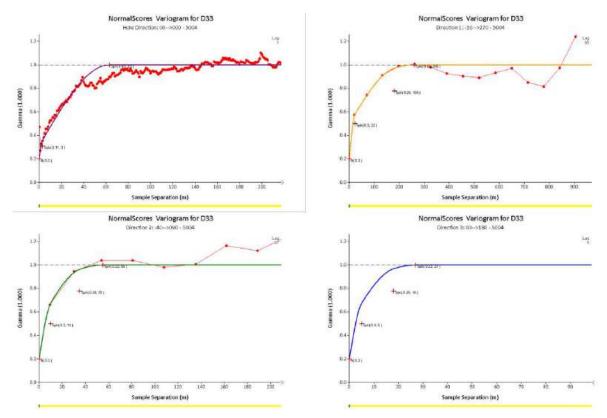


Figure 14-50 Great Fingall – Golden Crown MRE domain 5004 continuity models. Source: Westgold.

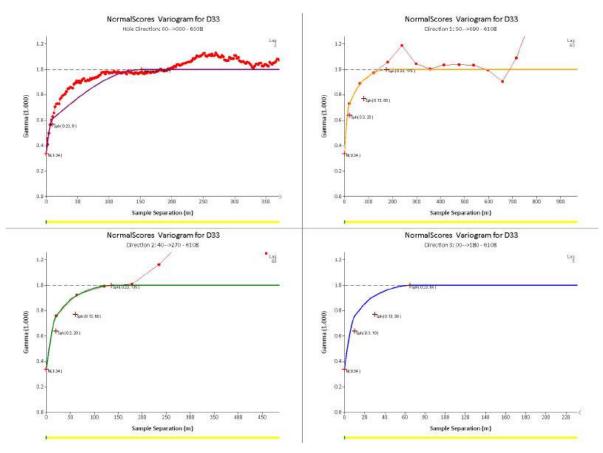


Figure 14-51 Great Fingall – Golden Crown MRE domain 6108 continuity model. Source: Westgold.



#### 14.5.3.7 Block Model and Grade Estimation

Selection of the 2D estimation technique was influenced by a 2015 external review (Cube) of the Great Fingall and Golden Crown 3D estimates along with trial 2D estimates. The 3D estimates, whilst appearing to provide appropriate selectivity within the Great Fingall Reef, contained conditional bias where short range inflections of the reef provided significant limiting of the estimate neighbourhood. Narrow vein style deposits lend themselves to a 2D estimate technique and can take advantage of the simplified 2D geometry as well as sample neighbourhoods not affected by complexities in geometry. It was felt that 2D estimation would represent a positive step forward in estimate robustness when compared with previous resources. It should be noted that a primary assumption of the 2D estimate technique applied at Great Fingall and Golden Crown is that there will be no selectivity applied to the veins in the across strike orientation during mining.

At Great Fingall estimation domains were interpolated using a combination of Ordinary kriging and, for domains with insufficient sample numbers, assigning the domain mean grade. The ordinary kriging was performed with the ECX macro system utilising both the "campaign\_blockmodel\_-750\_1.2dgcx" and related parameter files. A single parent cell size was utilised to compliment the estimation process, this being 20 m (X) x 20 m (Y) x 10 m (Z) for the 2D estimates at Great Fingall. For the 3D estimates parent cell sizes ranged from 5 m (X) x 5 m (Y) x 2.5 m (Z) to 20 m (X) x 20 m (Y) x 10 m (Z).

At Golden Crown estimation domains were interpolated using a combination of Ordinary kriging and, for domains with insufficient sample numbers, assigning the domain mean grade. Three parent cell sizes were utilised to provide appropriate resolution for the domain estimates, these are 20 m (X) x 20 m (Y) x 20m (Z) for the majority of the 2D domains with a 10 m (X) x 10 m (Y) x 10 m (Z) cell size used within the Spur and Alimak domain (3030) and for the entirety of the Footwall Reef (3079). The main Golden Crown Reef and Selvedge domain used a 20 m (X) x 20 m (Y) x 10 m (Z) parent cell size.

In all 2D domains, two variables were estimated (gold accumulation and horizontal / vertical width) in a 2D space sub-model (single cell wide in the 2D plane), with a calculated gold (accumulation / width) value being exported and applied across the full width of the domain in the final 3D space compilation model. In domains where the composited horizontal / vertical width exceeded typical mining dimensions (4 - 5 metres) a 3D estimate of a single variable (gold) was undertaken. The Ordinary kriging estimation technique used for both 2D and 3D estimates carries out block interpolation based on the weighted average of the values of nearby sample points. It weights the sample points by the semi-variance of the distance between each of the sampled points and the un-sampled location, and the semi-variances of the distances among all paired combinations of sample points (i.e. it considers grade continuity). Ordinary kriging is considered an appropriate technique to apply to the estimation of both 2D and 3D domains at Great Fingall and Golden Crown. All interpolations and transfer of estimated block values from 2D to 3D for classified resource blocks were constrained within the wireframes generated from the geological sectional interpretation of the mineralisation (i.e. within the plane of mineralisation) and carried out in a series of passes.



A summary of the block model parameters used in the resource model is listed below. It should be noted that the User Block Size listed differs from the parent cell sizes utilised in estimation for some domains. A common sub-cell size of 1.25 m (X) x 0.625 m (Y) x 1.25 m (Z) was used allowing both the 2D and 3D models to be merged.

#### Table 14-72 Block model attributes – Great Fingall and Golden Crown MRE.

Туре	Y	X	z
Minimum Coordinates	13500	4250	-750
Maximum Coordinates	15250	5750	1015
User Block Size	10	10	5
Min. Block Size	0.625	1.25	1.25
Rotation	0.000	0.000	0.000

	3.7
Total Blocks	115416
Storage Efficiency %	99.97

Attribute Name	Туре	Decimals	Background	Description
block_lock	Character	-	UNLOCKED	Block Locking Attribute - Overwrite Protection - Updated to ESTIMATE when estimated, DESIGN when design stamped, and STOPE after level drive extraction or stoping
campaign_id	Character	<u>-</u>	BLANK	Campaign Model Boundary Number based on Drilling Campaign
campaign_rl	Character	-	BLANK	Campaign RL Number - Crest RL of Drilling Campaign
campaign_zone_c	Character	-	BLANK	Domain Character
campaign_zone_n	Integer	-	0	Domain Integer
gc_2d_au_thickness	Float	2	0.009999999776482582	Estimated Au * 2D Thickness
gc_2d_thickness	Float	2	0	Estimated Thickness
gc_au	Float	2	0.009999999776482582	Estimated Au ppm
gc_density	Float	2	0	gc Bulk Density
geo_lith_c	Character	-	BLANK	Lithology Character
geo_lith_n	Integer	-	0	Lithology Integer
geo_ox_c	Character		BLANK	Oxidation Character
geo_ox_n	Integer	-	0	Oxidation Integer
mined_actual_date	Character	ಸ	BLANK	As Mined:Survey Pickup Date - yyyymmdd
mined_actual_id	Character	5	BLANK	As Mined:Stope Survey ID, or DEVELOPMENT
mined_month	Character	-	BLANK	Month of Mining yyyymm
mined_type_c	Character	-	INSITU	As Mined: AIR; INSITU; DEVELOPMENT; STOPE; ROCK_FILL; PASTE_FILL
mined_type_n	Integer	•	1	As Mined: 0= AIR; 1=INSITU; 2=DEVELOPMENT; 3=STOPE; 4=ROCK_FILL; 5=PASTE_FILL
res_au	Float	2	0.01	Resource Back Calculated Au
res_cat_n	Integer	÷(	0	Resource Category Integer
res_density	Float	2	2.8	Resource Bulk Density
res_ox_n	Integer	-	0	Resource Oxidation Integer
res_zone_n	Integer	H).	0	Resource Domain Integer
stope_design_date	Character	ti.	BLANK	Stope Design Date - Designed
stope_design_id	Character		BLANK	Stope Design ID - Designed



KNA was conducted for the major domains at to establish appropriate estimation block size as well as suitable parameters for minimum and maximum samples. At Great Fingall an estimation block size of 20 m (X) x 20 m (Y) x 10 m (Z) provided optimum estimate performance on the fringe of the well drilled portion of the main vein. A variable 3D block size ranging from 5 m (X) x 5 m (Y) x 2.5 m (Z) to 20 m (X) x 20 m (Y) x 10 m (Z) was selected to provide a robust estimate for domains unsuitable to 2D estimation. At Golden Crown an estimation block size of 20 m (X) x 20 m (Y) x 20 m (Z) provided optimum estimate performance on the margins of the major domains while a block size of 10 m (X) x 10 m (Y) x 10 m (Z) was found to be more appropriate for the densely underground sampled portions of several of the major domains. The main Golden Crown Reef and Selvedge domain used a 20 m (X) x 20 m (Y) x 10 m (Z) parent cell size.. Several factors were considered when selecting an appropriate block size for each resource model, these being:

- The slope of the regression of the 'true' block grade on the 'estimated' block grade;
- Kriging efficiency (measure of kriging variance and block variance);
- Grade continuity and nugget variance;
- Nominal drill hole spacing;
- Mineralisation geometry.

Analysis of KNA outputs allowed the minimum and maximum number of samples used for estimation to be established, with a first pass minimum of 6 samples and a maximum of 22 samples being applied to all domains. Several factors were considered in the application of minimum and maximum samples, these include:

- Robustness of the estimate on domain fringes.
- Local variability within the domain core.
- Estimation artefacts created by a multi-pass approach.
- Search neighbourhood consistency across multiple domains.

Search neighbourhoods for estimation of width including search range, orientation and anisotropy were set with identical parameters to that of the accompanying accumulation estimate to avoid problematic calculation of the final gold variable given that the calculation is the result of two independent estimates.

Estimation parameters are detailed below for the updated major 2D domains.



# Table 14-73 Accumulation (d33) and width (d10) estimation parameters – Great Fingall Reef and Selvedge domains

Control Parame Name 5002 5002										
5002			Search Parameters							
	Assay D Field	gc_2d_thickness	Search Method ELLIPSOID	Minimum Samples 7	Maximum Samples 13		Max Vert Search Dist			
	d33	gc_2d_au_thickness	ELLIPSOID	7	13		99999			
5003	d10	gc_2d_thickness	ELLIPSOID	7	13		99999			
5003	d33	gc_2d_au_thickness	ELLIPSOID	7	13		99999			
5004	d10	gc_2d_thickness	ELLIPSOID	7	13		99999		-	
5004 5102	d33	gc_2d_au_thickness gc_2d_thickness	ELLIPSOID ELLIPSOID	7	13		99999 99999			
5102	d10 d33	gc_2d_au_thickness	ELLIPSOID	5			99999			
5103	d10	gc_2d_thickness	ELLIPSOID	5			99999			
5103	d33	gc_2d_au_thickness	ELLIPSOID	5	11	75	99999			
5104	d10	gc_2d_thickness	ELLIPSOID	5	11		99999			
5104	d33	gc_2d_au_thickness	ELLIPSOID	5	11	75	99999			_
Control Parame Name		d Estimation Attribute	Bearing	Plunge	Dip	Maior/Semi Maior Ratio	Major/Minor Ratio			
5002	d10	gc_2d_thickness	270	-50	90		10			
5002	d33	gc_2d_au_thickness	270	-50			10			
5003	d10	gc_2d_thickness	270	-50	90		10			
5003 5004	d33 d10	gc_2d_au_thickness gc_2d_thickness	270 270	-50 -50	90 90		10			
5004	d33	gc_2d_au_thickness	270	-50			10			
5102	d10	gc_2d_thickness	270	-40	90		4			
5102	d33	gc_2d_au_thickness	270	-40			4			
5103	d10	gc_2d_thickness	270	-40			4			_
5103 5104	d33 d10	gc_2d_au_thickness gc_2d_thickness	270 270	-40 -40			4			
5104	d33	gc_2d_au_thickness	270	-40			4			
<b>Control Parame</b>			Grade Dependent Parameters							
Name		d Estimation Attribute	Adjust Search Radius by CutOff		Grade From 1 (>=)		Search Distance 1			
5002	d10	gc_2d_thickness	N	1	0		0			
5002 5003	d33 d10	gc_2d_au_thickness gc_2d_thickness	N	1	0		0			
5003 5003	d10 d33	gc_2d_thickness gc_2d_au_thickness	Y	1	10		125			-
5004	d10	gc_2d_thickness	N	1	0		0			
5004	d33	gc_2d_au_thickness	Y	1	45	99999	125			
5102	d10	gc_2d_thickness	N	1	0		0			-
5102 5103	d33 d10	gc_2d_au_thickness gc_2d_thickness	N	1	0		0			
5103	d33	gc_2d_au_thickness	N	1	0		0			
5104	d10	gc_2d_thickness	N	1	0	99999	0			
5104	d33	gc_2d_au_thickness		1	50	99999	80			
Control Parame Name		d Estimation Attribute	Estimation Parameters Estimation Method	XDescretisation	V Descrotization	7 Decorptication	ID Power	Din Attribut -	Din Dir Attribute	No Structures
Name 5002	d10	gc_2d_thickness	Estimation Method Ordinary Kriging	X Descretisation	Y Descretisation 5			Dip Attribute dynamic_dip	Dip Dir Attribute dynamic_dipd	No Structures
5002	d33	gc_2d_au_thickness	Ordinary Kriging	5	5		2	dynamic_dip	dynamic_dipd	3
5003	d10	gc_2d_thickness	Ordinary Kriging	5	5	5		dynamic_dip	dynamic_dipd	3
5003	d33	gc_2d_au_thickness	Ordinary Kriging	5	5			dynamic_dip	dynamic_dipd	3
5004 5004	d10 d33	gc_2d_thickness gc_2d_au_thickness	Ordinary Kriging Ordinary Kriging	5	5		2	dynamic_dip dynamic_dip	dynamic_dipd dynamic_dipd	3
5102	d10	gc_2d_ad_unckness gc_2d_thickness	Ordinary Kriging	5	5			dynamic_dip	dynamic_dipd	2
5102	d33	gc_2d_au_thickness	Ordinary Kriging	5	5			dynamic_dip	dynamic_dipd	2
5103	d10	gc_2d_thickness	Ordinary Kriging	5			2	dynamic_dip	dynamic_dipd	2
5103	d33	gc_2d_au_thickness	Ordinary Kriging	5	5			dynamic_dip	dynamic_dipd	2
5104	d10	gc_2d_thickness	Ordinary Kriging	5				dynamic_dip	dynamic_dipd	2
5104 Control Parame	d33	gc_2d_au_thickness	Ordinary Kriging	5	5	5	2	dynamic_dip	dynamic_dipd	2
Name		d Estimation Attribute	Nugget	Sill 1	Range 1	Bearing 1	Plunge 1	Dip 1	Semi Ratio 1	Minor Ratio 1
5002	d10	gc_2d_thickness	0.27	0.322				90	2.2	4.4
5002	d33	gc_2d_au_thickness	0.27	0.322	22	270	-50	90	2.2	4.4
5003	d10	gc_2d_thickness	0.25	0.323				90	2.2	4.4
5003 5004	d33	gc_2d_au_thickness	0.27	0.322		270 270		90 90	2.2	4.4
5004	d10 d33	gc_2d_thickness gc_2d_au_thickness	0.282	0.347	22	270		90	2.2	4.4
5102	d10	gc_2d_thickness	0.565	0.124		270		90	1	3
5102	d33	gc_2d_au_thickness	0.565	0.124	75	270	-40	90	1	3
5103	d10	gc_2d_thickness	0.565	0.124				90	1	3
5103	d33	gc_2d_au_thickness	0.565	0.124				90	1	3
5104 5104	d10 d33	gc_2d_thickness gc_2d_au_thickness	0.565	0.124 0.124		270 270		90 90	1	3
Control Parame		gc_2d_ad_unckness	0.000	0.124	75	270	-40	50		5
Name	Assay D Field	d Estimation Attribute	Sill 2	Range 2	Bearing 2	Plunge 2	Dip 2	Semi Ratio 2	Minor Ratio 2	
5002	d10	gc_2d_thickness	0.245	180 180	270		90	5.143	10	
5002 5003	d33				270				10	
5003		gc_2d_au_thickness	0.245				90	5.143	10	
	d10 d33	gc_2d_thickness	0.256	180	270	-50	90 90	5.143 5.143	10	
5004	d33 d10		0.256 0.245 0.239	180 180 180	270 270	-50 -50 -50	90 90 90 90	5.143 5.143 5.143 5.143	10 10 10	
5004 5004	d33 d10 d33	gc_2d_thickness gc_2d_au_thickness gc_2d_thickness gc_2d_au_thickness	0.256 0.245 0.239 0.239	180 180 180 180	270 270 270	-50 -50 -50 -50	90 90 90 90 90	5.143 5.143 5.143 5.143 5.143	10 10 10	
5004 5004 5102	d33 d10 d33 d10	gc_2d_thickness gc_2d_au_thickness gc_2d_thickness gc_2d_au_thickness gc_2d_au_thickness	0.256 0.245 0.239 0.239 0.311	180 180 180 180 140	270 270 270 270	-50 -50 -50 -50	90 90 90 90 90 90	5.143 5.143 5.143 5.143 5.143 5.143 1	10 10 10 3.111	
5004 5004 5102 5102	d33 d10 d33 d10 d33	gc_2d_thickness gc_2d_au_thickness gc_2d_thickness gc_2d_au_thickness gc_2d_thickness gc_2d_thickness gc_2d_au_thickness	0.256 0.245 0.239 0.239	180 180 180 180	270 270 270	-50 -50 -50 -50 -40	90 90 90 90 90 90 90	5.143 5.143 5.143 5.143 5.143	10 10 10 3.111 3.111	
5004 5004 5102	d33 d10 d33 d10	gc_2d_thickness gc_2d_au_thickness gc_2d_thickness gc_2d_thickness gc_2d_au_thickness gc_2d_thickness gc_2d_au_thickness gc_2d_thickness	0.256 0.245 0.239 0.239 0.311 0.311	180 180 180 180 140 140	270 270 270 270 270	-50 -50 -50 -50 -40 -40	90 90 90 90 90 90 90 90	5.143 5.143 5.143 5.143 5.143 1 1	10 10 10 3.111	
5004 5004 5102 5102 5103 5103 5104	d33 d10 d33 d10 d33 d10 d33 d10 d33 d10	gc_2d_thickness gc_2d_au_thickness gc_2d_thickness gc_2d_thickness gc_2d_thickness gc_2d_thickness gc_2d_au_thickness gc_2d_au_thickness gc_2d_au_thickness gc_2d_u_thickness	0.256 0.245 0.239 0.311 0.311 0.311 0.311 0.311	180 180 180 140 140 140 140 140	270 270 270 270 270 270 270 270 270	-50 -50 -50 -50 -40 -40 -40 -40 -40	90 90 90 90 90 90 90 90 90 90 90	5.143 5.143 5.143 5.143 5.143 1 1 1 1	10 10 10 3.111 3.111 3.111 3.111 3.111	
5004 5004 5102 5102 5103 5103 5104 5104	d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33	gc_2d_thickness gc_2d_au_thickness gc_2d_au_thickness gc_2d_au_thickness gc_2d_thickness gc_2d_au_thickness gc_2d_au_thickness gc_2d_au_thickness	0.256 0.245 0.239 0.311 0.311 0.311 0.311	180 180 180 140 140 140 140	270 270 270 270 270 270 270 270	-50 -50 -50 -50 -40 -40 -40 -40 -40	90 90 90 90 90 90 90 90 90 90	5.143 5.143 5.143 5.143 5.143 1 1 1 1 1	10 10 10 3.111 3.111 3.111 3.111	
5004 5004 5102 5102 5103 5103 5104 5104 <b>Control Parame</b>	d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 eters	gc.2d_thickness gc.2d_au_thickness gc.2d_au_thickness gc.2d_au_thickness gc.2d_au_thickness gc.2d_au_thickness gc.2d_thickness gc.2d_thickness gc.2d_thickness gc.2d_thickness gc.2d_au_thickness	0.256 0.245 0.239 0.239 0.311 0.311 0.311 0.311 0.311 0.311 0.311	180           180           180           140           140           140           140           140           140           140           140           140           140           140           140           140	270 270 270 270 270 270 270 270 270 270	-50 -50 -50 -50 -40 -40 -40 -40 -40 -40 -40	90 90 90 90 90 90 90 90 90 90 90 90 90	5.143 5.143 5.143 5.143 1 1 1 1 1 1 1 1 1	10 10 10 3.111 3.111 3.111 3.111 3.111 3.111 3.111	
5004 5004 5102 5102 5103 5103 5104 5104	d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 eters	gc_2d_thickness gc_2d_au_thickness gc_2d_thickness gc_2d_thickness gc_2d_thickness gc_2d_thickness gc_2d_au_thickness gc_2d_au_thickness gc_2d_au_thickness gc_2d_u_thickness	0.256 0.245 0.239 0.239 0.311 0.311 0.311 0.311 0.311 0.311 0.311	180 180 180 140 140 140 140 140	270 270 270 270 270 270 270 270 270	-50 -50 -50 -50 -50 -40 -40 -40 -40 -40 -40 -40 -40	90 90 90 90 90 90 90 90 90 90 90 90 90 9	5.143 5.143 5.143 5.143 5.143 1 1 1 1 1	10 10 10 3.111 3.111 3.111 3.111 3.111	
5004 5004 5102 5103 5103 5103 5104 5104 Control Parame Name 5002 5002	d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d3 d3 d10 d10 d3 d10 d10 d3 d10 d10 d3 d10 d10 d10 d10 d10 d10 d10 d10 d10 d10	gc.2d.thickness gc.2d.nickness gc.2d.thickness gc.2d.thickness gc.2d.thickness gc.2d.u.thickness gc.2d.u.thickness gc.2d.u.thickness gc.2d.au.thickness gc.2d.au.thickness gc.2d.au.thickness gc.2d.au.thickness gc.2d.au.thickness gc.2d.au.thickness	0.256 0.245 0.239 0.311 0.311 0.311 0.311 0.311 0.311 0.311 0.311 0.311	180 180 180 140 140 140 140 140 140 140 140 260 260	270 270 270 270 270 270 270 270 270 270	-50 -50 -50 -50 -40 -40 -40 -40 -40 -40 -40 -40 -50 -50	90 90 90 90 90 90 90 90 90 90 90 90 90 9	5.143 5.143 5.143 5.143 1.143 1.144	10 10 10 10 3.111 3.111 3.111 3.111 3.111 3.111 3.111 3.111 9.63 9.63	Image: Constraint of the sector of
5004 5004 5102 5103 5103 5104 5104 Control Parame Name 5002 5002 5003	d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 d3 d10 d33 d3 d10 d33 d3 d10 d33 d33 d10 d33 d3 d10 d33 d3 d10 d33 d3 d10 d33 d3 d10 d33 d3 d10 d33 d3 d10 d33 d3 d10 d3 d3 d3 d10 d3 d3 d10 d3 d3 d10 d3 d3 d10 d10 d3 d3 d10 d10 d3 d3 d10 d10 d10 d3 d10 d10 d10 d10 d10 d10 d10 d10 d10 d10	gc 2d, thickness gc 2d, au, thickness gc 2d, au, thickness gc 2d, thickness gc 2d, au, thickness gc 2d, thickness gc 2d, au, thickness	0.256 0.245 0.239 0.311 0.311 0.311 0.311 0.311 0.311 0.311 0.311 0.311 0.311 0.311 0.311 0.311 0.311	180 180 180 180 140 140 140 140 140 140 260 260 260	220 220 220 220 220 220 220 220 220 8aating 3 220 220 220 220 220 220	-50 -50 -50 -50 -40 -40 -40 -40 -40 -40 -40 -50 -50 -50	90 90 90 90 90 90 90 90 90 90 90 90 90 9	5.143 5.143 5.143 5.143 1.143 1.1 1.111 1.1111 1.1111 5.000 Ratio 3 4.727 4.727	10 10 10 10 3.111 3.111 3.111 3.111 3.111 3.111 Minor Ratio 3 9.63 9.63 9.63	-           -
5004 5004 5102 5103 5103 5104 5104 Control Parame Name 5002 5002 5002 5003	d33 d10 d33 d10 d33 d10 d33 d10 d33 d10 d33 eters <b>Assay D Field</b> d10 d33 d10 d33	gc 2d uitkiness gc 2d, uitkiness	0.256 0.245 0.239 0.311 0.312 0.310 0.312 0.3200 0.3200 0.3200 0.320000000000	180 180 180 140 140 140 140 140 140 140 260 260 260	270 270 270 270 270 270 270 270 270 270	-50 -50 -50 -50 -50 -50 -40 -40 -40 -40 -40 -50 -50 -50	90 90 90 90 90 90 90 90 90 90 90 90 90 9	5.143 5.143 5.143 5.143 1.5.143 1 1 1 1 1 5.143 1 1 1 5.143 1 1 1 5.143 1 1 2 4 727 4.727 4.727	10 10 10 10 3.1111 3.1111 3.111 3.111 3.111 3.111 3.111	-           -
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5004 5004 5102 5102 5103 5103 5104 5104 5104 <b>Control Parame</b> <b>Solo2</b> 5002 5003 5003 5003 5004 5004 5004 5004 5004 5002 5003 5003 5003 5003 5004 5004 5002 5003 5003 5003 5003 5003 5003 5003 5003 5003 5002 5003 5002 5003 5002 5003 5003 5002 5003 5002 5003 5002 5002 5002 5002 5002 5002 5003 5004 5004 5004 5004 5004 5004 5004 5004 5004 5002 5002 5003 5002 5003 5003 5002 5003 5003 5003 5003 5002 5003 5003 5003 5003 5003 5002 5003 5003 5003 5004 5002 5003 5003 5004 5002 5003 5004 5002 5003 5003 5004 5004 5002 5003 5004 5002 5003 5004 5002 5003 5004 5002 5004 5002 5003 5004 5002 5004 5002 5004 5002 5003 5004 5002 5004 5002 5003 5004 5002 5004 5002 5004 5002 5003 5004 5002 5004 5002 5004 5004 5002 5004 5004 5002 5004 5002 5004 5002 5004 5002 5004 5002 5004 5002 5004 5002 5002 5004 5002 5002 5004 5002 500	d33 d10 d10 d33 d10 d10 d10 d33 d10 d10 d10 d10 d33 d10 d10 d10 d10 d10 d10 d33 d10 d10 d10 d10 d10 d10 d33 d10 d10 d10 d10 d10 d10 d10 d33 d10 d10 d10 d10 d10 d10 d10 d10 d10 d10	p. 2.4 thickness           p. 2.4 au thickness           p. 2.4 au thickness	0.256 0.245 0.239 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.3	180 180 180 140 140 140 140 140 140 140 260 260 260 260 260 260 260 26	270 270 270 270 270 270 270 270 270 270	-50 -50 -50 -50 -40 -40 -40 -40 -40 -40 -40 -50 -50 -50 -50 -50 -50 -50 -50 -50 -5	90 90 90 90 90 90 90 90 90 90 90 90 90 9	5.143 5.143 5.143 5.143 1 1 1 1 1 1 5.143 1 1 1 1 1 1 1 1 5.143 5.143 5.143 7 1 1 1 5.143 7 1 1 1 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2	10 10 10 10 3.111 3.111 3.111 3.111 3.111 3.111 3.111 3.111 4.063 9.65 9.75 9.75	-         -           -         -
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5004 5002 5102 5103 5103 5103 5104 5014 5014 5002 5002 5002 5003 5003 5003 5003 5004 5004 5004 5004	d33           d10           d33	e 2.4 thickness g: 2.4 au thickness g: 2.4 au thickness g: 2.4 thickness g: 2.4 thickness g: 2.4 thickness g: 2.4 au thickness	0.256 0.245 0.239 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.3	180 180 180 140 140 140 140 140 140 140 14	270 270 270 270 270 270 270 270 270 270	-50 -50 -50 -40 -40 -40 -40 -40 -40 -40 -4	90 90 90 90 90 90 90 90 90 90 90 90 90 9	5.143 5.143 5.143 5.143 1.1 1 1 1 1 2 5.000 1 1 1 1 1 1 1 1 1 1 1 2 5.000 2 4.727 4.727 4.727 4.727 4.727 0 0 0 0 0 0	10 10 10 3.111 3.111 3.111 3.111 3.111 3.111 4.111 3.111 4.1111 4.1111 4.1111 4.1111 4.1111 4.1111 4.1111 4.11111 4.1111 4.1111 4.1111 4.1111 4.1111 4.11111 4.	Image: Section 1         Image: Section 2           Image: Section 2
5004 5004 5102 5102 5103 5103 5104 Control Parame Name 5002 5002 5002 5003 5003 5004 5003 5004 5102 5102 5102 5102 5102 5102 5102 5103 5104 5105 5004 5004 5004 5004 5004 5004 5004 5005 5004 5002 5002 5002 5002 5002 5003 5003 5004 5002 5002 5003 5003 5004 5002 5002 5003 5003 5003 5004 5002 5003 5002 5003 5003 5004 5002 5003 5004 5002 5003 5003 5004 5002 5003 5004 5003 5004 5002 5003 5004 5002 5004 5002 5004 5004 5002 5004 5004 5004 5002 5004 5004 5004 5002 5004 5002 5004 5002 5005 50	d33           d10           d33	6: 2.4 au, hickness 6: 2.4 au, hickness 8: 2.4 au, hickness 9: 2.4 au, hickness	0.256 0.245 0.239 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.311 0.312 0.312 0.312 0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.3	180 180 180 140 140 140 140 140 140 280 280 280 280 280 280 280 28	270 270 270 270 270 270 270 270 270 270	-50 -50 -50 -50 -40 -40 -40 -40 -40 -40 -40 -40 -40 -50 -50 -50 -50 -50 -50 -50 -50 -50 -5	90 90 90 90 90 90 90 90 90 90 90 90 90 9	5.143 5.143 5.143 5.143 1 1 1 1 1 1 1 2 3 3 3 4.727 4.727 4.727 4.727 4.727 0 0 0 0 0 0 0 0	10 10 10 3111 311 31111 31111 3111 3111 3111 3111 3111 3111 3111 3111 3111	
5004           5004           5102           5103           5103           5103           5104           5002           5002           5003           5004           5002           5003           5004           5004           5004           5004           5004           5004           5004           5004           5102           5103           5104           5104           5104	33           410           413           410           433           410           33           410           33           410           33           43	6. 2.4 uhickness 6. 2.4 u. hickness 6. 2.4 u. hickness 8. 2.4 u. hickness 9. 2.4 u. hickness	0.256 0.245 0.239 0.311 0.311 0.311 0.311 0.311 0.311 0.311 0.312 0.313 0.313 0.313 0.314 0.314 0.314 0.314 0.312 0.312 0.321 0.321 0.321 0.321 0.321 0.312 0.320000000000	180 180 180 180 140 140 140 140 140 280 280 280 280 280 280 280 28	220 220 220 220 220 220 220 220 220 220	-50 -50 -50 -50 -40 -40 -40 -40 -40 -40 -40 -40 -40 -50 -50 -50 -50 -50 -50 -50 -50 -50 -5	90 90 90 90 90 90 90 90 90 90 90 90 90 9	5.143 5.143 5.143 5.143 1 1 1 1 1 1 2 3 3 4.727 4.727 4.727 4.727 4.727 4.727 4.727 4.727 0 0 0 0 0 0 0 0 0	10 10 10 3.1111 3.1111 3.1111 3.111 3.111 3.111 3.111 3.111 3.111 3.111 3	
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#### 14.5.3.8 Model Validation

In order to validate the results of the estimate, the modelled results were analysed by visual validation both in 2D and 3D, global statistical comparison of domains against input composites and swath plots to analyse local estimate variance against input data. For 2D domains, both the estimated variables of accumulation and width as well as the calculated gold were considered during validation.

Global statistical comparisons whilst informative at Great Fingall and Golden Crown do not provide a realistic benchmark for estimate comparison across the bulk of the mineralisation domains due to the lack of global stationarity, this is particularly evident in swath plots across a number of domains. Global estimate variance against informing composites for both accumulation and width are significant across several major domains, particularly the Great Fingall Reef and Golden Crown Reefs and the Alimak / Spur Reef (3030). De-clustering of input composite statistics displays some sensitivity to de-clustering dimensions, particularly where underground data density is high. Examination of the validation statistics above the 0 mRL and below the 700 mRL for the Great Fingall Lower Reef (5004) displays a small over-estimate in accumulation with a resultant 6% over-estimate in the accumulation variable when compared to the naïve mean. The Great Fingall Upper Reef (5104) displays moderate under-estimation of -25% in the accumulation variable when compared to the naïve mean. The Golden Crown Reef (6108) displays a moderate under-estimation globally, with a resultant 28% under-estimate in the accumulation variable when compared to the declustered mean. However, this is largely driven at depth by a small number of lower grade samples influencing a large number of blocks.

Examination of the global statistics for the Spur and Alimak Reef (3030) suggest significant variance in both accumulation and width against input composites, with the resultant 45% under-estimate in calculated Au. It should be noted that the input composite mean is significantly biased by clustering of underground samples as well as the domains lack of global stationarity. Swath plot and visual validation indicates a robust estimate given the clustered underground dataset on the sub-vertical portion of the reef and the sparse sample density where the reef flattens (2016 model examination of data).



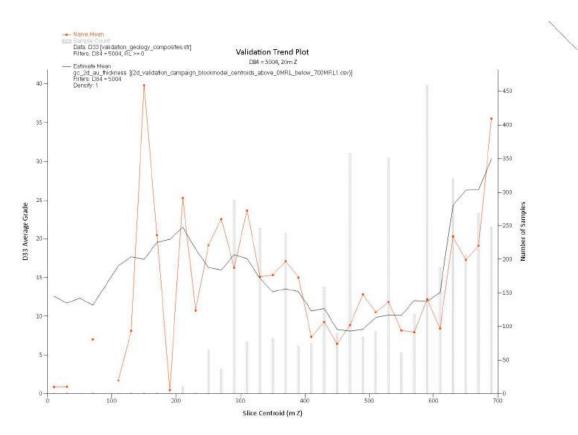


Figure 14-52 Great Fingall lower reef (5004) accumulation validation plots – Z direction; <700 mRL. Source: Westgold.

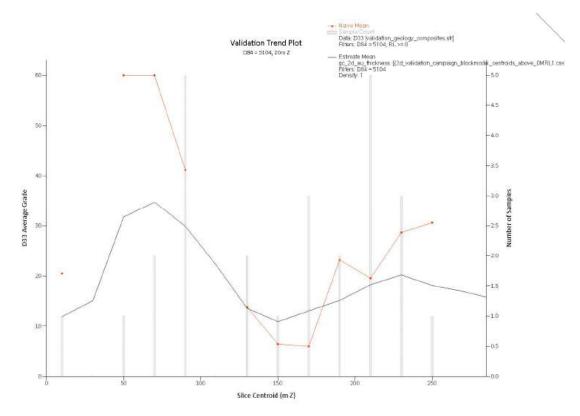
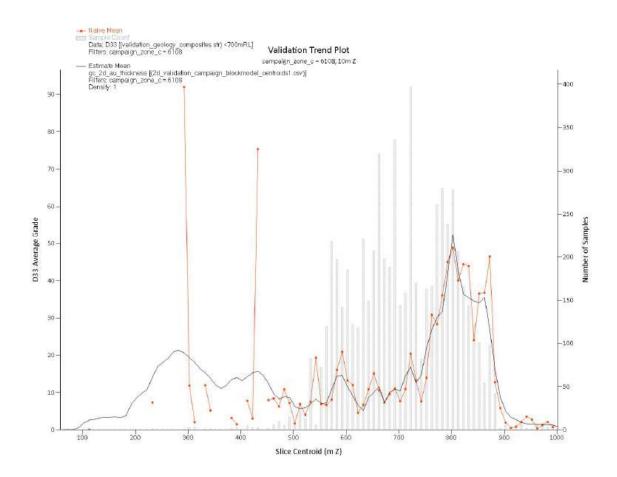


Figure 14-53 Great Fingall upper reef (5104) accumulation validation plots – Z direction; <700 mRL. Source: Westgold.







The Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

The deposit has been classified as Indicated or Inferred Mineral Resource based on a combination of quantitative and qualitative criteria which included geological continuity and confidence in volume models, data quality, sample spacing, lode continuity and estimation parameters.



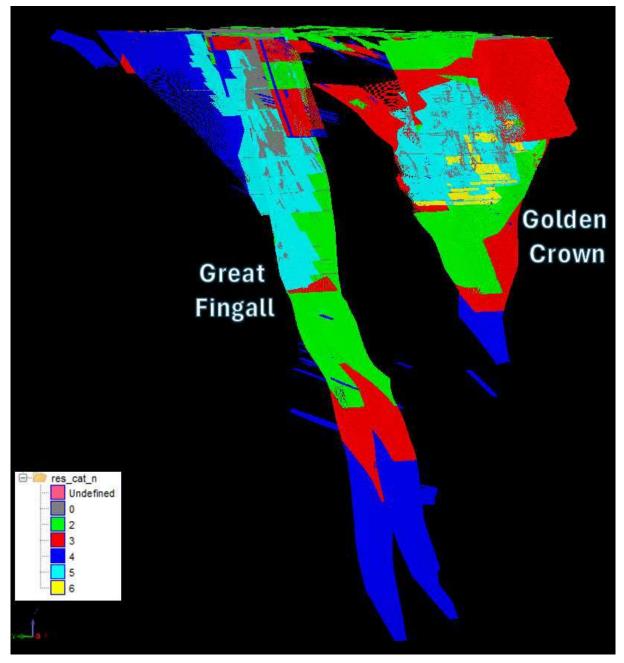


Figure 14-55 Great Fingall and Golden Crown combined Mineral Resource classification. Source: Westgold.

# 14.5.3.10 Mineral Resource Reporting

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource estimate is effective as of June 30, 2024. The Mineral Resource at the Great Fingall and Golden Crown deposit has been reported using a cut-off at 0.7 g/t Au for the Open Pit component and 2.0 g/t Au for the Underground resource. Resources have been depleted for open pit and underground mining.



The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations. At Great Fingall & Golden Crown, areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. These areas were adjacent to mined out stopes as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.

		Min	ieral Res	source Sta	ingall Un atement 30/06/20	- Round	nd ed for Rep	orting				
		Measure	d	l	ndicated		Measure	ed and In	dicated		Inferred	
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Great Fingall UG	0	0.00	0	1,616	5.25	273	1,616	5.25	273	883	3.51	100
Total	0	0.00	0	1,616	5.25	273	1,616	5.25	273	883	3.51	100

 Table 14-74 Great Fingall Underground Mineral Resource Estimate - CGO - as of June 30, 2024.

NOT ABOVE Z PLANE 800; >=2.0 g/t Au.

Table 14-75 Great Fingall Open	Dit Mineral Resource Estimat	$c_{0} = CGO = as of lune 30, 2024$
Table 14-75 Great Fillgall Open	FIL MINERAL RESOURCE ESUINAL	e – 000 – as of Julie 30, 2024.

Great Fingall Open Pit Mineral Resource Statement - Rounded for Reporting 30/06/2024												
	Measured Indicated Measured and Indicated Inferred											
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Great Fingall OP	0	0.00	0	188	1.85	11	188	1.85	11	26	1.23	1
Total	0	0.00	0	188	1.85	11	188	1.85	11	26	1.23	1

ABOVE DTM 3000\_AT\_2600\_INF\_120T90T\_GEOTECH\_PIT21CND.DTM; ABOVE Z PLANE 800; INSIDE CONSTRAINT GF\_ORE; >=0.7 g/t Au.

		Mine		urce Sta		- Round	und ed for Rej	porting				
30/06/2024												
		Measured Indicated Measured and Indicated			Inferred							
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
												l
Golden Crown UG	0	0.00	0	333	6.18	66	333	6.18	66	944	5.14	150
												. <u> </u>
Total	0	0.00	0	333	6.18	66	333	6.18	66	944	5.14	15

NOT ABOVE Z PLANE 950; >=2.0 g/t Au.



The Great Fingall and Golden Crown Mineral Resource estimate as set out in **Table 14-74**, **Table 14-75** and **Table 14-76** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

# 14.5.4 Mount Fingall

#### 14.5.4.1 Summary

The Mount Fingall deposit is located approximately five hundred and fifty kilometres north northeast of Perth and about five kilometres southwest of Cue in the Murchison Province of Western Australia. Mount Fingall sits four kilometres south of the existing Golden Crown underground mine.



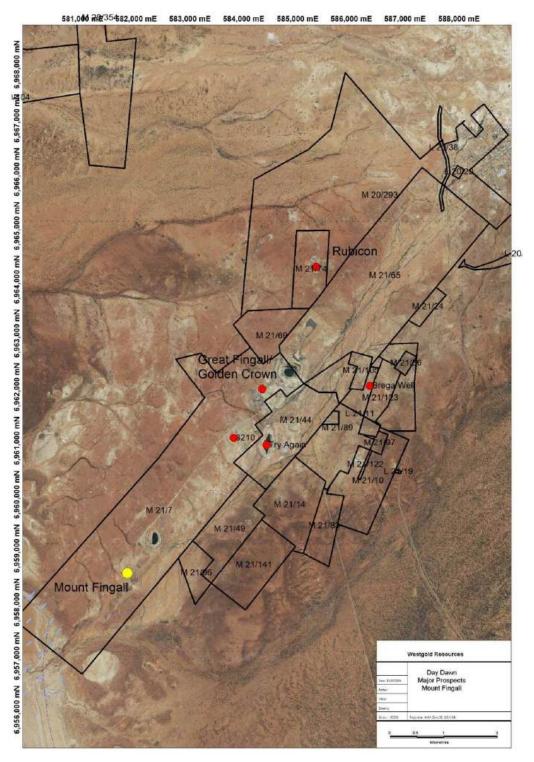


Figure 14-56 Mount Fingall location map. Source: Westgold.

Historical production from the Mount Fingall Open Pit is reported at 68,000 t at 1.4 g/t for 3,116 oz.

An updated Mineral Resource estimate for Mount Fingall was completed in April 2013. The Mount Fingall MRE was undertaken using all available data. The MRE includes an update to the interpretation of the main geological units and the estimation domains.

Grade estimation utilised inverse distance (squared) for all domains.



#### 14.5.4.2 Modelling Domains

Geological interpretation of the Mount Fingall deposit was carried out using a systematic approach to ensure that the resultant estimated MRE figure was both sufficiently constrained, and representative of the expected subsurface conditions.

Initially a three-dimensional viewing of the data was undertaken to establish a feel for the basic form and continuity of the mineralisation. This was followed by sectional viewing of the mineralisation. Strings were digitised on section to establish a 0.50 g/t cut-off envelope around the interpreted mineralisation. A maximum of two metres of downhole internal dilution was allowed, and in cases where geological knowledge of the deposit allowed, the interpretation strings were continued through zones of lower grade to assist in modelling mineralisation continuity, and to increase the level of along strike control on the location of the mineralised structure. All strings were digitised in a clockwise direction; with a common base of interpretation selected (the base selected was dependent upon the depth at which drillhole information became so sparse as to render mineralisation surface interpretation impractical). Strings were snapped to drillholes at sample interval boundaries, with no points created between drillholes, ensuring that no artificial complexities were introduced into the mineralisation geometry.

Wireframing of mineralisation sectional perimeters was performed via the linking of appropriate perimeters on adjacent sections. The wireframes were sealed by triangulation within the end member perimeters, leading to the creation of a volume model.

This mineralisation volume model was then used to create an intersection table within the database by marking for extraction all intervals of drillholes enclosed by the volume model. These intervals were then extracted for use in domain analysis, and later grade estimations. Each intersection was flagged according to the object of the mineralisation it intersected, with numerical codes assigned to each intersection as appropriate.

The base of complete oxidation (BOCO) and top of fresh rock (TOFR) surfaces were generated in Surpac mining software from geological logging.

# 14.5.4.3 Statistical Analysis and Compositing

One metre composites of the downhole assay results from the valid holes in the project area were used in the statistical analysis, and ultimate Mineral Resource estimation. Composites were taken from within the interpreted mineralised envelope, with the composite length chosen based on the dominant sample length within the database (i.e. one metre).

A top-cut analysis was performed for data included in the resource estimation.

The one metre composite files of downhole assay data were ranked. Datasets were then graphed and analysed for disintegrations, which is defined as the first significant increase in percentage difference between adjacent values (i.e. the first change in value greater than 10%) for assay values sufficiently above the mean assay value for the dataset.



From this analysis a top cut of 9 g/t was determined. Cutting the dataset to 9 g/t affects 5 values (1.3% of the population) and a total of 4.22% of the metal is cut.

## 14.5.4.4 Density

Densities assigned to the current resource model were assigned based upon geologically logged oxidation boundaries.

Due to the lack of density data available for Mount Fingall, densities applied to the current model were taken from values recorded in corresponding oxidation conditions in the Great Fingall Dolerite (as rock types should be compositionally identical for the majority of cases).

#### Table 14-77 Mount Fingall applied densities.

Density:	
>topo	0
Backfill	1.9
boco>x <topo< td=""><td>2.2</td></topo<>	2.2
tofr>x <boco< td=""><td>2.4</td></boco<>	2.4
<tofr -="" ore<="" td=""><td>2.65</td></tofr>	2.65
<tofr -="" td="" waste<=""><td>2.7</td></tofr>	2.7

## 14.5.4.5 Metallurgy

No known metallurgical test work exists for the Mount Fingall deposit.

# 14.5.4.6 Variography

Understanding the grade continuity and determining its extent and orientation is achieved through interpreting and modelling the experimental variogram. The experimental variogram requires sufficient sample data to provide a reliable measure of the grade continuity.

The downhole variogram provides the best estimate of the true nugget. For the 2013 Mount Fingall MRE no valid variograms were generated due to insufficient sample data. As a result, the ID<sup>2</sup> estimation method was chosen.

# 14.5.4.7 Block Model and Grade Estimation

The block model was originally created in April 2013 using Surpac mining software to encompass the full extent of the deposit. A parent block size of 12.5 m NS x 2 m EW x 5 m vertical with sub-blocking to 6.25 m x 1 m x 2.5 m was used. Inverse Distance (ID<sup>2</sup>) was used for the grade estimation as it allowed for block interpolation weighted towards sample points closest to the block centroid. The wireframes were used as a hard boundary for the grade estimation of each domain. That is, only grades inside each lode were used to interpolate the blocks inside the lode. An 'ellipsoid' search orientated to reflect the geometry of the individual lodes was used to select data for interpolation. Three estimation passes were used for the interpolations with parameters based on the drill spacing. The first pass search distance was set to 60 m (2.4 x nominal drill spacing of 25 m), the second pass search distance set to 120 m and the third pass set to 180 m. The minimum number of informing composites was set to 4 and the maximum number of samples set to 16.



## 14.5.4.8 Model Validation

The following three-step process was used to validate the estimate through the entire deposit:

- A visual assessment was completed by slicing sections through the block model in positions coincident with drilling.
- A quantitative assessment was completed by comparing the average grades of the composite file input against the block model output for all the lodes.
- For the main domains, trend swath plots were generated in various orientations across strike, along strike and at elevation.

The validation indicates that the mineral resource model replicates the source input data well in regions of higher density drilling. Smoothing is evident in domains with limited input data; however, the estimate is considered appropriate as the trends in the data are adequately reproduced.

## 14.5.4.9 Mineral Resource Reporting

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource estimate is effective as of June 30, 2024. The Mineral Resource at the Mount Fingall deposit has been reported using a cut-off at 0.7 g/t Au and has been depleted for open pit mining.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the min Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations.

Mount Fingall Mineral Resource Statement - Rounded for Reporting 30/06/2024												
	Measured Indicated Measured and Indicated Inferred											
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz
Mount Fingall	0	0.00	0	89	1.84	5	89	1.84	5	188	1.23	7
Total	0	0.00	0	89	1.84	5	89	1.84	5	188	1.23	7

Table 14-78 Mount Fingall Mineral Resource Estimate – CGO – as of June 30, 2024.

The Mount Fingall Mineral Resource estimate as set out in **Table 14-78** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.



- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

#### 14.5.5 Rubicon

#### 14.5.5.1 Summary

The Rubicon deposit is located approximately five hundred and fifty kilometres north northeast of Perth and about four kilometres southwest of Cue in the Murchison Province of Western Australia. Rubicon sits two kilometres north of the existing Golden Crown underground mine.



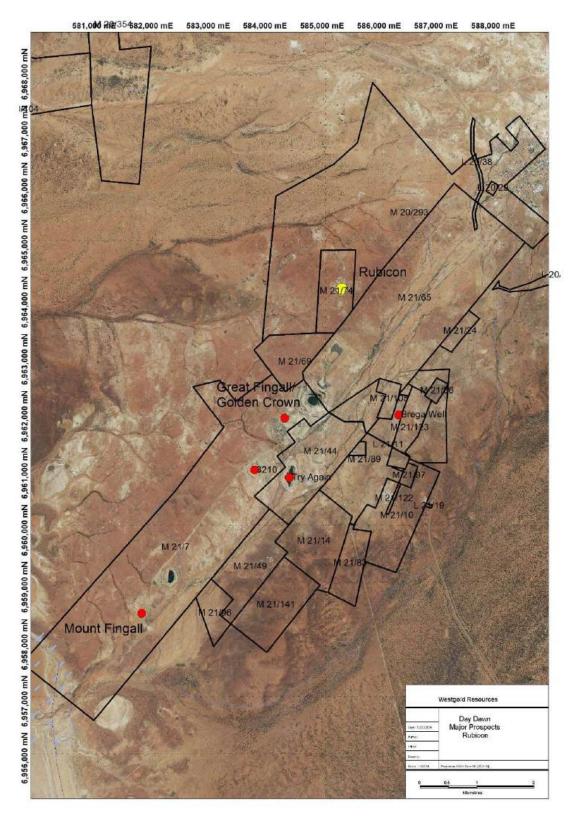


Figure 14-57 Rubicon location map. Source: Westgold.

Early underground ore production from Rubicon totalled 5,803.9 ounces extracted from 10,798 tonnes of ore during two episodes in 1895-96 and 1897-1913. Recent open pit mining by Harmony produced a further 246 ounces from 4361 tonnes of ore.



The Rubicon project area is situated within the Meekatharra-Wydgee Greenstone Belt, in the Murchison Province of the Archaean Yilgarn Craton of Western Australia (Myers, 1992). This belt extends over a strike length of approximately 300 km southwest from Meekatharra, and includes the mining centres of Meekatharra, Cue, Big Bell and Mount Magnet. It contains two major sequences, the Luke Creek and Mount Farmer Groups, which together comprise the Murchison Supergroup.

Within the Golden Crown project area the Greenstone Belt consists of intrusive and extrusive mafic and ultramafic units, felsic volcanics and volcaniclastics, sediments and quartz-haematite banded iron formation (BIF) belonging to the Gabanintha Formation, one of four laterally extensive litho-stratigraphic formations comprising the Luke Creek Group (Martin, 1993b). The Gabanintha Formation overlies sedimentary rocks of the Golconda Formation.

The following summarises the Luke Creek Group as defined by Watkins and Hickman (1990). These formations listed from youngest to oldest are:

- Windaning Formation A succession of abundant jaspilitic BIF and chert units interlayered with felsic volcanics, volcaniclastic, and volcanogenic rocks with minor basalts.
- Gabanintha Formation A bimodal succession of mafic and ultramafic rocks, felsic volcanics and volcaniclastics, and sedimentary rocks.
- Golconda Formation A succession of quartz-haematite BIF, interlayered with mafic and ultramafic extrusive and intrusive rocks. The lowermost formation of the Luke Creek Group, the Murrouli Basalt, is not exposed in this region. The area around Cue is composed of rocks of the Gabanintha and Golconda Formation and late-stage granite intrusives.

The Rubicon deposit is hosted with in the Hangingwall Basalts. Gold mineralisation at the Rubicon deposit is hosted within a broad envelope, the RB01 lode, contained within mafic schist that dips 65° towards the west. The overall strike of the mafic schist is local grid 010°, however, turns toward 025° (regional stratigraphy) where the thickest parts of the deposit occur.

The envelope of mineralisation ranges in thickness from 1 m to up to 12 m and occurs over a strike length of approximately 200 m. Distribution of gold within this envelope appears to form two narrow high-grade zones, which vaguely plunge 40° to the south and is surrounded by a halo of lower-grade.

The mineralised mafic schist truncates two dolerite dykes that strike 340° and dip 50° to the west. The smaller dolerite dyke that sits to the north and below the larger dolerite dyke may be the same dyke but offset dextrally along a structure which possibly strikes 065° and dips steep to the south.

The mineralisation within the mafic schist predominately occurs where these dykes intersect the schist. The southerly plunge direction of the mineralisation is parallel to the intersection lineation.



An updated Mineral Resource estimate for Rubicon was completed in April 2013. The Rubicon MRE was undertaken using all available data. The MRE includes an update to the interpretation of the main geological units and the estimation domains.

Both the Ordinary Kriged and Inverse Distance squared estimation techniques were employed for Rubicon.

## 14.5.5.2 Drilling and Sample Data

Drillhole data is stored in a Maxwell's DataShed system based on the Sequel Server platform which is currently considered "industry standard". The database used in the current estimate consists of tables for collar, survey, assay, lithology, veining, oxidation and alteration and is considered to be an accurate reflection of the drillhole data that has been collected at Rubicon. A total of 1022 holes are within the extracted database used for the Rubicon estimate. 251 drillholes were used to inform the estimate.

Date Drilled	Company	Drill Type						
Date Difited	Company	AC	GC	RC	DDH			
Pre 1990	Yinnex			52				
1990-2000	St Barbara			48	20			
2005	Harmony		866	17				
2010	Aragon				1			
2011	Westgold							
2013	Metals X			18				
		0	866	135	21			

#### Table 14-79 Extracted holes for the Rubicon Mineral Resource Estimate.

#### Table 14-80 Holes used to inform the Rubicon Mineral Resource Estimate.

Date Drilled	Compony	Drill Type						
Date Diffied	Company	AC	GC	RC	DDH			
Pre 1990	Yinnex			38				
1990-2000	St Barbara			42	18			
2005	Harmony		122	16				
2010	Aragon							
2011	Westgold							
2013	Metals X			15				
		0	122	111	18			

A significant portion of the drilling undertaken at Rubicon is RC with a minor component of diamond drilling.

RC Sampling by Metals X / Harmony - Standard 5½" RC, three tier riffle splitter (approximately 5 kg sample). Similar assumed for historical drilling.

Diamond Sampling: SBM - Half-core niche samples assumed taken.



Recent drilling by Metals X was analysed by fire assay by Bureau Veritas - Kalassay as outlined below:

- A 50 g sample undergoes fire assay lead collection followed by flame atomic adsorption spectrometry.
- Quality control is ensured via the use of standards, blanks and duplicates.
- No significant QA/QC issues have arisen in Metals X drilling results.

Historical drilling has been analysed via Aqua Regia and Pulverise and Leach.

# 14.5.5.3 Modelling Domains

Geological interpretation of the Rubicon deposit was carried out using a systematic approach to ensure that the resultant estimated MRE figure was both sufficiently constrained, and representative of the expected subsurface conditions.

Initially a three-dimensional viewing of the data was undertaken to establish a feel for the basic form and continuity of the mineralisation. This was followed by sectional viewing of the mineralisation. Strings were digitised on section to establish a 0.50 g/t cut-off envelope around the interpreted mineralisation. A maximum of two metres of downhole internal dilution was allowed, and in cases where geological knowledge of the deposit allowed, the interpretation strings were continued through zones of lower grade to assist in modelling mineralisation continuity, and to increase the level of along strike control on the location of the mineralised structure. All strings were digitised in a clockwise direction; with a common base of interpretation selected (the base selected was dependent upon the depth at which drillhole information became so sparse as to render mineralisation surface interpretation impractical). Strings were snapped to drillholes at sample interval boundaries, with no points created between drillholes, ensuring that no artificial complexities were introduced into the mineralisation geometry.

Wireframing of mineralisation sectional perimeters was performed via the linking of appropriate perimeters on adjacent sections. The wireframes were sealed by triangulation within the end member perimeters, leading to the creation of a volume model.

Domain analysis within Rubicon resulted in the generation of two estimation domains; The main Rubicon RB01 reef and the footwall shear. The geology, data distribution and gold tenor are sufficiently different to warrant separate mineralisation domains.

This mineralisation volume model was then used to create an intersection table within the database by marking for extraction all intervals of drillholes enclosed by the volume model. These intervals were then extracted for use in domain analysis, and later grade estimations. Each intersection was flagged according to the object of the mineralisation it intersected, with numerical codes assigned to each intersection as appropriate.

The base of complete oxidation (BOCO) and top of fresh rock (TOFR) surfaces were generated in Surpac mining software from the geological logging.



## 14.5.5.4 Statistical Analysis and Compositing

One metre composites of the downhole assay results from the valid holes in the project area were used in the statistical analysis, and ultimate Mineral Resource estimation. Composites were taken from within the interpreted mineralised envelope, with the composite length chosen based on the dominant sample length within the database (i.e. one metre).

A top-cut analysis was performed for data included in the resource estimation.

The one metre composite files of downhole assay data were ranked. Datasets were then graphed and analysed for disintegrations, which is defined as the first significant increase in percentage difference between adjacent values (i.e. the first change in value greater than 10%) for assay values sufficiently above the mean assay value for the dataset.

From this analysis a top cut of 30 g/t was determined for the Rubicon RB01 reef. Cutting this dataset to 30 g/t affects 6 values (0.54% of the population) and a total of 4.31% of the metal is cut. For the footwall shear domain no top cut was deemed necessary.

## 14.5.5.5 Density

Densities assigned to the current resource model were assigned based upon geologically logged oxidation boundaries.

Due to the lack of density data available for Rubicon, densities applied to the current model were taken from values recorded in corresponding oxidation conditions in the Great Fingall Dolerite (as rock types should be compositionally similar for the majority of cases).

Table 14-81 Rubicon applied densities.	
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Density:	
>topo	0
boco>x <topo< td=""><td>2.3</td></topo<>	2.3
tofr>x <boco< td=""><td>2.3</td></boco<>	2.3
<tofr -="" ore<="" td=""><td>2.65</td></tofr>	2.65
<tofr -="" td="" waste<=""><td>2.7</td></tofr>	2.7

# 14.5.5.6 Metallurgy

Limited metallurgical information can be found for the Rubicon deposit. A Newcrest report (FES-DD-0008 Pre-feas Rubicon Newcrest) documents a +90% overall recovery, max 97.8% (Normet test laboratory).

# 14.5.5.7 Variography

Understanding the grade continuity and determining its extent and orientation is achieved through interpreting and modelling the experimental variogram. The experimental variogram requires sufficient sample data to provide a reliable measure of the grade continuity.



The downhole variogram provides the best estimate of the true nugget. For the 2013 Rubicon MRE variograms were generated for the Rubicon RB01 reef and are shown below. The Rubicon RB01 reef domain was estimated using the Ordinary Kriging (OK) interpolation method.

	Length	Ratio
MAJOR	90	
SEMI-MAJOR	90	1.00
MINOR	8	11.25
NUGGET	0.62	
SILL 1	0.29	
SILL 2	0.08	
TOTAL SILL	1.00	
BEARING	4	
DIP	78	
PLUNGE	-50	
SEARCH DISTANCE	80	
DIR 1	-50 / 004	
DIR 2	-33 / 223	
DIR 3	20 - 300	

No valid variograms were generated for the footwall shear domain due to insufficient sample data. As a result, the ID<sup>2</sup> estimation method was chosen for the footwall shear domain.

#### 14.5.5.8 Block Model and Grade Estimation

The block model was originally created in April 2013 using Surpac mining software to encompass the full extent of the deposit. A parent block size of 10 m north-south x 2 m east-west x 5 m vertical with sub-blocking to 5 m x 1 m x 2.5 m was used. The Rubicon RB01 reef domain was estimated using the Ordinary Kriging (OK) interpolation method. Inverse Distance (ID<sup>2</sup>) was used for the estimation of the footwall shear domain as it allowed for block interpolation weighted towards sample points closest to the block centroid. The wireframes were used as a hard boundary for the grade estimation of each domain. That is, only grades inside each lode were used to interpolate the blocks inside the lode. An 'ellipsoid' search orientated to reflect the geometry of the individual lodes was used to select data for interpolation.

For the Rubicon RB01 reef domain, three estimation passes were used for the interpolations. The first pass search distance was set to 80 m, the second pass search distance set to 120 m and the third pass set to 200 m. The minimum number of informing composites was set to 6 and the maximum number of samples set to 16.



For the Rubicon footwall shear domain, three estimation passes were used for the interpolations. The first pass search distance was set to 25 m (2.5 x nominal drillhole spacing), the second pass search distance set to 50 m and the third pass set to 100 m. The minimum number of informing composites was set to 4 and the maximum number of samples set to 20.

## 14.5.5.9 Model Validation

The following three-step process was used to validate the estimate through the entire deposit:

- A visual assessment was completed by slicing sections through the block model in positions coincident with drilling.
- A quantitative assessment was completed by comparing the average grades of the composite file input against the block model output for all the lodes.
- For the main domains, trend swath plots were generated in various orientations across strike, along strike and at elevation.

The validation indicates that the Mineral Resource Estimate replicates the source input data well in regions of higher density drilling. Smoothing is evident in domains with limited input data; however, the estimate is considered appropriate as the trends in the data are adequately reproduced.

# 14.5.5.10 Mineral Resource Reporting

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource estimate is effective as of June 30, 2024. The Mineral Resource at the Rubicon deposit has been reported using a cut-off at 0.7 g/t Au and has been depleted for mining.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations.

		Mir	neral Res	source S <sup>1</sup>	Rubico tatement 30/06/2	- Round	ed for Re	porting					
Measured Indicated Measured and Indicated Inferred													
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	
Rubicon	0	0.00	0	143	2.21	10	143	2.21	10	0	0.00	0	
Total	0	0.00	0	143	2.21	10	143	2.21	10	0	0	0	

Table 14-83 Rubicon Mineral Resource Estimate – CGO – as of June 30, 2024.



The Rubicon Mineral Resource estimate as set out in **Table 14-83** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

# 14.5.6 Try Again

## 14.5.6.1 Summary

The Try Again deposit is located approximately five hundred and fifty kilometres north northeast of Perth and about five kilometres southwest of Cue in the Murchison Province of Western Australia. Try Again sits one kilometre south of the existing Golden Crown underground mine.



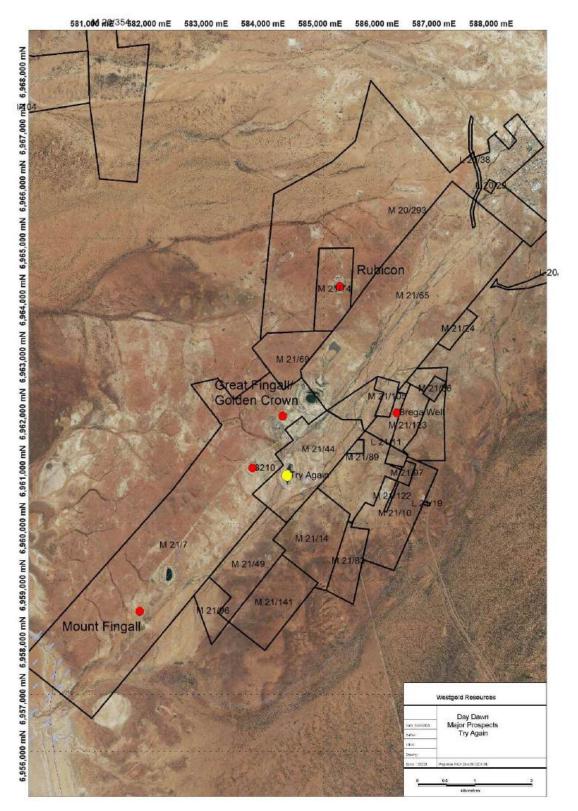


Figure 14-58 Try Again location map. Source: Westgold.

Historical production from the Try Again Open Pit is reported at 176,749 t at 3.70 g/t for 20,855 oz.



An updated Mineral Resource estimate for Try Again was completed in March 2018. The Try Again MRE was undertaken using all available data. The MRE includes an update to the interpretation of the main geological units and the estimation domains.

All domains were estimated by Ordinary Kriging (OK).

## 14.5.6.2 Modelling Domains

Geological interpretation of the Try Again deposit was carried out using a systematic approach to ensure that the resultant estimated MRE figure was both sufficiently constrained, and representative of the expected subsurface conditions.

Initially a three-dimensional viewing of the data was undertaken to establish a feel for the basic form and continuity of the mineralisation. This was followed by sectional viewing of the mineralisation. Strings were digitised on section to establish a 0.50 g/t cut-off envelope around the interpreted mineralisation. A maximum of two metres of downhole internal dilution was allowed, and in cases where geological knowledge of the deposit allowed, the interpretation strings were continued through zones of lower grade to assist in modelling mineralisation continuity, and to increase the level of along strike control on the location of the mineralised structure. All strings were digitised in a clockwise direction; with a common base of interpretation selected (the base selected was dependent upon the depth at which drillhole information became so sparse as to render mineralisation surface interpretation impractical). Strings were snapped to drillholes at sample interval boundaries, with no points created between drillholes, ensuring that no artificial complexities were introduced into the or mineralisation geometry.

Wireframing of mineralisation sectional perimeters was performed via the linking of appropriate perimeters on adjacent sections. The wireframes were sealed by triangulation within the end member perimeters, leading to the creation of a volume model.

This mineralisation volume model was then used to create an intersection table within the database by marking for extraction all intervals of drillholes enclosed by the volume model. These intervals were then extracted for use in domain analysis, and later grade estimations. Each intersection was flagged according to the object of the mineralisation it intersected, with numerical codes assigned to each intersection as appropriate.

The base of complete oxidation (BOCO) and top of fresh rock (TOFR) surfaces were generated in Surpac mining software from the geological logging.

# 14.5.6.3 Statistical Analysis and Compositing

One metre composites of the downhole assay results from the valid holes in the project area were used in the statistical analysis, and ultimate Mineral Resource estimation. Composites were taken from within the interpreted mineralised envelope, with the composite length chosen based on the dominant sample length within the database (i.e. one metre).



A top-cut analysis was performed for data included in the resource estimation.

The one metre composite files of downhole assay data were ranked. Datasets were then graphed and analysed for disintegrations, which is defined as the first significant increase in percentage difference between adjacent values (i.e. the first change in value greater than 10%) for assay values sufficiently above the mean assay value for the dataset.

From this analysis top cuts for each domain were determined (see below).

<u>Au_cut</u>											
Domain	1010	1020	1030	1040	1045	1050	1060	1070	1080	1090	1100
Samples	168	669	60	759	84	88	47	49	32	50	63
Imported	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069
Minimum	0.02	0.01	0.01	0.01	0.01	0.01	0.03	0.01	0.01	0.01	0.01
Maximum	17	32	4	37	5	3.85	6	2.39	5	5	5
Mean	2.81	2.23	0.82	2.45	0.99	0.67	1.26	0.89	1.30	0.96	1.19
Standard deviation	3.41	4.32	1.17	4.94	1.08	0.66	1.56	0.64	1.58	1.22	1.17
CV	1.21	1.94	1.43	2.02	1.09	0.99	1.24	0.72	1.21	1.27	0.98
Variance	11.6	18.63	1.38	24.4	1.17	0.44	2.43	0.4	2.49	1.49	1.38
Skewness	1.87	4.64	1.63	4.76	2.19	2.03	2.07	0.61	1.71	2.36	1.8
50% (Median)	1.24	0.83	0.24	0.97	0.72	0.56	0.64	0.84	0.68	0.55	0.76
90%	7.2	5.26	2.98	5.3	2.11	1.54	3.18	2.1	4.71	2.27	2.59
95%	8.69	8.15	3.5	9.11	3.42	1.86	5.39	2.1	5	3.88	4.31
97.5%	11.88	13.39	4	16.5	4.65	2.14	5.97	2.12	5	5	4.31
99.0%	15.76	28.38	4	31.23	4.83	2.88	6	2.26	5	5	4.57

Table 14-84 Top cut statistics for Try Again domains.

## 14.5.6.4 Density

Due to the lack of existing density values for the Try Again model, values were assigned based upon:

- Previous resource estimation models of Try Again. These values were taken from a combination of values recorded in corresponding oxidation conditions in the GFD and footwall basalts as determined during historical mining (as rock types should be compositionally identical for the majority of cases).
- Limited bulk density test-work carried out by Harmony upon samples gained from exposures in the existing Try Again open pit.



Densities were assigned to the current resource model were assigned based upon geologically logged oxidation boundaries.

Rock Type	Oxide	Transitional	Fresh
Ore	2.10	2.20	2.70
Waste	2.10	2.20	2.70
Cover	1.80		
Fill	2.00		
Air/void	0.00		

Table 14-85 Try Again assigned densities.

# 14.5.6.5 Metallurgy

Previous metallurgical test-work reports are available. The Harmony open pit closure report stated a reconciled metallurgical recovery of 94.72% from ore processed at the Mount Magnet Checker plant, with an average ore grade of 2.90 g/t.

## 14.5.6.6 Variography

Understanding the grade continuity and determining its extent and orientation is achieved through interpreting and modelling the experimental variogram. The experimental variogram requires sufficient sample data to provide a reliable measure of the grade continuity.

The downhole variogram provides the best estimate of the true nugget. For the 2018 Try Again MRE all domains were estimated using Ordinary Kriging (OK). Estimation parameters for each domain at Try Again are shown in the table below.



#### Table 14-86 Try Again estimation parameters.

Domain Code	1010	1020	1030	1040	1045	1050	1060	1070	1080	1090	1100
Estimate	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
# Structures	1	2	1	2	1	1	1	1	1	1	1
CO	0.75		0.08	0.42	0.29	0.37	0.37			0.13	0.60
C1	0.75		0.08	0.42	0.23	0.63	0.63			0.13	0.40
				11.00	32.00					100.00	45.00
a1	50.00		150.00			25.00	25.00				
C2	0.00	0.13	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
a2	0.00	100.00	0.00	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
a3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL SILL	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1. Major : Semi Major	1	0.4	3	1	2	1	1.25	2	2	2	2
1. Major : Minor	4	2	6	1	4	2	2	4	4	4	3
2. Major : Semi Major	0	2	0	1.5	0	0	0	0	0	0	0
2. Major : Minor	0	10	0	3	0	0	0	0	0	0	0
3. Major : Semi Major	0	0	0	0	0	0	0	0	0	0	0
3. Major : Minor	0		0		0	0	0	1	0	0	0
	-			-	-	-	-				
SURPAC STRIKE	0	10	0	355	339.7	349.7	0	12.9	11.8	11.8	346.8
SURPAC PLUNGE	0				-17.2	-17.2	0		_	11.8	-15.2
SURPAC PLONGE	65	-	-				50	-		53.3	48.2
SURPAC DIP	65	60	60	59.6	58.4	58.4	50	68.8	53.3	53.5	48.2
								1	r		
Search											
Method	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID		ELLIPSOID
Estimation Block Size (x,y,z)	5, 5, 5	5, 5, 5	10, 10, 10	5, 5, 5	5, 5, 5	5, 5, 5	5, 5, 5	10, 10, 10	10, 10, 10	10, 10, 10	10, 10, 10
Estimation Block Size X	5	5	10	5	5	5	5	10	10	10	10
Estimation Block Size Y	5		10		5		5		10	10	10
Estimation Block Size Z	5	5	10	5	5	5	5	10	10	10	10
Disc Point X	5	5	5	5	5	5	5	5	5	5	5
Disc Point Y	5	5	5	5	5	5	5	5	5	5	5
Disc Point Z	5		5		5		5		5	5	5
				-		1					
Grade Dependent Parameters	N	N	N	N	N	N	N	N	N	N	N
Threshold Max											
Search Limitation											
Scarch Einitation											
Lineit Complex builtele Id	N	N	N	N	N	N	N	N	N	N	N
Limit Samples by Hole Id	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN
Hole Id D Field											
Max Samps per Hole											
		1				1		1	1		
Pass1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Min	8		4							6	8
Max	24	22	18	20	26	22	16	22	18	18	22
Max Search	45	90	100	90	30	50	50	80	66	66	70
Major/Semi	2	2	3	1.5	2	1	1.25	2	2	2	2
Major/Minor	4	10	6	3	4	2	2	4	4	4	3
•				•	•		•		•		
Run Pass2	Y	Y	Y	Y	Y	Y	Y	Y	Y	γ	γ
Factor	2	2	2	. 2	. 2	2	. 2	2	2	. 2	. 2
Major/Semi	2		3	=	2		1.25	-		2	2
Major/Minor	4		6		4		1.23			4	3
	4				6		6			6	
	0	c				6	0	4	0	6	
Min	8		4	-					10		
	8 24		4	-	26		16	22	18	18	22
Min Max	24	22	18	20		22	16	22	18	18	22
Min Max Run Pass 3	24 Y	22 Y	18 Y	20 Y	26 Y	22 Y	Y	Y	Y	Y	Y
Min Max Run Pass 3 Factor	24 Y 3	22 Y 3	18 Y 3	20 Y 3	26 Y 3	22 Y 3	Y 3	Y 3	Y 3	Y 3	Y 3
Min Max Run Pass 3 Factor Major/Semi	Y 3 2	22 Y 3 2	18 Y 3 3	20 Y 3 1.5	26 Y 3 2	22 Y 3 1	Y 3 1.25	Y 3 2	Y 3 2	Y 3 2	Y 3 2
Min Max Run Pass 3 Factor	Y 3 2 4	22 Y 3 2 5	18 Y 3 6	20 Y 1.5 3	26 Y 3 2 4	22 Y 3 1 2	Y 3	Y 3 2 4	Y 3 2 4	Y 3 2 4	Y 3 2 3
Min Max Run Pass 3 Factor Major/Semi	Y 3 2	22 Y 3 2 5	18 Y 3 3	20 Y 1.5 3 4	26 Y 3 2	Y 3 1 2 4	Y 3 1.25	Y 3 2 4	Y 3 2 4 4	Y 3 2	Y 3 2

## 14.5.6.7 Block Model and Grade Estimation

The block model was originally created in March 2018 using Surpac mining software to encompass the full extent of the deposit. A parent block size of 5 m north-south x 5 m east-west x 5 m vertical or A parent block size of 10 m north-south x 10 m east-west x 10 m vertical with sub-blocking to 2.55 m x 1.25 m x 2.5 m was used. All domains were estimated using ordinary kriging (OK), as this technique carries out block interpolation based on the average of the values of nearby sample points. It weights the sample points by the semi-variance of the distance between each of the sampled points and the un-sampled location, and the semi-variances of the distances among all paired combinations of sample points (i.e. it considers grade continuity). An 'ellipsoid' search orientated to reflect the geometry of the individual lodes was used to select data for interpolation. Estimation parameters are shown in **Table 14-86**.



## 14.5.6.8 Model Validation

The following three-step process was used to validate the estimate through the deposit:

- A visual assessment was completed by slicing sections through the block model in positions coincident with drilling.
- A quantitative assessment was completed by comparing the average grades of the composite file input against the block model output for all the lodes.
- For the main domains, trend swath plots were generated in various orientations across strike, along strike and at elevation.

The validation indicates that the mineral resource model replicates the source input data well in regions of higher density drilling. Smoothing is evident in domains with limited input data; however, the estimate is considered appropriate as the trends in the data are adequately reproduced.

				1m com	posites top	o-cut assays					Blo	ck centroids							
domain	lode	Samples	Minimum	Maximum	Mean	Declustered mean (comp)	Standard deviation	CV	Estimation	Samples	Minimum	Maximum	Mean (estimate)	Standard deviation	CV	% diff mean declustered	Actual diff mean declust	% diff naïve mean	Actual diff naïve mean
1010	Try Again Central	168	0.02	17	2.81	2.87	3.41	1.21	res_au	19349	0.01	6.62	2.97	1.43	0.48	3%	0.10	6%	0.16
1020	Try Again Central	669	0.01	32	2.23	1.93	4.32	1.94	res_au	34124	0.19	14.74	1.83	1.46	0.79	-5%	-0.10	-18%	-0.40
1030	Try Again Central	60	0.01	4	0.82	0.78	1.17	1.43	res_au	6233	-0.17	2.85	0.99	0.7	0.7	27%	0.21	21%	0.17
1040	Try Again East	759	0.01	37	2.45	2.11	4.94	2.02	res_au	6848	0.26	12.01	2	1.48	0.74	-5%	-0.11	-18%	-0.45
1045	Try Again East	84	0.01	5	0.99	0.98	1.08	1.09	res_au	440	0.26	1.83	0.96	0.36	0.38	-2%	-0.02	-3%	-0.03
1050	Try Again East	88	0.01	3.85	0.67	0.67	0.66	0.99	res_au	1334	0.24	1.81	0.74	0.18	0.24	10%	0.07	10%	0.07
1060	Try Again West	47	0.03	6	1.26	1.31	1.56	1.24	res_au	2618	0.37	2.78	1.39	0.46	0.33	6%	0.08	10%	0.13
1070	Curleys	49	0.01	2.39	0.89	0.85	0.64	0.72	res_au	4856	0.01	1.74	0.88	0.43	0.49	4%	0.03	-1%	-0.01
1080	Short	32	0.01	5	1.3	1.17	1.58	1.21	res_au	1494	0.47	3.51	1.24	0.61	0.49	6%	0.07	-5%	-0.06
1090	Short	50	0.01	5	0.96	0.89	1.22	1.27	res_au	2367	-0.07	2.17	0.94	0.46	0.49	6%	0.05	-2%	-0.02
1100	Short	63	0.01	5	1.19	1.17	1.17	0.98	res au	3039	0.56	2.96	1.21	0.48	0.4	3%	0.04	2%	0.02

Table 14-87 Global Model validation of the Try Again 2018 MRE.

## 14.5.6.9 Mineral Resource Reporting

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource estimate is effective as of June 30, 2024. The Mineral Resource at the Try Again deposit has been reported using a cut-off at 0.7 g/t Au and has been depleted for open pit mining. The underground portion of the deposit has been reported using a cut-off at 2.0 g/t Au.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations.



		Mi	neral Re		y Again O tatement 30/06/2	t - Round	ed for Re	porting						
Measured Indicated Measured and Indicated Inferred														
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz		
Try Again OP	0	0.00	0	282	2.15	20	282	2.15	20	3	1.24	0		
Total	0	0.00	0	282	2.15	20	282	2.15	20	3	1.24	0		

#### Table 14-88 Try Again open pit Mineral Resource Estimate – CGO – as of June 30, 2024.

>= 0.7g/t Au and 2019 optimised pit shell.

#### Table 14-89 Try Again underground Mineral Resource Estimate – CGO – as of June 30, 2024.

		Mir	neral Res		Again Und Statemen 30/06/2	t - Round		eporting						
Measured         Indicated         Measured and Indicated         Inferred           Desired         Indicated         Indicated         Inferred														
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz		
Try Again UG	0	0.00	0	65	2.99	6	65	2.99	6	99	4.39	14		
Total	0	0.00	0	65	2.99	6	65	2.99	6	99	4.39	14		

>= 2.0g/t Au.

The Try Again Mineral Resource estimate as set out in **Table 14-88** and **Table 14-89** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).



## 14.6 TUCKABIANNA

The Tuckabianna project area lies in the Archaean Murchison Province within a northeast-trending supracrustal greenstone sequence comprising various volcanic, intrusive and sedimentary rocks that form part of the Luke Creek Group. Mineralisation is concentrated within the lower formations of the Group (Golconda Formation and Gabanintha Formation), which dominate the greenstone belt in the district (Watkins and Hickman, 1990).

Most of the gold produced to date at Tuckabianna occurs in or adjacent to structurally deformed BIF located along the western limb of the Kurrajong syncline where the Tuckabianna Shear Zone cuts it. In addition to BIF hosted mineralisation, gold has been mined from deposits in other iron rich sediments, mafic rocks, porphyry and granitoid. A significant portion of gold production has also been achieved from lateritic material and from alluvial wash within a Tertiary palaeochannel.

The Tuckabianna Project contains numerous deposits of which Comet, Comet North, Pinnacles, Venus – Mercury, Causton's, Julies Reward and Tucka West, are reported in this Technical Report.

The Tuckabianna open pit deposits are reported within pit shells, with the exception of Venus - Mercury which is constrained by a cut-off grade only.

## 14.6.1 Comet

## 14.6.1.1 Summary

The Comet Project falls within the larger Tuckabianna Project group. Comet is located 25 km southeast of the township of Cue in the Murchison district of Western Australia. The Comet mine is located 14 km southwest of the Tuckabianna mill.



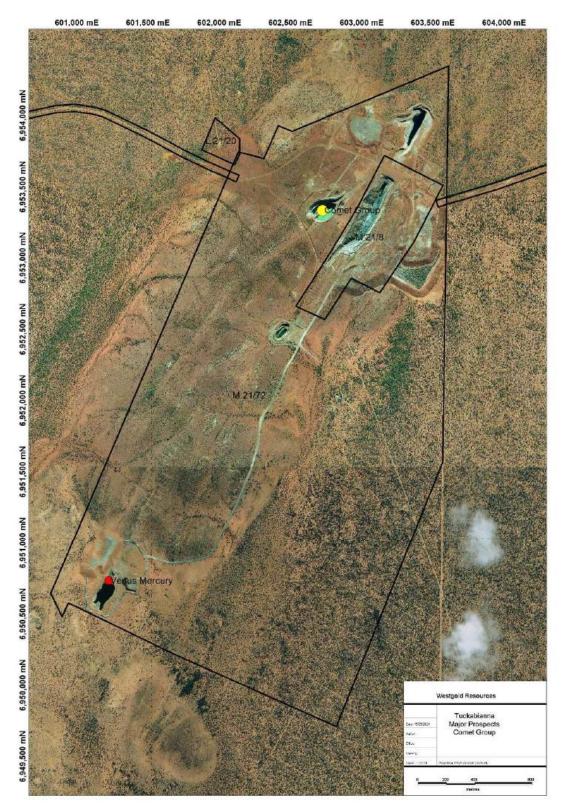


Figure 14-59 Comet location map. Source: Westgold.

Mining first commenced at Comet in 1913, with the deposit being exploited by a number of companies by underground mining up until 1983. In the late 1980's Hannans Gold Limited mined the deposit by open cut with a total of 638,355 t at 3.45 g/t for 65,700 oz being mined from the Comet and adjacent Pinnacles pits. At Comet all historical underground working were within the final pit shell. Following the purchase



of the operation by Newcrest in 1992, further ore was mined from the Pinnacles pit and open pit resources at Eclipse, Venus and Comet North, 500 m, 2.5 km and 200 m north of Comet, respectively. Collectively, a further 545,147 t at 2.24 g/t for 23,967 oz was produced by Newcrest (Sugden, 2005).

An updated Mineral Resource Estimate for Comet was completed in November 2022. The Comet MRE was undertaken using all available data. The MRE includes an update to the interpretation of the main geological units and the estimation domains.

All domains were estimated by Ordinary Kriging (OK).

#### 14.6.1.2 Modelling Domains

Previous modelling of the Comet mineralisation was based primarily on defining the hanging wall BIF, footwall BIF and internal mafic waste lithologies. However, underground observations indicated anomalous mineralisation is associated with the presence of sulphides (i.e. massive / blebby pyrrhotite) and the hanging wall and footwall BIF's can be domaining into mineralised (SIG) and un-mineralised (SIF) units.

Comparison of the SIG and SIF lithologies with respect to gold assay results has identified inaccuracies in the mapping as anomalous gold assays (i.e.  $\geq 1$  g/t Au) occur within the SIF and conversely, barren gold assays occur within the SIG. Log-probability plot analysis of the logged SIG intercepts indicate a population break at 1.0 g/t Au, thus indicating  $\geq 1.0$  g/t Au is a good approximation of the mineralised SIG lithology.

The interpretation was conducted on 5 m spaced north-south sections. The hangingwall and footwall BIFs were interpreted and secondly the high-grade SIG interpretation was constructed ensuring the interpretation was within the BIF units. The two staged approach ensured geology was the primary driver for the domaining strategy. The selection criteria for the primary estimation domains include:

- 1. Interpretation of the hanging wall and footwall BIF units.
- 2. Within each unit:
  - a. SIF:
    - i. Defined by lithological mapping or logging.
  - b. SIG:
    - i. Defined by lithological mapping or logging;
    - SIF interval is converted to a SIG interval if the grade is ≥1.0 g/t Au, is adjacent to a SIG interval and the composited grade for the mineralised interval is ≥1.0 g/t Au;
    - iii. SIF interval was converted to a SIG interval if no SIG intervals were present to simplify the construction of the estimation domains. These barren area or volumes are sub-domained, at a later stage, into mineralised waste intervals. The wall rock hosted lodes are primarily located within steep east dipping shear zones and hosted within the Poseidon Gabbro.



Digitised wireframes were completed in Surpac mining software by snapping to drill data.

The primary domains were separated north and south of the main fault and the modelled domains were:

- 1001: Footwall BIF low grade mineralisation (i.e. SIF).
- 2001: Footwall BIF high grade mineralisation (i.e. SIG plus  $\geq$  1.0 g/t).
- 3000: Waste mafic domain.
- 1002: Hanging wall BIF low grade mineralisation (i.e. SIF).
- 2002: Hanging wall BIF high grade mineralisation (SIG plus  $\geq$  1.0 g/t).

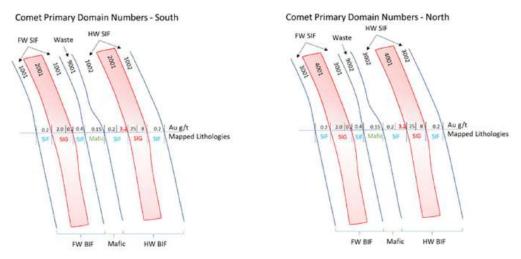


Figure 14-60 Schematic of the Comet primary estimation domains. Source: Westgold.

Long section contouring of the accumulation variables, log-probability plot analysis and swath plot stationarity analysis indicated internal or sub-domains are warranted to control the mixing of different statistical populations within the mineralised SIG hanging and footwall estimation domains.

Sub-domain boundaries were based on the log-probability population break at 5 gm/t:

- Internal Low Grade <5.0 gm/t.
- Internal High Grade ≥5.0 gm/t.

The long section analysis indicates the mineralisation is controlled by a northerly plunging structures and a southerly plunging structures. The identified structural trends and sub-domaining approach were validated by site personnel and deemed as acceptable. The northerly plunge is believed to be associated with the plunge component of crenulation cleavage and or parasitic folding.

The final estimation domains south of the fault are:

- **Primary Domain 1001**: Footwall BIF low grade mineralisation (i.e. SIF).
- Primary Domain 2001: Footwall BIF high grade mineralisation (i.e. SIG plus ≥1.0 g/t).
  - From south to north: Sub Domains 2011, 2021, 2031, 2041, 2051, 2061, 2071, 2901.



- **Primary Domain 9001**: Waste mafic domain.
- **Primary Domain 1002**: Hanging wall BIF low grade mineralisation (i.e. SIF).
- Primary Domain 2002: Hanging wall BIF high grade mineralisation (SIG plus ≥1.0 g/t).
  - From south to north: Sub Domains 2012, 2022, 2032, 2042, 2052, 2062, 2072, 2082, 2092, 2902.
- **Primary Domain 2003**: Small scale BIF high grade mineralisation with the footwall BIF.
- **Primary Domain 2004**: Small scale BIF high grade mineralisation with the footwall BIF.

The final estimation domains north of the fault are:

- **Primary Domain 3001**: Footwall BIF low grade mineralisation (i.e. SIF).
- Primary Domain 4001: Footwall BIF high grade mineralisation (i.e. SIG plus ≥1.0 g/t).
  - From south to north: Sub Domains 4061, 4081, 4091, 4901.
- **Primary Domain 9002**: Waste mafic domain.
- Primary Domain 3002: Hanging wall BIF low grade mineralisation (i.e. SIF).
- Primary Domain 4002: Hanging wall BIF high grade mineralisation (SIG plus ≥1.0 g/t).
  - From south to north: Sub Domains 4082, 4902.

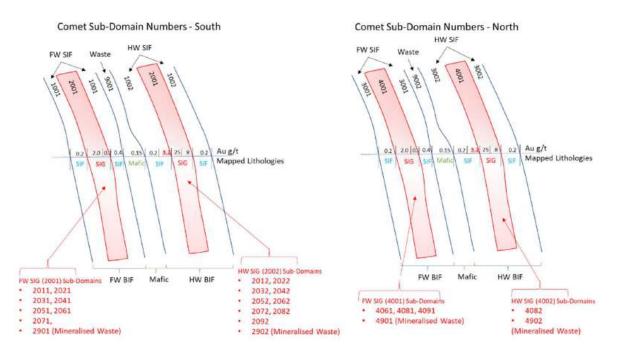


Figure 14-61 Schematic of the Comet estimation domains including the sub-domains. Source: Westgold.



# 14.6.1.3 Statistical Analysis and Compositing

Prior to compositing, the database was coded using the updated (sub)domain wireframes. Two different compositing routines were implemented depending on if the domain was being estimated using two-dimension or three-dimensional estimation methodologies. Two-dimensional compositing routine was carried out for the primary estimation domains 2001, 4001, 9001 and 9002. The compositing was conducted within Surpac Mining Software using the compositing by geology function which results in a composited grade for the entire interpreted interval. The accumulation variable was defined as:

$$accum(x) = grade(x)$$
. horizontal thickness(x)

Where:

- grade(x) is the composite grade for the entire interpreted interval.
- *horizontal thickness*(*x*) is the horizontal thickness or width of the interpreted interval calculated by drapping the composited centre point onto the hanging wall and footwall interpreted surfaces.

The structure of the composite files is listed below.

Field	Description
D1	Au ppm – Uncut interval composite
D2	Interval Length (Downhole Length)
D3	Hole ID
D4	Interval From Depth
D5	Interval To Depth
D10	Horizontal Width (HW) – Calculated
D11	Au Accumulation (Au ppm x HW)
D33	Cut Au Accumulation (Au ppm x HW)

Table 14-90 Comet composite by interval file structure.

A composite length of 1 m was selected for the primary estimation domains 1001, 1002, 3001 and 3002. The compositing was conducted within Surpac using the "best fit" method with a minimum requirement of 40% of the sample to be included within the composite file. Limited number of residuals were generated during the compositing routine and these residues were removed from the subsequent estimation process.

The file structure for the 3D composite files are listed below.

## Table 14-91 Comet 1 m Downhole Composite by interval file structure.

Field	Description
D1	Au ppm – Uncut interval composite
D2	Hole ID
D3	Interval From Depth
D4	Interval To Depth
D31	Cut Au ppm



A top-cut analysis was performed for data included in the resource estimate and several common measures of determining an appropriate top cut were reviewed:

- Log Probability Analysis.
- Histogram review.
- Percentile review.

During this review factors such as the number of composites cut, the percentage of data cut and the percentage of metal content cut were considered to ensure an appropriate value, if any, was chosen.

Top-cut values for all domains within the Comet resource can be seen in **Table 14-92**. No top cuts have been determined for some minor domains due to the low variability within the dataset and / or the low number of composite values within each domain.

The top-cutting approached for the 2D estimation domains focused on applying a topcut to the accumulation variable and not the gold variable. This approach ensures the top-cut is applied to a variable that is additive.

No top-cuts were applied to the horizontal thickness variable.

<u>D31</u>				<u>D33</u>												
Domain	1001	1002	9999		2012	2022	2031	2032	2041	2042	2051	2061	2062	2071	2901	2902
Assay	D31	D31	D31		D33	D33	D33	D33	D33							
Filters	1001 D31	1002 D31	9999 D31		2012 D33	2022 D33	2031 D33	2032 D33	2041 D33	2042 D33	2051 D33	2061 D 33	2062 D33	2071 D33	2901 D 33	2902 D33
Samples	848	337	15238		56	195	41	401	172	8	445	9	15	20	523	403
	16423	16423	16423		2288	2288	2288	2288	2288	2288	2288	2288	2288	2288	2288	2288
Minimum	-	-	-		-	-	0.27	-	0.02	1.14	0	0.07	0.63	0	0	0
Maximum	7.00	4.50	0.01		20.00	40.00	27.90	60.00	45.67	21.17	60.00	37.93	12.00	10.00	10.00	20.00
Mean	0.65	0.61	0.01		5.89	8.78	7.88	12.17	10.31	8.31	11.70	11.72	4.84	5.10	1.41	3.02
Standard deviation	1.36	0.89	-		5.37	8.33	5.88	11.97	9.03	6.73	12.29	13.85	3.27	3.02	2.07	3.99
cv	2.10	1.46	0.28		0.91	0.95	0.75	0.98	0.88	0.81	1.05	1.18	0.68	0.59	1.46	1.32
Variance	1.85	0.80	-		28.81	69.32	34.52	143.20	81.57	45.25	150.99	191.95	10.67	9.13	4.29	15.92
Skewness	3.75	2.95	- 2.52		1.36	2.06	1.27	1.94	1.54	0.91	1.99	0.88	0.85	-0.02	2.32	2.41
Log samples	848	337	15238		56	195	41	401	172	8	445	9	15	20	523	403
Log mean	- 1.43	- 1.26	- 4.81		1.31	1.77	1.74	1.99	1.88	1.76	1.86	0.92	1.32	1.41	-0.86	0.16
Log variance	1.76	1.81	0.35		1.49	1.05	0.82	1.48	1.36	0.8	1.79	5.03	0.6	0.89	3.63	2.89
Geometric mean	0.24	0.28	0.01		3.69	5.85	5.71	7.30	6.57	5.81	6.4	2.51	3.73	4.11	0.42	1.17
0.10	0.05	0.06	0.01		0.82	1.63	1.54	1.42	1.97	1.14	1.15	0.07	1.07	0.17	0.03	0.1
0.20	0.08	0.10	0.01		1.38	2.89	3.00	3.16	3.21	2.09	2.83	0.19	1.83	2	0.09	0.27
0.30	0.12	0.16	0.01		2.31	4.07	4.01	4.81	4.42	3.28	4.47	0.27	2.32	3.06	0.19	0.63
0.40	0.17	0.22	0.01		3.23	5.35	4.72	6.59	5.73	4.35	5.87	0.52	2.79	3.81	0.32	1.08
0.50	0.23	0.28	0.01		4.19	6.22	6.13	8.41	7.3	5.32	7.58	3.41	3.64	4.61	0.54	1.72
0.60	0.31	0.42	0.01		5.95	7.52	7.42	11.37	9.45	5.91	9.54	7.24	5	5.9	0.9	2.32
0.70	0.43	0.57	0.01		6.93	9.54	9.52	14.71	11.65	7.56	13.22	11.87	5.96	7.13	1.39	3.15
0.80	0.61	0.79	0.01		8.56	11.96	12.37	18.45	16.15	12.09	17.64	21.57	6.55	8.15	2.21	4.54
0.90	1.18	1.50	0.01		14.35	18.63	15.11	25.60	21.77	18.14	27.36	33	9.21	8.57	4.12	7.26
0.95	3.04	2.33	0.01		20.00	29.09	19.43	35.40	30.04	19.66	38.17	35.47	11.26	10	6.2	11.35
0.98	6.97	4.32	0.01		20.00	33.90	19.60	49.09	32.97	20.41	51.78	36.7	11.63	10	8.38	16.31
0.99	7.00	4.50	0.01		20.00	40.00	24.50	60.00	40.46	20.86	59.62	37.44	11.85	10	9.97	20

Table 14-92 Comet cut statistical analysis for the gold accumulation variable.

## 14.6.1.4 Density

Bulk density values are assumed and derived from mining modified densities used in the previous resource models. Previous models used values calculated from density measurements from 116 RC and DDH drill hole samples.

Bulk density was coded by lithology and oxidation type:

- Oxide Ore: 2.2 t/m<sup>3</sup>
- Transitional Ore: 2.5 t/m<sup>3</sup>
- Fresh Ore: 3.1 t/m<sup>3</sup>
- Oxide Waste: 2.2 t/m<sup>3</sup>
- Transitional Waste: 2.5 t/m<sup>3</sup>
- Fresh Waste: 2.9 t/m<sup>3</sup>



# 14.6.1.5 Metallurgy

Comet mineralisation has undergone metallurgical test work numerous times over the years with various test laboratories being used. No metallurgical issues have been noted with an average recovery rate of 93%.

# 14.6.1.6 Variography

Variograms were analysed in Snowden Supervisor software. Normal scores transforms were applied to limit the influence of extreme grades. Composites within lodes that exhibited common style, geology and univariate statistics were grouped for variogram modelling.

A summary of variogram groupings and resulting parameters is shown in **Table 14-93** and **Table 14-94**.



#### Table 14-93 Comet 2D variogram orientations and model parameters.

Name Assay D Field	Estimation Attribute	Search Method	Minimum Samples	Maximum Samples	Maximum Search Radius	Rearing	Plunge Din Major/Se	ni Maior/Mino	Fstimation Metho	d No Structures	Nugget Sill 1 Range 1	Rearing 1 Plung	e 1 Din 1 Semi Ratir	1 Minor Ratio	1 Sill 2 Range 2 Rearin	g 2 Plunge	2 Din 2 Semi Rat	tio 2 Minor Ratio	2 Sill 3 Range 3 Rearin	o 3 Plunge	3 Din 3 Semi Rati	io 3 Minor Ratio 3
2003 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6		-30	-90 0	0
2003 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2003 d10 2004 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2		0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2004 d33	gc_2d_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2		2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2011 d33		ELLIPSOID		16	50	0	-30 -90 2	2	Ordinary Kriging Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2011 d35 2011 d10	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2		2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
	gc_2d_thickness	ELLIPSOID	6	16	50	0	-55 -90 1	1.7	Ordinary Kriging	2					0.08 74 0	-30	-90 2.6	1.2	0.19 581 0	-30	-90 0	2.9
2012 d33	gc_2d_au_thickness		6		50	0		1.7	Ordinary Kriging	3		0 -55	-90 1	1	0.08 74 0	-55		1.2			-90 2.9	2.9
2012 d10 2021 d33	gc_2d_thickness	ELLIPSOID ELLIPSOID	6	16	50	0	-55 -90 1 -30 -90 2	2	Ordinary Kriging	3	0.54 0.2 23 0.52 0.2 21	0 -55	-90 1 -90 1.4	1.4	0.08 74 0	-30	-90 1.2 -90 2.6	2.6	0.19 581 0	-55	-90 2.9	2.9
2021 d33 2021 d10	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2			-90 1.4	1.4	0.28 145 0	-30		2.6	0 0 0	-30		0
	gc_2d_thickness		-	16		0		1.7	Ordinary Kriging	2	0.52 0.2 21			1.4			-90 2.6				-90 0 -90 2.9	-
2022 d33	gc_2d_au_thickness	ELLIPSOID	6		50	-	-55 -90 1		Ordinary Kriging	3	0.54 0.2 23		-90 1	1		-55	-90 1.2	1.2		-55		2.9
2022 d10 2031 d33	gc_2d_thickness	ELLIPSOID ELLIPSOID	6	16	50	0	-55 -90 1 -30 -90 1	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1 -90 1.4	1	0.08 74 0	-55 -30	-90 1.2 -90 2.6	2.6	0.19 581 0	-55	-90 2.9 -90 0	2.9
	gc_2d_au_thickness		-	16	50	-		2	Ordinary Kriging	2	0.52 0.2 21	0 -30			0.28 145 0	-30				-30		0
2031 d10	gc_2d_thickness	ELLIPSOID	6			0	-30 -90 1	-	Ordinary Kriging	2	0.52 0.2 21	0 -30		1.4	0.28 145 0		-90 2.6	2.6	0 0 0		-90 0	-
2032 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-55 -90 1	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2032 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-55 -90 1	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2041 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 1	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2041 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-30 -90 1	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2042 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-55 -90 1	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2042 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-55 -90 1	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2051 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	180	-30 90 1	2	Ordinary Kriging	2	0.52 0.2 21	180 -30	90 1.4	1.4	0.28 145 180	-30	90 2.6	2.6	0 0 180	-30	90 0	0
2051 d10	gc_2d_thickness	ELLIPSOID	6	16	50	180	-30 90 1	2	Ordinary Kriging	2	0.52 0.2 21	180 -30	90 1.4	1.4	0.28 145 180	-30	90 2.6	2.6	0 0 180	-30	90 0	0
2052 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-55 -90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2052 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-55 -90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2061 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 1	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2061 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-30 -90 1	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2062 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-55 -90 1	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2062 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-55 -90 1	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2071 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 1	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2071 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-30 -90 1	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2072 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-55 -90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2072 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-55 -90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2081 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2081 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
2082 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-55 -90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2082 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-55 -90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
2092 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	180	-30 90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	180 -30	90 1	1	0.08 74 180	-30	90 1.2	1.2	0.19 581 180	-30	90 2.9	2.9
2092 d10	gc_2d_thickness	ELLIPSOID	6	16	50	180	-30 90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	180 -30	90 1	1	0.08 74 180	-30	90 1.2	1.2	0.19 581 180	-30	90 2.9	2.9
2901 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-25 -90 1	2	Ordinary Kriging	2	0.52 0.26 30	0 -25	-90 2	2	0.22 186 0	-25	-90 2.82	2.82	0 0 0	-25	-90 0	0
2901 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-25 -90 1	2	Ordinary Kriging	2	0.52 0.26 30	0 -25	-90 2	2	0.22 186 0	-25	-90 2.82	2.82	0 0 0	-25	-90 0	0
2902 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-55 -90 1	1.7	Ordinary Kriging	2	0.58 0.2 26	0 -55	-90 1.73	1.73	0.21 281 0	-55	-90 1.74	1.74	0 0 0	-55	-90 0	0
2902 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-55 -90 1	1.7	Ordinary Kriging	2	0.58 0.2 26	0 -55	-90 1.73	1.73	0.21 281 0	-55	-90 1.74	1.74	0 0 0	-55	-90 0	0
4061 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
4061 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
4081 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
4081 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
4082 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-55 -90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
4082 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-55 -90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
4091 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
4091 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
4901 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
4901 d10	gc_2d_thickness	ELLIPSOID	6	16	50	0	-30 -90 2	2	Ordinary Kriging	2	0.52 0.2 21	0 -30	-90 1.4	1.4	0.28 145 0	-30	-90 2.6	2.6	0 0 0	-30	-90 0	0
4902 d33	gc_2d_au_thickness	ELLIPSOID	6	16	50	0	-55 -90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
4902 d10	gc 2d thickness	ELLIPSOID	6	16	50	0	-55 -90 1.7	1.7	Ordinary Kriging	3	0.54 0.2 23	0 -55	-90 1	1	0.08 74 0	-55	-90 1.2	1.2	0.19 581 0	-55	-90 2.9	2.9
9001 d33	gc 2d au thickness	ELLIPSOID	6	20	50	0	-30 -90 1.7	1.7	Ordinary Kriging	3	0.68 0.22 12	0 -30	-90 1	1	0.06 34 0	-30	-90 0.7	0.7	0.04 155 0	-30	-90 2.98	2.98
9001 d10	gc_2d_thickness	ELLIPSOID	6	20	50	0	-30 -90 1.7	1.7	Ordinary Kriging	3	0.68 0.22 12	0 -30	-90 1	1	0.06 34 0	-30	-90 0.7	0.7	0.04 155 0	-30	-90 2.98	2.98
9002 d33	gc 2d au thickness	ELLIPSOID	6	20	50	180	-50 90 1	1	Ordinary Kriging	2	0.67 0.23 34	180 -50	90 1	1	0.11 112 180	-50	90 1.4	1.4	0 0 180	-50	90 0	0
9002 d10	gc_2d_thickness	ELLIPSOID	6	20	50	180	-50 90 1	1	Ordinary Kriging	2	0.67 0.23 34	180 -50	90 1	1	0.11 112 180	-50	90 1.4	1.4	0 0 180	-50	90 0	0
	0		12	1.1	15.5				1						100				100			

#### Table 14-94 Comet 3D variogram orientations and model parameters.

Name	Assay D Field	Estimation Attribute	Search Method	Minimum Samp	olMaximum Samp	l Maximum Search	IBearing	Plunge	Dip Maj	ajor/Semi_Major Ma	lajor/Minor	Estimation Method	No Structures	Nugget	Sill 1 Range 1	Bearing 1	Plunge 1	Dip 1 Semi Rat	1 Minor Ratio 1	Sill 2	Range 2	Bearing 2	Plunge 2	Dip 2	Semi Ratio 2	Minor Ratio 2
1001	d31	gc_au	ELLIPSOID	8	30	50	123.4	-39.9	23 2	2		Ordinary Kriging	2	0.4	0.43 6	123.4	-39.9	22.9 1	1.2	0.17	80	123.4	-39.9	22.9	1.57	5.71
1002	d31	gc_au	ELLIPSOID	8	30	50	123.4	-39.9	23 2	2		Ordinary Kriging	2	0.4	0.44 23	123.4	-39.9	22.9 1.92	4.6	0.16	145	123.4	-39.9	22.9	1	10.36
3001	d31	gc_au	ELLIPSOID	8	30	50	123.4	-39.9	23 2	2		Ordinary Kriging	2	0.4	0.43 6	123.4	-39.9	22.9 1	1.2	0.17	80	123.4	-39.9	22.9	1.57	5.71
3002	d31	gc_au	ELLIPSOID	8	30	50	123.4	-39.9	23 2	2		Ordinary Kriging	2	0.4	0.44 23	123.4	-39.9	22.9 1.92	4.6	0.16	145	123.4	-39.9	22.9	1	10.36
9999	d31	gc_au	ELLIPSOID	8	30	50	123.4	-39.9	23 2	2		Ordinary Kriging	2	0.4	0.43 6	123.4	-39.9	22.9 1	1.2	0.17	80	123.4	-39.9	22.9	1.57	5.71



## 14.6.1.7 Block Model and Grade Estimation

Details of the Surpac block model extents are shown below.

3D Model Extents	Y	Х	Z
Minimum	2950	1750	-50
Maximum	4550	2460	510
Extent	1600	710	560
Parent cell size	5	5	10
Sub-block cell size	1.25	0.1563	1.25

#### Table 14-95 Comet block model extents.

The interpolation parameters for the MRE are shown above in **Table 14-93** and **Table 14-94**. All estimation boundaries were treated as hard boundaries. Ordinary Kriging was chosen for all domains (2D and 3D).

Kriging Neighbourhood Analysis (KNA) was undertaken to assist with the decision on the minimum and maximum number of samples to use for in the estimation process. The kriging Slope of Regression (SoR) and Weight of the Simple Kriged Mean were used in conjunction with the number of negative weights to reach a decision.

The search neighbourhood shape was chosen interactively, in 3D, with due consideration being given to the pattern of sample selection observed. This was done with the continuity orientation of mineralisation in mind and with a view to not selecting too many samples from any single drill hole.

The block dimensions were optimised through KNA, geometry of the estimation domains and data density.

## 14.6.1.8 Model Validation

Global comparisons of grade estimates versus input composites were completed by statistical analysis and visual comparisons. The block volume of each domain was also compared to the corresponding wireframe volume to ensure the sub size chosen allowed for accurate representation of the mineralisation volumes.

Sectional and elevation trend swath plots were generated for each lode. The profiles compared the volume-weighted average of the block grades to the length-weighted mean of the input composite grades for northing, easting and elevation slices through the block model. The plots assist in the assessment of the reproduction of local mean grades and are used to validate grade trends in the model.



			1m con	nposites top	-cut assays		Ι	Block o	entroids					
	domain	Samples	Minimum	Maximum	Mean	Declustered mean (comp)		Estimation	Mean (estimate)		% diff mean declustered	Actual diff mean declust	% diff naïve mean	Actual diff naïve mean
2D	2012	56		20.00	5.89	5.87	GMM	gc_au	6.14		5%	0.27	4%	0.25
2D	2022	195		40.00	8.78	8.81	GMM	gc_au	9.25		5%	0.44	5%	0.47
2D	2031	41		27.90	7.88	7.54	GMM	gc_au	7.94		5%	0.40	1%	0.06
2D	2032	401		60.00	12.17	12.19	GMM	gc_au	14.05		15%	1.87	15%	1.88
2D	2041	172		45.67	10.31	10.21	GMM	gc_au	10.78	[	6%	0.57	5%	0.47
2D	2042	8		21.17	8.31	8.21	GMM	gc_au	8.11	[	-1%	-0.10	-2%	-0.20
2D	2051	445		60.00	11.70	11.73	GMM	gc_au	12.53		7%	0.80	7%	0.83
2D	2061	9		37.93	11.72	10.48	GMM	gc_au	10.92		4%	0.44	-7%	-0.80
2D	2062	15		12.00	4.84	4.93	GMM	gc_au	5.21		6%	0.28	8%	0.37
2D	2071	20		10.00	5.10	5.54	GMM	gc_au	5.54	[	0%	0.00	9%	0.44
2D	2901	523		10.00	1.41	1.43	GMM	gc_au	1.68		17%	0.25	19%	0.27
2D	2902	403		20.00	3.02	2.90	GMM	gc_au	3.05	[	5%	0.15	1%	0.03
										[				
3D	1001	848		7.00	0.65	0.57	g/t	gc_au	0.62		7%	0.04	-5%	-0.03
3D	1002	337		4.50	0.61	0.62	g/t	gc_au	0.58	[	-7%	-0.04	-5%	-0.03
3D	9999	15238		0.01	0.01					[				
										[				

#### Table 14-96 Model validation of major domains in the November 2022 MRE.

## 14.6.1.9 Mineral Resource Classification

The Mineral Resource classifications for each domain, or part thereof, were assigned with consideration for the confidence in the tonnage / grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data, using the guidelines listed in Table 1 of the JORC Code. The Comet Mineral Resource was classified in the model on the following basis:

- The Measured category was applied between completed development horizons and where the data were sufficiently detailed.
- The Indicated Mineral Resource was assigned to all material within the defined drilled-out portion of the resource.
- The Inferred Mineral Resource was assigned where the data density was sufficient to imply, but too sparse to verify, geological and grade continuity.

The Comet Mineral Resource Estimate was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.



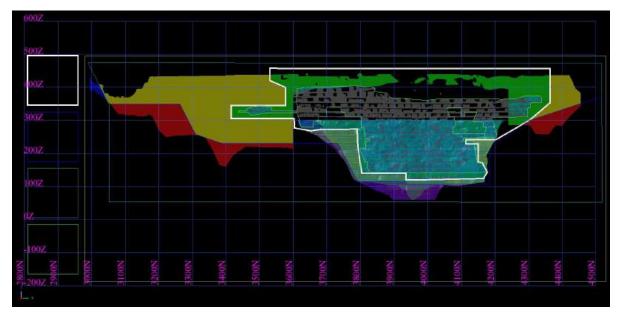


Figure 14-62 Comet block model coloured by resource classification – long-section looking west. Measured = Green; Indicated = Yellow; Inferred = Red; Unclassified = Blue; Sterilised = Cyan. Source: Westgold.

## 14.6.1.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource at the Comet deposit has been reported using a cut-off at 1.5 g/t Au and has been depleted for mining.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations. Areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. These areas were adjacent to mined out stopes as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.

The Comet Mineral Resource estimate is effective as of June 30, 2024.



		1	1ineral R	esource	Cor Stateme 30/06	nt - Rour	nded for R	eporting							
	Measured         Indicated         Measured and Indicated         Inferred														
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz			
Comet	140	4.63	21	270	4.22	37	410	4.36	57	106	3.40	12			
Total	140	4.63	21	270	4.22	37	410	4.36	57	106	3.4	12			

#### Table 14-97 Comet Mineral Resource Estimate – CGO – as of June 30, 2024.

>=1.5 g/t Au

The Comet Mineral Resource estimate as set out in **Table 14-97** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).



# 14.6.2 Comet North

# 14.6.2.1 Summary

The Comet North Project falls within the larger Tuckabianna Project group. Comet North is located 25 km southeast of the township of Cue in the Murchison district of Western Australia. Comet North is located 14 km southwest of the Tuckabianna mill and 100 m north of the Comet open pit.



Figure 14-63 Comet North location map. Source: Westgold.

A Mineral Resource Estimate for Comet North was completed in February 2022. The Comet North MRE was undertaken using all available data. The 2022 MRE includes updates to the interpretation of the main geological units and the estimation domains.

All domains were estimated by Ordinary Kriging (OK).



## 14.6.2.2 Modelling Domains

The estimation domains are based on continuous zones of >1.0g/t gold within the Comet North sediments with no more than 1m internal dilution. Interpretation of the mineralisation is undertaken in Leapfrog Geo. Mineralisation domains were flagged in the merged\_table\_1 field "ore\_domain\_select" where they could be used as base lithologies to create veins within the geological model "Comet North Lodes". Each mineralisation domain is represented as a vein within the Comet North Lodes geological model due to their relatively planar overall shape. Surface resolutions range from 4-10 and pinch outs are not active in any of the domains. All boundaries are set with manual polylines approximately half the drill spacing between the last intercept within and first intercept outside each domain.

# 14.6.2.3 Statistical Analysis and Compositing

Prior to compositing, the database was coded using the updated domain wireframes. Samples were composited to 1 m downhole using the "best fit" method in Surpac. Statistical analysis was carried out on the 1 m composited data for gold. Top cuts were applied to the gold variable when the domain exhibited an increased degree of skewness. The appropriateness of the top cuts was assessed for each domain utilising log-probability plots, mean and variance plots, histograms and univariate statistics. The statistical analysis was carried out in Snowden Supervisor software.

The top cut domain statistics are shown below.



<u>D31</u>										
Domain	Global	1004	1005	1006	1007	1008	1010	1011	1012	9999
Assay	D31	D31	D31	D31	D31	D31	D31	D31	D31	D31
Filters	D31	1004 D31	1005 D31	1006 D31	1007 D31	1008 D31	1010 D31	1011 D31	1012 D31	9999 D31
Samples	76523	334	1749	170	17	106	7	4	3	74133
	76523	76523	76523	76523	76523	76523	76523	76523	76523	76523
Minimum	-	0.01	-	-	0.63	0.06	0.67	0.65	0.75	-
Maximum	30.00	30.00	20.00	10.00	4.59	17.50	2.97	9.16	2.92	5.00
Mean	0.63	5.49	2.12	1.79	2.05	2.96	1.39	4.17	1.84	0.57
Standard deviation	1.49	8.75	2.90	2.23	1.39	4.17	0.76	3.14	0.89	1.24
CV	2.35	1.59	1.37	1.25	0.68	1.41	0.55	0.75	0.48	2.17
Variance	2.21	76.49	8.44	4.99	1.93	17.35	0.58	9.86	0.78	1.53
Skewness	5.73	1.89	3.23	2.32	0.73	2.14	1.05	0.62	- 0.01	2.71
Log samples	76523	334	1749	170	17	106	7	4	3	74133
Log mean	- 2.46	0.38	0.07	- 0.19	0.50	0.26	0.19	1.05	0.46	- 2.54
Log variance	4.43	3.13	1.51	2.48	0.44	1.72	0.26	0.92	0.32	4.29
Geometric mean	0.09	1.46	1.08	0.82	1.64	1.30	1.21	2.86	1.59	0.08
0.10	0.01	0.18	0.22	0.12	0.70	0.23	0.67	0.65	0.75	0.01
0.20	0.01	0.32	0.42	0.40	0.90	0.43	0.69	0.65	0.75	0.01
0.30	0.02	0.52	0.60	0.53	1.05	0.59	0.74	1.06	0.75	0.02
0.40	0.04	0.74	0.81	0.74	1.08	0.89	0.81	1.87	0.97	0.03
0.50	0.06	1.11	1.08	1.00	1.21	1.28	1.02	2.69	1.30	0.06
0.60	0.11	2.29	1.45	1.31	1.44	1.64	1.25	3.29	1.62	0.10
0.70	0.24	3.73	2.08	1.62	2.71	2.30	1.37	3.89	1.95	0.21
0.80	0.64	8.26	3.01	2.60	3.60	3.91	1.70	5.18	2.27	0.54
0.90	2.14	21.32	4.91	4.08	4.22	9.35	2.23	7.17	2.60	1.93
0.95	4.75	30.00	7.81	6.95	4.39	13.44	2.60	8.16	2.76	4.51
0.98	5.00	30.00	10.81	9.85	4.49	16.72	2.78	8.66	2.84	5.00
0.99	5.00	30.00	15.75	10.00	4.55	17.50	2.90	8.96	2.89	5.00

Table 14-98 Comet North cut statistical analysis for the gold variable.

#### 14.6.2.4 Density

Bulk density values are assumed and derived from mining modified densities used in the previous Comet resource models. Previous models used values calculated from density measurements from 116 RC and DDH drill hole samples.

Bulk density was coded by lithology and oxidation type:

- Oxide Ore: 2.2 t/m<sup>3</sup>
- Transitional Ore: 2.5 t/m<sup>3</sup>
- Fresh Ore: 3.1 t/m<sup>3</sup>
- Oxide Waste: 2.2 t/m<sup>3</sup>
- Transitional Waste: 2.5 t/m<sup>3</sup>
- Fresh Waste: 2.9 t/m<sup>3</sup>

## 14.6.2.5 Metallurgy

An internal Silverlake memo from October 2013 states a 96.8% recovery was achieved after 72 hours on two samples of fresh mineralisation. A January 1995 report from test work conducted by Oretest showed average recovery rates of 71.9% from multiple samples, with a minimum recovery of 45.7% and a maximum recovery of 98%.

## 14.6.2.6 Variography

Variograms were analysed in Snowden Supervisor software. Normal scores transforms were applied to limit the influence of extreme grades. Composites within lodes that exhibited common style, geology and univariate statistics were grouped for variogram modelling.



## A summary of variogram groupings and resulting parameters is shown below.

Domain Code	1004	1005	1006	1007	1008	1010	1011	1012	9999
	1004 Y	1003 Y	1008 Y	1007 Y	1008 Y	1010 Y	Y	Y	9999 Y
Estimate	T 2	r 3	2	3	3		3		3
# Structures C0	0.72	0.60	0.58	0.60	0.60		0.60		0.60
C1	0.72	0.80	0.38	0.80	0.80		0.80		0.80
al	30.00		25.00		14.00		14.00	1	14.00
C2		14.00	25.00	14.00	0.04				
a2	0.19	0.04		0.04			0.04		0.04
62 C3	45.00	40.00	48.00	40.00	40.00		40.00		40.00
a3		0.12		0.12	0.12		0.12		0.12
TOTAL SILL	1.00	80.00		80.00 1.00	80.00		80.00 1.00		80.00 1.00
TOTAL SILL	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1. Major : Semi Major	1	1.4	1	1.4	1.4	1.4	1.4	1.4	1.4
1. Major : Minor	2	1.4	2.083	1.4	1.4	1.4	1.4	1.4	1.4
2. Major : Semi Major	1	2	2.003	2	2		2		2
2. Major : Minor	2.045	2.667	2	2.667	2.667	2.667	2.667	2.667	2.667
3. Major : Semi Major	2.045	1.143	2	1.143	1.143		1.143		1.143
3. Major : Minor		2.286		2.286	2.286		2.286	2.286	2.286
3. 1016/01		2.200		2.200	2.200	2.200	2.200	2.200	2.200
	207 200	100 3/1	25	100 2/1	100 2/1	100 244	100 241	100 244	100 2/1
SURPAC STRIKE	207.208	198.341		198.341	198.341		198.341		198.341
SURPAC PLUNGE	20.705	29.499	0	29.499	29.499		29.499		29.499
SURPAC DIP	40.893	42.394	-65	42.394	42.394	42.394	42.394	42.394	42.394
Search									
Method		ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID	ELLIPSOID
Estimation Block Size (x,y,z)		5, 5, 10	5, 5, 10		5, 5, 10	5, 5, 10	5, 5, 10	5, 5, 10	5, 5, 10
Estimation Block Size X	5	5	5				5		5
Estimation Block Size Y	5	5	5	5	5		5		5
Estimation Block Size Z	10	10	10	10	10	10	10	10	10
Disc Point X	4	4	4	4	4		4		4
Disc Point Y	4	4	4	4	4		4		4
Disc Point Z	4	4	4	4	4	4	4	4	4
Grade Dependent Parameters	N	N	N	N	N	N	N	N	N
Threshold Max									
Search Limitation									
Limit Samples by Hole Id	N	N	N	N	N	N	N	N	N
Hole Id D Field	D2	D2	D2	D2	D2	D2	D2	D2	D2
Max Samps per Hole									
Pass1	Y	Y	Y	Y	Y	Y	Y	Y	Y
Min	6	8	6						2
Max	22	20			20				5
Max Search	30	14	25	14	14		14	1	14
Major/Semi	1	1.4	1	1.4	1.4		1.4	1.4	1.4
Major/Minor	2	1.4	2.083	1.4	1.4	1.4	1.4	1.4	1.4
Run Pass2	Y	Y	Y	Y	Y	Y	Y	Y	N
Factor	2	3	2	3	3		3		3
Major/Semi	1	2	1	2	2	2	2	2	2
Major/Minor	2	2.667	2		2.667	2.667	2.667	2.667	2.667
Min	6	8					8	8	8
Max	22	20	16	20	20	20	20	20	20
Run Pass 3	Y	Y	Y	Y	Y	Y	Y	Y	N
Factor	10	10			10				10
Major/Semi	10	1.143	10	1.143	1.143				1.143
							2.286		2.286
Major/Minor	2	2.286	2	2.286	2.200	2.200	2.200	2.200	
Major/Minor Min	2	2.286	2		2.286		2.280		2.280

#### Table 14-99 Comet North variogram orientations and model parameters.



## 14.6.2.7 Block Model and Grade Estimation

Details of the Surpac block model extents are shown below.

3D Model Extents	Y	Х	Z
Minimum	4,460	1,900	200
Maximum	5,100	2,300	500
Extent	640	400	300
Parent cell size	5	5	10
Sub-block cell size	1.25	0.625	1.25

#### Table 14-100 Comet North block model extents.

The interpolation parameters for the MRE are shown above in **Table 14-99**. All estimation boundaries were treated as hard boundaries. Ordinary Kriging was chosen for all domains.

Kriging Neighbourhood Analysis (KNA) was undertaken to assist with the decision on the minimum and maximum number of samples to use for in the estimation process. The kriging Slope of Regression (SoR) and Kriging Efficiency (KE) values were used in conjunction with the number of negative weights to reach a decision.

The search neighbourhood shape was chosen interactively, in 3D, with due consideration being given to the pattern of sample selection observed. This was done with the continuity orientation of mineralisation in mind and with a view to not selecting too many samples from any single drill hole. The block dimensions were optimised through KNA, geometry of the estimation domains and data density.

## 14.6.2.8 Model Validation

Global comparisons of grade estimates versus input composites were completed by statistical analysis and visual comparisons. The block volume of each domain was also compared to the corresponding wireframe volume to ensure the sub size chosen allowed for accurate representation of the mineralisation volumes.

Sectional and elevation trend swath plots were generated for each lode. The profiles compared the volume-weighted average of the block grades to the length-weighted mean of the input composite grades for northing, easting and elevation slices through the block model. The plots assist in the assessment of the reproduction of local mean grades and are used to validate grade trends in the model.

		1m con	posites top-	cut assays		Block ce	entroids				
domain	Samples	Minimum	Maximum	Mean	Declustered mean (comp)	Estimation	Mean (estimate)	% diff mean declustered	Actual diff mean declust	% diff naïve mean	Actual diff naïve mean
1004	334	0.01	30.00	5.49	5.42	gc_au	4.95	-9%	-0.48	-10%	-0.54
1005	1749	0.00	20.00	2.12	2.12	gc_au	2.00	-6%	-0.13	-6%	-0.12
1006	170	0.00	10.00	1.79	1.81	gc_au	1.98	9%	0.17	11%	0.19
1007	17	0.63	4.59	2.05	2.01	gc_au	2.08	3%	0.07	1%	0.03
1008	106	0.06	17.50	2.96	2.94	gc_au	3.46	18%	0.52	17%	0.50
1010	7	0.67	2.97	1.39	1.34	gc_au	1.39	4%	0.05	0%	0.00
1011	4	0.65	9.16	4.17	4.07	gc_au	4.09	0%	0.02	-2%	-0.08
1012	3	0.75	2.92	1.84	2.07	gc_au	1.94	-7%	-0.14	5%	0.10

#### Table 14-101 Model validation in the Comet North February 2022 MRE.



## 14.6.2.9 Mineral Resource Classification

The Mineral Resource classifications for each domain, or part thereof, were assigned with consideration for the confidence in the tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data, using the guidelines listed in Table 1 of the JORC Code. The Comet North Mineral Resource was classified in the model on the following basis:

- The Measured category was applied between completed development horizons and where the data were sufficiently detailed.
- The Indicated Mineral Resource was assigned to all material within the defined drilled-out portion of the resource.
- The Inferred Mineral Resource was assigned where the data density was sufficient to imply, but too sparse to verify, geological and grade continuity.

The Comet North Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

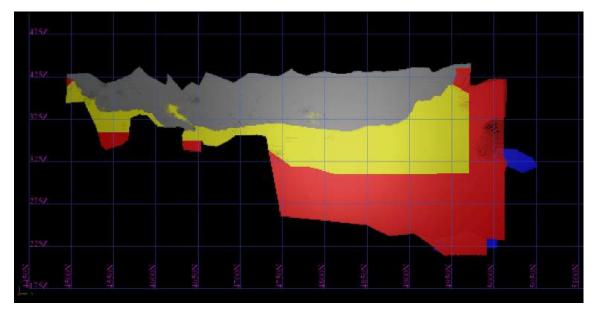


Figure 14-64 Comet North block model coloured by Mineral Resource classification – long-section looking west, showing main lode. Indicated = Yellow; Inferred = Red; Unclassified = Blue. Source: Westgold.

## 14.6.2.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource at the Comet North deposit has been reported using a cut-off at 1.5 g/t Au and has been depleted for mining.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at



an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations. Areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. These areas were adjacent to mined out stopes as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.

The Comet North Mineral Resource estimate is effective as of June 30, 2024.

					Comet	North									
		I	Mineral F	Resource	Stateme	nt - Rour	nded for F	Reporting							
	30/06/2024 Measured Indicated Measured and Indicated Inferred														
	Measured Indicated Measured and Indicated Inferred														
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz			
Comet North	0	0.00	0	333	3.06	33	333	3.06	33	369	2.40	29			
Total	0	0.00	0	333	3.06	33	333	3.06	33	369	2.4	29			

Table 14-102 Comet North Mineral Resource Estimate – CGO – as of June 30, 2024.

>=1.5 g/t Au

The Comet North Mineral Resource estimate as set out in **Table 14-102** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).



# 14.6.3 Pinnacles

## 14.6.3.1 Summary

The Pinnacles Project falls within the larger Tuckabianna Project group. Pinnacles is located 25 km southeast of the township of Cue in the Murchison district of Western Australia. Pinnacles is located 14 km southwest of the Tuckabianna mill and 200 m west of the Comet open pit.



Figure 14-65 Pinnacles location map. Source: Westgold.

A Mineral Resource Estimate for Pinnacles was completed in November 2022. The Pinnacles MRE was undertaken using all available data. The 2022 MRE includes updates to the interpretation of the main geological units and the estimation domains. All domains were estimated by Ordinary Kriging (OK).



## 14.6.3.2 Modelling Domains

Methodology for defining mineralisation domains was SIG / SIF lithology at a grade >1.0 g/t Au with no more than 1 m downhole of internal dilution. The downhole length for internal dilution can be extended slightly where drill intercept angle is acute to the mineralisation contact. Resinvalid holes are excluded from the interpretation. Orientation of the lodes largely follows the local orientation of the folded Pinnacles sediment package.

Interpretation of new and updated mineralisation domains was completed in Leapfrog Geo. The zones were flagged in the merged\_table\_1 field "ore\_domain\_select" where they could be used as base lithologies to create veins within the geological model "Pinnacles Lodes". Each mineralisation domain is represented as a vein within the Pinnacles Lodes geological model due to their relatively planar overall shape. Surface resolutions range from 1 - 10 and pinch outs are not active in any of the domains. All boundaries are set with manual polylines approximately half the drill spacing between the last intercept within and first intercept outside each domain.

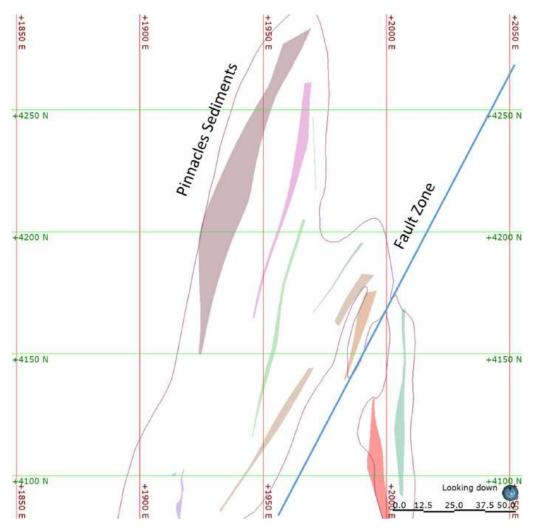


Figure 14-66 Plan of northern end of Pinnacles sediments. Mineralisation domains are trending in similar orientations to host sediments sliced at 315 mRL. Source: Westgold.



## 14.6.3.3 Statistical Analysis and Compositing

Prior to compositing, the database was coded using the updated domain wireframes. Samples were composited to 1 m downhole using the "best fit" method in Surpac. Statistical analysis was carried out on the 1 m composited data for gold. Top cuts were applied to the gold variable when the domain exhibited an increased degree of skewness. The appropriateness of the top cuts was assessed for each domain utilising log-probability plots, mean and variance plots, histograms and univariate statistics. The statistical analysis was carried out in Snowden Supervisor software.

The top cut domain statistics are shown below.

#### Table 14-103 Pinnacles cut statistical analysis for the gold variable.

D31																															
Domain	Global	3001	3002	3003	3004	3005	3005	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030
Assay	031	031	D31	D31	D31	D31	D31	D31	D31	D31																					
Filters	D31	3001 D31	3002 D31	3003 D31	3004 D31	3005 D31	3006 D31	3007 D31	3008 D31	3009 D31	3010 D31	3011 D31	3012 D31	3013 D31	3014 D31	3015 D31	3016 D31	3017 D31	3018 D31	3019 D31	3020 D31	3021 D31	3022 D31	3023 D 31	3024 D31	3025 D31	3026 D31	3027 D31	3028 D31	3029 D31	3030 D31
Samples	4286	1474	721	372	159	213	462	17	62	18	6	31	58	20	9	22	54	222	12	83	14	64	20	12	17	58	25	30	7	5	19
	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286	4286
Minimum	0.01	0.07	0.04	0.05	0.05	0.03	0.01	0.11	0.04	0.33	0.24	0.03	0.3	0.15	0.75	0.07	0.21	0.04	0.42	0.21	0.25	0.26	0.22	1.06	0.63	0.15	0.44	0.21	1.01	1.13	0.8
Maximum	20.00	20.00	20.00	10.00	5.00	10.00	10.00	10.00	6.25	2.55	1.02	2.74	9.76	6.32	5.54	14.00	4.55	10.00	2.01	15.00	4.52	8.71	5.00	4.04	6.79	7.81	4.40	4.15	3.70	4.25	4.14
Mean	2.54	3.05	3.24	1.82	1.24	1.46	1.64	1.76	1.26	0.93			2.31	1.93		3.21	1.72	2.83	1.29	4.25	1.99	2.00	1.88	2.15			1.69				2.37
Standard deviation	2.85	3.39	3.40	1.78	1.29	1.66	1.55	2.55	1.26	0.68	0.29	0.81	2.02	1.42	1.24	4.27	0.95	2.54	0.42	3.82	1.08	1.66	1.20	0.69	1.67	1.73	0.97	1.14	0.86	1.14	1.02
cv	1.13	1.11	1.05	0.98	1.04	1.14	0.95	1.45	0.99	0.73			0.87	0.73		1.33	0.55	0.90	0.32	0.90	0.55	0.83	0.64		0.58		0.57				0.43
Variance	8.20	11.52	11.55	3.18	1.66	2.77	2.40	6.51	1.58	0.46	0.09	0.66	4.09	2.01	1.53	18.2	0.91	6.46	0.18	14.58	1.18	2.76	1.44	0.47	2.77	2.99	0.93	1.3	0.75	1.31	1.05
Skewness	2.91	2.72	2.24	2.63	1.64	2.47	2.63	2.17	2.25	1.36	0.25	1.18	2.2	1.72	0.71	1.59	1.19	1.36	-0.2	1.49	0.43	1.75	0.83	1.29	0.93	1.29	1.41	0.31	0.19	1.32	0.39
Log samples	4286	1474	721	372	159	213	462	17	62	18	6	31	58	20	9	22	54	222	12	83	14	64	20	12	17	58	25	30	7	5	19
Log mean	0.45	0.68	0.65	0.21	- 0.28	0.14	0.07	0.28	0.18	- 0.29	-0.71	-0.61	0.57	0.41	0.91	0.24	0.39	0.6	0.19	1.05	0.47	0.38	0.37	0.72	0.89	0.68	0.38	0.49	0.73	0.58	0.76
Log variance	1.08	0.87	1.25	0.85	1.04	1.11	1.14	1.64	0.91	0.41	0.3	1.43	0.49	0.58	0.26	2.18	0.34	1.08	0.16	0.89	0.59	0.68	0.68	0.09	0.36	0.59	0.31	0.56	0.17	0.22	0.21
Geometric mean	1.57	1.98	1.92	1.24	0.76	0.87	1.07	0.76	0.84	0.74		0.54	1.77	1.51	2.48	1.27	1.48	1.82	1.21	2.86	1.59	1.46	1.44	2.05	2.43	1.98	1.46	1.63	2.08	1.78	2.14
0.10	0.41	0.65	0.40	0.40	0.21	0.23	0.33	0.14	0.27	0.33	0.24	0.05	0.78	0.74	0.75	0.16	0.75	0.47	0.52	0.87	0.3	0.38	0.26	1.16	0.94	0.75	0.59	0.44	1.01	1.13	1.08
0.20	0.74	0.95	0.79	0.70	0.31	0.33	0.57	0.20	0.39	0.39	0.25	0.28	0.96	0.96	1.69	0.27	1.03	0.81	0.94	1.25	0.89	0.81	0.96	1.59	1.55	1.24	0.95	1.01	1.18	1.13	1.45
0.30	1.02	1.24	1.18	0.88	0.42	0.49	0.83	0.25	0.49	0.44	0.29	0.36	1.2	1.05	2.1	0.48	1.16	1.19	1.01	1.84	1.3	1.11	1.11	1.75	1.75	1.49	1.08	1.14	1.47	1.18	1.61
0.40	1.28	1.55	1.57	1.05	0.53	0.67	1.04	0.44	0.77	0.58	0.31	0.41	1.53	1.26	2.27	0.84	1.33	1.55	1.17	2.32	1.65	1.22	1.42	1.99	1.85	1.74	1.3	1.8	1.69	1.23	1.72
0.50	1.63	1.92	2.15	1.28	0.75	0.90	1.21	0.66	0.88	0.61	0.32	0.56	1.61	1.66	2.47	1.25	1.42	1.83	1.23	2.93	1.8	1.49	1.62	2.06	2.35	2.11	1.55	1.91	2.06	1.49	2.04
0.60	2.04	2.37	2.85	1.54	0.89	1.16	1.47	0.81	1.08	0.77	0.58	0.76	1.72	1.79	2.75	2.09	1.61	2.57	1.29	3.82	2.2	1.72	1.76	2.24	2.76	2.37	1.72	2.12	2.4	1.74	2.5
0.70	2.65	3.19	3.70	1.98	1.20	1.49	1.84	1.26	1.24	0.84	0.76	1.02	2.28	1.85	3.06	2.38	1.89	3.29	1.48	4.63	2.31	2.13	2.38	2.28	2.85	2.66	1.87	2.52	2.49	1.75	2.71
0.80	3.65	4.15	4.99	2.52	2.14	2.16	2.33	2.49	1.60	1.37	0.76	1.42	2.86	2.26	3.3	3.76	2.05	4.52	1.62	6.01	2.76	3.1	2.58	2.33	4.2	3.51	2.01	2.93	2.82	1.76	3.45
0.90	5.59	6.76	7.36	3.79	3.06	3.17	3.39	4.08	2.84	1.81	0.86	2.4	4.42	3.25	3.66	10.8	3.06	6.58	1.79	9.19	2.96	4.34	3.25	2.45	4.98	4.96	2.53	3.92	3.23	3	3.99
0.95	8.24	9.97	10.05	4.90	4.95	4.63	4.32	6.60	3.44	2.51	0.94	2.74	6.01	4.79	4.6	13.02	3.51	9.23	1.89	13.69	3.45	4.91	3.98	3.1	6.11	6.8	3.9	4.04	3.47	3.63	4.04
0.98	10.68	13.78	12.74	7.31	5.00	6.53	5.70	8.30	4.91	2.53	0.98	2.74	8.97	5.55	5.07	13.56	4.28	10	1.95	15	3.98	6.26	4.49	3.57	6.45	6.93	4.32	4.15	3.58	3.94	4.09
0.99	15.58	18.81	17.75	10.00	5.00	7.72	9.15	9.32	6.21	2.54	1	2.74	9.46	6.01	5.35	13.82	4.5	10	1.99	15	4.31	7.41	4.8	3.85	6.65	7.3	4.37	4.15	3.66	4.12	4.12

#### 14.6.3.4 Density

Bulk density values are assumed and derived from mining modified densities used in the previous Comet resource models. Previous models used values calculated from density measurements from 116 RC and DDH drill hole samples.

Bulk density was coded by lithology and oxidation type:

- Oxide Ore: 2.2 t/m<sup>3</sup>
- Transitional Ore: 2.5 t/m<sup>3</sup>
- Fresh Ore: 3.1 t/m<sup>3</sup>
- Oxide Waste: 2.2 t/m<sup>3</sup>
- Transitional Waste: 2.5 t/m<sup>3</sup>
- Fresh Waste: 2.9 t/m<sup>3</sup>

## 14.6.3.5 Metallurgy

Metallurgical test work on Pinnacles mineralisation has been carried out at numerous laboratories over the years. An average recovery of 93.7% was obtained.

## 14.6.3.6 Variography

Variograms were analysed in Snowden Supervisor software. Normal scores transforms were applied to limit the influence of extreme grades. Composites within lodes that exhibited common style, geology and univariate statistics were grouped for variogram modelling.

A summary of variogram groupings and resulting parameters is shown below.



No.         No.        No.         No.         No.																																
Image         Image <th< th=""><th>Domain Code</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>	Domain Code																															
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a         b		3		3		3 3	1 3	3	3	3	3	3	3	3	2	3	3	2	3		2	3	2	3	3	3	3	2	2	2	3	3
n         100        100         100         100																																
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Note that the state         No         No        No	TOTAL SLL	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Note that the state         No         No        No																																
No. Works         No. Works <t< td=""><td></td><td></td><td>1 1/</td><td>1</td><td></td><td>1.663</td><td>r :</td><td>1.4</td><td>1.105</td><td>1.305</td><td>1.105</td><td>1</td><td>1.4</td><td></td><td>1/</td><td>1.305</td><td>1.305</td><td>1</td><td>1</td><td></td><td>1</td><td></td><td>1</td><td>1.647</td><td>1 3</td><td></td><td>1.308</td><td>1 3</td><td>1 1</td><td>1</td><td>1.4</td><td></td></t<>			1 1/	1		1.663	r :	1.4	1.105	1.305	1.105	1	1.4		1/	1.305	1.305	1	1		1		1	1.647	1 3		1.308	1 3	1 1	1	1.4	
14         15         15         16<			\$.7	2		2 25	5 10	8.75	5.667	5.667	5.667	2	8.7		8.75	5.667	5.667	7.5	2		10		7.5	25		2	5.667	10	10	10	8.75	
Image state						5 2	2 2	1		1.139			3			1.139		1.286			1	1.139	1.286	2	1.625			1 3	1	1	1	1.139
base frage         base fr						7 20	2	75		5.2			7.5		73	5.2		5			9	5.2	9	20	2.163				2 2	9	7.5	8.2
Set 128         3.0         4.1         5.0         4.0         5.0         4.0         5.0		1.05		1.385	1.355	2.690	s	1		1.05	1.05	1.385		1.05		1.05	1.05		1.385			1.05			1.385	1.385	1.05				1	1.05
Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	3. Major : Minor	3	1.055	4.5	4.3	\$ 10.33		3.059	7	7	7	4.5	3.055	3	3.055	7	7		45			7		10.33	4.5	4.5	7	1			3.059	7
Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>																																
Note         No         No        No        No        No </td <td></td> <td></td> <td></td> <td></td> <td>20</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>20</td> <td></td> <td>20</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>					20							20														20						
Note         No         No        No        No        No </td <td>SURPAC PLUNGE</td> <td>-29.495</td> <td>-41.561</td> <td>0</td> <td></td> <td>-27.034</td> <td>7.053</td> <td>-41.561</td> <td>-29,499</td> <td>-29.499</td> <td>-29.499</td> <td>0</td> <td>-41.561</td> <td>-29.495</td> <td>-41.561</td> <td>-29.499</td> <td>-29.499</td> <td>-31.772</td> <td>0</td> <td>-29.49</td> <td>7.053</td> <td>-29.499</td> <td>-31.772</td> <td>-27.034</td> <td></td> <td>0</td> <td>-29.499</td> <td>7.053</td> <td>7.053</td> <td>7.053</td> <td>-41.561</td> <td>-29.499</td>	SURPAC PLUNGE	-29.495	-41.561	0		-27.034	7.053	-41.561	-29,499	-29.499	-29.499	0	-41.561	-29.495	-41.561	-29.499	-29.499	-31.772	0	-29.49	7.053	-29.499	-31.772	-27.034		0	-29.499	7.053	7.053	7.053	-41.561	-29.499
Set         I	SURPACINE	.42 394	-30.75	-60	.50	37.454	_44 561	.30.79	_42 394	.42 394	.42 394	60	-30.75	.42 394	-30.75	.42 394	42 394	47 571	-60	.42 394	-44 561	.42 394	.47 571	.37.454		.60	.42 394	-44 561	_44 561	-44 561	.30.79	.42 394
Norm         Norm        Norm        Norm         N																																
Image         1.1         V.1         V.1 </td <td>Search</td> <td></td>	Search																															
Image         A.1         V.1         V.1 </td <td>Method</td> <td>FUIRSOID</td> <td>FLUESCID</td> <td>TH RSOID</td> <td><b>NUPSOID</b></td> <td>russon</td> <td>rusop</td> <td>rueson</td> <td>ruesan</td> <td>FILIPSOID</td> <td><b>FILIPSOID</b></td> <td>rupson</td> <td>FUIPSOID</td> <td>rusop</td> <td>FILIPSOID</td> <td>TH IPSOID</td> <td>nueson</td> <td>FUIRSOID</td> <td>FUIPSOID</td> <td>FILIPSOID</td> <td>TUPSOD</td> <td>TH PSOID</td> <td>FLUESOID</td> <td>FILIPSOID</td> <td>TURSOD</td> <td>TH IPSOID</td> <td>FUIESOID</td> <td>FILIPSOID</td> <td>FLUPSOID</td> <td>FILIPSOID</td> <td>rupson r</td> <td>usop</td>	Method	FUIRSOID	FLUESCID	TH RSOID	<b>NUPSOID</b>	russon	rusop	rueson	ruesan	FILIPSOID	<b>FILIPSOID</b>	rupson	FUIPSOID	rusop	FILIPSOID	TH IPSOID	nueson	FUIRSOID	FUIPSOID	FILIPSOID	TUPSOD	TH PSOID	FLUESOID	FILIPSOID	TURSOD	TH IPSOID	FUIESOID	FILIPSOID	FLUPSOID	FILIPSOID	rupson r	usop
Normal Mark Mark Mark Mark Mark Mark Mark Mark	Estimation Block Site (x v r)																															
Alternational and alternatindefinitional and alternational and alternational an		1.0.5							3.4.5	100						5		51515				5.55									5	
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Table 14-104 Pinnacles variogram orientations and model parameters.

14.6.3.7 Block Model and Grade Estimation

Details of the Surpac block model extents are shown below.

#### Table 14-105 Pinnacles block model extents.

3D Model Extents	Y	X	Z
Minimum	3500	1500	-50
Maximum	4450	2300	510
Extent	950	800	560
Parent cell size	5	5	5
Sub-block cell size	0.625	0.3125	0.3125

The interpolation parameters for the MRE are shown above in **Table 14-104**. All estimation boundaries were treated as hard boundaries. Ordinary Kriging was chosen for all domains.

Kriging Neighbourhood Analysis (KNA) was undertaken to assist with the decision on the minimum and maximum number of samples to use for in the estimation process. The kriging Slope of Regression (SoR) and Kriging Efficiency (KE) values were used in conjunction with the number of negative weights to reach a decision.

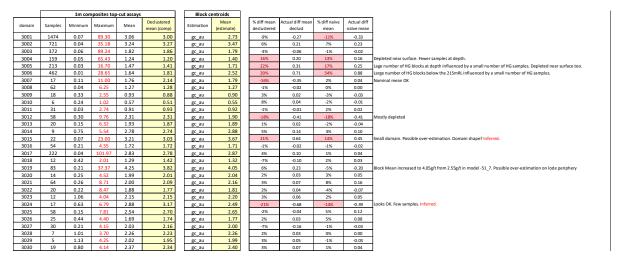
The search neighbourhood shape was chosen interactively, in 3D, with due consideration being given to the pattern of sample selection observed. This was done with the continuity orientation of mineralisation in mind and with a view to not selecting too many samples from any single drill hole. The block dimensions were optimised through KNA, geometry of the estimation domains and data density.

# 14.6.3.8 Model Validation

Global comparisons of grade estimates versus input composites were completed by statistical analysis and visual comparisons. The block volume of each domain was also compared to the corresponding wireframe volume to ensure the sub size chosen allowed for accurate representation of the mineralisation volumes.



Sectional and elevation trend swath plots were generated for each lode. The profiles compared the volume-weighted average of the block grades to the length-weighted mean of the input composite grades for northing, easting and elevation slices through the block model. The plots assist in the assessment of the reproduction of local mean grades and are used to validate grade trends in the model.





#### 14.6.3.9 Mineral Resource Classification

The Mineral Resource classifications for each domain, or part thereof, were assigned with consideration for the confidence in the tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data, using the guidelines listed in Table 1 of the JORC Code. The Pinnacles Mineral Resource was classified in the model on the following basis:

- The Measured category was applied between completed development horizons and where the data were sufficiently detailed.
- The Indicated Mineral Resource was assigned to all material within the defined drilled-out portion of the resource.
- The Inferred Mineral Resource was assigned where the data density was sufficient to imply, but too sparse to verify, geological and grade continuity.

The Pinnacles Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.



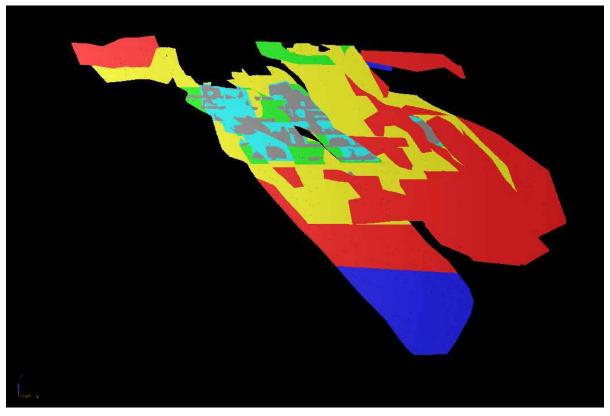


Figure 14-67 Pinnacles block model coloured by resource classification – oblique view. Measured = Green; Indicated = Yellow; Inferred = Red; Unclassified = Blue; Sterilised = Cyan; Depleted = Grey. Source: Westgold.

#### 14.6.3.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource at the Pinnacles deposit has been reported using a cut-off at 1.5 g/t Au and has been depleted for mining.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by depth considerations. Areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. These areas were adjacent to mined out stopes as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.

The Pinnacles Mineral Resource estimate is effective as of June 30, 2024.



		1	Mineral R	lesource s	Pinna Statemer 30/06/	nt - Roun	ded for Re	porting							
	Measured         Indicated         Measured and Indicated         Inferred														
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz			
Pinnacles	82	2.50	7	1,105	2.51	89	1,187	2.51	96	826	2.53	67			
Total	82	2.50	7	1,105	2.51	89	1,187	2.51	96	826	2.53	67			

#### Table 14-107 Pinnacles Mineral Resource Estimate – CGO – as of June 30, 2024.

>=1.5 g/t Au

The Pinnacles Mineral Resource estimate as set out in **Table 14-107** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

## 14.6.4 Venus - Mercury

## 14.6.4.1 Summary

The Venus – Mercury Project falls within the larger Tuckabianna Project group. Venus – Mercury is located 25 km southeast of the township of Cue in the Murchison district of Western Australia. Venus - Mercury is located 17 km southwest of the Tuckabianna mill and 3 km west of the Comet open pit.



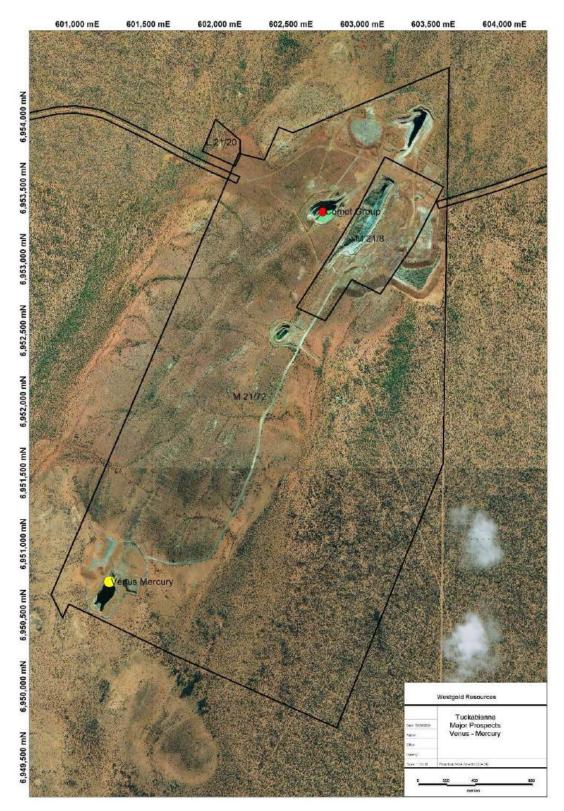


Figure 14-68 Venus - Mercury location map. Source: Westgold.



A Mineral Resource estimate for Venus - Mercury was completed in November 2011. The Venus - Mercury MRE was undertaken using all available data. The 2011 MRE includes updates to the interpretation of the main geological units and the estimation domains.

All domains were estimated by inverse distance squared (ID<sup>2</sup>).

### 14.6.4.2 Modelling Domains

Wireframes of the mineralisation were constructed using cross sectional interpretations based on a 0.5 g/t Au cut-off grade with 4 m minimum downhole length. Surpac mining software was used.

## 14.6.4.3 Statistical Analysis and Compositing

Samples within the wireframes were composited to 1.0 intervals based on analysis of the sample lengths in the database. High grade cuts were based on statistical analysis of all objects. A high grade cut 17 g/t Au was applied to all composites.

## 14.6.4.4 Density

Bulk density values were assigned using weathering surfaces based on geological logging 2.2 t/m<sup>3</sup> for oxide, 2.4 t/m<sup>3</sup> for transitional, 2.9 t/m<sup>3</sup> for fresh waste and 3.1 t/m<sup>3</sup> for fresh mineralised material.

# 14.6.4.5 Metallurgy

An internal Silverlake memo from October 2013 indicates an average recovery of 90.4%. Earlier test work submitted to Ammtec in January 1992 showed an average recovery of 92.9%.

#### 14.6.4.6 Variography

Understanding the grade continuity and determining its extent and orientation is achieved through interpreting and modelling the experimental variogram. The experimental variogram requires sufficient sample data to provide a reliable measure of the grade continuity.

The downhole variogram provides the best estimate of the true nugget. Search ellipses based on individual lode geometry and spatial distribution. For the 2011 Venus - Mercury MRE no valid variograms were generated due to insufficient sample data. As a result, the ID<sup>2</sup> estimation method was chosen.

#### 14.6.4.7 Block Model and Grade Estimation

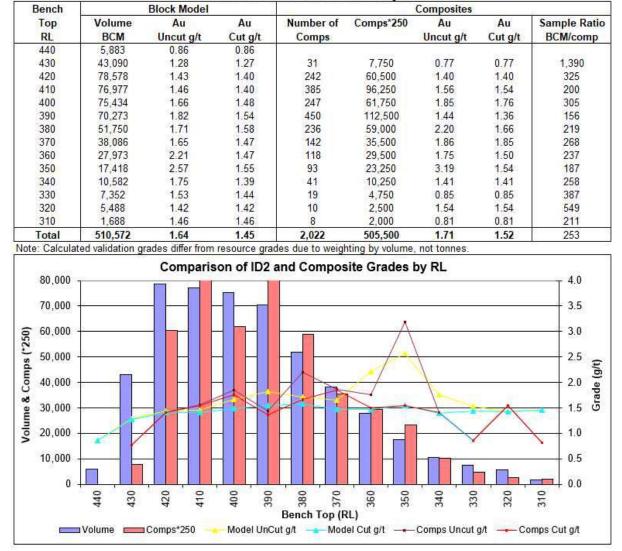
A Surpac block model was used for the estimate with a block size of 10 m north-south by 5 m east-west by 5 m vertical with sub-cells of 5 m by 1.25 m by 1.25 m. ID<sup>2</sup> grade interpolation with an oriented 'ellipsoid' search was used to estimate Au. A first pass long axis radius of 20 m with the search ellipse based on individual lode geometry was used. The search radius was 40 m for the second pass. A third pass of 200 m was used with a minimum number of samples reduced to 2. 91% of the blocks were filled in the first two passes.



#### 14.6.4.8 Model Validation

Global comparisons of grade estimates versus input composites were completed by statistical analysis and visual comparisons. The block volume of each domain was also compared to the corresponding wireframe volume to ensure the sub size chosen allowed for accurate representation of the mineralisation volumes.

Sectional and elevation trend swath plots were generated for each lode. The profiles compared the volume-weighted average of the block grades to the length-weighted mean of the input composite grades for northing, easting and elevation slices through the block model. The plots assist in the assessment of the reproduction of local mean grades and are used to validate grade trends in the model.



Venus Block Model Validation by RL

Figure 14-69 Model validation in the Venus - Mercury November 2011 MRE (all domains, validation by RL). Source: Westgold.



## 14.6.4.9 Mineral Resource Classification

The majority of the southern portion of the resource below the existing Venus pit has been classified as Indicated due to the close drill hole spacing and the good geological and grade continuity of mineralisation. The northern part of the resource has been classified as Inferred due to the slightly wider space drilling and the lack of any conformation drilling.

The Venus - Mercury Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

## 14.6.4.10 Mineral Resource Statement

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource at the Venus -Mercury deposit has been reported using a cut-off at 1.0 g/t Au and has been depleted for open pit mining.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations.

The Venus - Mercury Mineral Resource estimate is effective as of June 30, 2024.

	Venus - Mercury Mineral Resource Statement - Rounded for Reporting 30/06/2024														
Measured Indicated Measured and Indicated Inferred															
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz			
Venus - Mercury	0	0.00	0	275	1.66	15	275	1.66	15	162	1.59	8			
Total	0	0.00	0	275	1.66	15	275	1.66	15	162	1.59	8			

Table 14-108 Venus - Mercury Mineral Resource Estimate – CGO – as of June 30, 2024.

>=1.0 g/t Au

The Venus - Mercury Mineral Resource estimate as set out in **Table 14-108** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.



- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

#### 14.6.5 Causton's

14.6.5.1 Summary

The Causton's Project falls within the larger Tuckabianna Project group. Causton's is located 23 km east of the township of Cue in the Murchison district of Western Australia. Causton's is located adjacent to the Tuckabianna mill.



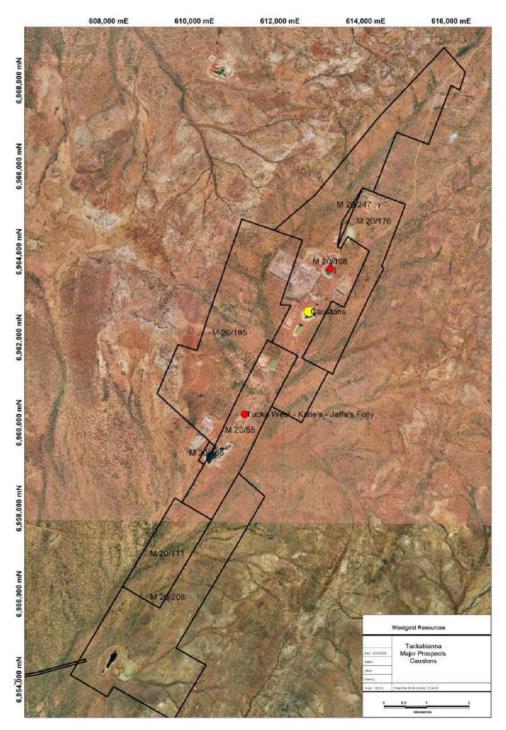


Figure 14-70 Causton's location map. Source: Westgold.

#### 14.6.5.2 Modelling Domains

The geological and estimation domain interpretation was conducted using both LeapFrog and Surpac Mining software. The interpretation was based around the historic descriptions of the mineralisation, geological logging and open pit mapping. The geological model consists of a series of iron rich sediments (SIF / SIG) interbedded within various mafic lithologies. Felsic lithologies are also observed within the project area but it is unclear if the felsic lithologies are intrusive, volcanoclastic or a combination of both.



Domaining was based on the interpretation of mine-scale stratigraphic units which provide the framework for the interpretation of the deterministic wireframes. deterministic wireframes were based on the Au threshold >0.5 g/t Au, the presence of sulphide mineralisation and hosted within iron rich sediments as outlined in the Geological Matrix Analysis (GMA).

The validity of the interpreted estimation domains is a key risk to the estimation process due to the subjective nature of linking corresponding mineralised intervals within sections and between sections and due to the narrow nature of the deterministic domains. Whilst geology was used to assist with the domains approach limited information is stored within the database that can be easily used / accessed for domaining analysis, which poses a risk to the volume of the interpreted estimation domains. Numerous small-scale faulting has been mapped within the pits and these faults are likely to increase stoping dilution and development advancement rates. Sub-domains were used in the estimation of domains 4000, 4001, 4004, 5000, and 9001 which accounts for 75% of the contained ounces at a zero threshold. The orientation of the sub-domains was based on the intersection lineation of the steeply dipping north-north-west strike shear zones. The intersection lineation of these structures and the hanging wall surfaces were used to orientate the variogram and search neighbourhoods during the estimation process (i.e. dynamic search neighbourhoods). The principal direction defined during the variographic analysis of the lateritic mineralisation corresponded with the north-north-west strike (i.e. 150 degrees) of the shear zones.

At present the sub-domain boundaries have been included to reduce the overestimation of the lower grade areas. The sub-domain boundaries were treated as a two-way soft boundary, based on a 10 m boundary expansion, and this may represent a risk if the boundaries are not diffusive. It is recommended the boundary analysis is conducted to determine the grade and boundary relationships as more data is collected.

For the Causton's May 2023 MRE a number of lodes were extended predominantly along strike to the north where it appeared mineralisation had not been included while remaining in the SIF unit. Some additional internal dilution at 0.4 g/t cut-off was included in some domains on review to maintain lode continuity and to include grade typically above 1.0 g/t. A minimum downhole width of 2.0 m was also maintained whereas in 2019 there appeared to be a number of 1.0 m intervals.

#### 14.6.5.3 Statistical Analysis and Compositing

Drillholes used in the mineralised domains estimate contained up to 15,645 samples of varying sample lengths between 0.04 and 112 m. The mean sample interval in the dataset is 1.06 m with a median of 1.00 m.

Top cuts for 1 m composites are shown below.



Domain	Samples	Minimum	Maximum	Mean	Standard deviation	cv	Variance	Top Cut	No Values Cut	% Data	% Metal
2000	151	0.02	10.00	1.23	1.46	1.19	2.14	1	1	1%	4%
2003	39	0.02	17.50	3.08	5.52	1.79	30.48	3	3	8%	36%
3003	69	0.02	17.50	1.95	3.37	1.74	11.38	1	1	1%	12%
3004	112	0.01	15.00	1.65	2.85	1.73	8.15	2	2	2%	5%
3006	17	0.02	4.00	0.92	1.08	1.17	1.17	1	1	6%	18%
3007	5	1.83	7.00	4.08	2.29	0.56	5.26	1	1	20%	30%
4000	1,587	0.00	40.00	2.86	5.22	1.82	27.25	12	12	1%	6%
4001	264	0.00	15.00	1.06	1.58	1.49	2.49	1	1	0%	4%
4004	486	0.01	30.00	3.39	4.96	1.46	24.56	2	2	0%	2%
4007	562	0.01	20.00	1.51	2.50	1.66	6.26	4	4	1%	4%
4009	16	0.13	12.00	2.73	3.86	1.41	14.88	2	2	13%	36%
4012	11	0.17	15.00	2.58	4.12	1.60	16.98	1	1	9%	281%
4017	106	0.02	10.00	1.25	1.36	1.08	1.85	1	1	1%	5%
4018	9	0.09	10.00	2.81	3.25	1.16	10.56	1	1	11%	21%
4019	4	0.05	10.00	4.06	3.78	0.93	14.28	1	1	25%	113%
4020	24	0.35	16.00	2.91	4.14	1.42	17.14	1	1	4%	11%
4021	32	0.03	6.00	1.47	1.46	0.99	2.12	1	1	3%	10%
4022	97	0.03	15.00	1.59	2.49	1.57	6.19	2	2	2%	14%
4023	63	0.06	8.00	1.18	1.50	1.27	2.25	1	1	2%	8%
4024	184	0.01	8.00	1.37	1.48	1.08	2.19	3	3	2%	6%
4025	61	0.02	6.00	1.03	1.16	1.14	1.36	1	1	2%	3%
4027	113	0.03	12.00	1.63	2.17	1.34	4.72	2	2	2%	6%
4028	25	0.01	12.00	1.88	2.80	1.49	7.85	1	1	4%	14%
5000	393	0.00	15.00	1.28	2.32	1.81	5.37	3	3	1%	5%
5001	259	0.01	20.00	1.97	2.98	1.52	8.88	2	2	1%	5%
5003	1,022	0.01	35.00	1.78	3.31	1.86	10.96	1	1	0%	6%
5005	226	0.04	15.00	1.44	2.05	1.43	4.19	1	1	0%	7%
5007	495	0.01	20.00	1.11	2.20	1.98	4.82	2	2	0%	6%
5008	633	0.01	40.00	2.05	3.92	1.92	15.37	1	1	0%	7%
6002	472	0.01	50.00	3.56	6.72	1.89	45.21	5	5	1%	20%
6004	18	0.37	6.00	1.51	1.55	1.02	2.39	1	1	6%	20%
9001	5,871	0.00	10.00	0.70	0.75	1.08	0.57	8	8	0%	2%

Table 14-109 Causton's top Cut Statistics – by estimation domain.

Top cuts were selected using the following criteria:

By inspection of the log probability plots of composite assay grade, with a view towards identifying the point at the upper tail where the robustness of the distribution breaks down and where the plot goes off trend.

- By inspection of histograms to identify the point where the grade distribution breaks down.
- By inspection of Mean and Variance plots to ensure that the average grade was not reduced by too much.
- By visual 3D inspection of the relative location of gold grade outliers and highergrade samples.

The Au coefficients of variation (CV) after cutting are approximately 2.0, which is acceptable for an OK estimate. The top cuts are also generally heavily influenced by some extreme outliers. Visual inspections were carried out to determine where the cut samples are located to see if they are spatially close or dispersed throughout.

#### 14.6.5.4 Density

The density assignment was based on the historic estimation process because no additional density information has been collected. Fresh SIF density has been allocated based on test-work of equivalent lithology at Comet.



Rock Type	Oxide	Transitional	Fresh
Mafic (Dolerite)	1.9	2.3	2.7
Porphyry	1.9	2.3	2.7
SIF	2.6	2.8	3
Mafic Schist	1.9	2.3	2.8
Quartz Veining	2.7	2.7	2.7
Ore	2.6	2.8	3
Backfill	1.6		
Lateritic Ore	2		

#### Table 14-110 Assigned Causton's densities.

## 14.6.5.5 Metallurgy

Metallurgical test work at Causton's in July 2011 submitted to ALS showed an average recovery rate of 87%. Subsequent test work submitted to ALS in June 2012 returned an average recovery rate of 90%.

## 14.6.5.6 Variography

Variography was completed in Isatis using the project files from 2019 and re-importing the updated composite data. The variography for each domain was reviewed and adjusted when required. An example of the back-transformed variogram is shown below.

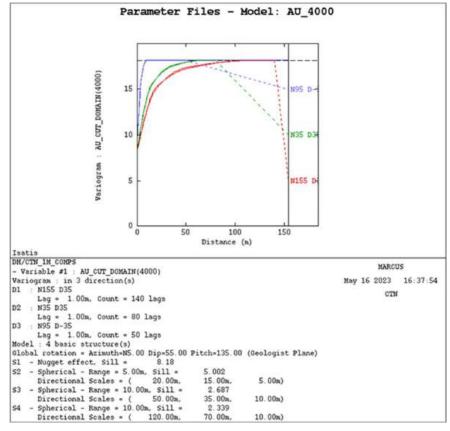


Figure 14-71 Back-transformed variogram for domain 4000. Source: Westgold.

Geology interpretations and observations were used as supporting evidence for variogram model orientation. All domains are estimated by Ordinary Kriging.



## 14.6.5.7 Block Model and Grade Estimation

The Causton's resource was estimated using Ordinary Kriging within Isatis Geostatistical Software. The interpolation was conducted using 1 m composited samples into deterministic estimation domains. The orientation of the search neighbourhoods and variogram models were controlled using local rotations which aligned the principal direction to the intersection lineation of the steeply dipping northnorthwest faults whilst taking the taking the local variation of the interpreted domains into consideration (i.e. semi-major and minor directions).

The SIF/BIF hosted estimation domains (1000's, 2000's, 3000's, 4000's, 5000's and 6000's):

- Ordinary Kriging.
- Dynamic search neighbourhoods and variograms.
- Block size of 5 mE x 10 mN x 10 mZ.

Lateritic hosted estimation domains (9000's):

- Ordinary Kriging.
- Static search neighbourhoods and variograms orientated 1500.
- Block size of 5 mE x 5 mN x 2.5 mZ.

Sub-domains were included to reduce the over-estimation of lower grade areas due to the close proximity of higher-grade composites. The sub-domain boundaries were treated as a two-way soft boundary based on a 10 m expansion distance. A distance based top-cutting approach of cutting low grade data set to 1 g/t for distances greater than 10 m was implemented to reduce the influence of the impact of the higher-grade samples within the 10 m expansion window.

The variogram parameters chosen for the estimate are given in **Table 14-111**. The search ranges and treatment of high-grade outliers is shown in **Table 14-112**. The block-size and discretisation used for the estimate is shown in **Table 14-113**.



Domain	Nugget	Sill 1	R	ange 1 (m)		Sill 2	Ra	ange 2 (m)		Sill 3				Rotation (A+X-Z)
2000	1.003	0.221	8.00m	8.00m	6.00m	0.412	40.00m	40.00m	6.00m	0.000				Dynamic
2002	0.057	0.028	7.00m	7.00m	6.00m	0.035	40.00m	40.00m	6.00m	0.000				Dynamic
2003	17.967	3.353	8.00m	8.00m	6.00m	6.214	40.00m	40.00m	6.00m	0.000				Dynamic
3000	0.681	0.539	10.00m	10.00m	8.00m	0.748	40.00m	35.00m	10.00m	0.000				Dynamic
3001	4.344	2.879	10.00m	10.00m	8.00m	3.199	40.00m	35.00m	10.00m	0.000				-5   70   157
3003	3.097	1.939	10.00m	10.00m	8.00m	1.980	40.00m	35.00m	10.00m	0.000				-5   70   157
3004	2.924	2.309	15.00m	15.00m	10.00m	0.963	35.00m	35.00m	10.00m	0.000				0   65   90
3005	0.974	1.437	30.00m	30.00m	30.00m	0.7562	100.00m	100.00m	100.00m	0.000				-5   70   157
3006	0.538	0.332	10.00m	10.00m	8.00m	0.5030	40.00m	35.00m	10.00m	0.000				-5   70   157
4000	8.180	5.002	20.00m	15.00m	5.00m	2.687	50.00m	35.00m	10.00m	2.339	120.00m	70.00m	10.00m	5   55   135
4001	0.862	0.144	10.00m	10.00m	5.00m	0.8220	150.00m	130.00m	10.00m	0.000				5   55   135
4003	2.036	1.301	20.00m	15.00m	5.00m	1.0346	50.00m	35.00m	10.00m	0.784	120.00m	70.00m	10.00m	5   55   135
4004	9.459	2.878	30.00m	20.00m	5.00m	4.3354	80.00m	60.00m	15.00m	0.000				5   55   135
4006	0.828	0.224	15.00m	15.00m	10.00m	0.4935	80.00m	50.00m	10.00m	0.000				5   55   135
4007	3.216	0.735	15.00m	15.00m	10.00m	1.3015	80.00m	50.00m	10.00m	0.000				5   55   135
4009	7.750	1.778	15.00m	15.00m	10.00m	3.7738	80.00m	50.00m	10.00m	0.000				5   55   135
4010	0.638	0.178	15.00m	15.00m	10.00m	0.4071	80.00m	50.00m	10.00m	0.000				5   55   135
4016	1.255	0.733	20.00m	15.00m	5.00m	0.6053	50.00m	35.00m	10.00m	0.458	120.00m	70.00m	10.00m	5   55   135
4017	1.087	0.564	20.00m	15.00m	5.00m	0.4071	50.00m	35.00m	10.00m	0.324	120.00m	70.00m	10.00m	5   55   135
4020	8.786	4.282	20.00m	15.00m	5.00m	3.3869	50.00m	35.00m	10.00m	2.620	120.00m	70.00m	10.00m	5   55   135
4021	0.714	0.444	20.00m	15.00m	5.00m	0.450	50.00m	35.00m	10.00m	0.326	120.00m	70.00m	10.00m	0   55   135
4022	3.392	1.775	20.00m	15.00m	5.00m	1.0161	50.00m	35.00m	10.00m	0.873	120.00m	70.00m	10.00m	5   55   135
4023	0.702	0.438	20.00m	15.00m	5.00m	0.3540	50.00m	35.00m	10.00m	0.268	120.00m	70.00m	10.00m	5   55   135
4024	0.733	0.469	20.00m	15.00m	5.00m	0.4440	50.00m	35.00m	10.00m	0.322	120.00m	70.00m	10.00m	5   55   135
4025	0.650	0.181	15.00m	15.00m	10.00m	0.3950	80.00m	50.00m	10.00m	0.000				5   55   135
4027	1.086	0.710	20.00m	15.00m	5.00m	0.5744	50.00m	35.00m	10.00m	0.433	120.00m	70.00m	10.00m	5   55   135
4028	2.767	0.654	15.00m	15.00m	10.00m	1.2252	80.00m	50.00m	10.00m	0.000				5   55   135
4030	1.650	1.032	20.00m	15.00m	5.00m	0.9190	50.00m	35.00m	10.00m	0.680	120.00m	70.00m	10.00m	5   55   135
4031	0.106	0.065	20.00m	15.00m	5.00m	0.0789	50.00m	35.00m	10.00m	0.055	120.00m	70.00m	10.00m	5   55   135
5000	1.218	0.665	120.00m	10.00m	10.00m	1.1268	120.00m	50.00m	10.00m	0.000				0   65   120
5001	2.446	1.341	15.00m	15.00m	10.00m	2.0945	80.00m	50.00m	10.00m	0.000				0   60   140
5003	2.532	1.631	15.00m	15.00m	5.00m	1.1618	120.00m	75.00m	10.00m	0.000				0   60   140
5005	1.231	0.436	10.00m	10.00m	5.00m	0.3439	25.00m	25.00m	5.00m	0.000				10   60   120
5006	0.198	0.065	10.00m	10.00m	10.00m	0.1676	80.00m	80.00m	30.00m	0.000				10   60   120
5007	2.081	0.604	10.00m	10.00m	10.00m	1.0138	80.00m	80.00m	30.00m	0.000				10   60   120
5008	14.849	4.309	15.00m	10.00m	5.00m	1.4370	45.00m	45.00m	10.00m	0.000				10   60   140
5009	0.964	0.282	10.00m	10.00m	10.00m	0.6041	80.00m	80.00m	30.00m	0.000				10   60   120
6002	14.000	15.718	28.00m	28.00m	28.00m	9.9182	100.00m	80.00m	16.00m	0.000		11		0   65   130
6003	0.277	0.200	10.00m	5.00m	5.00m	0.1311	60.00m	25.00m	10.00m	0.000				0   65   130
6006	0.845	0.612	10.00m	5.00m	5.00m	0.4100	60.00m	25.00m	10.00m	0.000				0   65   130
9001	0.244	0.088	15.00m	15.00m	5.00m	0.1878	250.00m	184.00m	10.00m	0.000				150   0   0
9002	0.029	0.013	8.00m	5.00m	5.00m	0.0355	184.00m	45.00m	10.00m	0.000				150   0   0

Table 14-111 Causton's variogram parameters for estimation.



Domain	Outliers	Threshold	Distance	Opt Samples Per DH	Number Sectors		Major	Semi	Minor	Min Samples	Optimium Samples Per Sector		Major	Semi	Minor	Min Samples	Optimium Samples Per Sector
2000	Ν	-	-	4	4		60	60	10	8	6		100	100	15	2	6
2002	Ν	-	-	4	4		60	60	10	8	6		100	100	15	2	6
2003	Y	15	15	4	4		60	60	10	8	6		100	100	15	2	6
3000	Y	5	10	4	4		45	40	10	8	5		90	80	15	2	6
3001	Y	5	15	4	4		60	60	10	8	6		100	100	15	2	6
3003	Y	12.5	10	4	4		45	40	10	8	6		90	80	15	2	5
3004	N	-	-	4	4		40	40	10	8	6		80	80	15	2	5
3005	N	-	-	4	4		45	40	10	7	5		90	80	15	2	6
3006	N	-	-	4	4		45	40	10	8	6		90	80	15	2	6
4000	Y (Low Grade)   N (High Grade)	1 g/t   27.5 g/t	10m   5m	4	4		75	40	5	8	5		220	140	10	2	6
4001	Y (Low Grade)   N (High Grade)	1g/t   NA	10m   NA	4	4		75	65	5	8	5		150	125	10	2	6
4003	N	-	-	4	4		75	55	10	8	5		220	160	20	2	6
4004	Y (Low Grade)   N (High Grade)	1g/t   22g/t	10m   10m	4	4		75	65	5	8	6		150	125	10	2	6
4006	N	-	-	4	4		60	40	10	8	6		100	60	15	2	6
4007	N	-	-	4	4		60	40	10	8	6		100	60	15	2	6
4009	N	-	-	4	4		60	40	10	8	6		100	60	15	2	6
4010	N	-	-	4	4		60	40	10	8	6		100	60	15	2	6
4016	N	-	-	4	4		75	55	10	8	6		100	75	15	2	6
4017	N	-	-	4	4	Cooreh 1	75	55	10	8	6	Co oveh 2	100	75	15	2	6
4020	N	-	-	4	4	Search 1	75	55	10	8	6	Search 2	100	75	15	2	6
4021	N	-	-	4	4		75	75	10	8	6		100	75	15	2	6
4022	Y	10	15	4	4		75	55	10	8	6		100	75	15	2	6
4023	N		-	4	4		75	55	10	8	6		100	75	15	2	6
4024	N	-	-	4	4		75	55	10	8	6		100	75	15	2	6 6
4025 4027	N N	-	-	4	4		60 75	40 55	10 10	8	6		100 100	60 75	15 15	2	6
4027	N	-	-	4	4		60	55 40	10	8	6		100	60	15	2	6
4028	N	-	-	4	4		60	40	10	8	6		100	60	15	2	6
4030	N			4	4		75	55	10	8	6		100	75	15	2	6
5000	N (High Grade)   Y (Low Grade)	NA   3g/t	NA   10m	4	4		75	30	10	7	5		120	50	15	2	6
5001	N	-	-	4	4		75	50	10	7	5		120	65	15	2	6
5001	N	_	_	4	4		80	50	10	8	6		100	65	15	2	9
5005	N	-	-	4	4		40	40	10	8	6		60	60	15	2	6
5006	N	-	-	4	4		60	60	10	8	6		90	90	15	2	6
5007	N	-	-	4	4		60	60	10	8	6		90	90	15	2	6
5008	N	-	-	4	4		45	45	10	8	6		65	65	15	2	6
5009	N	-	-	4	4		60	60	10	8	6		90	90	15	2	6
6002	N	-	-	4	4		50	20	10	8	6		120	60	20	2	6
6003	N	-	-	4	4		50	20	10	8	6		120	60	20	2	6
6006	N	-	-	4	4		50	20	10	8	6		100	50	20	2	6
9001	Y (Low Grade)   N (High Grade)	1g/t   NA	10m   NA	4	4		75	35	5	8	4		150	125	10	2	5
9002	N	-	-	4	4		75	20	10	8	6		100	50	15	8	6

#### Table 14-112 Causton's search methodology and outlier treatment.



Domain	Panel Size (X:Y:Z)	Discretisation
2000	5x10x10	3:5:5
2002	5x10x10	3:5:5
2003	5x10x10	3:5:5
3000	5x10x10	3:5:5
3001	5x10x10	3:5:5
3003	5x10x10	3:5:5
3004	5x10x10	3:5:5
3005	5x10x10	3:5:5
3006	5x10x10	3:5:5
4000	5x10x10	3:5:5
4001	5x10x10	3:5:5
4003	5x10x10	3:5:5
4004	5x10x10	3:5:5
4006	5x10x10	3:5:5
4007	5x10x10	3:5:5
4009	5x10x10	3:5:5
4010	5x10x10	3:5:5
4016	5x10x10	3:5:5
4017	5x10x10	3:5:5
4020	5x10x10	3:5:5
4021	5x10x10	3:5:5
4022	5x10x10	3:5:5
4023	5x10x10	3:5:5
4024	5x10x10	3:5:5
4025	5x10x10	3:5:5
4027	5x10x10	3:5:5
4028	5x10x10	3:5:5
4030	5x5x2.5	3:5:5
4031	5x10x10	3:5:5
5000	5x10x10	3:5:5
5001	5x10x10	3:5:5
5003	5x10x10	3:5:5
5005	5x10x10	3:5:5
5006	5x10x10	3:5:5
5007	5x10x10	3:5:5
5008	5x10x10	3:5:5
5009	5x10x10	3:5:5
6002	5x10x10	3:5:5
6003	5x10x10	3:5:5
6006	5x10x10	3:5:5
9001	5x5x2.5	3:5:5
9002	5x5x2.5	3:5:5

Table 14-113 Causton's domain block size and discretisation.

#### 14.6.5.8 Model Validation

Model validation was completed to check that the grade estimates within the model were an appropriate reflection of the underlying composite sample data, and to confirm that the interpolation parameters were applied as intended. Checks of the estimated block grade with the corresponding composite dataset were completed using several approaches involving both numerical and spatial aspects as follows:

• Globally: Comparison of the mean block grade estimates to the mean of informing composite grades for both domains.



- Semi-Local: Using swath plots in Northing and RL comparing the estimates to the sample data.
- Local: Visual inspection of the estimated block grades viewed in conjunction with the sample data.

The global statistical comparison for the lodes estimated are summarised below. The general agreement between the informing de-clustered composite means and the estimated global means is good in all the domains. In the QP's opinion the global statistics demonstrate that the estimates are globally unbiased and satisfactorily reflect the input data.

				Cut	1m Comp	osites						Blockmod	el						
D	omain	Samples	Minimum	Maximum	Mean	Declust Mean	Moving Window AuCut	cv	Variance	Samples	Minimum	Maximum	Mean	Standard deviation	cv	Mean vs Block	Dedust.Mean vs Block	Declust.Mean vs Block	Comments
	2000	151	0.02	10.00	1.23	1.16	1.14	1.2	2.1	20,680	0.37	2.54	1.27	0.5	0.4	3%	9%	11%	Good local and global estimated.
	2001	15	0.14	6.76	1.07			1.5	2.7	4,164	0.52	0.52	0.52	-					Assigned Median
	2002 2003	41	0.01	2.05	0.41	0.41	0.47	1.0	0.2	2,275	0.23	0.68	0.41	0.1	0.2	0% -1%	0%	-13%	Good local and global estimated. Good local and global estimated.
	2003	39	0.02	7.23	3.08	2.49	3.10	1.8	30.5	4.209	0.45	2.39	3.04	1.4		-1%	22% 11%	-2%	Good local and global estimated. Good local and global estimated.
	3001	43	0.03	16.56	2.28	1.73	176	1.3	15.2	7,359	0.43	7.45	1.98		0.7	-13%	14%	13%	Good local and global estimated.
	3002	5	0.20	2.28	0.98			0.8	0.5	1,138	0.59	0.59	0.59						Assigned Median
	3003	69	0.02	17.50	1.95	1.51	1.42	1.7	11.4	7,505	0.40	3.69	1.49	0.7	0.5	-23%	-1%	5%	Good local and global estimated.
	3004	112	0.01	15.00	1.65	1.40	1.22	1.7	8.1	13,136	0.25	3.92	1.47	0.8	0.6	-11%	5%	20%	OK local but extrapolation of higher grades (based on declustering) in poorly informed areas.
	3005	186	0.01	14.40	1.54	1.41	1.46	1.3	4.2	20,785	0.31	4.32	1.31	0.6		-15%	-7%	-10%	Good local and global estimated.
	3006	17	0.02	4.00	0.92	0.93	0.88	1.2	1.2	4,027	0.43	177	0.95	0.3	0.4	3%	2%	8%	Good local and global estimated.
	3007 4000	1.587	1.83	7.00	4.08	2.33	2.60	0.6	5.3 27.3	1,557 625,562	2.41	2.41	2.41 2.19	- 1.8	- 0.8	241/	-6%	104	Assigned Median
	4000	1,587	0.00	40.00	1.06	2.33	2.60	1.8	2/.3	124,530	0.01	4.26	0.76	1.8		-24%	-14%	-16%	Good local and global estimated. OK local but extrapolation of lower grades (based on declustering) in poorly informed areas.
	4002	204	0.44	2.98	1.70	0.00	0.50	0.5	0.8	553	1.64	1.64	1.64			-20/6	-14/6	-21/6	Assigned Median
	4003	56	0.06	13.40	1.91	1.75	1.71	1.3	5.8	13.116	0.68	3.31	1.84	0.6	0.3	-4%	5%	8%	Good local and global estimated.
	4004	486	0.01	30.00	3.39	2.51	2.70	1.5	24.6	268,008	0.05	10.82	2.11	1.5		-38%	-16%	-22%	OK local but extrapolation of lower grades (based on declustering) in poorly informed areas.
	4005	7	0.03	8.51	2.20			1.3	8.7	653	0.58	0.58	0.58	-					Assigned Median
	4006	48	0.07	6.30	1.20	1.16	1.20	1.0	1.5	9,645	0.61	2.08	1.23	0.3		3%	6%	3%	Good local and global estimated.
	4007	562	0.01	20.00	1.51	1.46	1.44	1.7	6.3	106,044	0.31	6.57	1.53	0.8	0.5	2%	5%	6%	Good local and global estimated.
	4008	12	0.37	3.06	1.33			0.8	1.0	734	0.82	0.82	0.82	-	•				Assigned Median
	4009 4010	16 20	0.13	12.00 5.30	2.73	2.73	4.20	1.4	14.9 1.5	2,341	1.47	5.30 1.89	2.33	1.0		-15%	-15%	-45%	One Section of drilling One Section of drilling
	4010	4	0.05	1.76	1.15	1.20	1.44	0.9	0.2	2,004	1.20	1.89	1.20	0.5	0.2	-476	676	-10%	Assigned Median
	4012	11	0.33	15.00	2.58			1.6	17.0	2,459	0.73	0.73	0.73						Assigned Median
	4013	11	0.12	2.40	0.88			0.8	0.5	5,566	0.54	0.54	0.54						Assigned Median
	4014	7	1.03	5.92	2.33			0.8	3.1	1,815	1.03	1.03	1.03	-					Assigned Median
	4015	6	0.29	5.00	1.92			0.9	3.2	1,487	0.50	0.50	0.50	-					Assigned Median
	4016	30	0.01	8.94	1.63	1.46	1.83	1.2	4.1	13,564	0.48	3.26	1.23	0.7		-25%	-16%	-33%	Good local and global estimated.
	4017	106	0.02	10.00	1.25	1.31	1.31	1.1	1.8	15,047	0.58	2.79	1.25	0.3	0.3	0%	-5%	-5%	Good local and global estimated.
	4018	9	0.09	10.00	2.81			1.2	10.6	1,226	0.66	0.66	0.66		•				Assigned Median
	4019 4020	4	0.05	10.00	4.06	3.12	2.60	0.9	14.3 17.1	1,102 13,559	1.70	1.70	1.70	- 1.1		20%	121/	200	Assigned Median
	4020	32	0.03	6.00	1.47	1.29	1.47	1.4	2.1	8,727	0.58	2.63	1.49	0.4		0%	12%	0%	OK local but extrapolation of higher grades (based on declustering) in poorly informed areas. Good local and elobal estimated.
	4022	97	0.03	15.00	1.59	1.54	1.52	1.6	6.2	17.725	0.58	3.73	1.70		0.4	7%	10%	12%	OK local but extrapolation of higher grades (based on declustering) in poorly informed areas.
	4023	63	0.06	8.00	1.18	1.15	1.17	1.3	2.2	15,024	0.40	2.42	1.12	0.4	0.4	-5%	-3%	-4%	Good local and global estimated.
	4024	184	0.01	8.00	1.37	1.34	1.30	1.1	2.2	37,796	0.55	3.30	1.43	0.5		4%	7%	10%	Good local and global estimated.
	4025	61	0.02	6.00	1.03	0.98	0.95	1.1	1.4	20,836	0.45	1.98	1.00	0.3	0.3	-3%	2%	5%	Good local and global estimated.
	4026	8	0.28	1.90	0.76			0.7	0.2	2,345	0.58	0.58	0.58						Assigned Median
	4027	113	0.03	12.00	1.63	1.37	1.63	1.3	4.7	21,634	0.35	4.98	1.56	0.8		-4%	14%	-4%	OK local but extrapolation of higher grades (based on declustering) in poorly informed areas.
	4028 4029	25	0.01	12.00 4.66	1.88	1.43	1.70	1.5	7.8	6,069	0.44	4.93	1.92	0.8	0.4	2%	34%	13%	OK local but extrapolation of higher grades (based on declustering) in poorly informed areas. Assigned Median
	4029 4030	52	0.11	4.66	1.41	1.63	1.57	1.0	4.2	2,625	0.38	3.63	1.43	- 06		-10%	-12%	-9%	Assigned Median Good local and global estimated.
	4031	16	0.02	2.56	0.93	0.87	0.91	0.6	0.3	3,733	0.58	1.25	0.92	0.0		-1%	-12.%	-5%	Good local and global estimated.
	4032	4	0.34	3.73	1.57	0.07		0.8	1.7	437	0.74	0.74	0.74	-	1.				Assigned Median
	5000	393	0.00	15.00	1.28	0.89	1.00	1.8	5.4	107,665	0.01	4.36	0.78		0.9	-39%	-12%	-22%	Good local and global estimated. Sub Domains Used
	5001	259	0.01	20.00	1.97	1.60	1.80	1.5	8.9	14,000	0.31	4.57	1.61	1.0	0.6	-18%	1%	-11%	Good local and global estimated.
	5002	6	0.46	4.42	1.44			1.0	2.0	846	0.61	0.61	0.61	-	·				Assigned Median
	5003	1,022	0.01	35.00	1.78	1.29	1.59	1.9	11.0	75,361	0.12	6.79	1.28	0.7	0.6	-28%	-1%	-19%	Good local and global estimated.
	5004 5005	226	0.50	7.72	3.36	1.09	1.14	0.8	7.7	1,242	1.53	2.78	1.53	- 0.6		-24%	0%	-4%	Assigned Median
	5005	225	0.04	2.40	0.70	0.68	0.73	1.4	4.2	2,585	0.33	2.78	0.69		0.6	-24%	0%	-4%	Good local and global estimated. Good local and global estimated.
	5005	495	0.05	2.40	1.11	1.00	1.04	2.0	4.8	2,585	0.09	4.37	1.20	0.6		-1%	20%	-5%	Obdo local and global estimated. OK local but extrapolation of higher grades (based on declustering) in poorly informed areas.
	5008	633	0.01	40.00	2.05	2.01	177	1.9	15.4	13,898	0.43	5.11	1.94	1.0		-5%	-3%	10%	Good local and global estimated.
	5009	22	0.01	5.30	1.10	0.78	1.10	1.4	2.3	470	0.38	1.70	0.93	0.2		-15%	19%	-15%	Poor estimated due to limited number of samples, but completely extracted already.
	6000	9	0.08	3.08	1.13			0.8	0.8	6,794	0.67	0.67	0.67	-					Assigned Median
	6001	7	0.10	5.62	1.68			1.3	4.7	989	0.38	0.38	0.38	-	· _				Assigned Median
	6002	472	0.01	50.00	3.56	3.14	2.70	1.9	45.2	43,543	0.06	15.10	2.84		0.7	-20%	-10%	5%	Good local and global estimated.
	6003	122	0.04	6.68	1.02	0.89	0.90	1.0	1.1	20,286	0.38	2.07	0.84	0.2	0.3	-18%	-6%	-7%	Good local and global estimated.
	6004 6005	18	0.37	6.00 5.12	2.08	_		1.0	2.4	5,340 672	1.03	1.03	1.03	· ·	ŀ				Assigned Median Assigned Median
	6006	65	0.08	5.12	2.08	1.33	1.36	1.2	3.4	5.378	0.66	2.57	1.4/	- 0.4		-12%	5%	2%	Assigned Median Good local and global estimated.
	9001	5,871	0.02	10.00	0.70	0.51	0.60	1.1	0.6	594,974	0.03	3.43	0.48	0.4		-12%	-6%	-20%	Good local and global estimated.
	9002	550	0.05	2.30	0.36	0.36	0.36	0.7	0.0	22,255	0.14	0.99	0.38	0.2		4%	6%	6%	Good local and global estimated.
	-									, , , ,									

#### Table 14-114 Causton's global validation statistics per estimation domain.

Swath plots (grade trend profiles) showing the estimated tonnes, grade, number of composites and mean de-clustered cut composite grade (tabulated by Northing, East and Elevation) were created for all significant domains. The limitations of this comparison such as data clustering should be kept in mind when drawing conclusions; however, there is generally good correlation between the block estimate and the composite mean. As expected, the estimated grade is more smoothed compared to the often-variable composite mean grades. The greatest differences occur in poorly sampled areas and where the composites display high degrees of local variability.





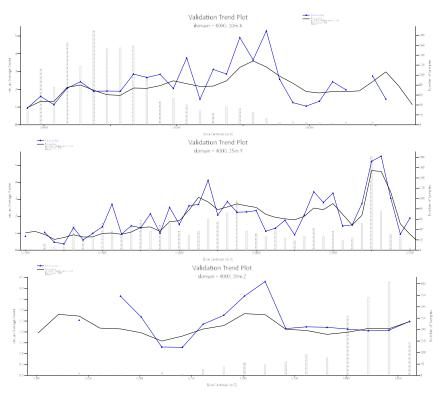


Figure 14-72 Causton's domain 4000 Au Swath Plots. Source: Westgold.

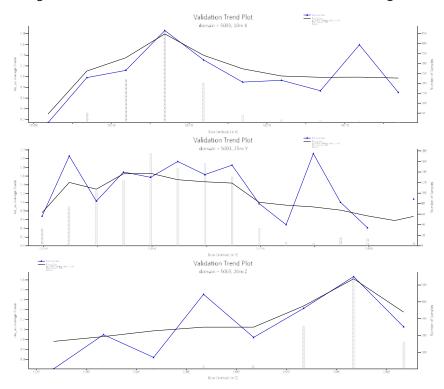


Figure 14-73 Causton's domain 5003 Au Swath Plots. Source: Westgold.



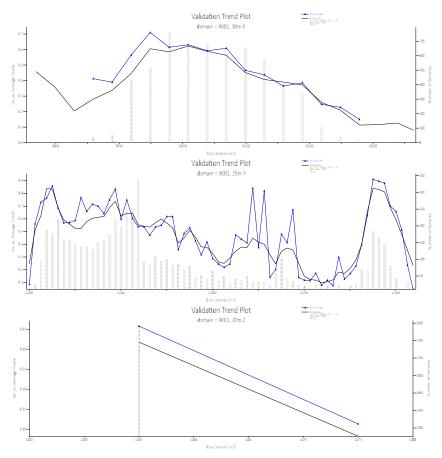


Figure 14-74 Causton's domain 9001 Au Swath Plots. Source: Westgold.

Visual validation of the grade estimates shows good correspondence between the estimate and informing data. The use of distance limiting of grades above a threshold for certain domains has limited the spreading and smoothing of high grades through areas of lower grade.

#### 14.6.5.9 Mineral Resource Classification

The Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

The portions of the May 2023 MRE classified as Indicated have been flagged by medium to high quality estimation parameters. The drill spacing within the Indicated portion of the resource is appropriate for defining the continuity and volume of the mineralised domains, at a nominal 20 m drill spacing on 20 m sections and the lode has been defined through existing mining. The portions of the May 2023 MRE classified as Inferred represent domains where geological continuity is present but not consistently confirmed by 20 m x 20 m drilling and where the drilling was completed prior to the 2000's. The Inferred portions of the MRE are defined by lower quality of estimation parameters, an average slope of regression (true to estimated block) of < 0.3 and an average distance to composites used of > 30 m.



## 14.6.5.10 Mineral Resource Reporting

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource estimate is effective as of June 30, 2024. The Mineral Resource at the Causton's deposit has been reported using a cut-off at 2.0 g/t Au and has been depleted for mining.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations. Areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. These areas were adjacent to mined out stopes as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.

	Causton's Underground Mineral Resource Statement - Rounded for Reporting 30/06/2024														
Measured Indicated Measured and Indicated Inferred															
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz			
Causton's UG	0	0.00	0	490	3.86	61	490	3.86	61	761	3.07	75			
Total	0	0.00	0	490	3.86	61	490	3.86	61	761	3.07	75			

Table 14-115 Causton's Mineral Resource Estimate – CGO – as of June 30, 2024.

NOT ABOVE Z PLANE 1390; >= 2.0g/t Au.

The Causton's Mineral Resource estimate as set out in **Table 14-115** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.



- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).

#### 14.6.6 Julie's Reward

#### 14.6.6.1 Summary

The Julie's Reward deposit is located 750 m north of the Tuckabianna mill in the Tuckabianna project area. The deposit is located 23 km east of the township of Cue in the Murchison district of Western Australia.



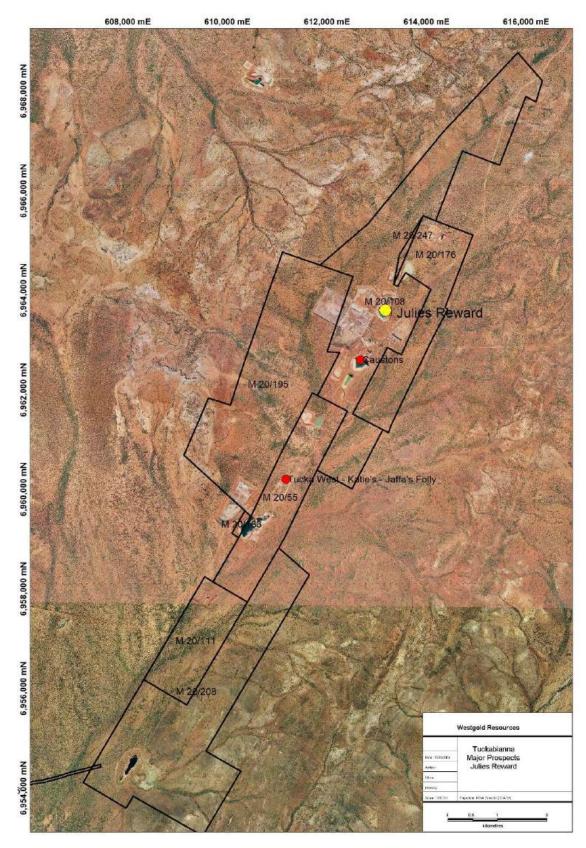


Figure 14-75 Julie's Reward location map. Source: Westgold.



Mining of the Julies Reward open pit commenced in 1988 and was completed in 1996, producing 858,067 t at 3.27 g/t for 90,297 oz.

The Julie's Reward resource estimate was updated in November 2017.

#### 14.6.6.2 Modelling Domains

Geological interpretation of the Julies Reward deposit was carried out using a systematic approach to ensure that the resultant MRE figure was both sufficiently constrained and representative of the expected subsurface conditions. In all aspects of resource estimation the factual and interpreted geology was used to guide the development of the model.

Initially a three-dimensional viewing of the data was undertaken to establish trend and continuity of the individual orebodies. This was followed by sectional viewing. The geologically modelled mineralisation domains represent the mineralised BIF lodes. These domains generally coincide with a wireframing cut-off of 0.5 g/t that aligns with logged geology and sulphides. 0.5 g/t wireframe cut-off was used for drilling with no geology in the database, but intersections were also checked against original logs in WAMEX reports to align the wireframes with the logged geology. Strings were digitised on section to establish the geological or 0.5 g/t cut-off envelope around the individual mineralised zones. Generally, a maximum of two continuous metres of down-hole internal dilution was allowed, and in cases where geological knowledge of the deposit allowed, the interpretation strings were continued through zones of lower grade to assist in modelling mineralisation continuity, and to increase the level of along-strike and down-dip control on the location of the mineralised structure. To satisfy mining constraints a minimum downhole intercept of two metres was modelled.



All strings were digitised in a clockwise direction, with a common extent of interpretation defined as 0.5 x drill spacing beyond the last intersecting drillhole. Strings were snapped to drillholes at sample interval boundaries, with no artificial complexities introduced into the mineralisation geometry (although points were created between drillholes to ensure accuracy during wireframing and aid triangulation of solids).

Wireframing of mineralisation sectional perimeters was performed via the linking of appropriate perimeters on adjacent sections. The wireframes were sealed by triangulation within the end member perimeters, leading to the creation of a volume model.

Modelling was undertaken in TUCKA local grid, with a nominal sectional spacing of 12.5 m through the open pit to align with the drillhole line spacing, increasing to 25 m or greater north and south of the pit.

No Base of Transported Material (BOTM) surface was modelled due to a lack of digitised geology logs.

Oxidation surfaces for the BOCO and TOFR were sourced from the previous 2008 SLR resource model by Runge Ltd. Intercept points are unchanged. The surfaces were checked in several locations against original logs in WAMEX reports and were found to align with logged oxidation states. There may be localised variation of the oxidation surfaces between drillholes, as the surfaces dependent on the accuracy of logging of the oxidation states of the drilling used in the model.

Digitised strings are based on weathering information from historic drillholes. A boundary string was digitised to extend beyond the borders of the block model, with a DTM created by triangulating between the snapped drillhole points and a boundary string, treating the digitised points as spot heights. The previous SLR model triangulated a surface using sectional digitised strings.

#### 14.6.6.3 Statistical Analysis and Compositing

The interpreted mineralisation wireframes were used to create intersection tables within the database by marking for extraction all intervals of drill holes enclosed by the volume model. Each intersection was flagged according to the object in which it intersected, with numerical codes assigned as appropriate.

Several intercepts were removed from this intersection table for drillholes that were suspected to have suffered from downhole grade smearing due to water table interaction and contamination. These were identified by checking the wireframe interpretation against original geology logs. Logs that mention contamination, or holes that showed a decreasing tail of mineralisation beyond the mineralised BIF units were removed from the intersection table. These holes generally occurred in the depleted open pit, so do not have a significant effect on the remnant Mineral Resource.



One metre (1 m) composites of the downhole assay results from the holes in the project area were used in the statistical analysis, and Mineral Resource Estimation. Composites were taken from within the volume model, with the composite length chosen based on the dominant sample length within the database.

Statistical comparisons were completed on all the domains for top-cut analysis. Geostatistical analysis was conducted on the larger domains with sufficient data density for meaningful experimental variogram and variogram model creation.

A top-cut analysis was performed for data included in the Julie's Reward resource estimation. The one metre composite files of downhole assay data were ranked. Datasets were then graphed and analysed for disintegrations, which are defined as the first significant increase in percentage difference between adjacent values for assay values sufficiently above the mean assay value for the dataset.

From this analysis several common measures of determining an appropriate top-cut were reviewed:

- Mean plus 2 standard deviations.
- 97.5<sup>th</sup> Percentile.
- 99<sup>th</sup> Percentile.
- Coefficient of Variance (COV).
- % of metal cut.
- % of data cut.
- Data disintegration.



Au raw														
Domain	1010	1020	1030	1040	1050	1060	1070	1080	1090	1095	2010			
VOLUME	· ·		•										•	
% total Volume	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Drillholes	82	73	72	50	14	11	25	8	8	11	99			
Samples	401	312	381	354	89	52	104	23	50	35	470			
Imported	2271	2271	2271	2271	2271	2271	2271	2271	2271	2271	2271			
Minimum	0.01	0.01	0.01	0.01	0.04	0.13	0.01	0.03	0.01	0.01	0.06			
Maximum	44.70	74.00	111.00	53.70	9.05	6.50	32.60	43.20	33.90	14.80	12.30			
Mean	3.51	1.95	4.28	2.90	1.20	0.96	1.52	4.15	2.37	1.30	1.67			
Standard deviation	5.88	5.17	8.60	5.09	1.46	1.08	4.43	9.54	6.07	2.63	1.53			
CV	1.68	2.65	2.01	1.75	1.21	1.13	2.91	2.30	2.56	2.03	0.91			
Variance	34.62	26.69	73.88	25.90	2.12	1.17	19.63	91.01	36.88	6.91	2.33			
Skewness	3.69	9.78	6.82	4.95	2.89	3.80	5.83	3.58	4.63	4.35	2.83			
50% (Median)	1.42	0.66	1.58	1.27	0.70	0.60	0.26	0.88	0.83	0.51	1.19			
90%	8	4	10	6	3	1	3	8	3	3	3			
95%	12.98	7.22	15.11	11.52	4.10	2.07	4.60	17.64	4.53	4.05	4.64			
97.5%	20.89	9.24	24.63	16.13	4.73	4.28	9.80	29.46	22.48	6.76	6.27			
99.0%	30.30	18.84	41.56	25.86	6.61	5.70	27.96	37.70	31.15	11.58	7.21			
Top Cut	15.00	9.00	18.00	12.00	5.00	-	10.00	10.00	5.00	6.00	9.00			
No Values Cut	18	8	14	16	2		3	2	2	1	2			
% Data	4.4%	2.6%	3.7%	4.5%	2.2%		2.9%	8.7%	4.0%	2.9%	0.4%			
% Metal	13.5%	20.9%	16.9%	14.6%	5.0%		26.1%	44.5%	44.1%	19.4%	0.8%			

Table 14-116 Julie's Reward domain raw and top-cut statistics.

Au_cut															
Domain	1010	1020	1030	1040	1050	1060	1070	1080	1090	1095	2010	l			
Samples	407	313	381	354	89	52	104	23	50	35	472				
Imported	2280	2280	2280	2280	2280	2280	2280	2280	2280	2280	2280				
Minimum	0.007	0.005	0.005	0.005	0.04	0.13	0.01	0.03	0.01	0.005	0.06				
Maximum	15	9	18	12	5	6.5	10	10	5	6	9				
Mean	3.02	1.54	3.55	2.48	1.14	0.96	1.13	2.30	1.33	1.05	1.65				
Standard deviation	3.867	2.157	4.479	3.055	1.202	1.081	2.075	3.287	1.39	1.462	1.445				
CV	1.28	1.40	1.26	1.23	1.06	1.13	1.84	1.43	1.05	1.40	0.87				
Variance	14.951	4.653	20.06	9.335	1.446	1.169	4.306	10.802	1.933	2.136	2.087				
Skewness	1.833	2.182	1.917	2.053	1.881	3.803	3.207	1.724	1.337	2.295	2.3				
50% (Median)	1.42	0.655	1.58	1.27	0.695	0.6	0.26	0.875	0.83	0.505	1.19				
90%	8.38	4.029	9.644	6.472	2.842	1.364	2.948	8.2	3.4	2.66	3.302				
95%	12.83	7.189	15.105	11.516	4.099	2.068	4.598	9.73	4.525	4.05	4.632				
97.5%	15	8.893	18	12	4.734	4.276	9.76	10	4.925	5.659	6.264				
99.0%	15	9	18	12	5	5.699	10	10	5	5.864	7.198				

### 14.6.6.4 Density

Density laboratory test-work of oxide, transitional and fresh rock was undertaken by Australmin in 1988. This test-work has been used to define density values for the Mineral Resource Estimate. The methodology used for this test-work is undocumented, only the results accompany geotechnical logs of diamond drillholes.

Values used in the WGX resource model are tabled below.

#### Table 14-117 Assigned Julie's Reward MRE densities.

Rock Type	Oxide	Transitional	Fresh
Ore (BIF)	2.60	2.80	3.00
Waste (mafic)	1.90	2.30	2.70
Laterite	2.00		
Fill	1.60		
Air	0.00		

### 14.6.6.5 Metallurgy

There is no record of metallurgical test-work for Julie's Reward in WAMEX annual reports, or in resource reports from the previous operator SLR.



#### 14.6.6.6 Variography

A geostatistical analysis of down-hole composited Julie's Reward data for all domains with a significant population was undertaken as part of the resource estimation process. This included normal scores variographic analysis of the composite data using Snowden Supervisor software. Grade distribution is analysed via Connelly diagrams and continuity rosettes, with directions of maximum grade continuity selected in three directions to produce a variogram model. A variogram model is also produced in the downhole direction with a lag spacing of 1 to determine the nugget of the population. Variogram nugget and sills for estimation are back-transformed from the Gaussian distribution using Hermite polynomials.

Domains with insufficient samples for geostatistical analysis were allocated variogram parameters of spatially and statistically similar domains for estimation.

The Ordinary Kriging (OK) method of interpolation was used to fill the blocks within all domains.

#### 14.6.6.7 Block Model and Grade Estimation

The Ordinary Kriging (OK) method of interpolation was used to fill the blocks within all domains. The OK estimation technique carries out block interpolation based on the average of the values of nearby sample points. It weights the sample points by the semi-variance of the distance between each of the sampled points and the unsampled location, and the semi-variances of the distances among all paired combinations of sample points (i.e. it considers grade continuity). Ordinary kriging is considered to be an appropriate technique to apply to the estimation within these domains. The interpolation was constrained within the wireframe generated from the geological sectional interpretation of the mineralisation (i.e. within the plane of mineralisation). All interpolation was conducted in three passes, with increased search distance 1.5 x and 2 x for subsequent interpolation runs, and a reduction of minimum and maximum inform sample for the third interpolation pass. QKNA was undertaken in Snowden's Supervisor v8.6 in an effort to optimise block sizes, numbers of informing samples and search parameters for the ordinary kriging estimation. Kriging Efficiency (KE) and Slope of Regression (SOR) is calculated and analysed for each sample point for a selection of parameters to assist in optimising model parameters, with the resulting analysis providing boxplots of KE and SOR for each parameter.



#### Table 14-118 Julie's Reward QKNA results.

Domain	B	Block Siz	2e	Sam	ples		Search		range	Dis	cretisa	tion
Domain	х	У	z	Min	Max	Dir 1	Dir 2	Dir 3	scale	х	у	z
1010	10	12.5	10	4	18	72	58	18	x0.9	5	5	5
1020	10	12.5	10	5	18	82.5	82.5	16.5	x0.66	5	5	5
1030	10	12.5	10	5	18	49.5	45.9	16.5	x0.66	5	5	5
1040	10	12.5	10	6	18	60	60	20	x1	5	5	5
1050	10	12.5	10	5	16	66	49.5	16.5	x0.66	5	5	5
1060	10	12.5	10	6	16	35	35	17.5	x1	5	5	5
1070	10	12.5	10	6	18	90	45	22.5	x0.9	5	5	5
1090	10	12.5	10	6	16	40	40	20	x1	5	5	5
2010	10	12.5	10	6	20	72.6	18.15	18.15	x0.66	5	5	5

#### Block Size Analysis

A series of block size configurations were tested for all sample locations, block size generally based on combinations of half, equal or double the drillhole spacing in all directions, with 10 mX 12.5 mY 10 mZ block size found to be adequate. This is appropriate for the drillhole spacing. Estimation block size has been increased to 20 mX 25 mY 20 mZ for domain 1010 and 1020 below 1330 mRL, and 1030 and 1040 below 1330 mRL to account for the wider sample spacing below these depths.

#### Number of informing samples

The effect on the estimate of the number of informing samples was tested all sample locations for the optimal block size chosen during the first phase of QKNA. The number of samples tested ranged from 1 to 30 in increments of 1. Test results varied per domain, however, suggest a minimum of 4-6 and a maximum of 16-20 samples provide a spread from where the minimum acceptable levels of KE and SOR are achieved, through to the maximum point where KE and SOR are no longer significantly positively affected.

#### Search range

The effect on the estimate of the sample range was tested at all sample support locations. Ranges tested were based on the variogram model spherical structure maximum ranges with two thirds, 90%, equal, one and a half times and double the model ranges tested as an estimation search range. Results varies per domain, with two thirds, 90% and 100% of the variogram model spherical structure range giving the best results for an estimation search range.

# Discretisation

The effect on the estimate of the block discretisation was tested at the good sample support locations. Varying combinations were tested. Discretisation of 5,5,5 in the X,Y,Z directions was found to be sufficient, with discretisation having little effect on KE or SOR, but ensures an adequate amount of discretisation points per estimation block based on the drillhole spacing and sample lengths.

Block Model Parameters are shown below.



	Y	х	Z
Min	12,700	9,700	1,150
Мах	13,800	10,400	1,510
Extent	1,100	700	360
Discretisation	5x 5y 5z		
Parent	12.50	10.00	10.00
Sub-block	6.25	1.25	1.25

#### Table 14-119 Julie's Reward block model parameters.

#### 14.6.6.8 Model Validation

Model validation was completed to check that the grade estimates within the model were an appropriate reflection of the underlying composite sample data, and to confirm that the interpolation parameters were applied as intended. Checks of the estimated block grade with the corresponding composite dataset were completed using several approaches involving both numerical and spatial aspects as follows:

- Globally: Comparison of the mean block grade estimates to the mean of informing composite grades.
- Semi-Local: Using swath plots in Northing, Easting and RL comparing the estimates to the sample data.
- Local: Visual inspection of the estimated block grades viewed in conjunction with the sample data.

Validation analysis has indicated that the block model for the Julie's Reward mineralisation is robust at a global scale compared to the domain naïve and declustered means. Estimation parameter domains show local high-grade spikes are under-reported and conversely low-grade spikes are over-reported in the model in many cases. This can be seen in the trend analysis graphs. This is due to the smoothing effect of the estimation techniques employed.

				1m comp	oosites top	-cut assays		
domain	ore_type	Samples	Minimum	Maximum	Mean	Declustered mean (comp)	Standard deviation	cv
1010	SIF	407	0.007	15	3.022	2.849	1.28	14.951
1020	SIF	313	0.005	9	1.539	1.559	1.402	4.653
1030	SIF	381	0.005	18	3.552	3.051	1.261	20.06
1040	SIF	354	0.005	12	2.479	2.309	1.232	9.335
1050	SIF	89	0.04	5	1.14	1.14	1.055	1.446
1060	SIF	52	0.13	6.5	0.957	1.019	1.129	1.169
1070	SIF/shear	104	0.01	10	1.126	1.107	1.843	4.306
1080	SIF/shear	23	0.03	10	2.3	2.017	1.429	10.802
1090	SIF/shear	50	0.01	5	1.327	1.261	1.047	1.933
1095	SIF/shear	35	0.005	6	1.046	1.151	1.397	2.136
2010	laterite	472	0.06	9	1.654	1.5	0.874	2.087

#### Table 14-120 Julie's Reward domain means validation.

WGX 2017/08 Block centroids												
Estimation	Samples	Minimum	Maximum	Mean (estimate)	Standard deviation	CV						
res_au	22096	0.14	8.38	2.27	1.62	0.71						
res_au	16490	0.01	5.84	1.59	1.14	0.72						
res_au	14331	0.47	9.22	2.62	1.66	0.63						
res_au	10544	0.01	7.19	2.12	1.05	0.49						
res_au	1856	0.66	2.23	1.13	0.37	0.33						
res_au	1330	0.5	2.47	1.1	0.38	0.35						
res_au	5056	0.02	3.96	1.06	0.74	0.7						
res_au	924	0.54	6.12	2.34	1.61	0.69						
res_au	1110	0.53	2.14	1.25	0.41	0.33						
res_au	2183	0.18	3.2	1.27	0.68	0.54						
res_au	8101	0.56	3.77	1.44	0.57	0.4						

% diff mean declustered	Actual diff mean dedust	% diff naïve mean	Actual diff naïve mean
-20%	-0.58	-25%	-0.75
2%	0.03	3%	0.05
-14%	-0.43	-26%	-0.93
-8%	-0.19	-14%	-0.36
-1%	-0.01	-1%	-0.01
8%	0.08	15%	0.14
-4%	-0.05	-6%	-0.07
16%	0.32	2%	0.04
-1%	-0.01	-6%	-0.08
10%	0.12	21%	0.22
-4%	-0.06	-13%	-0.21



### 14.6.6.9 Mineral Resource Classification

The Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

Resource classification has proceeded based on the confidence of the form and continuity of the mineralisation. As the state of the data was assumed to be of sufficient quality to estimate a Mineral Resource, and the confidence in the geological interpretation carried out using this data was deemed to be of sufficient quality to allow for Indicated and Inferred class to be used.

The resource was then categorised on the following basis;

- Domains with reasonable confidence in the estimated grade and geological continuity, generally coincident with a Conditional Bias Slope >0.7 and a drillhole line spacing of 12.5 m were allocated Indicated classification by a classification surface for domains 1010, 1020, 1030 and 1070, and were applied to the whole domain for domains 1050 and 1060.
- Domains with a reduced level of confidence (such as depth and strike extensions, or poorly informed domains) generally defined by wide spaced drilling 25 m or greater or with poor sample support were allocated an Inferred classification using a classification surface for domains 1010, 1020, 1030 and 1070, and were applied to the whole domain for domains 1090 and 1095.
- Domain 2010 is completely depleted by the open pit void.
- The resource was sterilised to 5 m below the open pit depletion DTM to account for potential undocumented goodbye cuts or inaccuracies in the surveyed pit surface.

# 14.6.6.10 Mineral Resource Reporting

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource Estimate is effective as of June 30, 2024. The Mineral Resource at the Julie's Reward deposit has been reported using a cut-off at 2.0 g/t Au and has been depleted for mining.

The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations. Areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. These areas were adjacent to mined out stopes as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.



Julie's Reward Underground Mineral Resource Statement - Rounded for Reporting 30/06/2024													
		Measure	red Indicated Measured and Indicated					Inferred					
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	
Julie's Reward UG	0	0.00	0	283	3.19	29	283	3.19	29	413	3.18	42	
Total	0	0.00	0	283	3.19	29	283	3.19	29	413	3.18	42	

#### Table 14-121 Julie's Reward Mineral Resource Estimate – CGO – as of June 30, 2024.

>= 2.0g/t Au.

The Jullie's Reward Mineral Resource estimate as set out in **Table 14-121** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).



# 14.6.7 Tucka West – Katie's – Jaffa's Folly

# 14.6.7.1 Summary

The Tucka West – Katies – Jaffa's Folly deposits (Tucka West) fall within the larger Tuckabianna Project group. The Tuckabianna Gold Project is located 23 km east of the township of Cue in the Murchison district of Western Australia. The Tucka West deposits are located 3 km southwest of the Tuckabianna mill.



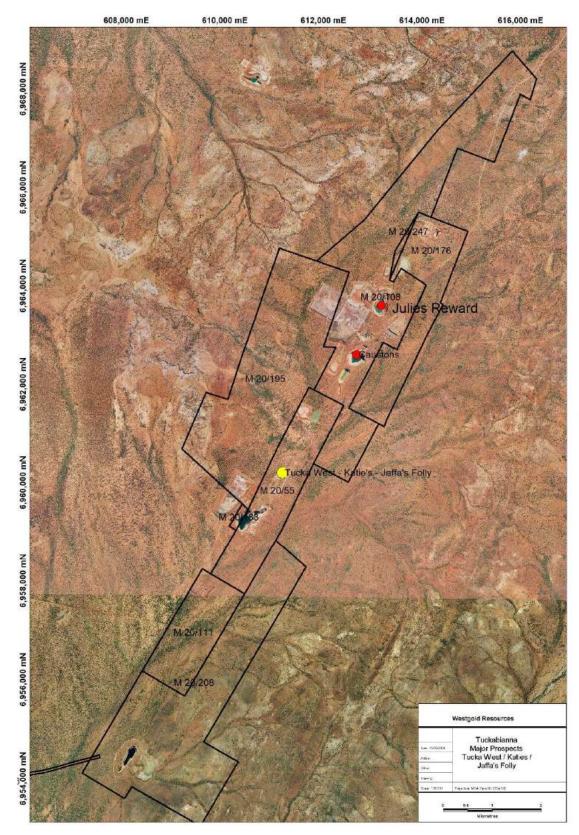


Figure 14-76 Tucka West – Katie's – Jaffa's Folly location map. Source: Westgold.



Mining at the Tucka West / Katie's occurred between October 1989 and May 1996. The timeframe and breakdown of mining activities is as follows:

- Tucka West mined from October 1989 to April 1994. 2,264,166 tonnes at an average grade of 2.15 g/t Au were mined for 156,534 oz of gold.
- Katie's a laterite cap approximately 1.2 km north of the main Tucka West pit was mined from June 1994 to July 1995. 176,718 tonnes at an average grade of 2.19 g/t Au were mined for 12,453 oz of gold.
- TMC (Tucka Mining Centre) a narrow elongate pit approximately 750 m north of the main Tucka West pit was mined from August 1995 to March 1996. 44,377 tonnes at an average grade of 1.79 g/t Au were mined for 2,553 oz of gold.

The Tucka West resource estimate was updated in February 2023.

# 14.6.7.2 Modelling Domains

A Geological Matrix Analysis supported historical findings that the gold mineralisation is contained within a Banded Iron Formation (lithology coded as SIF) and is associated with the presence of sulphides within dominant mineralisation species such as silica, magnetite and iron. The GMA analysis for lithology is tabulated below. GMA for logged mineralisation, alteration, veining, structures were not analysed due to insufficient data.

When logging information was missing, a lower grade threshold of 0.4 g/t Au was used to discriminate ore and waste. The threshold of 0.4 g/t Au is coherent with an inflection point or population break in the gold histogram and log-probability plots of Tucka West gold assay datasets. The sample population selection was constrained to valid drillholes.

Variable	Grouped Lithology	Count	Mean	Std. Dev	CV	Minimum	Maximum
	Mafics	30,218	0.13	1.04	7.80	0.001	91.00
	SIF	26,298	0.56	2.10	3.78	0.001	115.00
	Transported	12,101	0.15	0.64	4.18	0.001	55.00
	Unknown	6,699	0.33	2.04	6.20	0.001	99.75
	Felsic_Volcanics	3,365	0.16	0.57	3.64	0.001	13.05
	Sediments	1,198	0.45	1.58	3.49	0.001	27.60
Au_ppm	Ultramafic	273	0.35	0.72	2.06	0.001	6.66
	Veining	233	0.88	3.20	3.63	0.001	59.40
	Duricrust	92	0.23	0.25	1.12	0.005	1.26
	Intermediate	83	0.54	2.54	4.69	0.001	18.30
	Stope_WDump	34	0.65	1.17	1.80	0.001	4.17
	Breccia_Shear	21	1.07	3.40	3.17	0.001	15.90
	Cavity	16	0.44	0.65	1.46	0.003	1.68

Table 14-122 Tucka West, Katies and Jaffa's Folly GMA Analysis of Grouped Logged Lithologies.

The GMA analysis for Little Tucka West confirmed that gold mineralisation is associated with:

- Lithology Types used as indicative tool in domain construction:
  - $\circ$   $\qquad$  BIF (SIF) and Felsic 1000's, 2000's, 3000's, 4000's and 5000's domain
  - Supergene Laterite / Alluvium mineralisation 9000's domain



- Mineralisation Species: silica (si), magnetite (mt), and ferrigenous (fe).
- Au grade ≥0.4 Au g/t.

The above controlling geological factors were used in the construction of the 2023 mineralisation estimation domains.

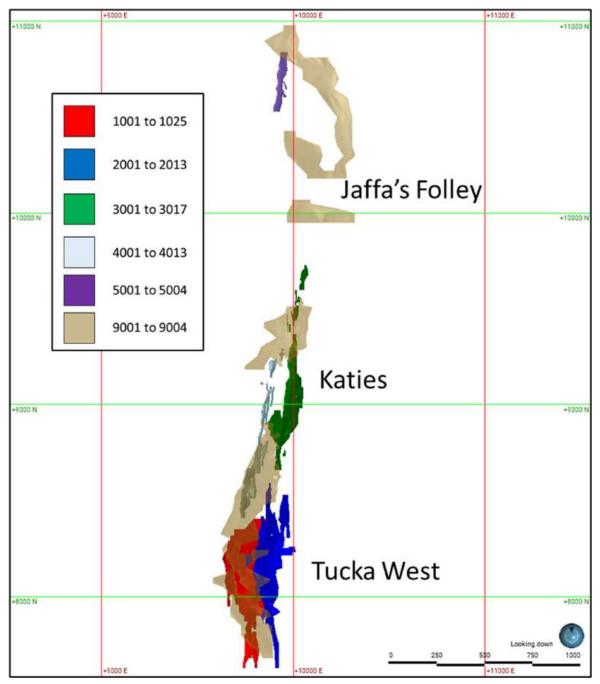


Figure 14-77 Tucka West project area coding. Source: Westgold.

Wireframes of the mineralisation were constructed in Surpac using cross sectional interpretations based on a 0.4 g/t Au cut-off grade with 2 m minimum for laterite, 2 m minimum intersections above 80 m vertical depth and a 2.5 g/t Au cut-off grade with 1 m minimum for intersections below 80 m vertical depth. These outlines were then triangulated to form closed solids.



Seventy-six separate wireframes were generated to separate the mineralisation into distinct lodes. These lodes were then grouped into six separate domains based on spatial location. The mineralised BIF (SIF) units generally strike northeast and dip southeast between 45° and 75°. Commonly only one or two of these BIF units for each area carry significant gold mineralisation.

In the primary BIF, gold is associated with quartz, carbonate, pyrite and pyrrhotite as stringers disrupting, fracturing and replacing well laminated BIF. Higher grade zones are associated with increasing quartz and sulphide. In the upper 70 m oxidized zone, secondary mobilisation of gold has made zones of economic mineralisation wider than those in the primary zone drilled to date.

Gold also commonly occurs within sheared mafic, narrow quartz porphyry / quartz-feldspar porphyry intrusive rocks in association with the mineralised BIF units.

The regolith surfaces were updated in Leapfrog as part of the estimation process. The interpretation was based on the logging data in the "oxidation" and "lithology" tables. Leapfrog was used to create the surfaces in a geology model based on a Grouped Weathering category selection.

#### 14.6.7.3 Statistical Analysis and Compositing

1 m downhole composites were selected as being appropriate for the mineralised domains. Top cuts were selected using the following criteria:

- By inspection of the log probability plots of composite assay grade, with a view towards identifying the point at the upper tail where the robustness of the distribution breaks down and where the plot goes off trend.
- By inspection of histograms to identify the point where the grade distribution breaks down.
- By inspection of Mean and Variance plots to ensure that the average grade was not reduced significantly.
- By visual 3D inspection of the relative location of gold grade outliers and highergrade samples.

The Au coefficients of variation (CV) after cutting are approximately 1.5, which is acceptable for an OK estimate.

The top cuts are also generally heavily influenced by some extreme outliers. Visual inspections were carried out to determine where the cut samples are located to see if they are spatially close or dispersed throughout.



Domain	Samples	Minimum	Maximum	Mean	Standard deviation	cv	Variance	Domain	Samples	Minimum	Maximum	Mean	Standard deviation	сv	Variance
1001	58	0.08	5.52	1.13	1.22	1.08	1.49	3001	1,135	0.01	38.80	1.90	3.50	1.84	12.26
1002	20	0.28	5.64	1.13	1.14	1.01	1.30	3002	166	0.01	91.00	2.59	8.19	3.17	67.15
1003	23	0.10	4.96	1.15	1.20	1.04	1.43	3003	29	0.00	7.35	1.51	1.82	1.20	3.31
1004	449	0.01	44.30	1.79	3.63	2.03	13.17	3004	60	0.02	7.07	1.03	1.28	1.24	1.63
1005	51	0.10	7.39	1.42	1.74	1.23	3.04	3005	30	0.05	2.77	0.77	0.65	0.84	0.42
1006	625	0.01	32.70	1.71	2.82	1.65	7.95	3006	16	0.02	3.90	0.93	0.97	1.05	0.95
1007	1,059	0.00	115.00	2.45	5.11	2.09	26.09	3007	21	0.19	3.05	0.98	0.82	0.83	0.67
1008	10	0.19	8.90	1.44	2.51	1.75	6.29	3008	32	0.01	5.13	1.17	1.16	0.99	1.34
1009	643	0.01	37.60	3.08	4.73	1.54	22.36	3009	107	0.01	18.30	1.36	2.40	1.76	5.76
1010	63	0.08	13.30	2.40	2.79	1.16	7.78	3010	50	0.09	36.50	3.96	7.38	1.87	54.46
1011	6	0.17	11.30	5.12	3.81	0.74	14.49	3011	7	0.28	12.00	2.93	3.87	1.32	14.96
1012	106	0.08	26.36	2.57	3.87	1.51	15.01	3012	20	0.01	6.96	1.60	2.05	1.28	4.20
1013	60	0.04	6.22	1.02	1.01	0.99	1.03	3013	19	0.03	8.38	1.90	2.44	1.28	5.93
1014	99	0.08	15.00	1.29	2.34	1.81	5.46	3014	39	0.01	9.47	1.16	1.60	1.38	2.55
1015	12	0.26	13.90	1.83	3.66	2.00	13.42	3015	26	0.07	6.62	0.88	1.22	1.38	1.48
1016	224	0.01	23.10	1.79	2.88	1.61	8.30	3016	25	0.01	3.56	0.97	1.22	1.26	1.48
1017	10	0.16	11.20	2.25	3.14	1.39	9.83	3017	31	0.08	2.26	0.74	0.50	0.68	0.25
1018	19	0.01	4.69	0.95	1.13	1.19	1.29	4001	128	0.02	40.00	1.76	4.24	2.41	17.96
1019	32	0.02	14.40	1.95	2.89	1.49	8.37	4002	58	0.04	4.41	0.83	0.83	0.99	0.68
1020	43	0.04	4.71	1.35	1.20	0.89	1.45	4003	14	0.06	2.08	0.95	0.65	0.69	0.43
1021	58	0.01	14.76	1.56	2.30	1.47	5.27	4004	81	0.07	6.83	1.03	1.21	1.18	1.47
1022	13	0.16	4.76	1.38	1.34	0.97	1.79	4005	38	0.04	16.10	1.33	2.61	1.97	6.82
1023	46	0.14	5.04	1.18	1.12	0.95	1.25	4006	76	0.01	19.00	1.93	3.03	1.57	9.15
1024	17	0.04	1.23	0.67	0.31	0.46	0.09	4007	31	0.06	6.25	0.93	1.18	1.26	1.39
1025	36	0.02	5.86	0.94	1.33	1.42	1.78	4008	15	0.05	2.50	0.70	0.63	0.90	0.40
2001	159	0.01	16.80	1.69	2.07	1.23	4.30	4009	7	0.43	1.40	0.78	0.31	0.39	0.10
2002	618	0.01	56.24	1.73	3.75	2.17	14.05	4010	52	0.06	8.72	1.43	1.53	1.07	2.33
2003	388	0.01	41.60	1.35	2.92	2.16	8.55	4011	18	0.04	9.29	1.65	2.18	1.32	4.74
2004	357	0.01	84.00	2.43	6.88	2.83	47.29	4012	15	0.17	21.60	3.20	5.36	1.68	28.76
2005	252	0.05	20.20	1.64	2.21	1.34	4.87	4013	25	0.55	26.40	3.99	6.10	1.53	37.24
2006	209	0.01	22.05	1.89	2.80	1.48	7.82	5001	249	0.04	53.00	3.08	6.42	2.09	41.22
2007	9	0.09	12.25	2.97	3.54	1.19	12.53	5002	27	0.11	10.20	2.75	2.63	0.96	6.93
2008	78	0.08	7.51	1.19	1.55	1.30	2.41	5003	17	0.06	3.67	0.91	1.03	1.13	1.06
2009	17	0.04	6.52	1.47	1.61	1.09	2.59	5004	7	0.09	4.06	1.03	1.30	1.27	1.69
2010	18	0.02	9.79	1.27	2.17	1.70	4.69	9001	1,308	0.01	99.75	0.90	2.86	3.18	8.17
2011	19	0.09	13.80	1.95	3.17	1.63	10.02	9002	546	0.03	10.80	0.77	0.77	1.00	0.59
2012	22	0.11	2.65	0.84	0.69	0.82	0.47	9003	94	0.21	2.85	0.82	0.41	0.51	0.17
2013	22	0.04	2.34	0.77	0.51	0.66	0.26	9004	414	0.01	5.10	0.81	0.61	0.75	0.37

Table 14-123 Uncut statistics for the Tucka West domains.



Domain	Samples	Minimum	Maximum	Mean	Standard deviation	cv	Variance	Top Cut	No Values Cut	% Data	% Metal
1002	20	0.28	3.00	1.00	0.66	0.66	0.44	3	1	5%	13%
1003	23	0.10	3.50	1.09	1.02	0.93	1.03	3.5	1	4%	6%
1004	449	0.01	15.00	1.64	2.48	1.51	6.15	15	6	1%	9%
1005	51	0.10	5.00	1.32	1.43	1.09	2.06	5	4	8%	8%
1006	625	0.01	10.00	1.59	2.01	1.26	4.02	10	8	1%	8%
1007	1,059	0.00	20.00	2.28	3.19	1.40	10.15	20	10	1%	7%
1008	10	0.19	4.00	0.95	1.06	1.12	1.13	4	1	10%	52%
1009	643	0.01	20.00	2.95	4.03	1.37	16.21	20	12	2%	5%
1010	63	0.08	8.00	2.22	2.24	1.01	5.00	8	4	6%	8%
1011	6	0.17	8.00	4.57	3.03	0.66	9.21	8	1	17%	12%
1012	106	0.08	12.00	2.32	2.75	1.19	7.55	12	4	4%	11%
1013	60	0.04	2.50	0.91	0.61	0.68	0.38	2.5	4	7%	13%
1014	99	0.08	8.00	1.13	1.55	1.37	2.42	8	4	4%	14%
1015	12	0.26	4.00	1.00	1.00	0.99	0.99	4	1	8%	82%
1016	224	0.01	10.00	1.65	2.14	1.30	4.58	10	6	3%	9%
1017	10	0.16	3.50	1.48	1.18	0.80	1.38	3.5	1	10%	52%
1018	19	0.01	2.50	0.84	0.81	0.97	0.66	2.5	2	11%	14%
1019	32	0.02	4.00	1.41	1.30	0.92	1.69	4	3	9%	38%
1020	43	0.04	3.00	1.25	1.00	0.80	0.99	3	6	14%	8%
1021	58	0.01	6.00	1.37	1.44	1.05	2.06	6	2	3%	14%
1022	13	0.16	3.00	1.22	1.00	0.82	1.01	3	3	23%	13%
1023	46	0.14	4.00	1.16	1.05	0.90	1.10	4	1	2%	2%
1025	36	0.02	3.50	0.82	0.92	1.13	0.85	3.5	2	6%	15%
2001	159	0.01	10.00	1.63	1.74	1.07	3.04	10	2	1%	3%
2002	618	0.01	22.00	1.63	2.72	1.68	7.42	22	3	0%	6%
2003	388	0.01	12.00	1.24	1.84	1.49	3.40	12	3	1%	9%
2004	357	0.01	25.00	2.07	3.77	1.82	14.18	25	3	1%	17%
2005	252	0.05	11.00	1.61	1.96	1.22	3.85	11	1	0%	2%
2006	209	0.01	8.00	1.70	1.87	1.10	3.51	8	5	2%	11%
2007	9	0.09	5.00	2.16	1.66	0.77	2.77	5	1	11%	37%
2008	78	0.08	5.00	1.12	1.32	1.17	1.73	5	4	5%	6%
2009	17	0.04	3.50	1.27	1.10	0.86	1.20	3.5	2	12%	16%
2010	18	0.02	3.00	0.89	0.82	0.92	0.68	3	1	6%	42%
2011	19	0.09	6.00	1.53	1.80	1.18	3.25	6	2	11%	27%

Table 14-124 Cut statistics for the Tucka West domains.



Domain	Samples	Minimum	Maximum	Mean	Standard deviation	cv	Variance	Top Cut	No Values Cut	% Data	% Metal
3001	1,135	0.01	18.00	1.80	2.78	1.54	7.73	18	13	1%	6%
3002	166	0.01	12.00	1.80	2.53	1.41	6.38	12	4	2%	44%
3003	29	0.00	3.50	1.22	1.02	0.84	1.05	3.5	3	10%	25%
3004	60	0.02	4.00	0.96	1.01	1.06	1.03	4	2	3%	7%
3005	30	0.05	1.50	0.69	0.44	0.64	0.19	1.5	2	7%	12%
3006	16	0.02	2.00	0.81	0.68	0.83	0.46	2	1	6%	15%
3007	21	0.19	2.00	0.88	0.61	0.69	0.37	2	3	14%	11%
3008	32	0.01	2.80	1.07	0.90	0.85	0.82	2.8	3	9%	10%
3009	107	0.01	6.00	1.15	1.33	1.16	1.76	6	3	3%	19%
3010	50	0.09	15.00	3.11	4.68	1.51	21.86	15	4	8%	27%
3011	7	0.28	4.00	1.78	1.44	0.81	2.06	4	1	14%	64%
3012	20	0.01	3.00	1.12	1.00	0.90	1.01	3	3	15%	43%
3013	19	0.03	3.00	1.24	1.12	0.90	1.26	3	4	21%	53%
3014	39	0.01	4.00	1.01	0.97	0.96	0.94	4	2	5%	14%
3015	26	0.07	2.00	0.70	0.48	0.68	0.23	2	1	4%	25%
4001	128	0.02	10.00	1.40	1.95	1.39	3.79	10	3	2%	26%
4002	58	0.04	2.00	0.73	0.53	0.72	0.28	2	4	7%	13%
4004	81	0.07	4.00	0.96	0.96	1.01	0.93	4	4	5%	7%
4005	38	0.04	6.00	1.06	1.26	1.18	1.58	6	1	3%	25%
4006	76	0.01	6.00	1.58	1.65	1.05	2.74	6	3	4%	22%
4007	31	0.06	3.00	0.80	0.67	0.84	0.45	3	2	6%	17%
4010	52	0.06	5.00	1.36	1.25	0.92	1.55	5	1	2%	5%
4011	18	0.04	3.00	1.19	0.93	0.78	0.86	3	2	11%	39%
4012	15	0.17	5.00	1.79	1.41	0.79	2.00	5	2	13%	78%
4013	25	0.55	6.00	2.32	2.01	0.86	4.03	6	4	16%	72%
5001	249	0.04	15.00	2.50	3.50	1.40	12.22	15	9	4%	23%
5002	27	0.11	6.00	2.46	2.01	0.82	4.04	6	3	11%	12%
5003	17	0.06	1.50	0.66	0.44	0.67	0.20	1.5	2	12%	37%
9001	1,308	0.01	6.00	0.82	0.71	0.87	0.51	6	4	0%	10%
9002	546	0.03	5.00	0.75	0.64	0.85	0.41	5	2	0%	2%
9999	85,401	0.00	2.00	0.09	0.19	2.19	0.04	2	303	0%	13%

Table 14-125 Cut statistics for the Tucka West domains.

Estimating using OK in domains with a mixed sample population can result in the higher-grade samples having a greater spatial influence than is warranted. As such distance limiting of grades above a threshold over a certain distance is used. This will result in the higher grades being more locally representative and not having an influence over distance.

After top-cutting the probability plots were reviewed to look for points of inflection in the sample data. This is typically a good indicator of where to apply the distance limiting function. **Table 14-126** shows the top-caps and the distance limits that have been applied.



Domain Code	Assay Limit	Search Distance
1005	5	15
1006	10	40
1008	8	20
1010	8	20
1012	12	25
1016	10	40
2002	22	80
2004	20	20
2005	8	20
2010	3	40
3010	10	25
4001	10	40
4013	6	10
9001	5	12

Table 14-126 Tucka West, Katies and Jaffa's Folly distance limit and top cap for individual domains.

#### 14.6.7.4 Density

The density assignment was based on the historic estimation process as no additional density information has been collected. Fresh SIF density has been allocated based on test-work of equivalent lithology at Causton's.

Rock Type	Oxide	Transitional	Fresh
Mafic (Background)	1.9	2.3	2.7
Ore (SIF)	2.6	2.8	3.0
Lateritic Ore	2.0	-	-
Alluvium	1.8	-	-

Table 14-127 Assigned Tucka West MRE densities.

#### 14.6.7.5 Metallurgy

Detailed metallurgical testing was completed on RC samples from the 2013 RC drilling program at the Katie's deposit. Mineralisation was similar to resources previously processed at the Tuckabianna mill and no metallurgical problems are expected.

### 14.6.7.6 Variography

Variography has been used to analyse the spatial continuity within the mineralised zones and to determine appropriate estimation inputs to the interpolation process. The variogram modelling process was undertaken using Supervisor software and consisted of the following steps:

- Calculate and model the omni-directional or downhole variogram to characterise the Nugget Effect.
- Systematically calculate orientated variograms in three dimensions to identify the plane of greatest continuity.



- Calculate a fan of variograms within the plane of greatest continuity to identify the direction of maximum continuity within the plane. Model the variogram in the direction of maximum continuity and the orthogonal directions.
- De-clustering weights have been incorporated in the variograms for Tucka West.
- Variography was undertaken on the 1 m cut composite data for the combined diamond drilling and RC data. The Normal Scores transformed variogram model was back-transformed to provide the final variogram model used for grade interpolation.

The Ordinary Kriging (OK) method of interpolation was used to fill the blocks within all domains.

		Nug.	Stru	ict. 1	Stru	ct. 2							
Domain Code	No. Structures	CO	C1	a1	C2	a2	1. Major : Semi Major	1. Major : Minor	2. Major : Semi Major	2. Major : Minor	SURPAC STRIKE	SURPAC PLUNGE	SURPAC DIP
1001	2	0.54	0.15	27	0.31	55	1.0	10.0	1.0	8.0	355	0	-55
1002	2	0.41	0.26	25	0.32	55	1.0	10.0	1.0	8.0	0	0	-75
1003	2	0.49	0.22	25	0.28	55	1.0	10.0	1.0	8.0	0	0	-55
1004	2	0.56	0.23	20	0.21	60	1.0	10.0	1.0	7.0	8	-24	-51
1005	2	0.42	0.27	25	0.31	40	1.0	10.0	1.0	5.0	5	0	-60
1006	2	0.53	0.17	20	0.30	70	1.3	10.0	1.7	9.0	5	0	-60
1007	2	0.55	0.17	25	0.28	80	1.0	8.0	1.0	7.0	5	0	-65
1008	2	0.53	0.27	25	0.20	50	1.0	6.0	1.0	6.0	350	0	-75
1009	2	0.42	0.24	25	0.34	50	1.0	10.0	1.0	7.0	14	-18	-64
1010	2	0.32	0.27	28	0.41	45	1.0	20.0	1.0	9.0	13	-29	-73
1011	2	0.29	0.23	25	0.48	45	1.0	20.0	1.0	9.0	345	0	-50
1012	2	0.52	0.26	15	0.22	45	1.0	15.0	1.0	11.0	22	-44	-54
1013	2	0.45	0.25	15	0.30	45	1.0	15.0	1.0	11.0	355	0	-85
1014	2	0.55	0.24	15	0.21	45	1.0	15.0	1.0	11.0	20	0	-60
1015	2	0.54	0.25	15	0.22	45	1.0	15.0	1.0	11.0	5	0	-55
1016	2	0.55	0.22	22	0.23	60	1.0	5.5	1.0	7.0	345	0	-55
1017	2	0.45	0.28	20	0.27	50	1.0	5.0	1.0	5.5	345	0	-65
1018	2	0.45	0.28	20	0.27	60	1.0	5.0	1.0	7.0	355	0	-60
1019	2	0.46	0.27	20	0.27	50	1.0	5.0	1.0	6.0	355	0	-55
1020	2	0.45	0.28	20	0.27	50	1.0	5.0	1.0	6.0	355	0	-65
1021	2	0.50	0.24	20	0.26	50	1.0	5.0	1.0	6.0	350	0	-45
1022	2	0.54	0.22	20	0.24	50	1.0	5.0	1.0	6.0	0	0	-60
1023	2	0.54	0.28	13	0.18	40	1.0	3.0	1.0	4.5	5	0	-70
1024	2	0.44	0.34	15	0.22	40	1.0	4.0	1.0	4.5	0	0	-60
1025	2	0.49	0.33	15	0.18	40	1.0	4.0	1.0	4.5	0	0	-65
2001	2	0.56	0.25	25	0.19	60	1.0	6.0	1.0	7.0	352	0	-75
2002	2	0.56	0.32	25	0.12	80	1.7	8.0	1.2	11.0	0	0	-75
2003	2	0.53	0.31	25	0.16	80	1.7	12.0	1.5	13.0	0	0	-65
2004	2	0.57	0.30	25	0.13	80	1.7	12.0	1.5	13.0	5	0	-65
2005	2	0.56	0.21	35	0.23	80	1.0	11.0	1.0	13.0	 5	0	-70
2006	2	0.54	0.29	30	0.17	70	1.0	15.0	1.0	11.0	0	0	-65
2007	2	0.46	0.37	25	0.17	50	1.0	12.0	1.0	8.0	5	0	-70
2008	2	0.51	0.35	25	0.14	50	1.0	12.0	1.0	8.0	355	0	-65
2009	2	0.46	0.37	25	0.17	50	1.0	10.0	1.0	8.0	0	0	-65
2010	2	0.44	0.38	25	0.17	50	1.0	12.0	1.0	8.0	0	0	-45
2011	2	0.49	0.37	25	0.15	50	1.0	12.0	1.0	8.0	0	0	-60
2012	2	0.46	0.38	25	0.17	50	1.0	12.0	1.0	8.0	355	0	-60
2013	2	0.42	0.39	25	0.19	50	1.0	12.0	1.0	8.0	355	0	-60

### Table 14-128 Tucka West, Katies and Jaffa's Folly variogram model parameters – sills normalised to 1.



		Nug.	Stru	ıct. 1	Stru	ıct. 2								
Domain Code	No. Structures	со	C1	a1	C2	a2		1. Major : Semi Major	1. Major : Minor	2. Major : Semi Major	2. Major : Minor	SURPAC STRIKE	SURPAC PLUNGE	SURPAC DIP
3001	2	0.42	0.39	25	0.19	50		1.0	12.0	1.0	8.0	355	0	-60
3002	2	0.43	0.39	18	0.18	55		1.0	9.0	1.0	18.0	5	0	-60
3003	2	0.37	0.39	18	0.24	55		1.0	9.0	1.0	18.0	0	0	-70
3004	2	0.43	0.38	18	0.20	50		1.0	9.0	1.0	16.0	15	0	-60
3005	2	0.39	0.38	18	0.23	50		1.0	9.0	1.0	16.0	15	0	-65
3006	2	0.44	0.33	20	0.24	50		1.0	10.0	1.0	16.0	0	0	-65
3007	2	0.45	0.32	20	0.23	50		1.0	10.0	1.0	16.0	0	0	-65
3008	2	0.45	0.32	20	0.23	50		1.0	10.0	1.0	16.0	0	0	-75
3009	2	0.48	0.32	20	0.19	50		1.0	10.0	1.0	16.0	0	0	-75
3010	2	0.55	0.29	20	0.16	50		1.0	10.0	1.0	16.0	 10	0	-80
3011	2	0.47	0.31	20	0.22	50		1.0	10.0	1.0	16.0	 0	0	-75
3012	2	0.45	0.32	20	0.23	50		1.0	10.0	1.0	16.0	 5	0	-75
3013	2	0.48	0.31	20	0.22	50		1.0	10.0	1.0	16.0	5	0	-60
3014	2	0.50	0.31	20	0.20	55		1.0	10.0	1.0	14.0	10	0	-60
3015	2	0.44	0.33	20	0.23	55		1.0	10.0	1.0	13.0	5	0	-70
3016	2	0.33	0.46	20	0.21	55		1.0	10.0	1.0	14.0	0	0	-80
3017	2	0.43	0.33	20	0.24	55		1.0	10.0	1.0	14.0	5	0	-70
4001	2	0.51	0.32	20	0.17	55		1.0	10.0	1.0	14.0	5	0	-80
4002	2	0.43	0.33	20	0.24	55		1.0	10.0	1.0	14.0	5	0	-80
4003	2	0.43	0.33	20	0.24	55		1.0	10.0	1.0	14.0	10	0	-80
4004	2	0.62	0.19	20	0.20	55		1.0	10.0	1.0	13.0	15	0	-75
4005	2	0.52	0.31	20	0.17	55		1.0	10.0	1.0	14.0	0	0	-80
4006	2	0.46	0.33	20	0.21	55		1.0	10.0	1.0	13.0	10	0	-75
4007	2	0.50	0.31	20	0.19	55		1.0	10.0	1.0	14.0	10	0	-75
4008	2	0.45	0.33	20	0.22	55		1.0	10.0	1.0	13.0	5	0	-75
4009	2	0.44	0.33	20	0.23	55		1.0	10.0	1.0	14.0	5	0	-70
4010	2	0.36	0.44	20	0.21	45		1.0	10.0	1.0	11.0	5	0	-70
4011	2	0.32	0.44	20	0.24	45		1.0	10.0	1.0	11.0	 10	0	-75
4012	2	0.35	0.42	20	0.23	45		1.0	10.0	1.0	11.0	 10	0	-75
4013	2	0.32	0.48	20	0.20	45		1.0	10.0	1.0	11.0	0	0	-80
5001	2	0.41	0.42	20	0.16	55		1.0	10.0	1.0	11.0	 5	0	-60
5002	2	0.34	0.43	20	0.23	55		1.0	10.0	1.0	11.0	 350	0	-70
5003	2	0.34	0.43	20	0.24	55	1	1.0	10.0	1.0	11.0	0	0	-70
5004	2	0.42	0.40	20	0.19	55	1	1.0	10.0	1.0	11.0	355	0	-70
9001	2	0.34	0.31	20	0.35	75		1.7	4.0	1.2	7.5	0	0	0
9002	2	0.36	0.40	15	0.24	61	1	1.0	0.4	1.0	8.0	55	0	0
9003	2	0.31	0.29	12	0.39	60		1.0	2.4	1.0	6.0	0	0	0
9004	2	0.36	0.31	14	0.33	50		1.0	7.0	1.0	8.0	0	0	0
9999	2	0.30	0.40	20	0.30	40	1	1.0	2.0	1.0	2.0	0	0	-70

1 

# 14.6.7.7 Block Model and Grade Estimation

The block model definition is shown below. The model has not been rotated and is constructed in the local mine grid.

The parent block size was chosen to be compatible with the drill hole spacing and the geometry of the mineralisation. The general 'rule-of-thumb' for block sizing is generally half of the drill hole spacing, and in this instance is 10 mE x 10 mN x 5 mRL. Subblocking was to 1.25 mE x 1.25 mN x 0.625 mRL for accurate volume representation of the mineralised lodes.



Туре	Y	х	Z
Minimum Coordinates	7,500	9,000	1,000
Maximum Coordinates	11,180	10,600	1,640
User Block Size	10	10	5
Min. Block Size	1.25	0.625	1.25
Rotation	0	0	0

Table 14-130 Tucka West, Katies and Jaffa's Folly block model definition.

The search parameters chosen for the estimate are given in **Table 14-131**. The ellipsoid search parameters were based on the variogram ranges, with the search ellipse dimensions similar to the variogram range, with anisotropies retained. Hard boundaries were used for the estimate.

A minimum of 8 and maximum of 20 (1 m composite) samples per block were used for the estimation with the minimums and maximums established through independent KNA on each major domain. Block discretisation was set at 5 E x 5 N x 3 RL points (per parent block).

Octant restrictions were not used, and estimates were into parent blocks, not subblocks.

Lodes used search ellipse rotation directions as determined by the variograms. A list of domains and the block size and discretisation is shown below. For 7 domains where the drilling density differs at depth a larger block-size was used for the estimate.



			First Pass		Second Pass								
Domain Code	Min	Max	Max Search	Major/ Semi	Major/ Minor	Factor	Major/ Semi	Major/ Minor	Min	Max			
1001	10	16	60	1	4	2	1	4	10	16			
1002	10	16	60	1	4	2	1	4	10	16			
1003	10	18	60	1	4	2	1	4	10	18			
1004	10	18	60	1	2	2	1	2	10	18			
1005	10	16	60	1	3	2	1	3	10	16			
1006	10	18	70	1.7	2	3	1	2	10	18			
1007	10	18	60	1	3	2	1	3	10	18			
1008	8	12	60	1	4	2	1	4	8	12			
1009	10	18	60	1	3	2	1	3	10	18			
1010	8	16	60	1	3	2	1	3	8	16			
1011	4	8	60	1	4	2	1	4	4	8			
1012	8	18	60	1	3	2	1	3	8	18			
1013	8	18	60	1	2	2	1	2	8	18			
1014	8	18	80	1	3	2	1	3	8	18			
1015	8	14	60	1	4	2	1	4	8	14			
1016	8	16	60	1	3	3	1	3	8	16			
1017	8	16	60	1	4	2	1	4	8	16			
1018	8	16	60	1	2	2	1	2	8	16			
1019	8	18	60	1	3	4	1	3	8	18			
1020	8	16	80	1	3	2	1	3	8	16			
1021	10	16	80	1	3	3	1	3	10	16			
1022	8	16	60	1	4	2	1	4	8	16			
1023	8	16	60	1	2	2	1	2	8	16			
1024	8	16	60	1	4	2	1	4	8	16			
1025	8	16	60	1	4	2	1	4	8	16			
2001	10	18	60	1	2	3	1.2	2	10	18			
2002	10	18	60	1	2	2	1.2	2	10	18			
2002	10	18	60	1	2	2	1.4	2	10	18			
2003	10	18	60	1	3	2	1.4	3	10	18			
2004	10	18	60	1	3	3	1	3	10	18			
2005	10	18	60	1	3	4	1	3	10	18			
	8	10	60	1	4	2	1	4	8	10			
2007	10	10	60	1	3	2	1	3	10	10			
	8	16	80	1	3	2	1	3	8	16			
2009	8	16	80	1	3	2	1	3	8	16			
2010	8	16	60	1	4	2	1	4	8				
2011			200.0			-				16			
2012 2013	8	16 16	60 80	1	4	2	1	4	8	16 16			

#### Table 14-131 Tucka West, Katies and Jaffa's Folly search parameters for estimation.



			First Pass				Seco	ond Pass		
Domain Code	Min	Max	Max Search	Major/ Semi	Major/ Minor	Factor	Major/ Semi	Major/ Minor	Min	Max
3001	10	20	60	1	3	3	1	3	10	20
3002	8	18	60	1.6	3	2	1	3	8	18
3003	8	16	60	1	4	2	1	4	8	16
3004	8	16	60	1	2	2	1	2	8	16
3005	8	16	60	1	2	2	1	2	8	16
3006	8	16	60	1	3	2	1	3	8	16
3007	8	16	60	1	2	2	1	2	8	16
3008	8	16	60	1	4	2	1	4	8	16
3009	10	18	60	1	2	2	1	2	10	18
3010	10	18	60	1	2	2	1	2	10	18
3011	8	16	60	1	4	2	1	4	8	16
3012	8	16	60	1	3	2	1	3	8	16
3013	8	16	60	1	2	2	1	2	8	16
3014	8	16	80	1	3	2	1	3	8	16
3015	8	14	80	1	3	2	1	3	8	14
3016	8	16	60	1	4	2	1	4	8	16
3017	8	16	60	1	4	2	1	4	8	16
4001	10	18	60	1	3	2	1	3	10	18
4002	10	18	60	1	4	2	1	4	10	18
4003	8	16	60	1	2	2	1	2	8	16
4004	8	16	60	1	2	2	1	2	8	16
4005	8	16	60	1	2	2	1	2	8	16
4006	10	18	60	1	2	2	1	2	10	18
4007	8	16	60	1	2	2	1	2	8	16
4008	8	16	60	1	3	2	1	3	8	16
4009	6	8	60	1	4	2	1	4	6	8
4010	8	16	80	1	3	2	1	3	8	16
4011	8	16	60	1	3	2	1	3	8	16
4012	8	16	60	1	4	2	1	4	8	16
4013	8	16	60	1	4	2	1	4	8	16
5001	10	18	60	1	3	2	1	3	10	18
5002	8	16	60	1	3	2	1	3	8	16
5003	8	16	80	1	3	2	1	3	8	16
5004	6	8	60	1	3	2	1	3	6	8
9001	12	19	80	1	4	2	1.2	4	12	19
9002	10	18	60	1	4	4	1	4	10	18
9003	8	16	80	1	4	2	1	4	8	16
9004	8	16	80	1	4	2	1	4	8	16
9999	8	16	60	1	2	2	1	2	8	16

#### Table 14-132 Tucka West, Katies and Jaffa's Folly search parameters for estimation.



Domain Code	Search	Method	Estimation Block Size (x,y,z)	Estimation Block Size X	Estimation Block Size Y	Estimation Block Size Z		Disc Point Y	Disc Point Z
1001	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1002	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1003	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1004	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1005	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1006	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1007	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1008	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1009	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1010	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1011	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1012	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1013	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1014	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1015	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1016	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1017	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1018	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1019	Ordinary Kriging	ELLIPSOID	20, 20, 10	20	20	10	5	5	3
1020	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1021	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1022	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1023	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1024	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
1025	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2001	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2002	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2003	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2004	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2005	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2006	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2007	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2008	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2009	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2010	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2011	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2012	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
2013	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3

Table 14-133 Tucka West, Katies and Jaffa's Folly search methodology and the block size and discretisation.

Domain Code	Search	Method	Estimation Block Size (x,y,z)	Estimation Block Size X	Estimation Block Size Y	Estimation Block Size Z		Disc Point Y	Disc Point Z
3001	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3002	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3003	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3004	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3005	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3006	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3007	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3008	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3009	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3010	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3011	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3012	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3013	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3014	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3015	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3016	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
3017	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4001	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4002	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4003	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4004	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4005	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4006	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4007	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4008	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4009	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4010	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4011	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4012	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
4013	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
5001	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
5002	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
5003	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
5004	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
9001	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
9002	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
9003	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
9004	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3
9999	Ordinary Kriging	ELLIPSOID	10, 10, 5	10	10	5	5	5	3

Table 14-134 Tucka West, Katies and Jaffa's Folly search methodology and the block size and discretisation.

Domain Code	Search	Method	Estimation Block Size (x,y,z)	Estimation Block Size X	Estimation Block Size Y	Estimation Block Size Z		Disc Point Y	Disc Point Z
1007	Ordinary Kriging	ELLIPSOID	10, 20, 20	10	20	20	5	5	3
1012	Ordinary Kriging	ELLIPSOID	10, 20, 20	10	20	20	5	5	3
1016	Ordinary Kriging	ELLIPSOID	10, 20, 20	10	40	40	5	5	3
2002	Ordinary Kriging	ELLIPSOID	10, 40, 40	10	20	20	5	5	3
3001	Ordinary Kriging	ELLIPSOID	10, 20, 20	10	20	20	5	5	3
3002	Ordinary Kriging	ELLIPSOID	10, 20, 20	10	20	20	5	5	3
4001	Ordinary Kriging	ELLIPSOID	10, 20, 20	10	20	10	5	5	3

Table 14-135 Tucka West, Katies and Jaffa's Folly domains with variable block size.

Domains that contained fewer than 7 samples were assigned the average grade of all the samples as shown below.

Table 14-136 Tucka West, Katies and Jaffa's Folly assigned grade to domains with <7 samples.

Domain	Assigned Grade
1011	4.79
4009	0.79
5004	1.14

# 14.6.7.8 Model Validation

Model validation was completed to check that the grade estimates within the model were an appropriate reflection of the underlying composite sample data, and to confirm that the interpolation parameters were applied as intended. Checks of the estimated block grade with the corresponding composite dataset were completed using several approaches involving both numerical and spatial aspects as follows:

- Globally: Comparison of the mean block grade estimates to the mean of informing composite grades.
- Semi-Local: Using swath plots in Northing, Easting and RL comparing the estimates to the sample data.
- Local: Visual inspection of the estimated block grades viewed in conjunction with the sample data.

The global statistical comparison for the lodes estimated is summarised below. The general agreement between the informing de-clustered composite means and the estimated global means is good in all the domains. Each of the elements estimated within the major domains came within 10%.

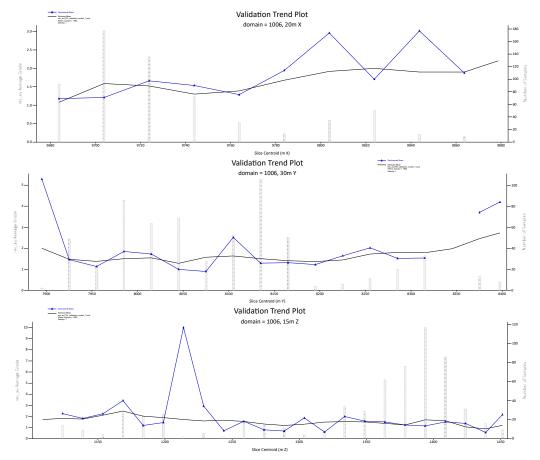


				Cut 1m	Composit	es					Blockmod	el			]	
	Domain	Samples	Minimum	Maximum	Mean	Declust Mean	сv	Variance	Samples	Minimum	Maximum	Mean	Standard deviation	cv	Mean vs Block	Declust.Mean vs Block
	1001	58	0.08	5.5	1.13	1.13	1.1	1.5	14,853	0.54	1.75	1.09	0.3	0.2	-4%	-4%
	1002	20	0.28	3.0	1.00	0.86	0.7	0.4	6,265	0.74	1.14	0.91	0.1	0.1	-9%	6%
	1003 1004	23 449	0.10	3.5 15.0	1.09 1.64	1.10 1.55	0.9 1.5	1.0 6.1	8,868 61,045	0.67	1.60 4.80	1.02 1.48	0.2	0.2	-7% -10%	-7% -5%
	1004	449 51	0.01	5.0	1.04	1.33	1.5	2.1	11,169	0.51	3.49	1.48	0.8	0.5	5%	-3%
	1006	625	0.01	10.0	1.59	1.63	1.3	4.0	214,519	0.35	5.29	1.64	0.7	0.4	3%	1%
	1007	1,059	0.00	20.0	2.28	2.09	1.4	10.1	204,724	0.51	7.54	2.13	1.0	0.5	-7%	2%
	1008 1009	10 643	0.19	4.0	0.95 2.95	0.92	1.1 1.4	1.1 16.2	3,407 39,305	0.79 0.74	1.29 8.92	0.98 2.54	0.1	0.1	3% -14%	7% 3%
	1009	63	0.01	8.0	2.95	1.83	1.4	5.0	9,735	0.74	4.32	2.54	0.8	0.6	-14%	<u> </u>
	1011	6	0.17	8.0	4.57	4.79	0.7	9.2	7,557	4.79	4.79	4.79	-	-	5%	0%
	1012	106	0.08	12.0	2.32	1.93	1.2	7.5	47,897	0.76	3.49	2.06	0.6	0.3	-11%	7%
	1013 1014	60 99	0.04	2.5 8.0	0.91	0.94	0.7	0.4	7,946 30,648	0.69	1.16 3.08	0.86	0.1	0.2	-5% 7%	-9% -2%
	1014	12	0.08	4.0	1.13	0.96	1.4	1.0	767	0.40	0.99	0.95	0.0	0.0	-5%	-2%
	1016	224	0.01	10.0	1.65	1.82	1.3	4.6	72,148	-	4.81	1.97	0.7	0.4	20%	8%
	1017	10	0.16	3.5	1.48	1.50	0.8	1.4	1,286	1.21	1.93	1.65	0.2	0.1	12%	10%
	1018 1019	19 32	0.01	2.5 4.0	0.84	0.88	1.0 0.9	0.7	13,505 50,543	0.63	1.12 2.67	0.87	0.1	0.1	4% -30%	-1% -30%
	1019	43	0.02	3.0	1.41	1.41	0.9	1.7	14,884	0.32	1.92	1.38	0.3	0.3	-30%	9%
	1021	58	0.01	6.0	1.37	1.45	1.1	2.1	16,054	0.74	2.31	1.33	0.3	0.2	-3%	-8%
	1022	13	0.16	3.0	1.22	1.11	0.8	1.0	4,259	1.06	1.41	1.22	0.1	0.1	0%	10%
	1023 1024	46 17	0.14	4.0	1.16 0.67	1.09 0.70	0.9 0.5	1.1 0.1	5,913 2,152	0.69	2.02 0.79	1.15 0.66	0.3	0.3	-1% -1%	6% -6%
	1024	36	0.04	3.5	0.67	0.70	0.5	0.1	2,152	0.58	1.31	0.66	0.1	0.1	-1%	-6%
	2001	159	0.01	10.0	1.63	1.54	1.1	3.0	43,500	0.70	2.71	1.46	0.4	0.3	-11%	-5%
	2002	618	0.01	22.0	1.63	1.57	1.7	7.4	195,165	0.57	4.41	1.55	0.7	0.4	-5%	-1%
	2003 2004	388 357	0.01	12.0 25.0	1.24 2.07	1.27 1.80	1.5 1.8	3.4 14.2	68,919	0.49	4.37	1.39 1.94	0.8	0.6	12% -6%	9% 8%
	2004	252	0.01	11.0	1.61	1.80	1.8	3.8	52,088 50,277	0.37	6.90 3.12	1.94	1.2 0.4	0.6	-0% -7%	<u>8%</u> 6%
	2006	209	0.01	8.0	1.70	1.42	1.1	3.5	39,966	0.62	3.58	1.33	0.6	0.4	-22%	-6%
	2007	9	0.09	5.0	2.16	2.20	0.8	2.8	1,178	1.89	2.37	2.08	0.2	0.1	-4%	-5%
	2008	78 17	0.08	5.0 3.5	1.12 1.27	1.04 1.41	1.2 0.9	1.7 1.2	10,959	0.66	1.90 1.56	1.07 1.36	0.3	0.3	-5% 7%	3% -4%
	2009 2010	17	0.04	3.5	0.89	0.86	0.9	0.7	5,929 4,473	1.08 0.71	1.56	0.93	0.1	0.1	4%	-4%
	2011	19	0.09	6.0	1.53	1.37	1.2	3.3	3,346	1.14	1.64	1.39	0.1	0.1	-9%	1%
	2012	22	0.11	2.7	0.84	0.84	0.8	0.5	2,422	0.72	0.97	0.81	0.0	0.1	-3%	-4%
Au	2013 3001	22 1,135	0.04	2.3 18.0	0.77	0.79	0.7 1.5	0.3	5,460 148,816	0.74	0.97 5.88	0.82	0.1	0.1	<u>6%</u> -12%	4% -7%
	3001	1,133	0.01	18.0	1.80	1.58	1.5	6.4	34,649	0.31	3.71	1.32	0.5	0.0	-12%	-16%
	3003	29	0.00	3.5	1.22	1.27	0.8	1.0	7,309	0.89	1.54	1.18	0.1	0.1	-3%	-7%
	3004	60	0.02	4.0	0.96	0.96	1.1	1.0	3,187	0.45	1.37	0.94	0.2	0.2	-2%	-2%
	3005 3006	30 16	0.05	1.5 2.0	0.69 0.81	0.65	0.6 0.8	0.2	1,805 2,717	0.56 0.78	0.82	0.67	0.1	0.1	-3% 6%	3% 1%
	3007	21	0.19	2.0	0.88	0.95	0.7	0.4	1,247	0.80	1.06	0.98	0.1	0.1	11%	3%
	3008	32	0.01	2.8	1.07	1.08	0.8	0.8	3,036	0.75	1.45	1.04	0.1	0.1	-2%	-4%
	3009	107	0.01	6.0	1.15	1.11	1.2	1.8 21.9	10,941	0.51	2.42	1.13	0.5	0.4	-1%	2%
	3010 3011	50 7	0.09	15.0 4.0	3.11 1.78	2.91 1.79	1.5 0.8	21.9	3,317 1,924	1.33 1.71	5.79 1.95	3.03 1.86	1.0 0.1	0.3	-2% 4%	4% 4%
	3012	20	0.01	3.0	1.12	1.14	0.9	1.0	1,155	0.87	1.33	1.06	0.1	0.0	-5%	-7%
	3013	19	0.03	3.0	1.24	1.36	0.9	1.3	1,029	0.93	1.68	1.26	0.2	0.2	1%	-7%
	3014	39 26	0.01	4.0	1.01 0.70	1.13 0.73	1.0 0.7	0.9	10,394	0.67	1.50 1.13	1.08	0.2	0.2	7%	-4% -4%
	3015 3016	26	0.07	3.6	0.70	0.73	0.7	0.2	14,915 2,221	0.41	1.13	0.70	0.2	0.3	0% 27%	-4% 2%
	3017	31	0.08	2.3	0.74	0.74	0.7	0.2	2,927	0.59	0.87	0.75	0.1	0.1	2%	1%
	4001	128	0.02	10.0	1.40	1.31	1.4	3.8	36,808	0.63	3.67	1.35	0.5	0.4	-4%	3%
	4002 4003	58 14	0.04	2.0	0.73	0.73	0.7	0.3	11,512 3,876	0.55 0.84	0.95	0.72	0.1	0.1	-2% 5%	-1% -1%
	4003	81	0.08	4.0	0.95	0.93	1.0	0.4	30,571	0.84	2.02	1.00	0.1	0.1	5% 4%	-1%
	4005	38	0.04	6.0	1.06	1.05	1.2	1.6	12,059	0.56	1.77	1.05	0.3	0.3	-1%	0%
	4006	76	0.01	6.0	1.58	1.38	1.0	2.7	23,093	0.57	3.01	1.40	0.6	0.4	-11%	1%
	4007 4008	31 15	0.06	3.0	0.80	0.78	0.8 0.9	0.4	14,207 4,949	0.54 0.56	1.12 0.97	0.81	0.2	0.2	1% 7%	4% 7%
	4003	7	0.43	1.4	0.78	0.70	0.3	0.4	1,467	0.79	0.79	0.79	-	-	1%	0%
	4010	52	0.06	5.0	1.36	1.27	0.9	1.6	8,455	0.78	2.21	1.28	0.4	0.3	-6%	1%
	4011	18	0.04	3.0	1.19	1.12	0.8	0.9	1,605	1.02	1.32	1.19	0.1	0.1	0%	6% 6%
	4012 4013	15 25	0.17	5.0 6.0	1.79 2.32	1.84 2.24	0.8 0.9	2.0 4.0	2,405 1,140	1.46 1.70	2.08 2.99	1.73 2.12	0.2	0.1	-3% -9%	-6% -5%
	5001	249	0.04	15.0	2.52	1.86	1.4	12.2	30,366	0.61	6.79	2.03	1.3	0.2	-19%	9%
	5002	27	0.11	6.0	2.46	2.28	0.8	4.0	2,452	1.74	2.98	2.31	0.4	0.2	-6%	1%
	5003	17	0.06	1.5	0.66	0.71	0.7	0.2	3,381	0.56	0.88	0.69	0.1	0.1	4%	-3%
	5004 9001	7 1,308	0.09	4.1 6.0	1.03 0.82	1.14 0.79	1.3 0.9	1.7 0.5	777 84,368	1.14 0.21	1.14 2.47	1.14 0.84	- 0.3	- 0.4	11% 3%	0% 6%
	9002	546	0.01	5.0	0.75	0.73	0.5	0.4	34,819	0.21	2.47	0.75	0.3	0.4	-1%	3%
	9003	94	0.21	2.9	0.82	0.77	0.5	0.2	15,153	0.52	1.42	0.78	0.1	0.2	-4%	1%
	9004	414	0.01	5.1	0.81	0.78	0.7	0.4	47,380	0.43	1.73	0.80	0.2	0.3	-2%	3%

#### Table 14-137 Tucka West, Katies and Jaffa's Folly global validation statistics per estimation domain.



Swath plots (grade trend profiles) showing the estimated tonnes, grade, number of composites and mean de-clustered cut composite grade (tabulated by Northing, East and Elevation) were created for all significant domains. The limitations of this comparison such as data clustering should be kept in mind when drawing conclusions; however, there is generally good correlation between the block estimate and the composite mean. As expected, the estimated grade is more smoothed compared to the often-variable composite mean grades. The greatest differences occur in poorly sampled areas and where the composites display high degrees of local variability.



Swath plots for the major domains are shown below.

Figure 14-78 Tucka West, Katies and Jaffa's Folly domain 1007 Au Swath Plots. Source: Westgold.



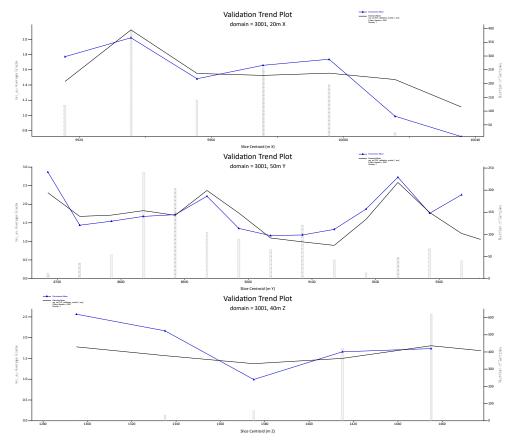


Figure 14-79 Tucka West, Katies and Jaffa's Folly domain 3001 Au Swath Plots. Source: Westgold.

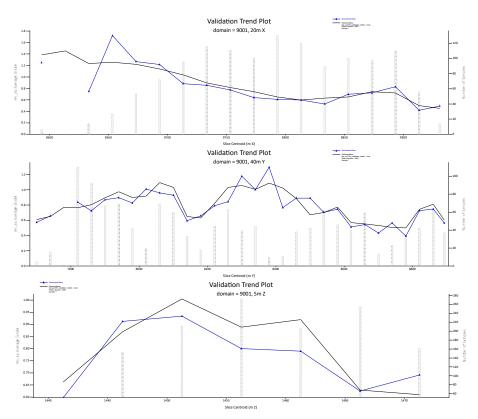


Figure 14-80 Tucka West, Katies and Jaffa's Folly domain 9001 Au Swath Plots. Source: Westgold.



Visual validation of the grade estimates shows good correspondence between the estimate and informing data. The use of distance limiting of grades above a threshold for certain domains has limited the spreading and smoothing of high grades through areas of lower grade.

### 14.6.7.9 Mineral Resource Classification

The Mineral Resource was classified in accordance with the JORC Code 2012 guidelines. A reconciliation of this reporting and the CIM Definition Standards (2014) by the Qualified Person shows no material differences.

Resource classification has proceeded based on the confidence of the form and continuity of the mineralisation. As the state of the data was assumed to be of sufficient quality to estimate a Mineral Resource, and the confidence in the geological interpretation carried out using this data was deemed to be of sufficient quality to allow for Indicated and Inferred class to be used.

The portions of the 2023 MRE classified as Measured have been flagged by high quality estimation parameters, an average distance to nearest sample of 13 m and an average slope of regression (true to estimated block) of > 0.8. The drill spacing within the Measured portion of the resource is appropriate for defining the continuity and volume of the mineralised domains, at a nominal 10 m drill spacing on 10 m sections.

The portions of the March 2023 MRE classified as Indicated have been flagged by medium to high quality estimation parameters, an average distance to nearest sample of 27 m. The drill spacing within the Indicated portion of the resource is appropriate for defining the continuity and volume of the mineralised domains, at a nominal 20 m drill spacing on 20 m sections.

The portions of the March 2023 MRE classified as Inferred represent typically minor lodes with less than three drillholes and portions of domains where geological continuity is present but not consistently confirmed by 20 m x 20 m drilling. The Inferred portions of the MRE are defined by lower quality of estimation parameters, an average slope of regression (true to estimated block) of < 0.3 and an average distance to composites used of > 30 m.

## 14.6.7.10 Mineral Resource Reporting

The Mineral Resource Statement presented herein sets out the Gold Mineral Resource estimate prepared in accordance with the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource estimate is effective as of June 30, 2024. The Mineral Resource at the Tucka West deposit has been reported using a cut-off at 2.0 g/t Au and has been depleted for mining.



The 'reasonable prospects for eventual economic extraction' requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that considers extraction scenarios and processing recoveries. In the case of open pit Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by the reporting above an optimisation shell at an appropriate gold price. In the case of underground Mineral Resources this is generally further refined by geotechnical and depth considerations. Areas considered sterilised by historical mining activities were removed from the Mineral Resource estimation. These areas were adjacent to mined out stopes as 'skins' of material on stope voids or as pillars between stopes. Westgold digitised sterilisation shapes around these locations as appropriate. The remaining blocks represent the current in situ Mineral Resource.

					Tucka	West							
	Mineral Resource Statement – Rounded for Reporting												
30/06/2024													
	Measured Indicated Measured and Indicated Inferred												
Project	kt	g/t	koz	kt g/t koz kt g/t koz kt g/						g/t	koz		
Tucka West	5	1.13	0	624	2.02	41	629	2.01	41	133	1.34	6	
Total	5	1.13	0	624	2.02	41	629	2.01	41	133	1.34	6	

#### Table 14-138 Tucka West Mineral Resource – CGO – as of June 30, 2024.

ABOVE DTM: TUCKA\_2600\_AT\_2600\_INF\_120TW90T\_ORE\_TO\_TUCKA\_PIT13\_CND.DTM; >= 2.0g/t Au.

The Tucka West Mineral Resource estimate as set out in **Table 14-138** is effective as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).



# 14.7 STOCKPILES

Stockpiles generated from the mining of historical and active CGO open pits and undergrounds, are estimated as Measured and Indicated Mineral Resources using the cost assumptions for CGO at the time the stockpile material was dumped. The estimates use data from grade control protocols during mining with the cut-off based on revenue and costs at the time of production. The grade control evaluation uses a combination of drilling, ore block / stope grade estimation and dump sampling to provide gold grade values.

	Cue Gold Operations Mineral Resource Statement - Rounded for Reporting 30/06/2024													
Measured Indicated Measured and Indicated Inferred														
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz		
Stockpiles	81	2.09	5	3,627	0.70	81	3,709	0.73	87	0	0.00	0		
Total	81	2.09	5	3,627	0.70	81	3,709	0.73	87	0	0.00	0		

#### Table 14-139 Stockpile Mineral Resource – CGO – as of June 30, 2024.

- 1 Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
- 2 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves.
- 3 The Mineral Resource estimates include Inferred Mineral Resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.
- 4 The Gold Mineral Resource is estimated using a long-term gold price of A\$2,750/oz.
- 5 The Gold Mineral Resource for CGO is reported using either a 0.7 g/t Au or 1.0 g/t Au cut-off for open pits and above an RL or optimised pit shell. A 1.5 g/t Au, 1.8 g/t or 2.0 g/t cut-off grade as best fits the deposit is used for underground projects and above an RL if appropriate. Stockpile Gold Mineral Resources are reported insitu.
- 6 Mineral Resources are depleted for mining as of June 30, 2024.
- 7 To best represent 'reasonable prospects of eventual economic extraction' the majority of the mineral resources for open pits have been reported within optimised pit shells at various prices between A\$1,950/oz and A\$2,600/oz. For underground resources, areas considered sterilised by historical mining are removed from the Mineral Resource estimation.
- 8 Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.
- 9 CIM Definition Standards (2014) were followed in the estimation of Mineral Resources.
- 10 Gold Mineral Resource estimates were prepared under the supervision of Qualified Person J. Russell, MAIG (General Manager Technical Services, Westgold Resources).



# 15 MINERAL RESERVE ESTIMATE

# 15.1 INTRODUCTION

The Gold Mineral Reserve estimates have been prepared using accepted industry practice and in accordance with NI 43-101 reporting standards, under the supervision of Mr. Leigh Devlin, FAusIMM who is an employee of Westgold Resources. Mr. Devlin FAusIMM accepts responsibility as Qualified Person for the Mineral Reserve estimates.

CGO is an operating gold project, allowing current design criteria, mining methods and actual costs to form the basis for mine design, scheduling and economic evaluation used in this estimation process. As an operating mine, costs, mining methods and metallurgical factors are well understood, providing confidence in their application as part of the Mineral Reserve estimation. All major infrastructure and permitting is also in place. The economics of the Mineral Reserve estimate could be materially affected by a significant change to commodity price.

Gold Min eral Reserves at Cue are split into three separate geological regions, Big Bell, Day Dawn and Tuckabianna. The Mineral Reserve estimate effective June 30, 2024 is summarised below.

			Cue Go	old Operatio	ons							
	Mineral Reserve Statement - Rounded for Reporting											
			30	/06/2024								
Proven Probable Proven and Proba												
Project	kt	g/t	koz	kt	g/t	koz	kt	g/t	koz			
Big Bell UG	9,808	1.48	467	4,898	3.10	489	14,706	2.02	956			
Fender UG	81	2.58	7	147	2.68	13	228	2.65	19			
Great Fingall UG	0	0.00	0	1,895	4.20	256	1,895	4.20	256			
Golden Crown UG	0	0.00	0	230	4.52	33	230	4.52	33			
Big Bell District	0	0	0	59	2.98	6	59	2.98	6			
Cuddingwarra	0	0	0	98	1.77	6	98	1.77	6			
Day Dawn District	0	0.00	0	0	0.00	0	0	0.00	0			
Tuckabianna	0	0.00	0	683	3.00	66	683	3.00	66			
Stockpiles	81	2.09	5	3,627	0.70	81	3,709	0.73	87			
Total	9,971	1.50	480	11,636	2.54	949	21,606	2.06	1,429			

#### Table 15-1 Cue gold Mineral Reserves as of June 30, 2024.

1 The Mineral Reserve is reported at varying cut-off grades per based upon economic analysis of each individual deposit.

- 2 Key assumptions used in the economic evaluation include:
  - a) A metal price of A\$3,000/oz for Underground and \$2,750/oz for Open Pits.
  - b) Metallurgical recovery varies by deposit.
  - c) The cut-off grade takes into account operating, mining, processing/haulage and G&A costs, excluding mining capital where relevant.
- 3 The Mineral Reserve is depleted for all mining to June 30, 2024.
- 4 The tonnes and grades are stated to a number of significant digits reflecting the confidence of the estimate. Since each number is rounded individually, the table may show apparent inconsistencies between the sum of rounded components and the corresponding rounded total.
- 5 The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (the point where material is delivered to the mill) and is therefore inclusive of ore loss and dilution.



- 6 CIM Definition Standards (2014) were followed in the estimation of Mineral Reserves.
- 7 Gold Mineral Reserve estimates were prepared under the supervision of Qualified Person L Devlin, FAusIMM.

## 15.2 BIG BELL

The Big Bell Mineral Reserves comprise the deposits of Big Bell and Fender.

### 15.2.1 Big Bell

The underground Big Bell deposit is mined via sub-level caving and longhole open stoping methods. The Big Bell Mineral Reserves were optimised, designed, and scheduled by mining method and mineralised zones. Cost modelling was completed to show the cashflow and NPV provides sufficient return to include within the WGX Mineral Reserves. Having reviewed the data and updated it with up to date modifying factors (costs and gold price), Mr. Devlin FAusIMM accepts responsibility as Qualified Person for the Big Bell Mineral Reserve estimates.

## 15.2.1.1 Mineral Reserve Estimation Process

Big Bell is planned to operate as an underground gold mine allowing current design criteria, mining methods and actual costs to form the basis for mine design, scheduling and economic evaluation used in this estimation process. As an historic operating underground mine, costs, mining methods and metallurgical factors are well understood, providing confidence in their application as part of the Mineral Reserve estimation process. Although some additional surface infrastructure will be required, the key major infrastructure and permitting is in place with access to a well-established decline portal. The economics of the Mineral Reserve estimate could be materially affected by a significant change to commodity price.

Designs previously completed by WGX were loaded into Deswik software and verified against current as-builts and the resource model.

Key assumptions include:

- Development dilution of 0% additional tonnes at 0 g/t;
- Stope dilution is included in the designed stope shapes of the sub-level cave and longhole open stoping (LHOS) with a 0 g/t applied.
- Stope recovery factor of 90% for stopes.

The resulting Mineral Reserve estimate as of June 30, 2024 is shown in Table 15-2.

Table 15-2 Big Bell Gold Mineral Reserves as of June 30, 2024.

	Proven				Probable		TOTAL			
	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)	
Big Bell	9,808	1.48	467	4,897	3.10	489	14,705	2.02	956	

- 1. The Mineral Reserve is reported at a 1.1 g/t cut-off grade for development and a 2.1 g/t cut-off grade for stopes.
- 2. Key assumptions used in the economic evaluation include:
  - a) A metal price of AUD\$3,000/oz gold.
  - b) The cut-off grade takes into account operating, mining, processing/haulage and G and A costs, excluding Mining capital where relevant.
- 3. The Mineral Reserve is depleted for all mining to June 30, 2024.



- 4. The tonnes and grades are stated to a number of significant digits reflecting the confidence of the estimate. Since each number is rounded individually, the table may show apparent inconsistencies between the sum of rounded components and the corresponding rounded total.
- 5. The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (the point where material is delivered to the mill) and is therefore inclusive of ore loss and dilution.
- 6. CIM Definition Standards (2014) were followed in the estimation of Mineral Reserves.
- 7. Gold Mineral Reserve estimates were prepared under the supervision of Qualified Person L. Devlin, FAusIMM.

## 15.2.1.2 Stope Design Parameters

The following stope design parameters were applied within the mine design:

- Minimum footwall dip angles were set at 45°;
- Minimum mining widths (excluding dilution) of 5 m;
- Natural low-grade rock pillars have been included in the mine design per the economic stope shapes developed. Proximity to old mined out areas were also considered. An additional mining recovery factor of 90% has been applied to account for ore extraction and ore losses and bogging recovery losses.

## 15.2.1.3 Cut-Off Grade Derivation

Cut-off grades (COG's) are derived from the Stope Optimiser (SO) stope shapes utilising gold COG's inclusive of costs, revenue and metallurgical factors. These were determined to be 2.1 g/t for stopes and 1.1 g/t for low grade development. The cut-off grade inputs and calculations are shown in **Table 15-3** and **Table 15-4**.

The Big Bell mine design and schedule is extremely sensitive to revenue factors, so changes to recovery or gold price may impact economic areas as designed for this Mineral Reserve.

Parameter	Unit	Value
Gold Price	AUD\$/oz	3,000
State Royalty	%	2.5
Third Party Royalty	%	
Metallurgical Recovery	%	88%
Net Price (after recovery)	A\$/oz	2,640
Net Price (after recovery)	A\$/g	84.88

#### Table 15-3 Big Bell underground Mineral Reserves – net gold price calculation.

Table 15-4 Big Bell cut-off grade calculation inputs.

Item	Fully Costed	Mine Operating	Stope Cut-Off	Low Grade
Mining Capital	4.95			
Mining Operating	64.15	60.90	48.63	
Haulage	18.49	18.49	18.49	18.49
Grade Control	4.08	4.08	4.08	
Exploration	7.65	7.65	6.12	6.12
Ancillary Services	15.71	15.71	15.71	
Mine Management and Technical	19.58	19.58	19.58	
Site G&A	13.91	13.91	13.91	13.91
Corporate Capital	16.97	16.97	16.97	16.97
Processing	32.34	32.34	32.34	32.34
Royalty	5.72	5.72	5.72	5.72
Total	203.55	195.35	181.55	93.55
Cut Off Grade	2.4	2.3	2.1	1.1



# 15.2.2 Fender

The underground Fender deposit is mined via longhole open stoping methods. The Fender mineral reserves were optimised, designed, and scheduled by mining method and mineralised zones. Cost modelling was completed to show the cashflow and NPV provides sufficient return to include within the WGX reserve. Having reviewed the data and updated modifying factors (costs and gold price), Mr. Devlin FAusIMM accepts responsibility as Qualified Person for the Fender Mineral Reserve estimates.

# 15.2.2.1 Mineral Reserve Estimation Process

Fender is planned to operate as an underground gold mine allowing current design criteria, mining methods and actual costs to form the basis for mine design, scheduling and economic evaluation used in this estimation process. As a current operating underground mine, costs, mining methods and metallurgical factors are well understood, providing confidence in their application as part of the Mineral Reserve estimation process. Although some additional surface infrastructure will be required, the key major infrastructure and permitting is in place with access to a wellestablished decline portal. The economics of the Mineral Reserve estimate could be materially affected by a significant change to commodity price.

Designs previously completed by WGX were loaded into Deswik software and verified against current as-builts and the resource model.

Key assumptions include:

- Development dilution of 0% additional tonnes at 0 g/t;
- Stope dilution is included in the designed stope shapes of the longhole open stoping (LHOS) with a 0 g/t applied.
- Stope recovery factor of 90% for LHOS stopes.

The resulting Mineral Reserve estimate as of June 30, 2024 is shown in Table 15-5.

		Proven			Probable			TOTAL	
	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)
Fender	81	2.58	7	147	2.68	13	228	2.65	19

- 1. The Mineral Reserve is reported at a 0.8 g/t cut-off grade for development and a 1.4 g/t cut-off grade for stopes.
- 2. Key assumptions used in the economic evaluation include:
  - a) A metal price of AUD\$3,000/oz gold.
  - b) The cut-off grade takes into account operating, mining, processing/haulage and G and A costs, excluding Mining capital where relevant.
- 3. The Mineral Reserve is depleted for all mining to June 30, 2024.
- 4. The tonnes and grades are stated to a number of significant digits reflecting the confidence of the estimate. Since each number is rounded individually, the table may show apparent inconsistencies between the sum of rounded components and the corresponding rounded total.
- 5. The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (the point where material is delivered to the mill) and is therefore inclusive of ore loss and dilution.
- 6. CIM Definition Standards (2014) were followed in the estimation of Mineral Reserves.
- 7. Gold Mineral Reserve estimates were prepared under the supervision of Qualified Person L. Devlin, FAusIMM.



## 15.2.2.2 Stope Design Parameters

The following stope design parameters were applied within the mine design:

- Minimum footwall dip angles were set at 45°;
- Minimum mining widths (excluding dilution) of 1.5 m;
- Natural low-grade rock pillars have been included in the mine design per the economic stope shapes developed. Proximity to old mined out areas were also considered. An additional mining recovery factor of 90% has been applied to account for ore extraction and ore losses and bogging recovery losses.

## 15.2.2.3 Cut-Off Grade Derivation

Cut-off grades (COG's) are derived from the Stope Optimiser (SO) stope shapes utilising gold COG's inclusive of costs, revenue and metallurgical factors. These were determined to be 1.6 g/t for stopes and 0.7 g/t for low grade development. The cut-off grade inputs and calculations are shown in **Table 15-6** and **Table 15-7**.

The Fender mine design and schedule is extremely sensitive to revenue factors, so changes to recovery or gold price may impact economic areas as designed for this Mineral Reserve.

Parameter	Unit	Value
Gold Price	AUD\$/oz	3,000
State Royalty	%	2.5
Third Party Royalty	%	0
Metallurgical Recovery	%	90%
Net Price (after recovery)	A\$/oz	2,700
Net Price (after recovery)	A\$/g	86.81

#### Table 15-6 Fender Underground Mineral Reserves – net gold price calculation.

#### Table 15-7 Fender cut-off grade calculation inputs.

Item	Fully Costed	Mine Operating	Stope Cut-Off	Low Grade
Mining Capital	26.13			
Mining Operating	46.68	44.82	31.42	
Haulage	28.33	28.33	28.33	28.33
Grade Control	6.84	6.84	6.84	
Exploration				
Ancillary Services	2.19	2.19	2.19	
Mine Management and Technical	17.61	17.61	17.61	
Site G&A				
Corporate Capital				
Processing	32.34	32.34	32.34	32.34
Royalty	5.48	5.48	5.48	5.48
Total	165.60	137.61	124.21	66.14
Cut Off Grade	1.9	1.6	1.4	0.8



# 15.3 CUDDINGWARRA

There are no Mineral Reserves to report for the Cuddingwarra region.

### 15.4 DAY DAWN

The Day Dawn Mineral Reserves comprise the deposits of Golden Crown and Great Fingall.

### 15.4.1 Golden Crown

The underground Golden Crown deposit is mined via longhole open stoping methods. The Golden Crown mineral reserves were optimised, designed, and scheduled by mining method and mineralised zones. Cost modelling was completed to show the cashflow and NPV provides sufficient return to include within the WGX reserve. Having reviewed the data and updated it with up to date modifying factors (costs and gold price), Mr. Devlin FAusIMM accepts responsibility as Qualified Person for the Golden Crown Mineral Reserve estimates.

# 15.4.1.1 Mineral Reserve Estimation Process

Golden Crown is planned to operate as an underground gold mine allowing current design criteria, mining methods and actual costs to form the basis for mine design, scheduling and economic evaluation used in this estimation process. As an historic operating underground mine, costs, mining methods and metallurgical factors are well understood, providing confidence in their application as part of the Mineral Reserve estimation process. Although some additional surface infrastructure will be required, the key major infrastructure and permitting is in place with access to a wellestablished decline portal. The economics of the Mineral Reserve estimate could be materially affected by a significant change to commodity price.

Designs previously completed by WGX were loaded into Deswik software and verified against current as-builts and the resource model.

Key assumptions include:

- Development dilution of 0% additional tonnes at 0 g/t;
- Stope dilution is included in the designed stope shapes of the longhole open stoping (LHOS) with a 0 g/t applied.
- Stope recovery factor of 90% for LHOS stopes.

The resulting Mineral Reserve estimate as of June 30, 2024 is shown in Table 15-8.

	Proven				Probable		TOTAL			
	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)	
Golden Crown				230	4.52	33	230	4.52	33	

### Table 15-8 Golden Crown Gold Mineral Reserves at June 30, 2024.

1.



- 2. The Mineral Reserve is reported at a 1.0 g/t cut-off grade for development and a 2.4 g/t cut-off grade for stopes.
- 3. Key assumptions used in the economic evaluation include:
  - a) A metal price of AUD\$2,750/oz gold.
  - b) The cut-off grade takes into account operating, mining, processing/haulage and G and A costs, excluding Mining capital where relevant.
- 4. The Mineral Reserve is depleted for all mining to June 30, 2024.
- 5. The tonnes and grades are stated to a number of significant digits reflecting the confidence of the estimate. Since each number is rounded individually, the table may show apparent inconsistencies between the sum of rounded components and the corresponding rounded total.
- 6. The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (the point where material is delivered to the mill) and is therefore inclusive of ore loss and dilution.
- 7. CIM Definition Standards (2014) were followed in the estimation of Mineral Reserves.
- 8. Gold Mineral Reserve estimates were prepared under the supervision of Qualified Person L. Devlin, FAusIMM.

## 15.4.1.2 Stope Design Parameters

The following stope design parameters were applied within the mine design:

- Minimum footwall dip angles were set at 45°;
- Minimum mining widths (excluding dilution) of 1.5 m;
- Natural low-grade rock pillars have been included in the mine design per the economic stope shapes developed. Proximity to old mined out areas were also considered. An additional mining recovery factor of 90% has been applied to account for ore extraction and ore losses and bogging recovery losses.

# 15.4.1.3 Cut-Off Grade Derivation

Cut-off grades (COG's) are derived from the Stope Optimiser (SO) stope shapes utilising gold COG's inclusive of costs, revenue and metallurgical factors. These were determined to be 2.30 g/t for stopes and 1.00 g/t for low grade development. The cutoff grade inputs and calculations are shown in **Table 15-9** and Table **15-10**. As mining of Great Fingall and Golden Crown will be completed together with proximate infrastructure shared, the COG's are calculated together.

The Golden Crown mine design and schedule is extremely sensitive to revenue factors, so changes to recovery or gold price may impact economic areas as designed for this Mineral Reserve.

Parameter	Unit	Value
Gold Price	AUD\$/oz	3,000
State Royalty	%	2.5
Third Party Royalty	%	0
Metallurgical Recovery	%	95%
Net Price (after recovery)	A\$/oz	2,850
Net Price (after recovery)	A\$/g	91.63

#### Table 15-9 Golden Crown Underground Mineral Reserves – net gold price calculation.



Item	Fully Costed	Mine Operating	Stope Cut-Off	Low Grade
Mining Capital	47.39	3.15		3.15
Mining Operating	111.97	111.97	54.66	0.00
Haulage	8.70	8.70	8.70	8.70
Grade Control	3.89	3.89		
Exploration	7.98	7.98	5.58	5.58
Ancillary Services	55.34	55.34	55.34	0.29
Mine Management and Technical	13.76	13.76	13.76	
Site G&A	12.84	12.84	12.84	12.84
Corporate Capital	22.70	17.42	17.42	17.42
Processing	31.07	31.07	31.07	31.07
Royalty	11.44	11.44	11.44	11.44
Total	327.07	277.55	210.80	90.49
Cut Off Grade	3.6	3.0	2.3	1.0

Table 15-10 Golden Crown cut-off grade calculation inputs.

# 15.4.2 Great Fingall

The underground Great Fingall deposit is mined via longhole open stoping methods. The Great Fingall mineral reserves were optimised, designed, and scheduled by mining method and mineralised zones. Cost modelling was completed to show the cashflow and NPV provides sufficient return to include within the WGX reserve. Having reviewed the data and updated it with up to date modifying factors (costs and gold price), Mr. Devlin FAusIMM accepts responsibility as Qualified Person for the Great Fingall Mineral Reserve estimates.

# 15.4.2.1 Mineral Reserve Estimation Process

Great Fingall is planned to operate as an underground gold mine allowing current design criteria, mining methods and actual costs to form the basis for mine design, scheduling and economic evaluation used in this estimation process. As an historic operating underground mine, costs, mining methods and metallurgical factors are well understood, providing confidence in their application as part of the Mineral Reserve estimation process. Although some additional surface infrastructure will be required, the key major infrastructure and permitting is in place with access to a wellestablished decline portal. The economics of the Mineral Reserve estimate could be materially affected by a significant change to commodity price.

Designs previously completed by WGX were loaded into Deswik software and verified against current as-builts and the resource model.

Key assumptions include:

- Development dilution of 0% additional tonnes at 0 g/t;
- Stope dilution is included in the designed stope shapes of the longhole open stoping (LHOS) with a 0 g/t applied.
- Stope recovery factor of 90% for LHOS stopes.

The resulting Mineral Reserve estimate as of June 30, 2024 is shown in Table 15-11.



#### Table 15-11 Great Fingall Gold Mineral Reserves at June 30, 2024.

	Proven		Probable			TOTAL			
	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)
Great Fingall				1,894	4.20	256	1,894	4.20	256

- 1. The Mineral Reserve is reported at a 1.0 g/t cut-off grade for development and a 2.4 g/t cut-off grade for stopes.
- 2. Key assumptions used in the economic evaluation include:
  - a) A metal price of AUD\$2,750/oz gold.
  - b) The cut-off grade takes into account operating, mining, processing/haulage and G and A costs, excluding Mining capital where relevant.
- 3. The Mineral Reserve is depleted for all mining to June 30, 2024.
- 4. The tonnes and grades are stated to a number of significant digits reflecting the confidence of the estimate. Since each number is rounded individually, the table may show apparent inconsistencies between the sum of rounded components and the corresponding rounded total.
- The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (the point where material is delivered to the mill) and is therefore inclusive of ore loss and dilution.
- 6. CIM Definition Standards (2014) were followed in the estimation of Mineral Reserves.
- 7. Gold Mineral Reserve estimates were prepared under the supervision of Qualified Person L. Devlin, FAusIMM.

## 15.4.2.2 Stope Design Parameters

The following stope design parameters were applied within the mine design:

- Minimum footwall dip angles were set at 45°;
- Minimum mining widths (excluding dilution) of 1.5 m;
- Natural low-grade rock pillars have been included in the mine design per the economic stope shapes developed. Proximity to old mined out areas were also considered. An additional mining recovery factor of 90% has been applied to account for ore extraction and ore losses and bogging recovery losses.

### 15.4.2.3 Cut-Off Grade Derivation

Cut-off grades (COG's) are derived from the Stope Optimiser (SO) stope shapes utilising gold COG's inclusive of costs, revenue and metallurgical factors. These were determined to be 2.30 g/t for stopes and 1.00 g/t for low grade development. The cutoff grade inputs and calculations are shown in **Table 15-12** and **Table 15-13**. As mining of Great Fingall and Golden Crown will be completed together with proximate infrastructure shared, the COG's are calculated together.

The Great Fingall mine design and schedule is extremely sensitive to revenue factors, so changes to recovery or gold price may impact economic areas as designed for this Mineral Reserve.

#### Table 15-12 Tucka Great Fingall Underground Mineral Reserves – net gold price calculation.

Parameter	Unit	Value
Gold Price	AUD\$/oz	3,000
State Royalty	%	2.5
Third Party Royalty	%	0
Metallurgical Recovery	%	95%
Net Price (after recovery)	A\$/oz	2,850
Net Price (after recovery)	A\$/g	91.63



Item	Fully Costed	Mine Operating	Stope Cut-Off	Low Grade
Mining Capital	47.39	3.15		3.15
Mining Operating	111.97	111.97	54.66	0.00
Haulage	8.70	8.70	8.70	8.70
Grade Control	3.89	3.89		
Exploration	7.98	7.98	5.58	5.58
Ancillary Services	55.34	55.34	55.34	0.29
Mine Management and Technical	13.76	13.76	13.76	
Site G&A	12.84	12.84	12.84	12.84
Corporate Capital	22.70	17.42	17.42	17.42
Processing	31.07	31.07	31.07	31.07
Royalty	11.44	11.44	11.44	11.44
Total	327.07	277.55	210.80	90.49
Cut Off Grade	3.6	3.0	2.3	1.0

Table 15-13 Great Fingall cut-off grade calculation inputs.

## 15.5 TUCKABIANNA

The Tuckabianna Mineral Reserves comprise the deposits of Comet, Pinnacles and Causton's.

# 15.5.1 Comet

The underground Comet deposit is mined via longhole open stoping methods. The Comet mineral reserves were optimised, designed, and scheduled by mining method and mineralised zones. Cost modelling was completed to show the cashflow and NPV provides sufficient return to include within the WGX reserve. Having reviewed the data and updated it with up to date modifying factors (costs and gold price), Mr. Devlin FAusIMM accepts responsibility as Qualified Person for the Comet Mineral Reserve estimates.

# 15.5.1.1 Mineral Reserve Estimation Process

Comet is planned to operate as an underground gold mine allowing current design criteria, mining methods and actual costs to form the basis for mine design, scheduling and economic evaluation used in this estimation process. As an historic operating underground mine, costs, mining methods and metallurgical factors are well understood, providing confidence in their application as part of the Mineral Reserve estimation process. Although some additional surface infrastructure will be required, the key major infrastructure and permitting is in place with access to a well-established decline portal. The economics of the Mineral Reserve estimate could be materially affected by a significant change to commodity price. Designs previously completed by WGX were loaded into Deswik software and verified against current as-builts and the resource model.

Key assumptions include:

- Development dilution of 0% additional tonnes at 0g/t;
- Stope dilution is included in the designed stope shapes of the longhole open stoping (LHOS) with a 0g/t applied.
- Stope recovery factor of 90% for LHOS stopes.



The resulting Mineral Reserve estimate as of June 30, 2024, is shown in Table 15-14.

	Proven		Probable			TOTAL			
	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)
Comet				120	3.2	12	120	3.2	12

- 1. The Mineral Reserve is reported at a 0.8 g/t cut-off grade for development and a 2.2 g/t cut-off grade for stopes.
- 2. Key assumptions used in the economic evaluation include:
  - a) A metal price of AUD\$2,750/oz gold.
  - b) The cut-off grade takes into account operating, mining, processing/haulage and G and A costs, excluding Mining capital where relevant.
- 3. The Mineral Reserve is depleted for all mining to June 30, 2024.
- 4. The tonnes and grades are stated to a number of significant digits reflecting the confidence of the estimate. Since each number is rounded individually, the table may show apparent inconsistencies between the sum of rounded components and the corresponding rounded total.
- 5. The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (the point where material is delivered to the mill) and is therefore inclusive of ore loss and dilution.
- 6. CIM Definition Standards (2014) were followed in the estimation of Mineral Reserves.
- 7. Gold Mineral Reserve estimates were prepared under the supervision of Qualified Person L. Devlin, FAusIMM.

# 15.5.1.2 Stope Design Parameters

The following stope design parameters were applied within the mine design:

- Minimum footwall dip angles were set at 45°;
- Minimum mining widths (excluding dilution) of 1.5 m;
- Natural low-grade rock pillars have been included in the mine design per the economic stope shapes developed. Proximity to old mined out areas were also considered. An additional mining recovery factor of 90% has been applied to account for ore extraction and ore losses and bogging recovery losses.

# 15.5.1.3 Cut-Off Grade Derivation

Cut-off grades (COG's) are derived from the Stope Optimiser (SO) stope shapes utilising gold COG's inclusive of costs, revenue and metallurgical factors. These were determined to be 2.2 g/t for stopes and 0.8 g/t for low grade development. The cut-off grade inputs and calculations are shown in **Table 15-15** and **Table 15-16**.

The Comet mine design and schedule is extremely sensitive to revenue factors, so changes to recovery or gold price may impact economic areas as designed for this Mineral Reserve.

#### Table 15-15 Comet Underground Mineral Reserves – net gold price calculation.

Parameter	Unit	Value	
Gold Price	AUD\$/oz	2,750	
State Royalty	%	2.5	
Third Party Royalty	%	0	
Metallurgical Recovery	%	95%	
Net Price (after recovery)	A\$/oz	2,612	
Net Price (after recovery)	A\$/g	83.99	



ltem	Fully Costed	Mine Operating	Stope Cut-Off	Low Grade
Mining Capital	19.18			
Mining Operating	93.72	86.50	53.00	
Haulage	11.46	11.46	11.46	11.46
Grade Control	1.97	1.97	1.97	
Exploration	2.06	2.06	2.06	2.06
Ancillary Services	23.06	23.06	23.06	
Mine Management and Technical	29.91	29.91	29.91	
Site G&A	13.29	13.29	13.29	13.29
Corporate Capital	6.13	6.13	6.13	6.13
Processing	31.07	31.07	31.07	31.07
Royalty	6.25	6.25	6.25	6.25
Total	238.10	211.70	178.20	70.26
Cut Off Grade	3.0	2.7	2.2	0.8

Table 15-16 Comet cut-off grade calculation inputs.

# 15.5.2 Pinnacles

The underground Pinnacles deposit is mined via longhole open stoping methods. The Pinnacles mineral reserves were optimised, designed, and scheduled by mining method and mineralised zones. Cost modelling was completed to show the cashflow and NPV provides sufficient return to include within the WGX reserve. Having reviewed the data and updated it with up to date modifying factors (costs and gold price), Mr. Devlin FAusIMM accepts responsibility as Qualified Person for the Pinnacles Mineral Reserve estimates.

# 15.5.2.1 Mineral Reserve Estimation Process

Pinnacles is planned to operate as an underground gold mine allowing current design criteria, mining methods and actual costs to form the basis for mine design, scheduling and economic evaluation used in this estimation process. As an historic operating underground mine, costs, mining methods and metallurgical factors are well understood, providing confidence in their application as part of the Mineral Reserve estimation process. Although some additional surface infrastructure will be required, the key major infrastructure and permitting is in place with access to a well-established decline portal. The economics of the Mineral Reserve estimate could be materially affected by a significant change to commodity price. Designs previously completed by WGX were loaded into Deswik software and verified against current as-builts and the resource model.

Key assumptions include:

- Development dilution of 0% additional tonnes at 0g/t;
- Stope dilution is included in the designed stope shapes of the longhole open stoping (LHOS) with a 0g/t applied.
- Stope recovery factor of 90% for LHOS stopes.

The resulting Mineral Reserve estimate as of June 30, 2024, is shown in Table 15-17.



#### Table 15-17 Pinnacles Gold Mineral Reserves at June 30, 2024.

	Proven		Probable			TOTAL			
	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)
Pinnacles				233	3.11	23	233	3.11	23

- 1. The Mineral Reserve is reported at a 0.8 g/t cut-off grade for development and a 2.2 g/t cut-off grade for stopes.
- 2. Key assumptions used in the economic evaluation include:
  - a) A metal price of AUD\$2,750/oz gold.
  - b) The cut-off grade takes into account operating, mining, processing/haulage and G and A costs, excluding Mining capital where relevant.
- 3. The Mineral Reserve is depleted for all mining to June 30, 2024.
- 4. The tonnes and grades are stated to a number of significant digits reflecting the confidence of the estimate. Since each number is rounded individually, the table may show apparent inconsistencies between the sum of rounded components and the corresponding rounded total.
- 5. The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (the point where material is delivered to the mill) and is therefore inclusive of ore loss and dilution.
- 6. CIM Definition Standards (2014) were followed in the estimation of Mineral Reserves.
- 7. Gold Mineral Reserve estimates were prepared under the supervision of Qualified Person L. Devlin, FAusIMM.

# 15.5.2.2 Stope Design Parameters

The following stope design parameters were applied within the mine design:

- Minimum footwall dip angles were set at 45°;
- Minimum mining widths (excluding dilution) of 1.5 m;
- Natural low-grade rock pillars have been included in the mine design per the economic stope shapes developed. Proximity to old mined out areas were also considered. An additional mining recovery factor of 90% has been applied to account for ore extraction and ore losses and bogging recovery losses.

### 15.5.2.3 Cut-Off Grade Derivation

Cut-off grades (COG's) are derived from the Stope Optimiser (SO) stope shapes utilising gold COG's inclusive of costs, revenue and metallurgical factors. These were determined to be 2.2 g/t for stopes and 0.8 g/t for low grade development. The cut-off grade inputs and calculations are shown in **Table 15-18** and **Table 15-19**.

The Pinnacles mine design and schedule is extremely sensitive to revenue factors, so changes to recovery or gold price may impact economic areas as designed for this Mineral Reserve.

Parameter	Unit	Value
Gold Price	AUD\$/oz	2,750
State Royalty	%	2.5
Third Party Royalty	%	0
Metallurgical Recovery	%	95%
Net Price (after recovery)	A\$/oz	2,612
Net Price (after recovery)	A\$/g	83.99

#### Table 15-18 Pinnacles Underground Mineral Reserves – net gold price calculation.



Item	Fully Costed	Mine Operating	Stope Cut-Off	Low Grade
Mining Capital	19.18			
Mining Operating	93.72	86.50	53.00	
Haulage	11.46	11.46	11.46	11.46
Grade Control	1.97	1.97	1.97	
Exploration	2.06	2.06	2.06	2.06
Ancillary Services	23.06	23.06	23.06	
Mine Management and Technical	29.91	29.91	29.91	
Site G&A	13.29	13.29	13.29	13.29
Corporate Capital	6.13	6.13	6.13	6.13
Processing	31.07	31.07	31.07	31.07
Royalty	6.25	6.25	6.25	6.25
Total	238.10	211.70	178.20	70.26
Cut Off Grade	3.0	2.7	2.2	0.8

Table 15-19 Pinnacles cut-off grade calculation inputs.

# 15.5.3 Causton's

The underground Causton's deposit is mined via longhole open stoping methods. The Causton's mineral reserves were optimised, designed, and scheduled by mining method and mineralised zones. Cost modelling was completed to show the cashflow and NPV provides sufficient return to include within the WGX reserve. Having reviewed the data and updated it with up to date modifying factors (costs and gold price), Mr. Devlin FAusIMM accepts responsibility as Qualified Person for the Causton's Mineral Reserve estimates.

# 15.5.3.1 Mineral Reserve Estimation Process

Causton's is planned to operate as an underground gold mine allowing current design criteria, mining methods and actual costs to form the basis for mine design, scheduling and economic evaluation used in this estimation process. As an historic operating underground mine, costs, mining methods and metallurgical factors are well understood, providing confidence in their application as part of the Mineral Reserve estimation process. Although some additional surface infrastructure will be required, the key major infrastructure and permitting is in place with access to a wellestablished decline portal. The economics of the Mineral Reserve estimate could be materially affected by a significant change to commodity price. Designs previously completed by WGX were loaded into Deswik software and verified against current asbuilts and the resource model.

Key assumptions include:

- Development dilution of 0% additional tonnes at 0g/t;
- Stope dilution is included in the designed stope shapes of the longhole open stoping (LHOS) with a 0g/t applied.
- Stope recovery factor of 90% for LHOS stopes.

The resulting Mineral Reserve estimate as of June 30, 2024 is shown in Table 15-20.



#### Table 15-20 Causton's Gold Mineral Reserves at June 30, 2024.

		Proven			Probable		TOTAL		
	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)	(kt)	(g/t)	(kOz)
Causton's				329	2.85	30	329	2.85	30

- 1. The Mineral Reserve is reported at a 0.8 g/t cut-off grade for development and a 1.8 g/t cut-off grade for stopes.
- 2. Key assumptions used in the economic evaluation include:
  - a) A metal price of AUD\$2,750/oz gold.
  - b) The cut-off grade takes into account operating, mining, processing/haulage and G and A costs, excluding Mining capital where relevant.
- 3. The Mineral Reserve is depleted for all mining to June 30, 2024.
- 4. The tonnes and grades are stated to a number of significant digits reflecting the confidence of the estimate. Since each number is rounded individually, the table may show apparent inconsistencies between the sum of rounded components and the corresponding rounded total.
- 5. The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (the point where material is delivered to the mill) and is therefore inclusive of ore loss and dilution.
- 6. CIM Definition Standards (2014) were followed in the estimation of Mineral Reserves.
- 7. Gold Mineral Reserve estimates were prepared under the supervision of Qualified Person L. Devlin, FAusIMM.

## 15.5.3.2 Stope Design Parameters

The following stope design parameters were applied within the mine design:

- Minimum footwall dip angles were set at 45°;
- Minimum mining widths (excluding dilution) of 1.5 m;
- Natural low-grade rock pillars have been included in the mine design per the economic stope shapes developed. Proximity to old mined out areas were also considered. An additional mining recovery factor of 90% has been applied to account for ore extraction and ore losses and bogging recovery losses.

### 15.5.3.3 Cut-Off Grade Derivation

Cut-off grades (COGs) are derived from the Stope Optimiser (SO) stope shapes utilising gold COGs inclusive of costs, revenue and metallurgical factors. These were determined to be 1.8 g/t for stopes and 0.8 g/t for low grade development. The cut-off grade inputs and calculations are shown in **Table 15-21** and **Table 15-22**.

The Causton's mine design and schedule is extremely sensitive to revenue factors, so changes to recovery or gold price may impact economic areas as designed for this Mineral Reserve.

Parameter	Unit	Value
Gold Price	AUD\$/oz	2,750
State Royalty	%	2.5
Third Party Royalty	%	2
Metallurgical Recovery	%	90%
Net Price (after recovery)	A\$/oz	2,475
Net Price (after recovery)	A\$/g	79.57

#### Table 15-21 Causton's Underground Mineral Reserves – net gold price calculation.



Item	Fully Costed	Mine Operating	Stope Cut-Off	Low Grade
Mining Capital	25.27			
Mining Operating	53.83	47.53	32.60	
Haulage	1.00	1.00	1.00	1.00
Grade Control	0.46	0.46	0.46	
Exploration	2.06	2.06	2.06	2.06
Ancillary Services	22.22	22.22	22.22	
Mine Management and Technical	17.42	17.42	17.42	
Site G&A	13.29	13.29	13.29	13.29
Corporate Capital	9.78	9.78	9.78	9.78
Processing	31.07	31.07	31.07	31.07
Royalty	10.18	10.18	10.18	10.18
Total	186.58	155.01	140.08	67.38
Cut Off Grade	2.3	1.9	1.8	0.8

Table 15-22 Causton's cut-off grade calculation inputs.

## 15.6 STOCKPILES

Stockpiles generated from the mining of historical and active CGO open pits and undergrounds, are estimated as Proven and Probable Mineral Reserves using the cost assumptions for CGO at the time the stockpile material was dumped. The estimates use data from grade control protocols during mining with the cut-off based on revenue and costs at the time of production. The grade control evaluation uses a combination of drilling, ore block / stope grade estimation and dump sampling to provide gold grade values.

Table 15-23 Stockpiles Gold Mineral Reserves at June 3	0. 2024.
	0,2024.

		Proven			Probable			TOTAL	
	(kt)	(g/t)	(koz)	(kt)	(g/t)	(koz)	(kt)	(g/t)	(koz)
Stockpiles	81	2.09	5	3,627	0.70	81	3,708	0.73	87

- 1. The Mineral Reserve is reported at a 0.0 g/t cut-off grade.
- 2. Key assumptions used in the economic evaluation include:
  - a) A metal price of AUD\$3,000/oz gold.
  - b) The cut-off grade takes into account operating, mining, processing/haulage and G and A costs, excluding Mining capital where relevant.
- 3. The Mineral Reserve is depleted for all mining to June 30, 2024.
- 4. The tonnes and grades are stated to a number of significant digits reflecting the confidence of the estimate. Since each number is rounded individually, the table may show apparent inconsistencies between the sum of rounded components and the corresponding rounded total.
- 5. The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (the point where material is delivered to the mill) and is therefore inclusive of ore loss and dilution.
- 6. CIM Definition Standards (2014) were followed in the estimation of Mineral Reserves.
- 7. Gold Mineral Reserve estimates were prepared under the supervision of Qualified Person L. Devlin, FAusIMM.



# 16 MINING METHODS

# 16.1 CUE

# 16.1.1 Big Bell

## 16.1.1.1 Underground Infrastructure

The Big Bell underground mine will be accessed through an existing portal and the main decline throughout the mine. The decline is typically 5.3 mW x 5.8 mH, with a standard ore drive size of 5.0 mW x 5.0 mH. Lateral development profiles are well matched to the mobile fleet. Ore is hauled from the underground to surface via the decline where it is then transported via a separate surface haulage fleet to the mill.

Big Bell is ventilated via the main haulage decline and the ASARCO fresh air shaft. Intakes are connected to the underground workings where a total of 325 m<sup>3</sup>/s of airflow is exhausted through a series of return airway systems to the surface.

## 16.1.1.2 Mining Methods

Two mining methods are employed at Big Bell, sub-level caving (SLC) and longhole open stoping (LHOS).

The current LHOS stope design dimensions are 25 m to 30 m high (following the typical historic level spacings) and vary in width from 5 m to 30 m with 10 m stope strike lengths. SLC design is on a ring-by-ring basis (2.8 m long) with sub levels at 25 m spacing in a longitudinal methodology.

Currently backfilling is not employed at Big Bell although the transition to LHOS will require paste filling all underground stoping voids. Paste filling infrastructure will be purchased and installed throughout the underground workings to ensure a consistent paste and production profile.

It is expected rehabilitation will be required throughout the mine during the mine life. This rehabilitation will potentially require some stripping and removing of loose rock and rusted or damaged ground support elements and the re-supporting of these development ends. This is a reasonably fast and inexpensive task, however, should be planned within the jumbo efficiencies and cycles to optimise access development and new stope zones.

The typical LHOS ore cycle post ore drive development is as follows:

- Drilling of blast holes using a longhole drilling rig.
- Charging and firing of blast holes.
- Bogging (mucking) of ore from the stope using conventional and tele-remote loading techniques.
- Loading of trucks with an LHD.
- Trucks haul ore to surface via the portal.



- Surface trucks haul ore to the mill or the same trucks simply running to the ROM pad at the plant.
- Installation of fill barricades.
- Filling of stope void.
- Redevelopment (where required) through fill to establish void for next stope in sequence.

## 16.1.1.3 Hydrology

Groundwater aquifers comprising the Big Bell system include;

- Fractured Achaean basement rocks.
- Weathered Achaean basement.
- Cainozoic alluvial and colluvial sands, gravels and clays.
- Calcrete (including opaline silica).

Depths of up to 60 m of alluvium occur in a palaeodrainage east and southeast of Big Bell. Under the palaeochannels, basement varies from fresh to weathered to depths of 10 m in the deeper parts of palaeochannels. Elsewhere, alluvials are only a thin veneer, overlying basement weathered to depths of 30 m or more. Depths to water in alluvium immediately southeast to northeast of Big Bell are in the order of 15 m to 20m.

Calcrete occupies parts of the palaeodrainage within 10 km of Big Bell. The Austin Downs Homestead calcrete is approximately 12 m thick, and is underlain by Tertiary clays of unknown thickness. Depths to water are in the order of 5 m. Calcrete east of Big Bell may reach 20 m in thickness nearer Cue. Depths to water in this area are up to 3 m below natural ground surface.

Groundwater recharge is derived primarily from surface run-off where alluvial material overlaps basement rocks, stream beds and areas of flooding. Some recharge may result from direct infiltration into areas of outcropping fractured basement rock. There will also be direct infiltration into calcrete via local depressions and areas of broken ground.

In the topographically low-lying areas, such as to the east and immediately south of the Big Bell area, saline groundwater exists. The highest groundwater salinities occur nearer Lake Austin, as a result of concentration by evapo-transpiration from the salt lake. Further modification to groundwater quality may occur periodically as a result of gradient reversal, mobilising water away from Lake Austin, after filling of the lake by rainfall and run-off.

# 16.1.1.4 Geotechnical

The updated Norwegian Geological Institute (NGI) Q-System an empirical rock mass classification scheme, has been used to characterise ground conditions and provide guidance for ground support and reinforcement design.



Window mapping has been undertaken in the decline, ore drives and accesses between 275 Level and 535 Level. Despite the different lithologies within the lode the rock characteristics are similar enough to view as two broad domains of footwall (amphibolite) and lode. All domains are massive to foliated rock masses with RQD's averaging 90-100.

Statistical Properties	Amphibolite	Ore zone *	
Mean	6.34	3.67	
Median	5	3.75	
Mode	7.5	5	
Standard Deviation	3.6	2.45	
Minimum	0.21	0.42	
Maximum	15	12.5	
Count	41	55	

Table 16-1 Big Bell Q values for Ore zone and the footwall.

\*The ore zone is a combination from mapping separate categories for KPSH, ALSH, and BISH.

#### **Major Structural Features**

Apart from foliation there are three major structural features intersected within the Big Bell mine area.

There is the lode graphitic shear, foliation parallel fault and the footwall graphitic shear.

### Lode Graphitic Shear Zone

The lode graphitic shear zone is slightly transgressive to stratigraphy, in the central areas of the mine it is located at the contact between the amphibolite and felsic volcanics, whilst at the northern and southern areas it moves up into the felsic volcanic. The zone varies in width from millimetres up to 0.5 m and consists of a zone of milled breccia comprising graphite, quartz, carbonate and country rock fragments.

The structure is sub-parallel to foliation and dips with foliation.

The shear is located five to twenty metres from the economic orebody footwall (**Figure 16-1**).

North of 3,760 mN the lode graphitic shear splits into two narrower parallel structures, with an approximate three metre separation.

### Foliation Parallel Fault

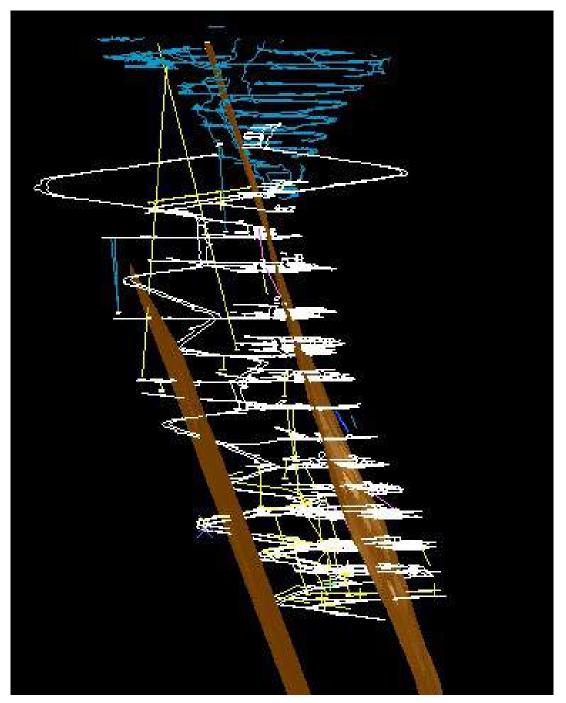
A foliation parallel fault is located in the orebody footwall, approximately 65 m from the ore contact. The fault is characterised by magnetite infill and exhibits a normal sense of movement. The fault has been offset by later stage pegmatite intrusions. It does not appear to have any geotechnical impact on the mine design.



# Footwall Graphitic Shear Zone

The footwall graphitic shear is located some 150 m from the footwall of the ore zone and is only intersected in the decline on the westward loops.

Although not shown in **Figure 16-1**, the shear zone does continue to surface. At higher levels in the mine (above 435 level) the structure is a single zone of milling, whilst below 510 level the shear consists of number of smaller discrete shears over several metres.



The structure is similar in composition to the first graphitic shear.

Figure 16-1 Big Bell looking north at the two graphite shears (mineralisation not shown). Source: Westgold.



The two graphitic shears appear to move gradually closer at depth and to the south from the available information. This may have an impact on planned decline shapes but will be evaluated by diamond drilling.

The footwall rock mass behind the production face gradually relaxes back to the footwall graphitic shear. This is evidenced by rock mass damage to the historic escapeway raisebore only to the East of the footwall graphitic shear zone and not to the West, relaxation driven falls of ground in unmeshed sections of the decline and displacement on the footwall graphitic shear when exposed in decline development. Development that crosses this zone must have a ground support scheme that can maintain serviceability with this deformation.

## **Major Defect Sets**

Rock defect data collected from historical mapping conducted between the 435 and 585 Levels mapping were assessed using the DIPS software.

A stereoplot of defect orientation data is shown below. Major defect sets are also summarised below.

Dominant defect sets identified from the historical mapping data have been compared to those identified by recent mapping. Typically, only two to three sets plus the ubiquitous foliation are present at any development heading.

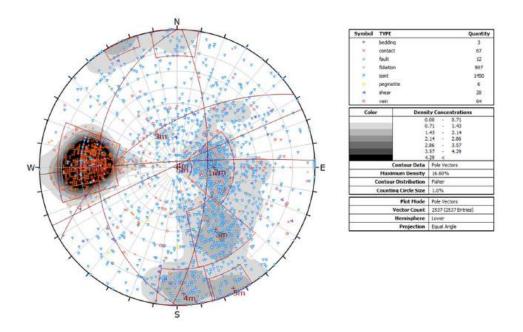


Figure 16-2 Big Bell stereoplot of defect orientation data is shown below. Source: Westgold.



Table 16-2 Big Bell defect orientation fata recorded on historical plans between the 435 and 585 levels fordominant defect sets.

Defect Set	Equivalent Historic Set ID (Sandy, 1997)	Dip	Dip Direction	Туре	Shape	Roughness	Trace Length (m)
1	1	65	092	Foliation, bedding, veins, contacts, joints, shears	Planar	Rough	2-5 (up to 20)
2	4	30	270	Joints, contacts, shears, veins	Planar	Rough	3-10 up to 30
3	3	56	328	Joints, veins, contacts	Planar	Rough	3
4	2	85	357	Joints, shears veins	Planar, undulose	Rough, smooth	2-6
5	-	88	335	Joints			

The dominant joint sets identified from the global database are generally representative of individual rock types with the following exceptions:

- Set 3 has a slightly steeper dip within the amphibolite.
- Two weaker sets are evident within the amphibolite units oriented  $59^{\circ} \rightarrow 225$  and  $58^{\circ} \rightarrow 273$  (outliers of Set 1).
- Sets 3 and 5 are not well represented within the BISH units.
- Sets 2, 3 and 5 are not present in the INSH, however this may be a function of a small dataset.

Slightly more variation in the dip of the foliation evident within the amphibolite, however this variation is not significant. Historical mapping on the lower levels of Big Bell indicates a slight change in strike of the mineralised units exists between the 3,775 mN and 3,800 mN. The change is strike of the mineralised units is of the order of 10° from 170-350 south of 3775 mN to 180-360 north of 3,775 mN.

Analysis of structural data north and south of the 3,775 mN indicates:

- there is no significant change in the orientation of the foliation north and south of the 3,775 mN.
- Set 2 is stronger in the north (as a percentage of the total poles) and dips more steeply to the WSW.

Analysis of defect orientation data from level to level shows no significant change in in distribution or orientation of the dominant defect sets with depth.



## In-situ Stress Regime

Four Hollow Inclusion Cell Stress (HI-Cell) measurements have been taken at the mine.

Australian Mining Consultants Pty Ltd conducted the measurements (measurements for 350, 380, 485 and 574 Level's). These four are considered to be influenced by their proximity to the workings, and therefore likely do not show their true in-situ stress fields.

Further analysis was undertaken by Western Australian School of Mines in 2010, with two samples from hole orientated diamond drill hole CMM0004, utilising Acoustic Emission (AE) methods. The results from the AE test were used for the calibration and damage forecasting work by Beck 2016. The results for the individual sites are shown below.

LOCATION	PRINCIPAL STRESSES	MAGNITUDE (MPa)	DIP (°)	BEARING (mine°)
	Major	74.3	06	215
350 Level HI-Cell	Intermediate	38.1	07	306
111-0011	Minor	19.3	81	086
	Major	52.5	16	242
380 Level HI-Cell	Intermediate	29.6	19	338
111-0011	Minor	22.8	65	114
	Major	69.1	27	274
485 Level HI-Cell	Intermediate	34.3	06	007
111-0011	Minor	29.9	63	109
	Major	86.3	10	266
574 Level HI-Cell	Intermediate	37.9	29	170
111-0011	Minor	31.4	59	014
	Major	49	06	178
836 Level AE	Intermediate	32	07	088
AE	Minor	23	81	307
	Major	54	08	194
928 Level	Intermediate	39	13	102
	Minor	25	74	314

### Table 16-3 Big Bell in-situ stress testing results.



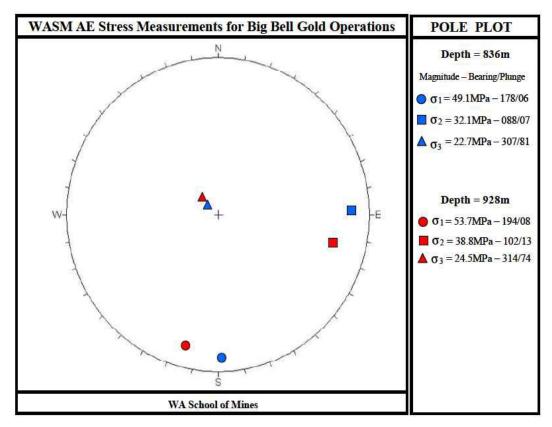


Figure 16-3 In-situ principal stress magnitudes from Acoustic Emission measurements taken at Big Bell. Source: Westgold.

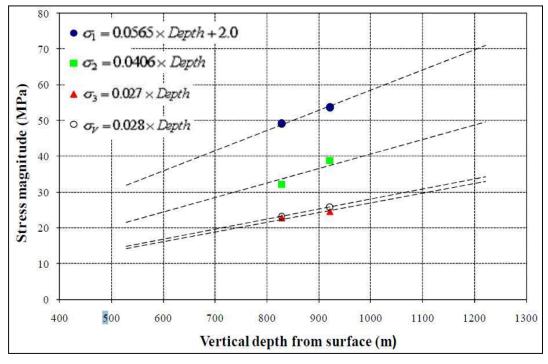


Figure 16-4 Relationship of principal stress at Big Bell with depth (Acoustic Emission results). Source: Westgold.



## **Rock Properties**

A number of rock testing programs have been undertaken for Big Bell. The tables below summarises available rock property test results.

		UCS (30)	Young's Modulus	Poisson	Densit	
Rock Type	Statistical Property	(MPa)	(GPa)	Ratio	(t/m <sup>3</sup> )	
AMPH	Mean	126.3	65.7	0.23	2.94	
Footwall	Standard Deviation	52.7	11.0	0.08	0.11	
Rock	Minimum	47.4	49.0	0.10	2,76	
Unit	Maximum	212.1	80.6	0.41	3.08	
	Count	22	16	16	17	
KPSH	Mean	128.3	44.2	0.28	2.73	
Lode	Standard Deviation	40.8	10.5	0.07	0.05	
	Minimum	79.8	27.2	0.17	2.65	
	Maximum	213.0	61.8	0.44	2.83	
	Count	22	21	21	22	
ALSH	Mean	115.6	43.8	0.22	2.78	
Lode	Standard Deviation	43.3	12.7	0.09	0.05	
	Minimum	40.8	22.9	0.04	2.72	
	Maximum	þ72.0	60.0	0.37	2.87	
	Count	13	12	12	13	
BISH	Mean	93.9	46.0	0.23	2.87	
Lode	Standard Deviation	25.8	13.2	0.07	0.07	
	Minimum	60.0	20.0	0.12	2.76	
	Maximum	153.0	69.4	0.34	2.99	
	Count	13	12	12	13	
INSH	Mean	168.6	60.3	0.31	2.70	
langingwall	Standard Deviation	27.9	14.5	0.03	0.03	
	Minimum	135.0	46.0	0.26	2.64	
	Maximum	216.0	86.0	0.37	2.73	
	Count	7	7	7	7	

Table 16-4 Summary of Big Bell rock property test results.

### Table 16-5 Big Bell pegmatite rock properties.

Rock Type	UCS (Mean)	Young's Modulus	Poisson Ratio
Pegmatite	187	49.4	0.19



### 16.1.1.5 Geology

The project area is located at the southern end of a narrow northeast-trending greenstone belt, (informally referred to as the Big Bell Greenstone Belt), which adjoins the larger Meekatharra - Mount Magnet Greenstone Belt. The belt has a strike length of 33 km and a width of 1.5 km at Big Bell and is bounded to the east and west by granite intrusions. To the north of Big Bell, the Big Bell Greenstone Belt widens, whereas to the south the sequence thins to less than 200 m (approximately 7 km south of the mine).

The Big Bell Greenstone Belt is comprised of variably altered and intensely sheared, north-northeast-trending amphibolites and felsic schists. The muscovite and biotitealtered rocks hosting gold mineralisation at Big Bell are informally referred to as the Big Bell Mine Sequence. The greenstone belt can be divided into three domains separated by two major regional fault zones (Barnes, 1996). The eastern domain (mostly amphibolite), the central domain (quartzofeldspathic and biotite schists which host the Big Bell Mine Sequence), and the western domain (dominated by amphibolite). The metamorphic grade within the greenstone belt is mid to upper amphibolite facies.

The Mine Sequence includes biotite and quartzofeldspathic schist (BISH and INSH), altered amphibolite (AMPH) and sheared porphyry dyke (PORP) within the central domain of the Big Bell greenstone belt. The main host for gold mineralisation at Big Bell is altered K-feldspar-rich (KPSH) and muscovite-rich (ALSH) quartzofeldspathic schist. The sequence dips to the east, and its base is the tectonic contact with the amphibolite of the western domain, along the graphitic Footwall Shear Zone.

Along strike to the south of Big Bell the lithological host of the mineralisation is variable, although still restricted to the altered biotite or quartzofeldspathic schist. At Little Bell and Big Bell South better gold mineralisation is found on the hanging wall (BISH) and to a lesser degree the footwall (KPSH) contacts of the mineralisation observed at Big Bell. Moving south, the biotite (+ cordierite) schist (BISH) is the dominant host at Shocker and 1,600N with lower, more dispersed, grade within ALSH. Fender is the southernmost deposit, and the entire mine sequence narrows significantly such that, although only approximately 13 metres wide, the mineralised lithologies includes ALSH, BISH and INSH. The Fender mineralisation is bound on the footwall by KPSH and hanging wall by garnet-rich schist (GASH).

In the Big Bell area, mineralisation outside the immediate Mine Sequence has been observed in the hanging wall amphibolite at Irishman - Mary Belle and the Footwall Amphibolites at Harris Find.

Approximately 30-40% of the belt outcrops in three areas of high relief (up to 30 m), one to the east of Big Bell mine, and the other two to the north of the mine. The remainder of the greenstone belt is concealed beneath granite-derived sheet-wash and alluvium of depths ranging from 5 m to greater than 90 m in Tertiary palaeodrainage.



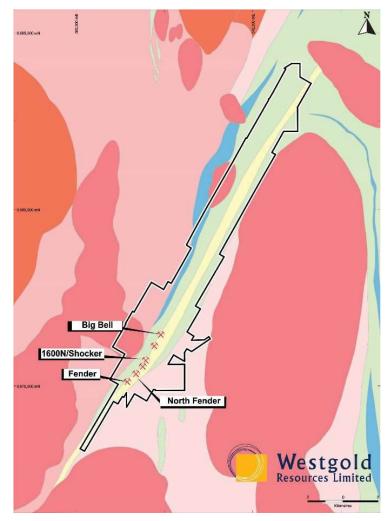


Figure 16-5 Schematic outline of Big Bell area geology showing the Big Bell mine sequence squeezed between the surrounding granite bodies: Westgold.

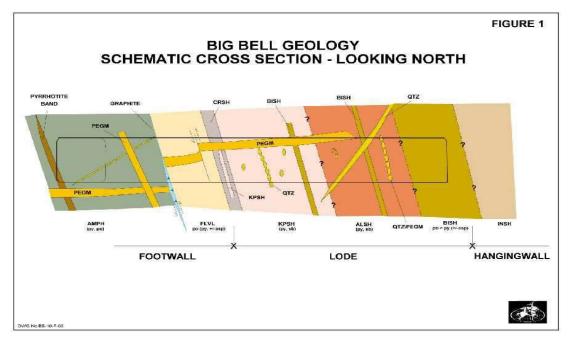


Figure 16-6 Schematic cross-section of Big Bell mine sequence geology. Source: Westgold.



Five phases of alteration have been recognised at Big Bell. These are:

- 1. Pre-metamorphic mass loss and aluminous enrichment;
- 2. Prograde biotite, muscovite and calc-silicate alteration, along with barren sulphide mineralisation;
- 3. Retrograde muscovite, sericite and chlorite alteration;
- 4. K-feldspar and silica alteration, plus gold and sulphide mineralisation;
- 5. Incipient development of sillimanite and remobilisation of pyrite and pyrrhotite during contact metamorphism.

Mineralisation at Big Bell is hosted in the shear zone (Mine Sequence) and is associated with the post-peak metamorphic retrograde assemblages. Stibnite, native antimony and trace arsenopyrite are disseminated through the K-feldspar-rich lode schist. These are intergrown with pyrite and pyrrhotite, which are noted in most rocks of the Mine Sequence, and chalcopyrite. Mineralisation outside the typical Big Bell host rocks (KPSH), for example 1,600N and Shocker, also display a very strong W-As-Sb geochemical halo.

Most studies indicate gold exists in two forms, silicate and sulphide host. However, a metallurgical report by AMTEL suggests the principle gold mineral is native gold (88 wt% Au) and accounts for 73 to 79% of the gold in the mill feed. The silicate host to the gold includes quartz and microcline. Sulphide hosts include pyrite and pyrrhotite, as well as traces in aurostibite, ilmenite, rutile, stibnite and arsenopyrite.

### 16.1.1.6 Historical Mining

The Big Bell deposit was previously mined via an open pit and from underground from the 1930's to 1955.

Mining operations recommenced in 1989 with excavation of a large low grade open pit centred over the historical workings. Underground mining (initially proposed as the core and shell method) resumed in 1994 via decline access to allow for the extraction of the orebody below the pit floor.

The new underground mine extracted the low-grade halo surrounding the historical stopes, their rib and crown pillars and the backfill they contained down to the 380 Level, the bottom of the old workings. Mining continued along strike as transverse and longitudinal Sub-Level Cave. The 410 Level was the first level to be the only longitudinal Sub-Level Cave. Production rates peaked in the late 1990's at just under two million tonnes.

Production reached the 585 mRL level before mining ceased in 2003 when it was no longer economically viable to continue. Services were pulled out and the mine was allowed to flood.



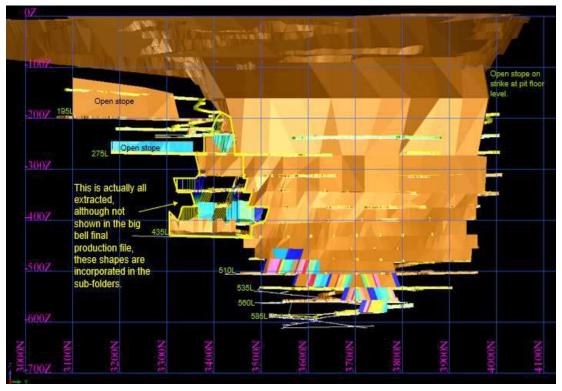


Figure 16-7 Big Bell void model looking west. Source: Westgold.

## 16.1.1.7 Mine Design Parameters

The decline will follow a gradient of -1:7 down. This ensures the consistency of the design whilst also optimising the haulage profile of the trucking fleet. Stockpiles have been strategically located along the decline to allow to be used as diamond drill and / or long-term infrastructure areas for the mine.

The decline has been designed to allow for speed of development, long straights rather than tighter turning circles have been preferred where possible. Initially, there will be a requirement for speed to reduce the time taken to get to the first ore level. During this period, it is imperative that consistency and efficiency is prioritised.

Stopes will be accessed via ore drives developed off access drives from the decline. Levels are kept vertically in the same plane to ensure drain holes and service holes between levels can be drilled. All levels have an internal stockpile for truck loading. Although ore drives are long (upwards of 160 m) no consideration was given to internal stockpiles within the ore drive as this occurrence is rare.

The minimum standoff from the orebody is based upon the footwall graphitic shear, therefore all capital infrastructure has been designed outside of this. Development is split into north and south areas with production beginning in the centre point of these two regions and longitudinally progressing to the extents. To comply with the current Western Australian Mines Regulations, all airflow will be captured "on-level", that is, each level shall have its own return airway.



### Table 16-6 Big Bell design criteria.

Criteria	Factors
Level Spacing	25m-30m vertical level spacing
Minimum Stope Width	5m
Dilution	Dependent on width, on average 10%
Strike Length	SLC – 2.8m, LHOS – 10m
Maximum Stope Width	30m
Minimum Dip (stoping area)	42°
Maximum Dip (stoping area)	NA

The mine designs were loaded into Deswik software. Figures below depict the design concluded for Big Bell.

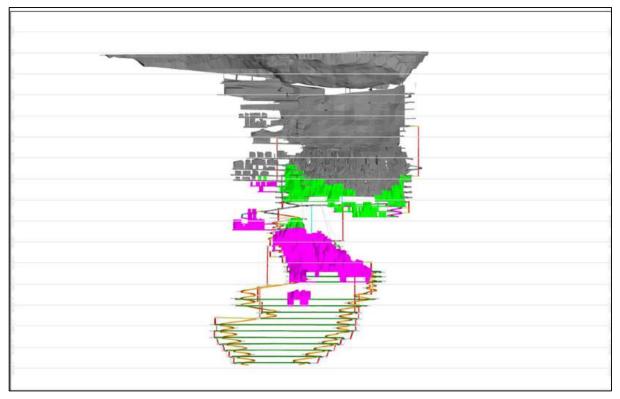


Figure 16-8 Big Bell Mineral Reserves showing existing pit and workings looking west. Source: Westgold.



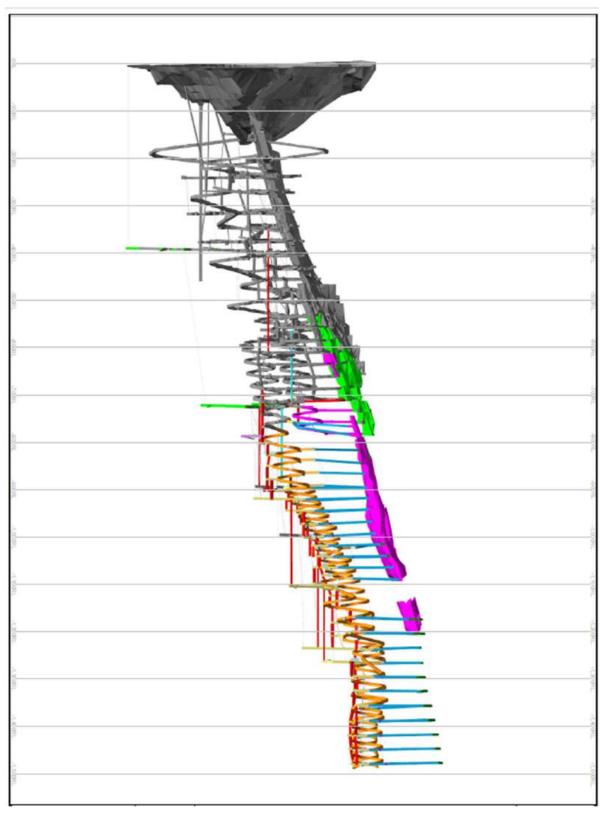
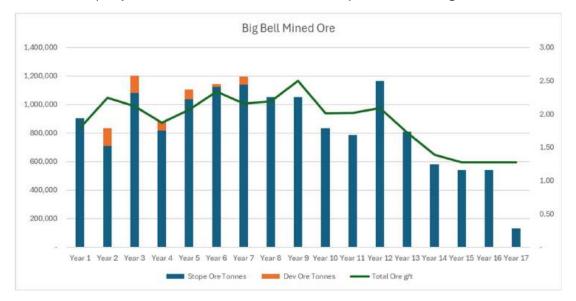


Figure 16-9 Big Bell Mineral Reserves showing existing pit and workings looking north. Source. Source: Westgold.



## 16.1.1.8 Mine Scheduling

The mining schedule for the LOM plan was generated using Deswik mine planning software. Once the development and stope designs are produced, they are evaluated in Deswik against the geological block model. Development and stope shapes are then reviewed and included in the schedule if they are economic to mine. All activities that make up the stoping cycle, such as production drilling, charging and bogging are added into the mine schedule. The development and stoping activities are then linked in a logical extraction sequence which considers mining practicality, geotechnical and productivity constraints. Each task has an equipment resource applied to it, with schedule productivities based on current site performance and parameters appropriate to the equipment being used. The current mine life is scheduled over 204 months (subject to further schedule refinements), as shown in Figure below.



### Figure 16-10 Big Bell Life of Mine schedule. Source: Westgold.

### 16.1.1.9 Mobile Equipment

The mine equipment proposed for Big Bell is industry standard trackless underground diesel equipment constructed by reputable manufacturers and well suited to current site operations. The primary underground fleet is shown below.

Unit Description	Unit Quantity
Twin Boom Jumbo	1-2
Production Drill	1-2
15 t LHD	1–5
60 t Truck	7–8
Integrated Tool Carrier	5

## 16.1.1.10 Labour Estimate

The cost model simulated the following labour requirements for the scheduled production at Big Bell as shown below. For ease of reading this is restricted to 12 years only.



Labour	Max.	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12
Jumbo Operators	6	6	6	6	6	6	6	4	3	3	3	3	3
Charge-Up Operators	12	12	12	12	12	12	12	8	6	6	6	5	5
Long Hole Drill Operator	6	6	6	6	6	6	6	6	6	6	6	5	3
LHD Operators	18	18	18	18	18	18	18	13	11	11	10	9	9
Truck Operators	24	24	24	24	24	24	24	24	24	21	21	21	21
Cable Bolter	3	3	3	3	3	3	3	2.5	2	2	2		
Grader Operators	1	1	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5
Water Cart Operators	1	1	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5
Servicecrew	12	12	12	12	12	11	9	9	9	9	9	9	9
Shotcretecrew	10	10	10	10	10	10	10	10					
Storeman	2	2	2	2	2	2	2	2	2	2	2	2	2
Nipper	6	6	6	6	6	6	6	4	3	3	3	3	3
Lead Hand Fitter	4	4	4	4	4	4	4	4	4	4	4	4	4
Fitters	35	35	35	35	35	35	35	35	35	35	35	30	25
Drill Fitter	4	4	4	4	4	4	4	4	4	4	4	4	4
Electricians	8	8	8	8	8	8	8	8	8	8	8	8	8
UG Manager	2	2	2	2	2	2	2	2	2	2	2	2	2
Mine Superintendent	3	3	3	3	3	3	3	3	3	3	3	3	2
Shift Supervisor	6	6	5	5	5	5	5	4	4	4	4	4	4
Safety Trainer	4	4	4	4	3	3	3	2.5	2	2	2	2	2
Maintenance Foreman	2	2	2	2	2	2	2	2	2	2	2	2	2
Maintenance Senior Leading Hand	4	4	4	4	4	4	4	4	4	4	4	4	4
Electrical Supervisor	2	2	2	2	2	2	2	2	2	2	2	2	2
Site Administrator	2	2	2	2	2	2	2	2	2	2	2	2	2
Mining Engineer	8	8	8	8	8	8	8	8	8	8	8	8	8
Surveyor	5	5	5	5	4	3	3	3	3	3	3	3	3
Geologist	12	12	12	11	7	7	7	9	9	9	9	9	9
Total Labour		202	201	200	194	192	190	176	159	156	155	145	137

### Table 16-8 Big Bell labour requirements.

### 16.1.1.11 Site Layout

Big Bell is an operating mine, as development and production continues upgrades and refurbishments of various parts of the underground and surface infrastructure will be required.

## 16.1.2 Fender

## 16.1.2.1 Underground Infrastructure

The Fender underground mine will be accessed the existing Fender decline to the base of the mine. The declines are developed at a 1:7 (down) gradient to the various orebody development horizons through. The decline is typically 5.3 mW x 5.8 mH, with a standard ore drive size of 5 mW x 5 mH. Lateral development profiles are well matched to the mobile fleet.



Ore is hauled from the underground to surface via the decline where it is then transported via a separate surface haulage fleet to the Tuckabianna mill.

The Fender is not an active underground mine and therefore key infrastructure such as underground communications, electrical reticulation, pumping and ventilation will need to be re-established.

Equipment will be maintained and serviced at a surface workshop.

### 16.1.2.2 Mining Methods

The current planned mining method for Fender mine is Long-Hole Open Stoping (LHOS) using longitudinal retreat to central access. Levels are spaced at 25 m vertical intervals and extracted in top-down sequence. No backfill is used to fill the stope voids, only rib, island and sill pillars to control stope span and hanging wall stability.

Access to the underground workings is by decline to the base of the mine. Initial access is provided by a portal excavated into the lower western wall of the Fender Pit at the -80 mRL. The decline is developed at a gradient between 1:7 and 1:8 down to attain the various orebodies' development horizons.

Declines and level accesses are located in the footwall of Fender ore body. The access drives may provide travel-way access, suitable for underground trucks, into the main production areas of the orebody. Secondary development, suitable for bogger access, is then developed to the economic periphery of the level.

Levels are sub-divided into multiple panels (or individual stopes), with rib, island and sill pillars designed where required to reduce the overall hydraulic radius and provide stability of the stope. Sill pillars are being used to minimise stope dilution and potential cascading of previous failure above, therefore are designed as thin as practicable to reduce ore being left behind.

Production stoping typically follows the cycle outlined below.

Up or down holes are drilled in patterns to form a rise and slot for initial stope opening.

Up or down hole production rings follow to define stope excavation boundary.

The rise and slot are fired to create an initial void.

Ring blasting commences towards opened void.

Manual bogging of the broken ore continues until the loader bucket is level with the stope brow.

Tele-remote bogging is conducted beyond the stope brow.



## 16.1.2.3 Hydrology

Rockwater Proprietary Limited (Rockwater) carried out an assessment of the Cue area, including Fender pit water samples in November 2011.

The key conclusions of the Rockwater assessment report for the mine were:

- The main aquifers in the mine area are not recorded, but based on investigations in similar areas, they are probably the mineralised zone; transition zone rocks near the base of weathering; and other brittle, siliceous rocks including felsic volcanics, BIF and gabbro. Also, the folding and other structural processes may have resulted in open joints.
- The assumption of the depth of the water table (between 13 m and 28 m below the ground level) is taken from Big Bell data since there is no record for Fender. It is made due to the close proximity between Big Bell and Fender (within 4 km).
- The monitoring program has indicated a PH of approximately 9.0.
- The water sample had 5,400 mg/L of water salinities.
- Groundwater flows into the proposed underground development at Fender are expected to be low; however, there may be some higher short-term flows when localised zones of high permeability are intersected.

Previous water inflows of 13.1 L/s were controlled with established pumping infrastructure and no significant increases of inflow are expected.

### 16.1.2.4 Geotechnical

Geotechnical data will be collected on an ongoing basis in the Fender mine. This will include logging of borehole cores, mapping of underground conditions, monitoring of instrumentation and visual inspections.

Defect orientation data has been collected from logging of orientated core from six diamond drillholes and mapping conducted in the Fender Pit at the -80 mRL.

Stereoplots of defect data obtained from footwall amphibolite and ore sequence are shown in Figures 4 and 5 respectively.

Defect sets identified within the footwall amphibolite and rocks comprising the ore sequence are essentially identical, however Sets 3, 6 and 7 are absent from the ore sequence.



Defect Set	Dip/Dip Direction	Fisher's Constant (K)	Туре	Planarity	Roughness	Comment
1	80°→091	38.0	Foliation, joints, veins	Planar to curved/wavy	Rough to very rough	Dominant set
2	05°→360	32.4	Well-developed joints	Planar to curved/wavy	Rough	Major Set
3	<mark>58°→08</mark> 5	100.5	Foliation, joints, veins	Planar to curved/wavy	Rough to very rough	Outlier of Set 1
4	83°→125	70.9	Joints	Planar to curved/wavy	Rough	Outlier of Set 1
5	68°→011	19.3	Joints	Planar	Rough	Broad, relatively weak set
6	87°→183	45.0	Joints	Planar	Rough	Weak Set
7	76°→270	1970.4	Joints, foliation	Planar to curved/wavy	Rough	Outlier of Set 1

Table 16-9 Dominant defects identified from core logging and mapping within the Fender pit.

Essentially there are two dominant defect sets present at the mine:

- A north-south striking, steep easterly dipping foliation and sub-parallel joint set (Set 1),
- A sub-horizontal joint set (Set 2).

Defect orientation data collected from mapping within the Fender Pit indicates that the dominant defect set has a slightly north-northeast – south-southwest west strike compared with the north - south strike determined from logging (**Figure 16-11**). This may be the result of inaccuracies in core orientation or an indication there is a slight variation in the orientation of the dominant defect set (foliation) further away from the mineralised zone.

Moderate to steeply dipping east-west striking defects (Sets 5 and 6) are relatively common within the pit, although tend to be isolated. A similar structural pattern has been observed at the neighbouring Big Bell Mine.

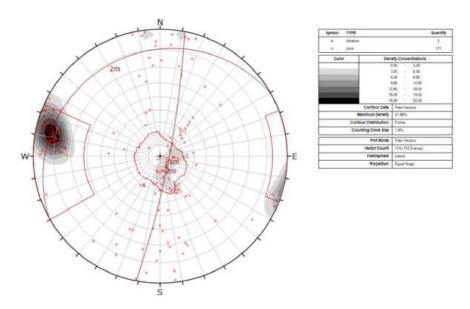
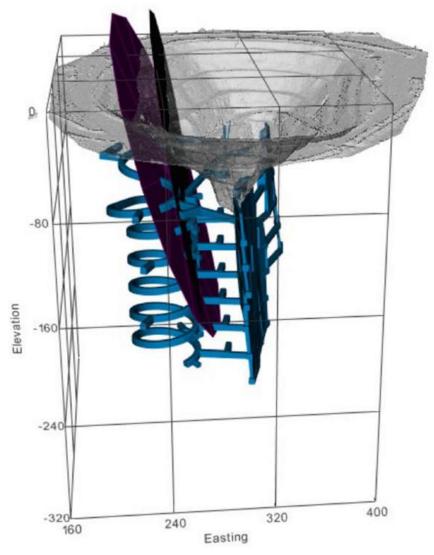


Figure 16-11 Fender defect orientation data obtained from pit mapping. Source: Westgold.



Within holes 20FDGT002, 21FDGT004 and 21FDGT003 two graphitic shear zones have been identified within the footwall amphibolite (**Figure 16-12**).

These structures have similar orientations, with the western structure possibly a splay of the main zone to the east. The shear zone appears conformable to the foliation and has orientations between 81°→094 and 73°→097. Projection of the two graphitic structures identified within drillholes indicate they may merge at depth. These structures have been associated with significant slope instability within weathered material on the western wall of the Fender Pit.



The graphite zones are typically 10 to 20 cm thick in drill core.

Figure 16-12 Location of Fender graphitic shear zones identified in drill core in the footwall amphibolite. Source: Westgold.

The rock mass in hole 21FDGT003 collared at the northern end of the pit is more weathered than in holes 20FDGT002 and 20FDGT004. Minor graphite is evident within 21FDGT003, corresponding with the eastern graphitic shear projection.

The western graphitic shear corresponds with a 50 cm zone of "sand" (Figure 16-3).





Figure 16-13 'Sand Zone' intersected in hole 21FDGT003. Source: Westgold.

Typical RQD values in the vicinity of the graphitic shear zone are between 10 and 40.

Several oxidised structures were intersected in drillhole 21GT003 at low axis to the long-core axis (**Figure 16-14**). These structures are sub-horizontal and preferentially weathered, located just above the top of fresh rock. The sub-horizontal structures are persistent and act as possible conduits for ground water.



Figure 16-14 Preferentially weathered structures at low angle to the long core axis in hole 21FDGT003. Source: Westgold.



No in situ rock stress measurements have been undertaken at the mine. However, the pre-mining stress state has been inferred from calibrated numerical models conducted at Big Bell.

Major principal stress gradients and orientations are summarised below.

Table 16-10 Pre-mining stress field assumed at Fender (relative to Big Bell grid).

Major Principal Stress	Magnitude (MPa)	Bearing (°)	Plunge (°)	
σ1	0.0657	090	00	
σ2	0.0441	180	00	
σ3	0.0280	005	90	

Current proposed stoping will be carried out at depths of <500 m below natural surface.

Given proposed relatively shallow stoping depths, in situ rock stress magnitudes anticipated to be encountered are not expected to cause significant stress related issues.

Laboratory direct shear tests were performed on two (2) naturally occurring rock defects within Fender borehole cores.

	From	T.		P	eak	Res	idual
Hole ID	From (m)	(m)	To (m)	Friction Angle	Cohesion (kPa)	Friction Angle	Cohesion (kPa)
20FDGT001	35.3	35.53	Amphibolite	37.6	5.6	31.4	16.8
20FDGT004	41.22	41.5	Amphibolite	46.4	67.5	36.5	68.5

The results of defect shear strength testing have been used to determine defect shear strength within weathered and fresh material for the purpose of kinematic analysis using the Barton Empirical Shear Strength Criterion.

The Barton Empirical Shear Criterion is defined as:

 $\tau = \sigma n x \tan [(JRC * \log(JCS/\sigma n) + \phi b]]$ 

where:

τ = Peak Shear Strength (MPa)
 σn = Normal Stress (MPa)
 JRC = Joint Roughness Coefficient
 JCS = Joint Wall Compressive Strength
 φb = basic friction angle

The basic friction angle for defects in fresh rock, has been assumed to be equivalent to the residual friction angles determined from direct shear testing.



# Table 16-12 Estimates of defect shear strength (Mohr - Coulomb) derived from the empirical Barton strength criteria.

Material	JRC	JCS	Basic Friction Angle	Friction Angle	Cohesion
Amphibolite	7	194MPa	34°	44.9°	176kPa
Ore Sequence	7	156MPa	34°	44.2°	171kPa

### 16.1.2.5 Geology

The Meekatharra – Wydgee Greenstone Belt is located in the Murchison domain of the Youanmi Terrane, in the north-western part of the Yilgarn Craton (**Figure 16-15**) of Western Australia.

The Murchison Domain is made up almost entirely of narrow Archaean greenstone belts surrounded by large granitoids and gneissic complexes (Van Kranendonk and Ivanic, 2009; Watkins and Hickman, 1990). Abundant mafic dykes of predominantly Mesoproterozoic age crosscut major structures. Many of the granitoid in the area are covered by moderate to thick alluvium and lacustrine sediments. The remainder of the area has a thin transported cover.

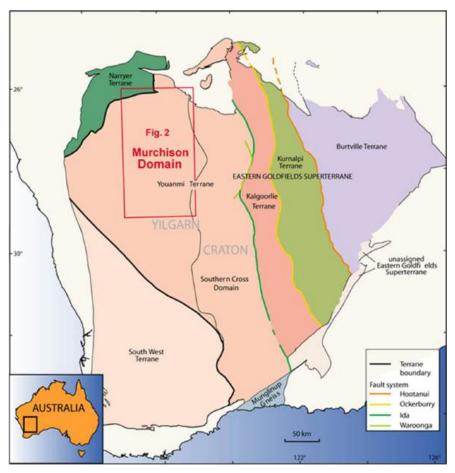


Figure 16-15 Map of the Yilgarn Craton. Source: Westgold.



The greenstone belts comprise a sequence of mafic to ultramafic volcanics with interflow sediments. Rock types include tholeiitic and komatiitic basalts, ultramafic intrusive and extrusive rocks, iron rich chert, shale and sandstone. Overall, these rocks are regionally metamorphosed to lower greenschist facies with metamorphic grade increasing in the vicinity of the granites (Alexander *et. al.*, 1991).

The Meekatharra - Wydgee greenstone belt is part of the northeast trending Meekatharra structural zone which is dominated by north and northeast trending folds and shears that is interpreted as a major zone of shear-related deformation (Spaggiari, 2006). In that respect, the Meekatharra - Wydgee greenstone belt is bounded to the west by the Chunderloo Shear Zone, and to the east by the Mount Magnet Fault. Within the greenstones, shear zones and the regional fabric are sub-vertical and trending in a north-north-easterly direction. Shears are locally cut by brittle faults. These shears and faults host numerous gold deposits and are the dominant structural control for Au-mineralisation in the Murchison Domain.

The Fender deposit occurs in a strongly deformed belt of mafic, ultramafic and felsic units that have been metamorphosed to amphibolite facies. The trend itself is defined by a zone of more intense shearing, which has experienced varying degrees of Kfeldspar– muscovite – biotite – sulphide (pyrite, pyrrhotite, and arsenopyrite) alteration.

The main mineralised zone at Fender strikes at 010 and dips steeply to the east. The true width of the mineralised zone varies from 3 m to about 15 m but is generally about 8 m wide. The mineralisation zone has a strike length of 300 m and is open at depth. The mineralised zone is interpreted to plunge at 75° to the north.

Mineralisation is hosted within potassium-feldspar-schist (KPSH), altered schist (ALSH) and biotite schist (BISH). Footwall development will be excavated in amphibolite schist (AMPH). Cordierite schist (CRSH) has been observed locally in drillholes and is the footwall marker unit to the deposit.

### 16.1.2.6 Historical Mining

Fender was mined in multiple stages, both as an open pit and underground mines with the latest underground mining conducted by WGX in 2020 to establish the portal.

### 16.1.2.7 Mine Design Parameters

The following stope design parameters were applied within the mine design:

- Minimum footwall dip angles were set at 45°;
- Minimum mining widths (excluding dilution) of 1.5 m;

Stope stability at Fender is likely to be controlled by the stability of the hangingwall and footwall of the stopes due to the narrow width mineralised zone, the presence of a dominant defect set sub-parallel to the strike of the stopes and the sub-vertical to steep, easterly dip of the stopes. Some instability in the backs may be expected due to the presence of a sub-horizontal to shallow dipping defect set.



The Modified Stability Graph Method developed by Potvin (1988) and comprehensively described by Hutchinson and Diederichs (1996) has been used to make a preliminary assessment of stope spans.

The key input parameters and formulae for determining the stability of a stope are summarised below:

$$Q' = \frac{RQD}{Jn} x \frac{Jr}{Ja}$$

Modified Stability Number, N ' = Q' × A × B × C, where:

- A Factor relating to rock strength and induced stresses.
- B Measure of relative orientation of dominant jointing to excavation surface.
- C Measure of influence of gravity on the stability of the stope face.

Modified stability numbers for stope hangingwalls, footwalls and backs at the mine are summarised below.

Rocktype	Q'min	Q'expected	Factor A	Factor B	Factor C	N'min	N'expected
Hangingwall	12	22.8	1	0.3	7	25.2	47.9
Footwall	11.3	22.8	1	0.3	3	10.2	20.5
Backs	14.8	24	1	0.3	2	8.9	14.4

 Table 16-13 Modified stability numbers determined for stopes at Fender.

Hydraulic Radius (HR) for regular stope geometries is given by:

HR (m) = Area (m2) ÷ Perimeter (m)

The modified stability number (N ') has been related to stable hydraulic radius (HR) in a generalised case history database of stope performance compiled by Potvin (1988).

The limit of stable hydraulic radius for unsupported spans has been determined by the relationship:

HR = 10(0.573 + 0.338LogN')

The equation above defines the boundary between the 'Transition' and 'Failure' zones on the Nickson-Potivin stability graph (**Figure 16-16**). Stable stope hydraulic radius for the backs, hangingwall and footwall predicted by this method are summarised in **Table 16-14**.

An estimation of dilution is provided by the Equivalent Linear Overbreak Slough (ELOS) which is a measure of the depth of overbreak normalised to the height and length of the stope.

ELOS is given by:

 $ELOS(m) = \frac{Volume \ of \ slough(dilution \ or \ overbreak)}{Stope \ height \ \times \ strike \ length}$ 



Dilution estimates or 'boundaries' are shown in Figure 16-16 and summarised below.

Design Face	Worst-case		Expected Conditions		
	HR	ELOS	HR	ELOS	
Hangingwall	11.1	0.5m	13.8	0.5m	
Footwall	8.2	1.0m	10.4	0.75m	
Backs	7.8	1.0m	9.2	1.0m	

Table 16-14 Stable stope hydraulic radius and ELOS at Fender.

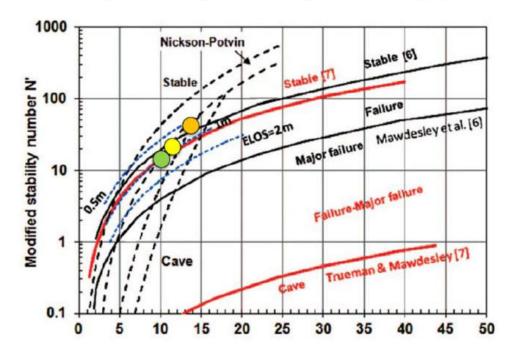


Figure 16-16 Expected stable stope hydraulic radii at fender relative to various versions of the modified stability graph - orange = hanging wall; yellow = footwall; green = backs. Source: Westgold.

Stable stope strike lengths determined for stope footwalls and hanging walls open over several levels are summarised in **Table 16-15**. Stope strike lengths will be constrained by the rock mass conditions in the footwall.

Estimated maximum strike lengths of stopes are not constrained by rock mass conditions in the backs, for stope widths of up to 9 m.

No. Levels Open	Hang	ingwall	Footwall		
No. Levels Open	Min <mark>i</mark> mum	Expected	Minimum	Expected	
1 (30m)	58	126	30	49	
2 (55m)	31	43	20	28	
3 (80m)	26	35	18	24	
4 (105m)	24	32	17	23	
5 (130m)	23	30	17	22	
6 (155m)	23	29	17	21	



Effective Radius Factor (ERF) is used to describe the geometry of irregularly shaped stopes or account for pillars within stopes. ERF should be used in place of HR to determine overall void sizes in the case of a staggered array of rib pillars or island pillars between stopes.

$$ERF = \frac{0.5}{\frac{1}{n}\sum_{\theta=1}^{n}\frac{1}{r_{\theta}}}$$

where:

n = number of measurements $r\theta = measured distance to pillar abutment etc.$ 

ERF values are maximised towards the centre of the stope, decreasing towards the edges.

The maximum ERF value is defined as the Radius Factor (RF) value, and generally corresponds to the HR for stope faces with length to width ratios of 3 or less. Based on the above analysis significant dilution would be expected in the central part of the stope with ERF values in excess of 30 m recorded.

In order to maintain an ERF value of 10 m, stope strike length should be limited to a maximum of 23 m. Where ERF values exceed 10 m a sill pillar would be most likely required to contain potential dilution.

The following guidelines are recommended for stope blocks utilising a staggered array of rib pillars:

- Maximum stope strike length: 23 m.
- Rib pillar strike: 5 m.
- Sill pillars every third level.

The designed stand-off distance between Fender decline and proposed stoping is 30 m coincides with the modelled location of the footwall graphitic shear zone, with any stand-off distance <30 m requiring review/approval by the Geotechnical Engineer. Proposed stoping is not expected to have significant influence on major access and mine infrastructure.

A sill pillar may be required in the event excessive dilution is experienced as a result of stopes remaining open over successive levels. Two-dimensional elastic modelling has been conducted in order to determine the required sill thicknesses to achieve FOS of 1.2 and 1.5 for non-entry and 'entry' mining respectively. The higher FOS would be required in the event that the sill is required to contain backfill to be used as a base or platform on which to extract the crown pillar during the later stages of mining.

In order to achieve a FOS of 1.2 modelling indicates an 8 m thick sill pillar would be required above a 9 to 10 m span (**Figure 16-17**). A 10.5 m thick sill pillar would be required to achieve a FOS of 1.5 m.



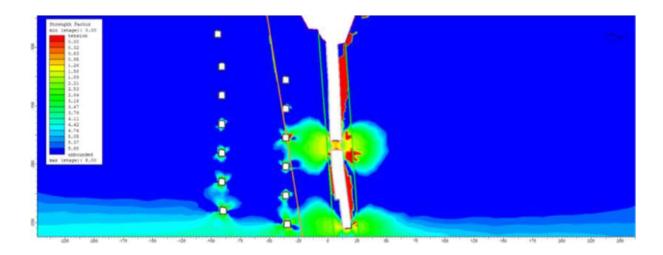


Figure 16-17 Induced stress around an ore drive at the base of the proposed development at Fender: Westgold.

The short-term stability of rib pillars will be controlled to a large extent by blast damage. The strike length of rib pillars should ultimately be determined based upon site experience. In general, pillars with strike lengths of less than 5 m in drives with widths of greater than 5 m, have a high failure rate due to damage caused by blasting.

As a starting point, the dimensions of the rib pillars are full height with typically 1:1 (width : length). Using experiential learnings, the pillar dimensions are adjusted pending previous performance and desired outcomes. These pillars are generally not permanent requirements and only needed until the stope panel is bogging empty (<1 month).

Pillars between development drives are designed based on their skin-to-skin separation distance, according to the following convention:

- The skin-to-skin horizontal separation distance between two development drives, divided by the height of the drive, is the **width : max. span ratio**.
- The skin-to-skin vertical separation distance between two development drives, divided by the width of the drive, is the **height : max. span ratio**.
- The minimum required width : max. span ratio is estimated to be 1:1.
- The minimum height : max. span ratio is estimated to be 1.5:1.

The mine designs were developed in Deswik software. **Figure 16-18** and **Figure 16-19** depict the design concluded for Fender.





Figure 16-18 Fender underground Mineral Reserve design with existing pit (grey) looking west. Source: Westgold.

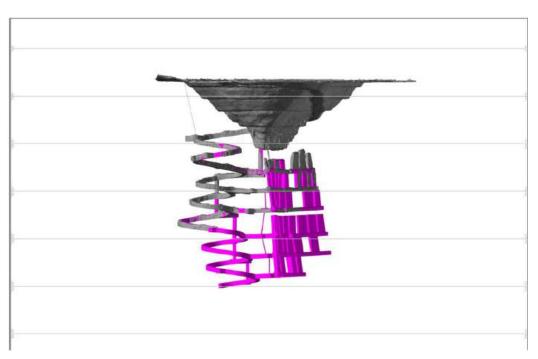


Figure 16-19 Fender underground Mineral Reserve design with existing pit (grey) looking north. Source: Westgold.



### 16.1.2.8 Mine Scheduling

The mining schedule for the LOM plan was generated using Deswik mine planning software. Once the development and stope designs are produced, they are evaluated in Deswik against the geological block model. Development and stope shapes are then reviewed and included in the schedule if they are economic to mine. All activities that make up the stoping cycle, such as production drilling, charging and bogging are added into the mine schedule. The development and stoping activities are then linked in a logical extraction sequence which considers mining practicality, geotechnical and productivity constraints. Each task has an equipment resource applied to it, with schedule productivities based on current site performance and parameters appropriate to the equipment being used.

The current mine life is scheduled over 11 months (subject to further schedule refinements), as shown below.

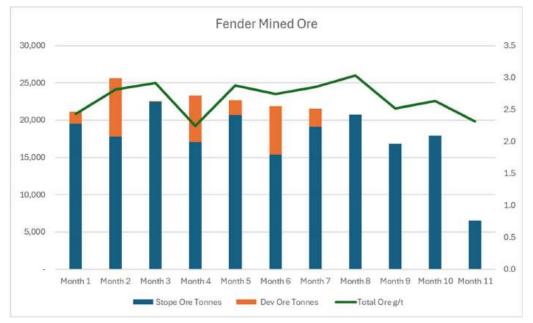


Figure 16-20 Fender Underground schedule. Source: Westgold.

## 16.1.2.9 Mobile Equipment

The mine equipment proposed for Fender is industry standard trackless underground diesel equipment constructed by reputable manufacturers and well suited to current site operations. The primary underground fleet is shown in **Table 16-16**.

Unit Description	Unit Quantity
Twin Boom Jumbo	1
Production Drill	1
15tLHD	2
60 t Truck	1
Integrated Tool Carrier	1

Table 16-16 Fender Primary underground fleet.



## 16.1.2.10 Labour Estimate

The cost model simulated the following labour requirements for the scheduled production at Fender as shown in below.

Labour	Maximum	Year 1	
Jumbo Operators	3	3	
Charge-Up Operators	3	3	
Long Hole Drill Operator	3	3	
LHD Operators	9	9	
Truck Operators	3	3	
Grader Operators	1	1	
Water Cart Operators	1	1	
Service crew	6	6	
Storeman	1	1	
Nipper	3	3	
Lead Hand Fitter	0		
Fitters	8	8	
Drill Fitter	2	2	
Electricians	4	4	
UG Manager	1	1	
Mine Superintendent	1	1	
Shift Supervisor	4	4	
Safety Trainer	1	1	
Maintenance Foreman	1	1	
Maintenance Senior Leading Hand	0		
Electrical Supervisor	0	0	
Site Administrator	0	0	
Mining Engineer	3	3	
Surveyor	2	2	
Geologist	4	4	
Total Labour		64	

Table 16-17 Fender labour requirements.

## 16.1.2.11 Site Layout

The previous Fender infrastructure area will be utilised for workshop, change rooms and technical and administrative facilities.

Ore will be hauled by mine trucks to the pre-existing pit ROM pad from where it will be rehandled to road trucks for transport to the Tuckabianna Mill.



## 16.2 DAY DAWN

## 16.2.1 Great Fingall / Golden Crown

## 16.2.1.1 Underground Infrastructure

The Great Fingall - Golden Crown underground mine will be accessed using the existing Great Fingall decline to the base of the mine. The declines are developed at a 1:7 (down) gradient to the various orebody development horizons through. The decline is typically 5.3 mW x 5.8 mH, with a standard ore drive size of 5 mW x 5 mH. Lateral development profiles are well matched to the mobile fleet.

Ore is hauled from the underground to surface via the decline where it is then transported via a separate surface haulage fleet to the Tuckabianna mill.

Great Fingall - Golden Crown is not an active underground mine and therefore key infrastructure such as underground communications, electrical reticulation, pumping and ventilation will need to be re-established.

Equipment will be maintained and serviced at a surface workshop.

## 16.2.1.2 Mining Methods

The proposed mining method is conventional uphole bench retreat. Conventional jumbo drill and blast methods will be used to establish the decline and lateral development. Escape ways will be created using raise-bore techniques. Dependent on size and longevity, the return airway system will use either a large diameter raisebore or smaller diameter raisebore before stripping out to final airway dimensions.

Ore development in the orebody will be 5.0 mW x 5.0 mH. Development drives will be established along the strike of the orebody at 20 m vertical sub-level intervals. It is expected that the stope lengths will be between 20 and 40 metres as dictated by operational and production requirements however the final lengths will be determined on a case-by-case basis after geotechnical and geological analysis.

Once a predetermined number of fanned drill rings have been drilled, the holes are loaded with explosives and blasted towards the void previously established. Once blasted, the broken material is removed from the stopes using underground loaders. A percentage of the blasted material can be removed using manual control of the loaders where the operator sits in the machine. Once the stope brow is open to such an extent that the top of the bucket could be positioned beyond the brow of the stope, the remaining ore in the stope will be bogged with the loader being operated by remote control.

When the entire stope has been mined out, rib pillars will be left based upon grade (where possible) and geotechnical considerations before establishing the next stope along the ore drive. Following extraction of the stope, subsequent stopes are mined in a similar way with stoping horizon retreating laterally to the level access and vertically down- dip. Stope ore will be trammed to a stockpile on the level access where it is later loaded on to dump trucks for haulage to the mine ROM pad.



To ensure long term stability sill pillars are left at pre-determined intervals to break up the vertical span within the orebody. At this point in the mine design, it is not predicted that fill will be required for Great Fingall although there is the potential at a later date to convert to a fill methodology dependent on the considerations required for such a decision.

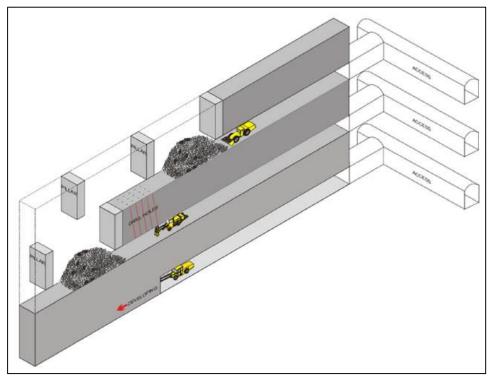


Figure 16-21 Uphole bench retreat example. Source: Westgold.

## 16.2.1.3 Hydrology

Recent salinity and pH measurements in pits, underground workings and bores in the Day Dawn area are compared with measurements made before or during the earlier phase of mining at Day Dawn from 1987 to 2012 below.

Pit/Bore	Date	TDS	рН	Date	TDS	рН	
	Measurem	nents 1987 - 20	12	Most Recent Measurements			
Great Fingall	19 Nov 01	25,000	7.15	29 Sept 21	30,810	7.31	

Dewatering rates at Great Fingall are currently low, less than 50 m<sup>3</sup>/d, as the permeable rocks, which generally extend to 100 m to 150 m depth, have been dewatered around the pit and underground workings. Once mining recommences there could be additional voids and fractures to be dewatered and dewatering rates could be up to 250 m<sup>3</sup>/d. This is unlikely to have any significant impact on groundwater drawdowns around the workings.

Previous water inflows of 4.63 L/s were controlled while developing the decline for the Open Pit In-Wall Ramp system with established pumping infrastructure. This rate will increase when there is dewatering required for the deeper workings.

Additional staging pump stations will be installed as the mine progresses.



### 16.2.1.4 Geotechnical

Geotechnical data will be collected on an ongoing basis in the Great Fingall - Golden Crown mine. This will include logging of borehole cores, mapping of underground conditions, monitoring of instrumentation and visual inspections.

Acoustic emission stress measurements were undertaken on core from Great Fingall (Table 16-19).

The stress magnitudes are significantly less than those measured at Big Bell, the closest other measurements to Great Fingall. The magnitude of the measurements indicates a potential for stress-related problems below around 500 mRL at Great Fingall. The magnitude of mining induced stress increases and stress vector changes could be severe below this depth, compounded by the dimensions of the orebody up dip and along strike. There is potential for strain bursting and for localised rock bursts.

In the upper sections there appears to be a very deviatoric nature to the virgin stress and this indicates a potential for sidewall fracturing in drives and pillars. Discing was observed in core photographs from CMD0013 and CMD0014A, also indicating there is potential for localised strain bursting if there are adverse stress concentrations or change on stiff structures located on faces or drive sidewalls.

Vertical Depth (m)	Hole	Stress Component	Magnitude (MPa)	Bearing (0)	Plunge (0)
290	GCDD0027A	σ1	20	036	05
		σ2	13	128	26
		σ3	6	296	63
541	GCDD0027A	σ1	30	024	07
		σ2	21	115	09
		σ3	16	257	79
520	FDD019_23W1	σ1	46.68	252.7	16.7
		σ2	40.93	116.9	67.2
		σ3	33.40	347.3	14.9
820	FDD019_23W1	σ1	62.92	355.83	40.82
		σ2	54.57	146.83	45.36
		σ3	49.51	252.51	14.94
910	FDD019_23W1	σ1	81.57	356.43	43.61
		σ2	73.58	140.15	40.24
		σ3	70.95	247.18	19.09

#### Table 16-19 Great Fingall Stress Measurement Results.





Figure 16-22 Example of intense discing seen in Golden Crown core. Source: Westgold.

Intact rock samples from Great Fingall were tested at the Western Australian School of Mines (WASM) and the results indicate generally high intact rock strengths around 200 MPa for most of the rocks.

WASM	Client			Unit	UCS	Fa	ailure Feat	ure	Young's	Poisson's	UTS
Sample No.	Borehole ID	Depth (m)	Lithology	Weight (kN/m3)	(MPa)	Mode	Angle	Nature	Modulus (GPa)	Ratio	(MPa)
1	CMD010	174.90~ 175.03	Great Fingall Dolerite AGF3	27.47	186	Bi	22	Violent	62.7	0.3374	19
2	CMD010	270.80~ 270.93	Great Fingall Dolerite AGF3	27.33	174	Bi	35	Violent	66.1	0.3223	17
3	CMD010	356.80~ 356.93	Great Fingall Dolerite AGF4	29.43	246	A	-	Violent	77.6	0.3895	20
4	CMD010	477.30~ 477.43	Great Fingall Dolerite AGF4	29.38	366	С	-	Violent	100.2	0.3009	26
5	CMD012	250.40~ 250.53	Great Fingall Dolerite AGF3	26.95	141	Bs	25	Quiet	56.9	0.3632	14
6	CMD012	408.60~ 408.73	Great Fingall Dolerite AGF3	29.60	254	Bi	25	Violent	80.8	0.3629	22
7	CMD012	471.10~ 471.23	Great Fingall Dolerite AGF4	27.18	169	Bs	27	Violent	60.9	0.3765	19
8	CMD012	486.80~ 486.93	Great Fingall Dolerite AGF4	27.63	100	Bs	29	Quiet	72.2	0.3246	19
9	CMD017	272.00~ 272.16	Great Fingall Dolerite AGF2	28.59	252	С	-	Violent	83.2	0.3529	16
10	CMD017	291.50~ 291.66	Great Fingall Dolerite AGF2	28.90	253	a/ Bi	21	Violent	87.3	0.3307	16
11	CMD017	316.40~ 316.56	Great Fingall Dolerite AGF2	27.24	120	Bs	37	Quiet	64.3	0.3440	12
12	CMD017	335.30 ~ 335.46	Great Fingall Dolerite AGF2	28.80	222	A/ Bi	15	Violent	81.2	0.3215	20

Table 16-20 Great Fingall Dolerite UCS test results.



The rock mass quality (Q) method (Barton, Lien and Lunde, 1974) has been used for the estimation of rock mass properties relative to stope and development stability and support.

Q is the preferred method for assessing rock mass strength due to its accepted use in the Stability Graph Method for determining stable stope span limits. Stoping spans at Great Fingall and Golden Crown will need to be limited to ensure stability.

Stope span calculations use the rock mass quality term Q', directly related to Q, with the effects of water and stress discounted.

The rock mass quality has been calculated using the method described in Barton *et*. *al*. (1974), where Q is defined as in the following equation:

$$Q = \frac{RQD}{Jn} x \frac{Jr}{Ja} x \frac{Jw}{SRF}$$

Where: RQD is the Rock Quality Designation.
Jn is the Joint set number.
Jr is the joint roughness number.
Ja is the joint alteration number.
Jw is the joint water reduction factor.
SRF is the stress reduction factor.

RQD

• The RQD has been calculated from diamond drill core logging and the Jn, Jr and Ja parameters have been based on observations from core photographs.

Jn

• Jn = 6 was used for the hangingwall, orebody and footwall, based on visual interpretation of core photographs. This indicates 2 common joint sets plus less common random joint sets.

Jr

- A joint roughness between 1.0 and 2.0 has been used for the footwall and hangingwall domains, indicative of the smooth planar surfaces seen in core photos in the basalt.
- A joint roughness parameter of 1.0-2.0 has also been used for the orebody, representative of the irregular, planar joint surfaces seen in core photographs.

Ja

- Joint alteration was allocated a value = 1.0-2.0 for the hangingwall, orebody and footwall domains following comments in the logging sheets.
- There are not many low-fraction minerals throughout all domains. Quartzcalcite and staining appear the most common infill minerals.

Jw



• There are no indications of adverse groundwater conditions therefore the groundwater parameter = 1.0 for all domains.

SRF

- Stress measurements indicate a moderate major principal stress, 30 MPa at 540 metres below surface, but increasing to 56 MPa at 1000 MPa.
- A SRF value 1- 2.5 has been selected for all domains due to the magnitude of the major principal stress combined with a low minor principal stress and potentially strain burst-prone rocks.

Rock Quality Q is a good indicator of excavation stability, with higher values (e.g. higher than 4) equivalent to stable ground and low values (especially less than 1) equivalent to unstable ground.

The full list of calculated values is included in **Table 16-21**.

Q is generally categorised using the Barton *et. al.* (1974) values (**Table 16-22**).

A lower Q value below the 500 m level is expected to count for higher SRF value of >1.5. This due to the high stresses expected at depth and the deviatoric nature of the stresses.

The mean values stated above are not statistically valid and are just an indication based on the limited number of borehole intersections.

Domain	RQD	Jn	Jr	Ja	Q'	Jw	SRF	Q Minimum	Q Maximum	Q Expected
HW	75.2	6	1-2.0	1-2.0	13.33	1	1-2.5	2.51	25.07	10.26
Orebody	84.8	6	1-2.0	1-2.0	14.13	1	1-2.5	2.83	28.27	10.87
FW	95.7	6	1-2.0	1-2.0	15.95	1	1-2.5	3.19	31.90	12.27

Table 16-21 Great Fingall – Golden Crown rock quality Q parameters.

### Table 16-22 Rock Quality Categories (Barton et. al. 1974).

Description	Rock Quality (Q)
Exceptionally Poor	0.001 to 0.01
Extremely Poor	0.01 to 0.1
Very Poor	0.1 to 1
Poor	1 to 4
Fair	4 to 10
Good	10 to 40
Very Good	40 to 100
Extremely Good	100 to 400
Exceptionally Good	400 to 1,000



## 16.2.1.5 Geology

The dominant geological feature of the project area is the Great Fingall Dolerite (GFD). It is a large differentiated tholeiitic sill striking 030° (MGA) and dipping 70° to the northwest and is approximately 530 m thick. It is truncated to the north-east by a gabbroic intrusion and a post-folding tonalite, and to the south-west it is progressively attenuated by and brought into parallelism with the N-S Cuddingwarra Shear Zone (CSZ). The GFD hosts numerous quartz vein gold deposits attributed to dilatational strain. This strain appears to have been induced by refracted north – south late-stage regional cross fractures.

The GFD hosts the major gold mineralisation of the Day Dawn area, including the following deposits within the project tenements (from north to south);

- Princess Royal
- Great Fingall
- Wallace's
- Goldilocks
- Golden Crown
- Smith's United
- 3210
- Galena
- Trenton
- Porphyry
- Yellow Taxi
- Mount Fingall.



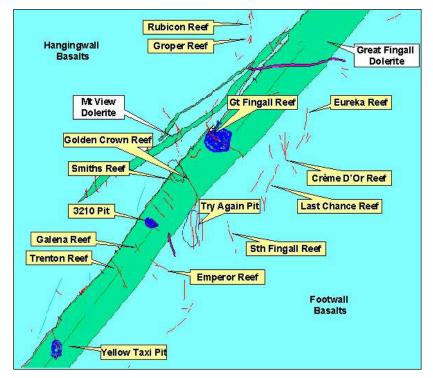


Figure 16-23 Golden Crown area mineralised quartz reef location plan. Source: Westgold.

Because of its significant role as a major lithological control on gold mineralisation, the GFD has been well delineated and studied, both on surface and in underground workings. Macroscopically it can be subdivided into five major units (Hicks, 1990 and Pawlitschek, 1993), which are more or less recognisable throughout its the length:

- AGF1 Upper chilled margin, about twenty metres thick, of fine-grained amphibole-plagioclase dolerite. Near the hanging-wall contact (with meta-sediments) it is schistose and heavily chloritised and carbonated.
- AGF2 A medium to coarse-grained, amphibole-plagioclase dolerite, approximately 60 m thick, characterised by elongated dark green amphiboles. There is a transitional contact with AGF3A.
- AGF3 A thick (approximately 175-250 m) coarse-grained, differentiated, Ferich, granophyric dolerite showing a marked foliation sub-parallel to the regional synformal axial plane. Calcite is a common accessory mineral. This thick central unit may be further divided into three sub-units:
  - AGF3A A medium-grained granophyric dolerite. Marked by appearance of quartz, stubby black amphiboles and granophyric texture.
  - AGF3B A medium to coarse-grained granophyric magnetic dolerite.
     Appearance of magnetite, and an increase in grain size, distinguishes it from AGF3A.
  - AGF3C A fine to medium-grained melanocratic magnetic dolerite. There is no visible quartz.
- Amphibole and plagioclase make up the bulk of the rock, which has an equigranular texture.



- AGF4 A medium-grained sub-ophitic dolerite, approximately 175-200 m thick, with only minor quartz. This unit becomes more leucocratic with an increase in plagioclase and decrease in magnetite towards the footwall. Equigranular texture.
- AGF5 Footwall ultramafic, approximately 50 m thick, consisting of amphibolechlorite-talc-magnetite schist. Distinguished by its high talc content, which gives the rock a soft and greasy texture, strong foliation and high magnetic signature.

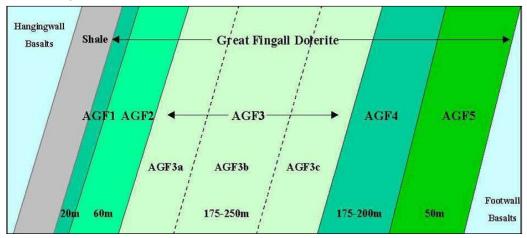


Figure 16-24 Stratigraphic cross-section of the Great Fingall Dolerite looking northeast. Source: Westgold.

Petrologically the upper four units are quartz dolerites, with ubiquitous (>5%) free quartz (Hicks, 1990). The upper three units are invariably granophyric, with much of unit AGF3 being granophyre with >5% free quartz. Unit AGF3 is the most brittle of all the five units and it is thought that this characteristic is potentially responsible for its role as the most favourable lithological host to gold mineralisation in the sill.

Units AGF3 B / C and AGF5 have strong magnetic signatures, which are particularly useful in mapping these units. The magnetic response of Units AGF3 B / C and AGF5 is strongest between Golden Crown and Galena and between Stockyard and Empress respectively, weakening along strike both northwards and southwards.

The Footwall Basalts (FWB) consist of a highly contorted succession of intercalated basalts, high-Mg basalts, dolerites and ultramafics, with felsic volcanics and metasedimentary lithological units (mainly siltstones) to the east.

The Hangingwall Basalts (HWB) consist of a monotonous succession of basalts, pillow lavas, amygdaloidal basalts, agglomerate and graphitic interflow sediments well exposed as a line of low hills to the west of the Great Fingall Dolerite. A number of dolerite dykes and sills, two of which have been mapped, have intruded the HWB. The base of this group, in contact with the hanging-wall of the GFD, is marked by a distinct shale horizon that displays strong evidence of faulting and shearing.

Importantly, while chemically similar, the competency contrast between the dolerite and basalts is the cause of refraction of major structures through the area with dilation apparently most pronounced in the more brittle dolerite (Longley and Young, 2001).



The high iron content in units AGF3B and AGF3C of the GFD, and in the dolerite dykes within the Footwall Basalts, provided a favourable chemical environment for the deposition of sulphides and gold from the auriferous mineralising fluids. This, coupled with the brittle nature of the quartz-rich granophyric AGF3 unit, made it a prime lithological control of mineralisation.

The major implication of these lithological controls of mineralisation is that the most highly prospective zones for the discovery of new deposits lie within the AGF3 unit (within the central portion of the GFD) and along the shale contact with the hangingwall of unit AGF1 (of the GFD).

A suite of younger dolerite dykes, up to 30 m thick, occur in the GFD (Hicks, 1990; Martin, 1993a). These dykes are fine-grained with chilled margins. They pre-date, but are oriented sub-parallel to, the major quartz reefs (strike north-northwest - north, dipping steeply west).

Several suites of Proterozoic dykes, trending east-west with sub-vertical dips, cut all the Archaean rocks of the project tenements. These dykes have marked magnetic signatures and are readily delineated by aeromagnetics.

The major structure of the project area is a tightly folded synform with a northeasttrending, sub-vertical axial plane (D3). The project tenements lie mainly on the eastern limb of this structure, with the lithological units striking northeast in the northern section and north-south in the southern section. Dips are generally at moderate angles westerly. The synformal axis is cut obliquely by a major regional D4 shear, the meridional, steeply east-dipping Cuddingwarra Shear Zone (CSZ). The CSZ has been traced by mapping and aeromagnetic surveys from the southernmost tenements, on the shores of Lake Austin, northwards to approximately nine kilometres west of Cue.

Four sets of fault structures are developed within the project area;

- 1. North-south strike (350-010°), steep westerly dips.
- 2. East-west strike (090°), variable (moderate-flat) southerly dips.
- 3. Northwest strike (300-320°), moderate (50-60°) south-westerly dips.
- 4. Northeast to north-northeast strike (sub-parallel to the strike of lithological units), moderate north-westerly dips.

All four sets of faults show relatively minor lateral movement (in plan), with the Great Fingall reef showing the maximum (80 m) offset, in the vicinity of the Great Fingall / Mountain View workings.

The north-south and east-west shear zones are characteristically compact. They are a conjugate set that are interpreted to have formed under a compressional stress regime. They are characterised by tightness, with veins rarely exceeding two metres in width. The north-northeast faults, sub-parallel to the regional dip and strike, also tend to be tight and narrow, whereas the northwest -trending structures are more open, dilational fractures (especially within the more brittle lithological units), up to ten metres in width. The northwest-trending faults reach maximum thickness where they traverse the GFD, especially the coarse-grained granophyric AGF3.



It is possible to interpret at least three dozen recognisable northwest -trending faults within the project area. They form an en-echelon northeast-trending zone centred along the strike of the GFD. These northwest-trending structures host virtually all the important gold reef deposits of the area, including the two major quartz reef deposits at Great Fingall and Golden Crown.

The most important of these faults, named after the mines that occur on them are, from north to south:

- Happy Jack.
- Victoria Lily Lady Forrest Richmond.
- Brega Kinsella Kalahari.
- Polar Star Homeward Bound Croesus Rubicon Groper Crème d'Or.
- Cooya Ballarat New Caledonia Caledonian.
- Mountain View Great Fingall South Fingall.
- Queen's Birthday Pelican Golden Crown Try Again.
- Smith's United.
- Tailings Dam.
- 3,210.
- Galena.
- Aurifer South Trenton.
- Fox Gully Porphyry.
- Yellow Taxi.
- Mount Fingall.

Scott (1991) showed that both the Great Fingall and Golden Crown Reefs are sinistral oblique-slip reverse faults, with the northeast block down and northwest relative to the southwest block.

The direction of movement (at least in the final stages) is parallel to a lineation (observed in the Golden Crown underground workings) which plunges 64° / 263° (about 74° on vertical longitudinal section). This is virtually the same as the plunge of the hanging-wall contact of the GFD and explains why there is only about ten metres of offset across the Golden Crown fault at surface.

This movement results in the flatter sections of the reef being wider than the steeper sections.

The net amount of movement on the Great Fingall fault is 340 m, along the lineation direction, based on 80 m offset of the hanging-wall contact of the GFD (Scott, 1991). It is uncertain how much movement has taken place on the Golden Crown fault, but it is likely to be less because of the smaller horizontal offset shown by the hanging-wall contact of the GFD. If this is so, it explains why the Great Fingall Reef is considerably thicker than the Golden Crown Reef, as reef thickness will be roughly proportional to the net amount of movement.



Subsequent work has shown that the Golden Crown Reef has had a complex history of deformation, including both normal and reverse oblique-slip movements. It has also been noted that the sudden termination of gold mineralisation within the Golden Crown reef above Level 4 coincided with its intersection with a flat south-dipping reef (projected to be the continuation of Wallace's Reef).

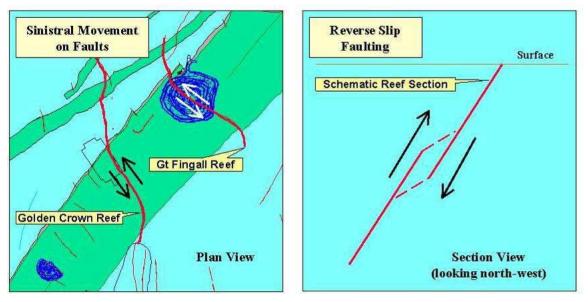


Figure 16-25 Plan and section view of fault movement in the Great Fingall area. Source: Westgold.

The major implication of these structural controls of mineralisation is that the most highly prospective targets for the discovery of new deposits lie within northwesttrending sinistral oblique-slip faults and northwest-trending, shallow southwestdipping stockworks, where these structures transect the upper differentiated portion of the GFD.

The development of vugs and cockade textures within the auriferous quartz reefs indicates deposition under non-stress, dilational conditions. There is also strong evidence, however, of shearing (e.g. sericite-chlorite-sulphide laminae and rafts of host rock within the quartz). Although these faults are particularly well developed and prominent within the GFD, they are not confined solely this lithological unit.

In fact, the Great Fingall fault has been traced over a strike length of approximately six kilometres. These northwest-trending faults commonly show refraction in their strike direction on entering the foot- and hanging-walls of the more brittle GFD. They also become more oblique to the strike of the GFD, from north to south within the project tenements, due mainly to the strike of the GFD changing from north-northeast – south-southwest to north-south.

The northeast-trending faults, sub-parallel to regional strike, also host gold mineralisation. These structures are generally tighter and narrower, however, and the resulting quartz reefs are generally smaller and lower grade than those on the more prominent northwest-trending faults. Examples of quartz reefs in these northeast-trending structures include Royal Secret (within the GFD) and Racecourse (within the FWB). Two main ideas have been hypothesised for the structural setting pertaining to



the mineralised reefs. The most popular and simple structural setting has been proposed as simply refraction of regional structures across the more competent Great Fingall Dolerite, leading to a shear and subsequent dilation.

Hammond 2001 suggests that the formation of the reefs is likely not due to a competency contrast. The suggestion of a dissipation of the north-south compressive stresses at the upper and lower contacts of the Great Fingall Dolerite induced a localised stress field. This splits  $\sigma$ 1 into its vector components, one parallel to the hangingwall and the other vector perpendicular to the dolerite. This field in turn dissipates after the formation of equally spaced reefs and vein arrays. Later reactivation and mineralisation on the reef structures occurred in the following eastwest compressional regime together with further low angle vein arrays.

Quartz porphyry dykes have intruded along the north-south, east-west and northeasttrending faults, described above, especially within the more brittle GFD and dolerite / basalt units of both the FWB and HWB. Porphyry dykes within north-south structures include those at Porphyry (in GFD) and Crème d'Or, Ballarat, New Caledonia and southeast of Yellow Taxi (within FWB), those within northeast-trending structures include Kinsella (within FWB), and those within east-west structures include outcropping intrusions west and south of Aurifer South (within HWB).

The metamorphic grade of the rocks comprising the greenstone belt within the project tenements is greenschist-amphibolite facies. The weathering profile is extremely variable within the Golden Crown project area. Deep profiles are well preserved within the FWB sequence at the Try Again, Crème d'Or, Eureka and South Fingall prospects (Martin, 1993b), associated with supergene enrichment of gold mineralisation.

Regolith depth appears to be in the order of thirty metres on average over the bulk of the project area.

Approximate depths of oxidation interfaces are (Exploration 2005 Grid) as follows:

•	Surface	1,005mRL	
•	Base of cover	1,001mRL	-4m from surface.
•	Base of complete oxidation	985mRL	-20m from surface
•	Top of Fresh rock	973mRL	-32m from surface

The whole of the project area is covered by erosional remnants of a Tertiary lateritic regolith, as evidenced by the direct transition from surface alluvium / colluvium and residual soils to saprolite or weakly oxidised bedrock in most drill holes, mine shafts and open pit workings.

Alluvial nuggets and the higher gold grades obtained by miners in the early shallow workings were probably derived from weathered and remnant supergene enrichment zones in the quartz reefs. At Try Again this occurs at 15-40 m depth below surface. A depletion zone, up to twenty-five metres thick, below the zone of supergene enrichment is evident at the Great Fingall, Golden Crown, Try Again and Kinsella mines (Martin, 1993b).



## 16.2.1.6 Historical Mining

The Great Fingall Reef is by far the largest gold deposit discovered and mined to date within the Cue district and was originally discovered in 1891. The original mine, operated by Great Fingall Consolidated Ltd., yielded 1,185,412 oz gold from 1,895,647 t of ore up until 1924. Subsequent operations, by London, Australian and General Exploration Co. Ltd. between 1922 and 1929, yielded only 1,039 oz gold from 1,494 t of ore. Thus, total historic production was 1,186,451 oz gold from 1,897,141t ore for a recovered grade of 19.5 g/t. Twenty levels were developed underground to a depth of 786 metres below the surface, although below the 10 level the reef was selectively mined.

Early in 1918 the mine operator elected to stop mining at Great Fingall due to declining profitability. Several reasons for the mines decline have been suggested in various sources:

- Lack of labour due to the war.
- A broken ore hoist in the internal shaft.
- A decline in ounces per vertical metre (OVM)

After 1918 small-scale mining by tribute miners continued until 1921 when tailings stored close to the shafts ran into the workings. The inrush was possibly as a result of tribute miners savaging pillars in the upper portions of the mine. A further phase of small-scale mining between 1942 and 1955 in the area known as Mountain View produced 70,000 oz.

Mining recommenced at Great Fingall in 1995 via open pit methods focusing on extracting the stockwork vein system in the footwall of the Great Fingall Reef which had remained after underground mining. The open pit, operated by Normandy up until March 1999, yielded 82,476 oz gold from 1,767,135 t ore, for a recovered grade of 1.45 g/t. Mining was carried out by Normandy using 5 m benches and 2.5 m flitches, trucking the ore to the Big Bell mill.

In 2001 Harmony Gold recommenced open pit mining following their takeover of New Hampton Goldfields, with operations suspended in November 2002 after production of a further 437,041 t at 2.08 g/t for 29,226 oz, bringing the total production from the Great Fingall deposit to almost 1.3 million ounces from over 4.1 million tonnes at an average grade of 9.8 g/t Au.

Golden Crown was first mined in 1897 and up to 1902 had been developed to a vertical depth of 80 m with very little production or encouraging grades. This activity was coincident with mining on the Great Fingall reef located 400 m north where bonanza grades and generous widths of reef were encountered from surface.

In 1935, the lease was acquired by WMC who drilled four diamond holes and estimated a resource of 40,000 to 80,000 t at 12.2 g/t Au was possible. The lease was relinquished as this failed to meet WMC's requirements and was subsequently picked up by ACM in 1969.



ACM drilled six holes and de-watered the old workings to evaluate the potential. Results were disappointing and it was not until 1983 that the Company drill tested deeper zones and discovered that the old workings were actually in what appears to be a depletion zone down to 120 m vertical depth.

Drilling results enabled a Mineral Resource estimation of 350,000 t at 21g/t Au (237,000 oz). This was encouraging enough for ACM to commence shaft sinking in December 1983. A small crushing and treatment plant was built on site and in May 1986 the mine was officially opened. Production records reveal that 648,000 t at 13.8 g/t Au was mined for 288,017 oz realising a 20% increase over the original resource estimate.

In 1991, ACM was taken over by Posgold, a division of Normandy Mining Limited. The ore was then trucked-to and processed at the Big Bell plant as additional feed to their mill. This was concurrent with ore haulage from the nearby Great Fingall open pit operations also operated by Normandy. The Company operated the mine for five years up to 1996 when the mine was placed on care and maintenance. The reason for cessation of mining given was that development could not keep up with production.

In 1999, New Hampton purchased Golden Crown, Big Bell and Cuddingwarra in from Normandy.

Mining Operation	Host Geology	Tonnes	Grade Au g/t	Au Ounces
Great Fingall Underground	Great Fingall Dolerite	1,881,842	20.24	1,224,473
Great Fingall Open Pit (pre Harmony)	Great Fingall Dolerite	1,767,135	1.45	82,476
Great Fingall Open Pit (Harmony)	Great Fingall Dolerite	437,041	2.08	29,311
Great Fingall Open Pit (Westgold)	Great Fingall Dolerite	620,353	1.28	25,536
Golden Crown Underground	Great Fingall Dolerite	648,427	13.81	288,017
Mountain View Underground	Mt View Dolerite	27,557	55.4	49,083
Total		5,382,355	9.82	1,698,896

Table 16-23 Historical production for Great Fingall/Golden Crown area.

#### 16.2.1.7 Mine Design Parameters

The following stope design parameters were applied within the mine design:

Stope design was completed using Deswik.SO (stope optimiser). This is an automated process that allow for quick and effective stope designs based upon inputs determined by the engineer. This methodology is industry standard for project at this level of evaluation. Once completed the stopes are checked against the ore wireframe and block model to ensure sufficient encapsulation and/or waste removal as required. The inputs for Deswik.SO are shown below.



Input	Field	Comment
Stope Width 1m		Minimum width to determine stope
Cut-off Grade	2.3gt	Minimum grade to determine stope
Wall Dilution - Hangingwall	0.01m	ELOS assumption – dilution determined in schedule
Wall Dilution – Footwall	0.01m	ELOS assumption – dilution determined in schedule
Vertical Default Dip	120°	Where ore wireframe cannot constrain
Vertical Default Strike	30°	Where ore wireframe cannot constrain
Wall Angle – Max.	180°	Largest possible to allow for flat stopes
Wall Angle – Min.	0°	Minimum possible to allow for flat stopes
Max. Change Wall Angle	15°	To ensure stopes are mineable
Strike Angle – Max. 90°		Max. angle stope can strike along
Strike Angle – Min.	– Min90° Min. angle stope can strike along	
Max. Change Strike Angle	15°	To ensure stopes are mineable
Stope Slice 5m		Creation of stopes every slice

Table 16-24 Great Fingall – Golden Crown Deswik.SO inputs.

As stope optimiser (SO) creates a "stope" at every 5 m increment this allows the engineer to determine ideal stope strike lengths based upon the recommended geotechnical conditions. The 5 m increments were chosen as the preferred stope slice lengths although SO can slice stopes at any pre-determined length. For the basis of the Great Fingall design it was determined that stopes should have a minimum of 10 m of strike to form a mineable stope. The output from SO is shown below.

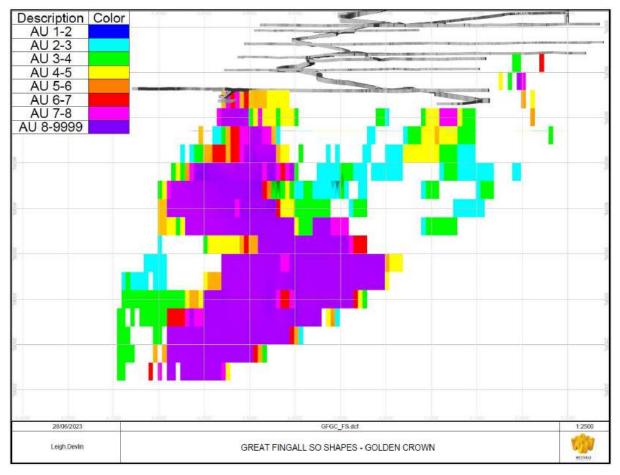


Figure 16-26 Great Fingall – Golden Crown SO shapes output. Source: Westgold.



For the basis of the Great Fingall design it was determined that stopes should have a minimum of 10 m of strike to form a mineable stope. Pillars are designed in areas where required to align with the geotechnical recommendations but strategically where possible to minimise value loss. Once stope design has been finalised the area analysed as part of the mine plan are as presented in **Figure 16-27**.

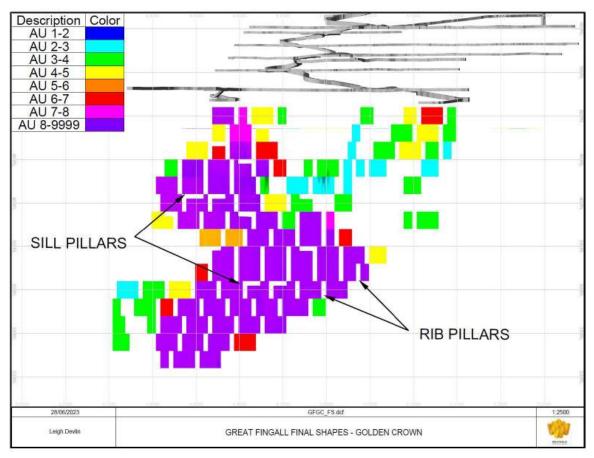


Figure 16-27 Great Fingall – Golden Crown final stope shapes output. Source: Westgold.

The designed stand-off distance between Great Fingall decline and proposed stoping is 40 m, with any stand-off distance <40 m requiring review/approval by the Geotechnical Engineer. Proposed stoping is not expected to have significant influence on major access and mine infrastructure.

The pillar design for stopes is based on case-by-case basis which also considers lithology and ore width.

As a starting point, the dimensions of the island pillars are 1:1:1 (width : height : length) ratio, rib pillars are full height with typically 1:1 (width : length), and sill pillars are 1:1 (width : length) ratio.

Pillars between development drives are designed based on their skin-to-skin separation distance, according to the following convention:

• The skin-to-skin horizontal separation distance between two development drives, divided by the height of the drive, is the width : length ratio.



- The skin-to-skin vertical separation distance between two development drives, divided by the width of the drive, is the height : width ratio.
- The minimum required width : length ratio is estimated to be 1:1.
- The minimum height : width ratio is estimated to be 1.5:1.

The mine designs were developed in Deswik software. **Figure 16-28** and **Figure 16-29** below depict the design concluded for Great Fingall - Golden Crown.

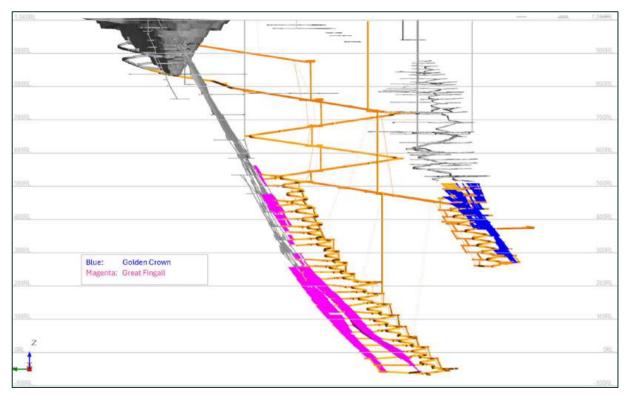


Figure 16-28 Great Fingall - Golden Crown underground Mineral Reserve design with existing pit (grey) looking east. Source: Westgold.



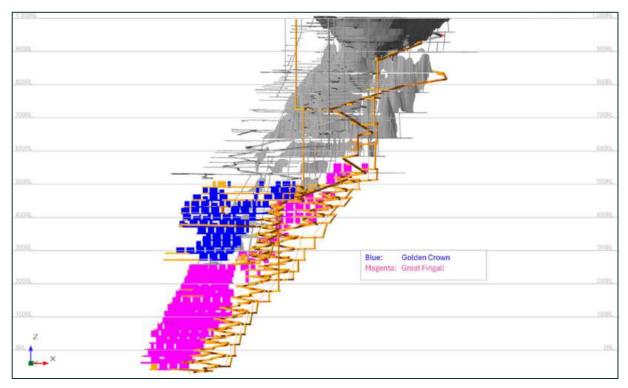


Figure 16-29 Great Fingall - Golden Crown underground Mineral Reserve design with existing pit (grey) looking north. Source: Westgold.

## 16.2.1.8 Mine Scheduling

The mining schedule for the LOM plan was generated using Deswik mine planning software. Once the development and stope designs are produced, they are evaluated in Deswik against the geological block model. Development and stope shapes are then reviewed and included in the schedule if they are economic to mine. All activities that make up the stoping cycle, such as production drilling, charging and bogging are added into the mine schedule. The development and stoping activities are then linked in a logical extraction sequence which considers mining practicality, geotechnical and productivity constraints. Each task has an equipment resource applied to it, with schedule productivities based on current site performance and parameters appropriate to the equipment being used.

The current mine life is scheduled over ninety-six months (subject to further schedule refinements), as shown below.



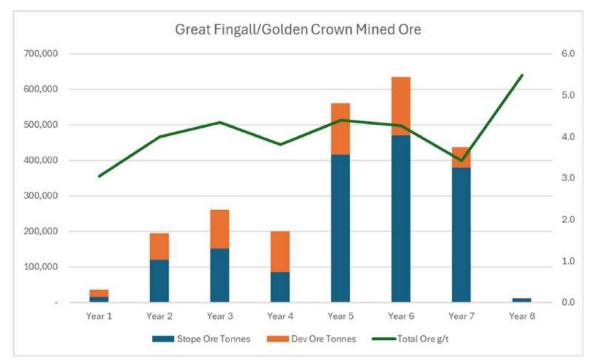


Figure 16-30 Great Fingall - Golden Crown underground schedule. Source: Westgold.

# 16.2.1.9 Mobile Equipment

The mine equipment proposed for Great Fingall - Golden Crown is industry standard trackless underground diesel equipment constructed by reputable manufacturers and well suited to current site operations. The primary underground fleet is shown below.

Unit Description	Unit Quantity
Twin Boom Jumbo	1-2
Production Drill	1-2
15 t LHD	1–4
60 t Truck	1–4
Integrated Tool Carrier	2

Table 16-25 Great Fingall - Golden Crown Primary underground fleet.

## 16.2.1.10 Labour Estimate

The cost model simulated the following labour requirements for the scheduled production at Great Fingall / Golden Crown as shown below.



Labaur	May	Veerd	VeerO	Year	Year	Year	Year	Year	Year
Labour	Max.	Year 1	Year 2	3	4	5	6	7	8
Jumbo Operators	8	4	8	8	8	8	8		
Charge-Up Operators	8	4	8	8	8	8	8	8	4
Long Hole Drill Operator	4		4	4	4	4	4	4	4
LHD Operators	12	4	12	12	12	12	12	12	6
Truck Operators	12	4	12	12	12	12	12	12	6
Grader Operators	1		1	1	1	1	1	1	0.5
Water Cart Operators	1	1	1	1	1	1	1	1	0.5
Service crew	8	4	8	8	8	8	8	8	4
Storeman	1	1	1	1	1	1	1	1	1
Nipper	8	4	8	8	8	8	8	8	4
Lead Hand Fitter	4	4	4	4	4	4	4	4	3
Fitters	38	18	38	38	38	38	38	38	22
Drill Fitter	6	2	6	6	6	6	6	6	3
Electricians	4	4	3	3	3	3	3	3	3
UG Manager	2	2	2	2	2	2	2	2	2
Mine Superintendent	2	1	2	2	2	2	2	2	1
Shift Supervisor	4	4	4	4	4	4	4	4	4
Safety Trainer	2	2	2	2	2	2	2	2	2
Maintenance Foreman	1		1	1	1	1	1	1	1
Maintenance Senior	2	2	2	2	2	2	2	2	2
Leading Hand									
Electrical Supervisor	2	2	2	2	2	2	2	2	1
Site Administrator	2	2	2	2	2	2	2	2	1
Mining Engineer	6		6	6	6	6	6	6	3
Surveyor	4	2	4	4	4	4	4	4	2
Geologist	10	4	10	10	10	10	10	10	6
Total Labour		75	151	151	151	151	151	143	86

Table 16-26 Great Fingall - Golden Crown labour requirements.

16.2.1.11 Site Layout

The previous Great Fingall infrastructure area will be utilised for workshop, change rooms and technical and administrative facilities.

Ore will be hauled by mine trucks to the pre-existing pit ROM pad from where it will be rehandled to road trucks for transport to the Tuckabianna Mill.



## 16.3 TUCKABIANNA

#### 16.3.1 Comet Group

#### 16.3.1.1 Underground Infrastructure

The Comet Group underground mine will be accessed the existing Comet Group decline to the base of the mine for the Pinnacles orebody. The declines are developed at a 1:7 (down) gradient to the various orebody development horizons through. The decline is typically 5.3 mW x 5.8 mH, with a standard ore drive size of 5 mW x 5 mH. Lateral development profiles are well matched to the mobile fleet.

Ore is hauled from the underground to surface via the decline where it is then transported via a separate surface haulage fleet to the Tuckabianna mill.

The Comet group is not an active underground mine and therefore key infrastructure such as underground communications, electrical reticulation, pumping and ventilation will need to be re-established.

Equipment will be maintained and serviced at a surface workshop.

## 16.3.1.2 Mining Methods

The current planned mining method for Comet mine (including the Pinnacles orebody) is Long-Hole Open Stoping (LHOS) using longitudinal retreat to central access. Levels are spaced at 20 m vertical intervals and extracted in top-down sequence. No backfill is used to fill the stope voids, only rib, island and sill pillars to control stope span and hanging wall stability. Whilst not utilised at the time of writing, handheld Airleg mining may be utilised from time to time for the extraction of shallow dipping, narrow lodes at Comet.

Access to the underground workings is by decline to the base of the mine. Initial access is provided by a portal excavated into the lower western wall of the Comet Pit at the 387 mRL for the Pinnacles region. A new portal will be established to access the northern portions of the Comet deposit. The declines are developed at a gradient between 1:7 and 1:8 down to attain the various orebodies' development horizons.

Declines and level accesses are located in the footwall of Comet ore body and the hangingwall of the Pinnacles orebody. A minimum standoff distance of 15 m from the orebodies has been adopted for the Decline. The access drives may provide travel-way access, suitable for underground trucks, into the main production areas of the orebody. Secondary development, suitable for bogger access, is then developed to the economic periphery of the level.

Levels are sub-divided into multiple panels (or individual stopes), with rib, island and sill pillars designed where required to reduce the overall hydraulic radius and provide stability of the stope. Sill pillars are being used to minimise stope dilution and potential cascading of previous failure above, therefore are designed as thin as practicable to reduce ore being left behind.



Handheld air leg mining may be used to extract shallow dipping and narrow ore lodes, utilising scrappers and small boggers. The development drives are supported with bolts and mesh where required and airleg stopes typically consist of slot rise and "bays" which is the area stripped out between rises. Stopes are supported with rock bolts and spans controlled by using a combination of rock pillars, timber props and sties.

Production stoping typically follows the cycle outlined below:

- Up or down holes are drilled in patterns to form a rise and slot for initial stope opening.
- Up or down hole production rings follow to define stope excavation boundary.
- The rise and slot are fired to create an initial void.
- Ring blasting commences towards opened void.
- Manual bogging of the broken ore continues until the loader bucket is level with the stope brow.
- Tele-remote bogging is conducted beyond the stope brow.

## 16.3.1.3 Hydrology

Previous water inflows of 6.6 L/s were controlled with established pumping infrastructure and no significant increases of inflow are expected.

Additional staging pump stations will be installed as the mine progresses.

## 16.3.1.4 Geotechnical

Geotechnical data will be collected on an ongoing basis in the Comet Group mine. This will include logging of borehole cores, mapping of underground conditions, monitoring of instrumentation and visual inspections.

Comet structural discontinuity orientation data have been obtained from underground mapping in development drives. The dominant joint sets (sets 1 and 2) have been defined from mapping conducted within the open pit and from logging of orientated core conducted by Peter O'Bryan & Associates (POB).

In summary, moderately steep east dipping foliation and sub-parallel lithological contacts are the major geological features along with moderately steep to steep southwest dipping defects. The minor sets are less dominant but create slabby rock mass conditions were present.

DISCONTINUITY SET	DESCRIPTION		DIP DIRECTION (°)
1	Dominant set - moderately east dipping	47	094
2	Dominant set - moderately southwest dipping	40	236
3	Minor set - sub-vertical to steeply northwest dipping	88	334
4	Minor set - steeply southeast dipping	70	136

#### Table 16-27 Comet dominant discontinuity sets.



No in situ rock stress measurements have been undertaken at Comet. Current proposed stoping will be carried out at depths of <500 m below natural surface. Given proposed relatively shallow stoping depths, in situ rock stress magnitudes anticipated to be encountered are not expected to cause significant stress related issues.

Rock mass classification undertaken for Comet has used RMR89 and Q-System methods. RMR89 assessment of rock mass quality undertaken by Golder 1 utilised information obtained from summary logging of selected exploration cores. Q-System assessment undertaken by PBA utilised summary geotechnical core logging data obtained from cores of boreholes 09CODD-001A, 003 and 005, 10CPRC013, 11CODD-004 and 005.

Ground conditions at Comet have been assessed according to the three major rock lithology domains (**Table 16-28**).

DOMAIN	DESCRIPTION			
Hangingwall Basalt	Hangingwall to ore lodes			
	Massive to foliated, metasediments and mafic tuff			
Talc Schist	Zone of foliation parallel talcose alteration and schist which occurs at varying			
	distances into the hangingwall			
Footwall Basalt	Footwall to ore lodes			
	Generally comprises foliated basalts			
	All planned access development will be located within this domain			

Preliminary Comet RMR89 rock mass quality assessment results are summarised below. On the basis of results presented in **Table 16-29**, the footwall and hanging wall basalts can be classified as good rock (RMR value range 61 to 80). The talc schist zone can be classified as fair rock (RMR value range 41 to 60).

DOMAIN		RMR89 VALUES	MEAN RMR89 VALUE		
DOMAIN	MIN	MAX	MEAN	CLASS	
Hangingwall basalt	65	76	70	Good	
Talc schist	39	58	50	Fair	
Footwall basalt	67	81	72	Good	

Table 16-29 Summary of Comet RMR89 classification results.

Q-System rock mass quality assessment carried out on cores of boreholes 11CODD-004 and 005 indicates that fresh rock quality generally ranges from fair to good within the Comet footwall basalt domain (decline development area). Limited intervals of poor-quality rocks were also encountered, and were generally associated with geological structures and alteration (chlorite) effects.

# 16.3.1.5 Geology

The Comet mine is located 20 km southeast of Cue, Western Australia, in the Murchison Province of the Archean Yilgarn Block. Comet is located at the southern end of the Tuckabianna Shear Zone, which is sub-parallel to the regional Moyagee Shear Zone. Local geology consists of folded and faulted Archaean basalts and sediments. Mafic and ultramafic volcanic and intrusive rocks with banded iron formation have been folded into a syncline to the east of the shear zone. To the west of the shear zone felsic, mafic and ultramafic rocks form an antiform.



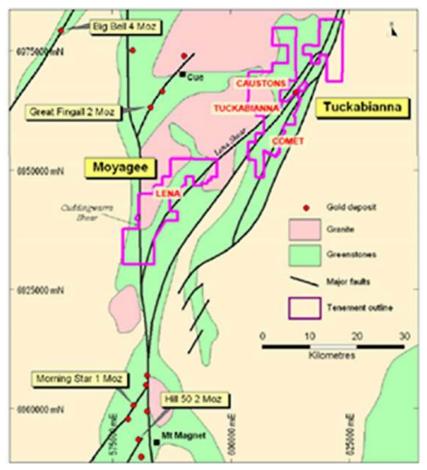


Figure 16-31 Regional Geology of Comet Mine, GDA grid. Source: Westgold.

The Comet deposit is hosted in mafic and ultramafic units that form part of the Kurrajong Syncline. Mineralisation at Comet is strata-bound and hosted within, or adjacent to structurally deformed iron (Fe) enriched silicified sediments. Two parallel zones of mineralisation, dipping at ~ 45° to the east (mine grid), have been identified which vary in thickness from 1 – 5 metres and are separated by a mafic unit which varies in thickness from a few centimetres to up to 10 m. The interpretation at Comet Main consists of two individual Banded Iron Formation (BIF) domains and dividing mafic units, with surfaces used for construction to avoid volumetric discrepancies between the units. The upper and lower BIF units were further sub-domained to avoid smoothing between characteristically different grade tenor areas. This resulted in 3 subdomains (1101, 1102, 1103) for the upper BIF unit and 2 subdomains (1201,1202) for the lower BIF.

The geology at Pinnacles is dominated by the Comet - White Well Shear which is part of the Mount Magnet Shear Zone. Local mineralisation is confined to iron-rich sedimentary units within a sequence of mafic basalts. Mineralisation dips at 60 to 65° towards the east (local grid) and plunges to the north with a northerly plunge to mineralisation. The ore mined at Pinnacles was predominantly from two main sedimentary units with the highest grades concentrated near the hinge of an isoclinal fold. Several smaller sulphide-rich sedimentary units are present adjacent to the lodes mined however no significant Au-mineralisation was associated with these units.



## 16.3.1.6 Historical Mining

The Comet Group pit was mined in multiple stages, with the latest underground mining conducted by Westgold Resources (WGX) between 2017 and 2022.

# 16.3.1.7 Mine Design Parameters

The following stope design parameters were applied within the mine design:

- Minimum footwall dip angles were set at 45°;
- Minimum mining widths (excluding dilution) of 1.5 m;

Maximum spans, stope dimensions and stope geometries proposed to be used at Comet are based on empirical design methods. The empirical method used to determine preliminary maximum stope spans is the Modified Stability Graph Method.

The method gives an indication of stability based on comparison to case histories at other mines. Once stoping commences these empirical limits should be analysed against stope performance.

Assessment of likely achievable stope spans has been performed using the modified Stability Graph method to calculate a Stability Number, and in turn graphically define the limiting hydraulic radius (HR) for the critical stope surface.

Establishment and maintenance of stability within the moderately steeply inclined hanging wall is inferred to be the critical limiting factors to open stoping at Comet.

The Stability Number (N') for Comet hanging walls is assessed as follows:

$$N' = Q' \times A \times B \times C$$

Where:

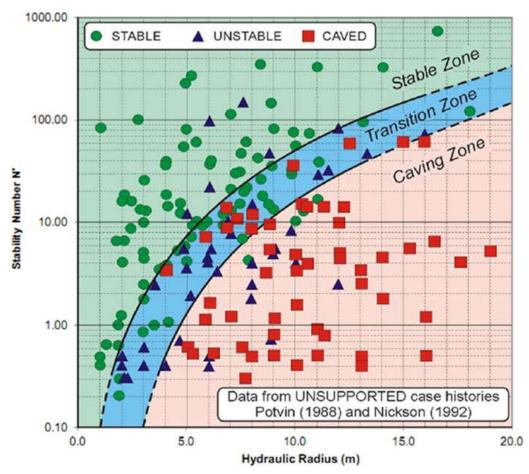
- Q' = With expected dry rock mass conditions and the moderate depth of mining, the calculated Q'-value equated with Q.
- A = 0.6 expected (0.3 low value). Based on stress gradient 2.5 at 150 m depth and mining induced concentration of 2 x times initial stress (inferred conservative).
- B = 0.3 based on fabric and associated defects being sub-parallel to stope hangingwall
- C = 4.5 based on slab failure from inclined hangingwall.

Hence:

 $N' = 12 \times 0.6 \times 0.3 \times 4.5 = 9.7$  (2.7 low value)

Using iso-probability charts for stable conditions, a maximum HR of ~ 3.7 m to ~ 4.2 m is indicated.





#### **Unsupported Stability Graph**

Figure 16-32 Unsupported case histories stability graph method chart.

The potential for stope hanging wall instability may be exacerbated by the presence of foliation-parallel shears located within close proximity to the stope surface. Several narrow intervals of laminated shales, well developed foliation in mafics / ultramafics and zones of crenulated fabric were noted in the immediate hanging wall.

While the Stability Graph method considers the influence / orientation of structures near stope walls, it is unable to account for the possible and specific adverse influence of major structures such as the shears and/or locally poorer conditions in the hangingwall. While there may not be a single persistent shear in the immediate hangingwall, the combined influence of several intervals of shale, highly foliated or fissile ground, talc-chlorite alteration may be detrimental to stope stability.

Cable bolting for stope stability is judged on an individual basis and normally dependent on the proximity of the UTC (Ultramafic-Talc-Chlorite Schist) contact. Where present and sufficiently close to the stope hangingwall (within ≈5 m) major structures, or zones of lesser quality dur to more intensely developed foliation fabric of talc-chlorite alteration, will govern the capacity and behavior of the stope hangingwall.



The designed stand-off distance between Comet decline and proposed stoping is 30 m, with any stand-off distance <30 m requiring review/approval by the Geotechnical Engineer. Proposed stoping is not expected to have significant influence on major access and mine infrastructure.

Due to the relatively shallow depth of proposed mining induced stress changes from currently proposed stoping is not expected to have a significant influence on major access and mine infrastructure development at Comet.

The pillar design for stopes is based on case-by-case basis which also considers lithology and ore width. As a starting point, the dimensions of the island pillars are 1:1:1 (width : height : length) ratio, rib pillars are full height with typically 1:1 (width : length), and sill pillars are 1:1 (width : length) ratio. Using experiential learnings, the pillar dimensions are adjusted pending previous performance and desired outcome. These pillars are generally not permanent requirements and only needed until the stope panel is bogging empty (<1 months).

Pillars between development drives are designed based on their skin-to-skin separation distance, according to the following convention:

- The skin-to-skin horizontal separation distance between two development drives, divided by the height of the drive, is the width : length ratio.
- The skin-to-skin vertical separation distance between two development drives, divided by the width of the drive, is the height : width ratio.
- The minimum required width : length ratio is estimated to be 1:1.
- The minimum height : width ratio is estimated to be 1.5:1.

The mine designs were developed in Deswik software. **Figure 16-33** and **Figure 16-34** depict the design concluded for Comet Group.

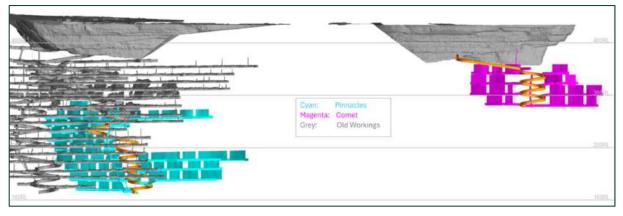


Figure 16-33 Comet Group underground Mineral Reserve design with existing pit (grey) looking West. Source: Westgold.



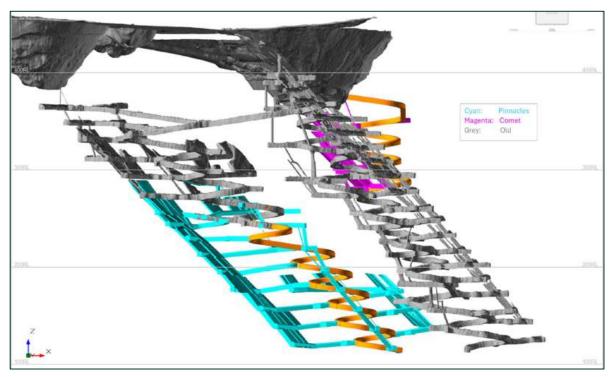


Figure 16-34 Comet Group underground Mineral Reserve design with existing pit (grey) looking north. Source: Westgold.

## 16.3.1.8 Mine Scheduling

The mining schedule for the LOM plan was generated using Deswik mine planning software. Once the development and stope designs are produced, they are evaluated in Deswik against the geological block model. Development and stope shapes are then reviewed and included in the schedule if they are economic to mine. All activities that make up the stoping cycle, such as production drilling, charging and bogging are added into the mine schedule. The development and stoping activities are then linked in a logical extraction sequence which considers mining practicality, geotechnical and productivity constraints. Each task has an equipment resource applied to it, with schedule productivities based on current site performance and parameters appropriate to the equipment being used.

The current mine life is scheduled over twenty-six months (subject to further schedule refinements), as shown below.



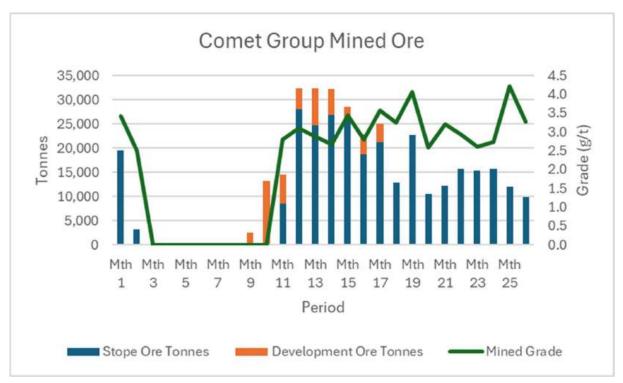


Figure 16-35 Comet Group underground schedule. Source: Westgold.

## 16.3.1.9 Mobile Equipment

The mine equipment proposed for Comet Group is industry standard trackless underground diesel equipment constructed by reputable manufacturers and well suited to current site operations. The primary underground fleet is shown below.

Unit Description	Unit Quantity
Twin Boom Jumbo	2
Production Drill	1
15tLHD	1–3
60 t Truck	1–2
Integrated Tool Carrier	1

## 16.3.1.10 Labour Estimate

The cost model simulated the following labour requirements for the scheduled production at Comet Group as shown below.



Labour	Maximum	Year 1	Year 2
Jumbo Operators	8	8	4
Charge-Up Operators	6	6	3
Long Hole Drill Operator	3	1	3
LHD Operators	6	6	3
Truck Operators	6	6	3
Grader Operators	1	1	1
Water Cart Operators	1	1	1
Serviceman	7	7	7
Storeman	2	2	2
Nipper	6	6	3
Lead Hand Fitter	3	3	3
Fitters	10	10	10
Drill Fitter	3	3	3
Electricians	3	3	3
UG Manager	2	2	2
Mine Foreman	1	1	1
Shift Supervisor	4	4	4
Safety Trainer	2	2	2
Maintenance Foreman	1	1	1
Maintenance Senior Leading Hand	1	1	1
Electrical Supervisor	1	1	1
Site Administrator	2	2	2
Mining Engineer	2	2	2
Surveyor	2	2	2
Geologist	5	5	5
Total Labour		86	72

#### Table 16-31 Comet Group labour requirements.

#### 16.3.1.11 Site Layout

The previous Comet infrastructure area will be utilised for workshop, change rooms and technical and administrative facilities.

Ore will be hauled by mine trucks to the pre-existing pit ROM pad from where it will be rehandled to road trucks for transport to the Tuckabianna Mill.



# 16.3.2 Causton's

## 16.3.2.1 Underground Infrastructure

The Causton's underground mine will be accessed through an existing portal and the main decline throughout the mine. The decline is typically  $5.3 \text{ mW} \times 5.8 \text{ mH}$ , with a standard ore drive size of  $5.0 \text{ mW} \times 5.0 \text{ mH}$ . Lateral development profiles are well matched to the mobile fleet. Ore is hauled from the underground to surface via the decline where it is then transported via a separate surface haulage fleet to the mill. Causton's is ventilated via the main haulage decline with a return airway system connected to the Causton's pit via a ventilation decline.

## 16.3.2.2 Mining Methods

Longhole open stoping (LHOS) without fill is employed at Causton's. The current LHOS stope design dimensions are 20 m to 25 m high and vary in width from 3 m to 8 m with 20 m stope strike lengths. Backfilling will not be required at Causton's with regional stability supplied by sill and rib pillar located in strategic locations throughout the orebody.

It is expected rehabilitation will be required throughout the mine during the mine life. This rehabilitation will potentially require some stripping and removing of loose rock and rusted or damaged ground support elements and the re-supporting of these development ends. This is a reasonably fast and inexpensive task, however, should be planned within the jumbo efficiencies and cycles to optimise access development and new stope zones.

The typical LHOS ore cycle post ore drive development is as follows:

- Drilling of blast holes using a longhole drilling rig.
- Charging and firing of blast holes.
- Bogging (mucking) of ore from the stope using conventional and tele-remote loading techniques.
- Loading of trucks with an LHD.
- Trucks haul ore to surface via the portal.
- Surface trucks haul ore to the mill or the same trucks simply running to the ROM pad at the plant.
- Pillar left insitu.

#### 16.3.2.3 Hydrology

There is no specific hydrology work completed at Causton's, instead hydrology has been taken from the Tucka West test work which sits along the line of lode to Causton's and will likely provide similar results. The figure below shows the proximity Causton's to Tucka West.





Figure 16-36 Causton's proximity to Tucka West. Source: Westgold.

Aquifers at Tuckabianna West include mineralised zones in Banded Iron Formation (BIF) and in the footwall, the BIF itself, porphyry; and transition-zone rocks near the base of weathering. There could also be some permeable zones in cross-cutting faults. The BIF and mineralised zones are expected to be of relatively high permeability (hydraulic conductivity).

Background water quality is represented by Tuckabianna Well, which has been sampled on three occasions for major component analysis. The results of the analyses are shown below. They show that the water is fresh (approximately 570 mg/L TDS), of a sodium chloride type, and generally slightly alkaline with low metal concentrations. The high nitrate concentration recorded in 1966 (64 mg/L) probably resulted from local contamination, as the well is open to fauna including birds. Bores TBS3 to TBS5 (Fig. 2) are used to monitor groundwater quality close to the walls of TSF2.

There has been no WAD (Weak Acid Dissociable) cyanide recorded in any of the bores.



Analyte	Units	19/10/1966	1/10/2018	21/6/2020
рН		6.8	7.9	8.00
TDS	mg/L	440	560	570
Conductivity	µS/cm	714	850	880
Alkalinity	mg/L	25	150	130
Carbonate	mg/L		<1	<1
Bicarbonate	mg/L	× .	180	160
Nitrite	mg/L	8	<0.2	<0.2
Nitrate	mg/L	64	4.3	4.9
Chloride	mg/L	130	170	160
Sulphate	mg/L	55	41	57
Fluoride	mg/L		0.2	0.2
Calcium	mg/L	25	42	42
Magnesium	mg/L	17	23	22
Potassium	mg/L	11	14	14
Silicon	mg/L	65	33	35
Sodium	mg/L	78	81	80
Hardness	mg/L	132	200	200
Aluminium	mg/L	1	<0.005	0.007
Arsenic	mg/L	- a )	0.001	0.002
Cadmium	mg/L		<0.0001	<0.0001
Chromium	mg/L	1	<0.001	< 0.001
Cobalt	mg/L	<0.02	< 0.001	<0.001
Copper	mg/L	<0.02	0.001	0.003
Iron	mg/L	<0.1	0.008	0.055
Lead	mg/L	<0.1	<0.001	0.003
Manganese	mg/L	34 24	0.002	0.033
Nickel	mg/L	<0.02	<0.001	< 0.001
Selenium	mg/L	æ.,	0.001	< 0.001
Zinc	mg/L	0.95	0.039	0.20
Mercury	mg/L		-	<0.0005
Molybdenum	mg/L	3	-	< 0.001

Table 16-32 Tuckabianna Well, major component analysis.

#### 16.3.2.4 Geotechnical

The updated Norwegian Geological Institute (NGI) Q-System an empirical rock mass classification scheme, has been used to characterise ground conditions and provide guidance for ground support and reinforcement design.

Assessment of the rock mass quality using the NGI Q System and data derived from summary geotechnical logging of selected boreholes; core logs; and core photographs yields an estimated likely Q = 32 (with potential for localised occurrence of best- and worst-case values of Q = 67 and Q = 4.75 respectively).

In this case with expected dry rock mass conditions and the moderate depth of mining (and hence inferred moderate stress magnitudes), the calculated Q' values equate with Q.



The stability number (N') is defined as follows:

## N' = Q'ABC; where

- A is a factor related to the expected ration of maximum induced stress to the UCS of the rock.
- B is a factor related to the relative orientations of the critical defect set and the stope surface under consideration.
- C is a factor related to the inclination of the stope surface and likely mode of failures.
- In the case of Causton's;
  - A = 0.6 expected (0.3 lower value). Based on stress gradient 2.5 at 150 m depth and mining-induced concentration of 2 times initial stress (inferred conservative).
  - B = 0.3 based on fabric and associated defects being sub-parallel to stope hangingwalls.
  - C = 4.5 based on slab failure from inclined hangingwall.

Hence, N' =  $32 \times 0.6 \times 0.3 \times 4.5 = 25.9$  (13 low value).

Using isoprobability charts for stable conditions indicates a maximum hydraulic radius (HR) of 6 m (at 95% probability) to 6.5 m to 7 m (90%).

Cable bolt reinforcement installed into the hangingwall at intermediate levels within a multiple level high stope constructs "beams" of increased competence which effectively reduce the hangingwall span into a series of lesser spans.

While this reinforcement scheme will not necessarily reduce the extent to which compressive stresses are reduced (or tensile stresses are developed), the reinforcement in the "competent" zones is inferred to restrict the degree of relaxation/dilation of the hangingwall rock mass.

## 16.3.2.5 Geology

At Tuckabianna the rocks of Hallberg's Association 1 consist mainly of interlayered mafic and ultramafic rocks and a prominent banded iron formation (BIF). The ultramafic rocks are mostly high magnesian basalt, occurring near the top of the Association 1 sequence. Below this is a layered mafic-ultramafic sill, which provides evidence of the "way up" of the succession. The lowermost portion of the sequence consists of basalt and dolerite with some andesite or felsic schist at the base. BIF is an important host to gold mineralisation in the Murchison, possibly because its high iron content causes gold to precipitate from solution. The "main BIF unit" is in detail a thick sequence of interbedded BIF units and dolerite, with BIF making up a substantial proportion of the package.



The package is commonly about 200 m to 500 m thick, with some of this width variation being tectonic in nature. These Association 1 rocks have been folded into the gently south-plunging Kurrajong Syncline. The main line of gold deposits occurs within the western limb of the fold, and in detail most deposits are associated with minor BIF units in the mafic sequence stratigraphically below the main BIF. The deposits are aligned at a narrow angle to the stratigraphy such that the line of workings converges with the main BIF sequence at Tuckabianna West.

The Tuckabianna Shear Zone has long been regarded as one of the major shear zones in the region, with a width of 1 to 2 km and considerable regional extent. The Tuckabianna Shear has been cited by many workers as the fault system responsible for the mineralisation at Tuckabianna, but its precise role in this regard is not clear because it is generally depicted as lying some distance to the west of the main line of mineralisation.

Most of the gold produced to date at Tuckabianna occurs in or adjacent to structurally deformed BIF located along the western limb of the Kurrajong syncline where the Tuckabianna Shear Zone cuts it. In addition to BIF hosted mineralisation, gold has been mined from deposits in other iron rich sediments, mafic rocks, porphyry and granitoid. A significant portion of gold production has also been achieved from lateritic material and from alluvial wash within a Tertiary palaeochannel.

#### 16.3.2.6 Historical Mining

Prospectors first discovered gold at Tuckabianna in 1915 and this led to intermittent small-scale mining of rich mineralised pods within the banded iron formation. For the period leading up to the commencement of modern operations in 1988 a production of 53,000 ounces has been recorded at an average grade of 18 g/t Au.

Modern mineral exploration at Tuckabianna commenced in the early 1960's with a focus on base metal and nickel potential. Considerable interest was shown in the Eelya Hill felsic volcanic complex as a possible host for volcanogenic massive sulphides, but no significant discoveries were made at that time. More recent drilling for gold intersected massive sulphide assaying 6.9% Cu as well as 3.5 g/t Au over a 3 m interval.

Gold exploration was reactivated in the early 1980's by CSR Limited in joint venture with Australmin Holdings Ltd (Australmin). After purchase of CSR's interest in 1988, Australmin discovered deposits at Julies Reward, Causton's and Tuckabianna West. Mining at these prospects began in late 1988. Australmin was acquired by Newmont in May 1990, which became Newcrest through a merger with BHP Gold. The Comet area was acquired from Hannans Gold in 1992. The project was then purchased by Westgold Resources Ltd. (Westgold) in March 1994 and sold to Causton's Gold Operations Pty Limited (Causton's ) in July 2000. Causton's was a subsidiary of Harmony Gold Operations Ltd. Westcoast Mining Ltd. acquired these and other Tuckabianna tenements when they listed on the ASX in November 2003.



A total of 560,000 ounces at 2.5 g/t Au had been produced from the Tuckabianna project between 1988 and 2009. Ore was mined from 22 separate open pits along a 30 km zone of the Tuckabianna Shear.

## 16.3.2.7 Mine Design Parameters

The decline will follow a gradient of -1:7 down. This ensures the consistency of the design whilst also optimising the haulage profile of the trucking fleet. Stockpiles have been strategically located along the decline to allow to be used as diamond drill and / or long-term infrastructure areas for the mine.

The decline has been designed to allow for speed of development, long straights rather than tighter turning circles have been preferred where possible. Initially, there will be a requirement for speed to reduce the time taken to get to the first ore level. During this period, it is imperative that consistency and efficiency is prioritised.

Stopes will be accessed via ore drives developed off access drives from the decline. Levels are kept vertically in the same plane to ensure drain holes and service holes between levels can be drilled. All levels have an internal stockpile for truck loading. Although ore drives are long (upwards of 160 m) no consideration was given to internal stockpiles within the ore drive as this occurrence is rare.

The minimum standoff from the orebody is based upon the footwall graphitic shear, therefore all capital infrastructure has been designed outside of this. Development is split into north and south areas with production beginning in the centre point of these two regions and longitudinally progressing to the extents. To comply with the current Western Australian Mines Regulations, all airflow will be captured "on-level", that is, each level shall have its own return airway.

Criteria	Factors	
Level Spacing	20m-20m vertical level spacing	
Minimum Stope Width	2m	
Dilution	Dependent on width, on average 10%	
Strike Length	Based on geotechnical recommendations	
Maximum Stope Width	10m	
Minimum Dip (stoping area)	42°	
Maximum Dip (stoping area)	NA	

#### Table 16-33 Causton's design criteria.

#### 16.3.2.8 Mine Design

The mine designs were developed in Deswik software. **Figure 16-37** and **Figure 16-38** depict the design concluded for Causton's.



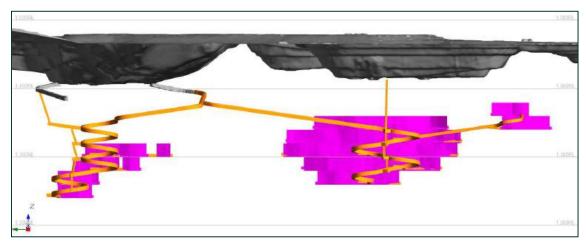
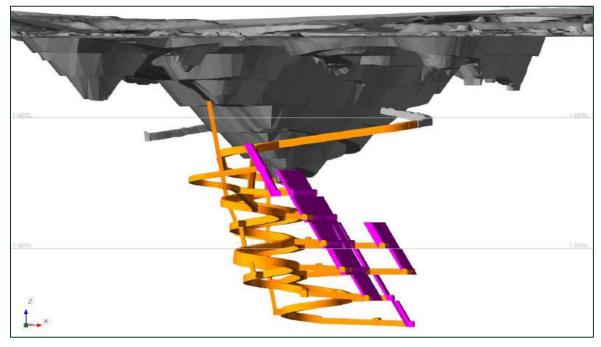


Figure 16-37 Causton's Mineral Reserves showing existing pit and workings looking west. Source: Westgold.



*Figure 16-38 Causton's Mineral Reserves showing existing pit and workings looking north. Source: Westgold. 16.3.2.9 Mine Scheduling* 

The mining schedule for the LOM plan was generated using Deswik mine planning software. Once the development and stope designs are produced, they are evaluated in Deswik against the geological block model. Development and stope shapes are then reviewed and included in the schedule if they are economic to mine. All activities that make up the stoping cycle, such as production drilling, charging and bogging are added into the mine schedule. The development and stoping activities are then linked in a logical extraction sequence which considers mining practicality, geotechnical and productivity constraints. Each task has an equipment resource applied to it, with schedule productivities based on current site performance and parameters appropriate to the equipment being used.

The current mine life is scheduled over nineteen months (subject to further schedule refinements), as shown below.



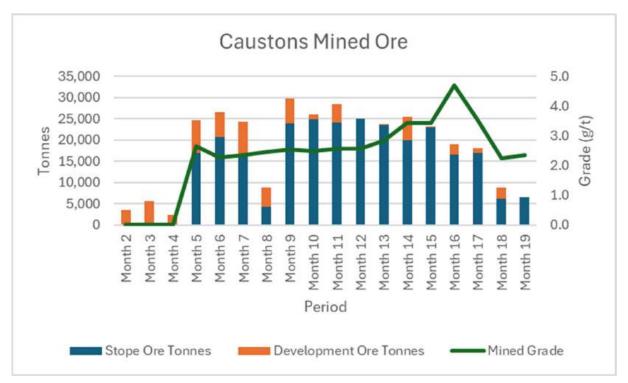


Figure 16-39 Causton's underground schedule. Source: Westgold.

## 16.3.2.10 Mobile Equipment

The mine equipment proposed for Causton's is industry standard trackless underground diesel equipment constructed by reputable manufacturers and well suited to current site operations. The primary underground fleet is shown below.

Unit Description	Unit Quantity
Twin Boom Jumbo	1
Production Drill	1
15tLHD	1
60 t Truck	2
Integrated Tool Carrier	1

Table 16-34 Causton's primary underground fleet.

### 16.3.2.11 Labour Estimate

The cost model simulated the following labour requirements for the scheduled production at Causton's as shown below.



Labour	Maximum	Year 1	Year 2
Jumbo Operators	3	3	3
Charge-Up Operators	3	3	3
Long Hole Drill Operator	3	3	3
LHD Operators	6	6	6
Truck Operators	3	3	3
Grader Operators	0.25	0.25	0.25
Water Cart Operators	0.25	0.25	0.25
Service crew	3	3	3
Storeman	1	1	1
Nipper	3	3	3
Lead Hand Fitter	0		0
Fitters	7	7	7
Drill Fitter	3	3	3
Electricians	3	3	3
UG Manager	2	2	2
Mine Superintendent	2	2	2
Shift Supervisor	3	3	3
Safety Trainer	2	2	2
Maintenance Foreman	1	1	1
Maintenance Senior Leading Hand	1	1	1
Electrical Supervisor	2	2	2
Site Administrator	1	1	1
Mining Engineer	2	2	2
Surveyor	2	2	2
Geologist	7	7	7
Total Labour		63.5	63.5

#### Table 16-35 Causton's labour requirements.

## 16.3.2.12 Site Layout

Causton's will leverage off the proximity to the Tuckabianna mill and share as many resources as possible in terms of site layout, offices, ablutions, and camps.



# 17 PROCESSING

# 17.1 TUCKABIANNA MILL

Westgold treats gold mineralisation at its Tuckabianna Mill, a 1.4 Mtpa conventional CIL processing plant, originally constructed for Silverlake Resources in 2012 and commissioned in 2013. The plant consists of an open circuit jaw crusher followed by closed circuit secondary crushers, a fine ore bin, ball mill, gravity separation circuit, three leach tanks and six carbon adsorption tanks.

The primary sections of the processing plant shown in **Figure 17-1** that are currently in use are:

- Crushing and conveying;
- Ore storage and reclaim and grinding;
- Leaching and carbon adsorption;
- Carbon stripping, electrowinning, refining and carbon regeneration;
- Tailings deposition and storage;
- Reagent mixing and handling; and
- Plant services.

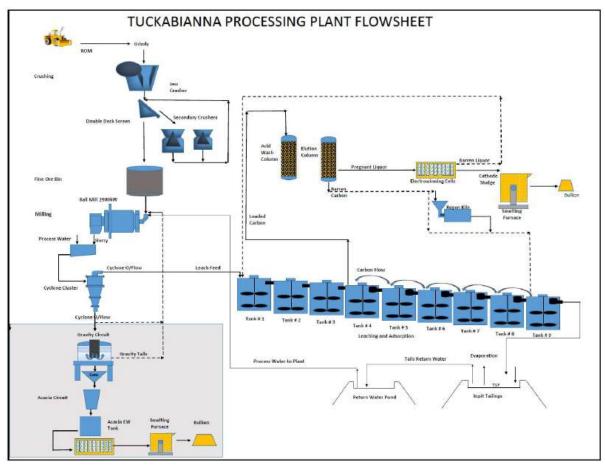


Figure 17-1 Tuckabianna process flowsheet 2023. Source: Westgold.



# 17.2 PROCESS DESCRIPTION

## 17.2.1 Crushing

Mill feed is trucked to the ROM pad from primarily the Big Bell mine located approximately 70 km by road to the west. Additional open pit and other underground ore sources are also utilised where available. The mill feed is classified and stockpiled according to gold grade to blend an optimal feed mix to the mill. Oversize mill feed is sorted from stockpiles and broken on the ROM pad using a front end loader (FEL) and a rock breaker. Any oversize that cannot pass through the primary crusher grizzly is broken by a rock breaker.

The crushing circuit consists of two stages of crushing:

- A C160 Nordberg primary single-toggle jaw crusher;
- A HP500 SX Metso secondary cone crusher;
- A TP450 Trio Cone crusher configured as a secondary crusher.

The crushers operate in closed circuit with a 3.0 m wide by 7.3 m long Metso MF double deck vibrating Banana screen.

Crushed material exits the product screen with a P80 of 12 mm and is stored in the fine ore bin, which has a live capacity of 5,500 t.

## 17.2.2 Grinding

Crushed mill feed is withdrawn from the fine ore bin via a belt feeders, which transfer the crushed product onto the mill feed conveyor that feeds into the ball mill. Mill feed can also be fed via an emergency feeder, which is fed from the fine ore stockpile via FEL.

The grinding circuit consists of an overflow ball mill, hydrocyclone cluster classifier and gravity recovery circuit. The ball mill is a 2.9 MW 5.49 m diameter by 8.70 m effective grinding length (EGL) ANI overflow ball mill.

The crushed mill feed is conveyed to the ball mill feed chute and combined with process water and recirculating cyclone underflow slurry. The ball mill operates in closed circuit with the mill discharge slurry classified by a cluster of Weir 250 mm hydrocyclones.

Oversize ore particles and reject grinding balls are removed from the ball mill discharge slurry by a 16 mm aperture trommel screen connected to the discharge trunnion of the mill. The oversize material (mill scats) is removed from the circuit to protect the cyclone feed slurry pumps and reduce wear rate on cyclone liners and the slurry handling equipment. Mill scats are passed under a belt magnet to remove reject grinding balls and are fed to a Trio TC 51 pebble crusher before return to the ball mill.

Slurry from the grinding and classification circuit passes over a trash screen to ensure that no oversize particles enter the leaching circuit and to remove plastic and other containments from the slurry. The trash screen is a 1.5 m wide by 3.6 m long Oreflow horizontal vibrating screen with an aperture size of 0.80 mm. Undersize slurry from the trash screen flows to the first of three 2,000 m<sup>3</sup> leach tanks.



## 17.2.3 Gravity and Intensive Cyanidation

A gravity separation circuit is included in the design to improve the gold recovery from the hydrocyclone underflow stream.

A bleed stream from the hydrocyclone underflow stream is classified by the gravity feed screen, which is a 1.2 m wide by 2.4 m long Oreflow horizontal vibrating screen with an aperture size of 2.5 mm.

Oversize from this screen returns to the ball mill feed chute for further grinding. Undersize material reports to a centrifugal concentrator to extract the gold. The gravity concentrator is a KCMD30 Knelson Concentrator.

The resulting concentrate is subjected to intensive cyanidation in a CS1000DM ConSep Acacia dissolution module to recover the gold. Pregnant solution from the intensive cyanidation process is pumped to the gold room for electrowinning.

# 17.2.4 Leaching and Adsorption

The leach and adsorption circuit consists of 3 2,100 m<sup>3</sup> leach tanks and six m<sup>3</sup> CIL carbon adsorption tanks consisting of four 1,300 m<sup>3</sup> tanks and two 600 m<sup>3</sup> final tanks.

The leach tanks are mechanically agitated with dual, open, up and down-pumping Mixtec agitator systems powered by 75 kW drives. The adsorption tanks are all mechanically agitated with dual open down pumping Lightnin agitator systems powered by 55 kW drives. Facilities are currently available to inject oxygen into Leach Tanks 1, 2 and 3 with high shear oxygen injector recirculating pumps on Tank 1 and 2. Oxygen is supplied in the form of Liquid Oxygen (LOX) stored on site in a 50,000 L vacuum insulated storage vessel. All the adsorption tanks have facilities for air injection either through side entry sparging or down the agitator shaft addition.

Cyanide solution at 30% strength is added to the first leach tank via a flow meter and automatic control valve. The leaching residence time is 24 hours. Lead Nitrate solution at 40%w/v from bulk storage can be added to either the milling circuit or Leach Tank 1.

Slurry flows from the leach tanks into the carbon adsorption circuit where dissolved gold in the cyanide leach solution is recovered and concentrated by adsorption onto activated carbon. The slurry discharge from the leach tank overflows into the first of the six CIL tanks, four with an average effective working volume of 1,210 m<sup>3</sup> and the last two with 585 m<sup>3</sup> each. The combined adsorption residence time is 24 hours.

In the CIL tanks, the carbon is advanced counter-current to the slurry flow, with new and regenerated carbon added to the last tank and advanced to the first tank while the slurry flows from CIL Tank 1 to Tank 6. Loaded carbon is periodically pumped from Adsorption Tank 1 to the gold room elution circuit for stripping of the gold.

The target pH in the leach circuit is 9.8, and the target cyanide concentration is up to 350 ppm.



## 17.2.5 Carbon Stripping, Electrowinning, Refining, and Carbon Regeneration

Gold is recovered from the loaded carbon by an 8.5 t Pressure Zadra elution circuit. Gold stripped from the carbon is electrowon onto stainless steel wool cathodes in the electrowinning cells. The cathodes are subsequently washed to remove the gold concentrate which is then dried and smelted in the gold room furnace to produce gold bullion for shipment.

The gold from the gravity circuit is leached in the Acacia reactor, and it is then electrowon onto stainless steel wool cathodes in the Acacia electrowinning cell. The gold is recovered and smelted in a similar manner to the gold produced by the Pressure Zadra circuit.

Barren carbon is reactivated using a liquified natural gas (LNG) fired vertical Combustion Air kiln at around 700°C and is returned to the adsorption circuit for reuse.

# 17.2.6 Tailings Disposal

Slurry from the last CIL tank flows by gravity to the feed box of the tailings screen. The tailings screen is a 1.5 m wide by 3.6 m long Oreflow horizontal vibrating screen with an aperture size of 0.8 mm. The screen undersize flows by gravity to the tailings pump hopper where it is pumped through a polyethylene line to the Tailings Storage Facility (TSF).

The screen oversize (trash and carbon fines) is collected and stored in a self-draining carbon fines bin located at ground level.

## 17.2.7 Plant Services

All necessary plant services are available to support the operation of the Cue Mill. Raw water is sourced from various disused open pits and water bores in the vicinity of the plant.

Process water is stored for use in a 7,500 m<sup>3</sup> process water dam. Process water is made up of raw water and tailings return water.

Potable water is sourced from a Novatron 26.5 m<sup>3</sup>/day RO unit using raw water as the feed water. Potable water is utilised in the process plant, administration building and workshop / stores.

High pressure air is provided at a nominal pressure of 650 kPa.

Power is generated on site with a hybrid 9.2 MW power station consisting of 5 CAT 3512H gas gensets, 2 dual fuel Cummins KTA50 gensets, along with 6.115 MW solar array and 2.448 MW Battery Energy Storage System (BESS).



## 17.3 PLANT PERFORMANCE

The Cue Mill has been in operation by Westgold since 2017 with throughput v. recoveries from 2022 shown in **Figure 17-2**.

Recoveries over that period have ranged from 90.25% to 82.25%, with the average recovery at 87.0%. Recovery has reduced over that time as higher recovery ore sources were depleted and more Big Bell ore was added to the ore blend. Throughput over that period has been consistent with lower months caused by plant maintenance or weather events restricting ore cartage. Throughput rate is capped to maintain grinds as Big Bell ore shows some sensitivity to grind.

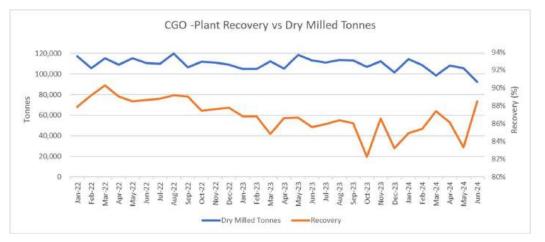


Figure 17-2 Tuckabianna process recoveries v. plant throughput. Source: Westgold.

**Figure 17-3** shows the processing recoveries against the calculated / reconciled and assayed head grades, showing a reduction plant recovery is more Big Bell ore was treated with no significant changes in the head grade. The variance between reconciled (calculated) and assayed head grades over that period has been good with an average reconciled head grade at 2.29 g/t Au. Recovery from Big Bell displays sensitivity to alkalinity with the presence of Stibnite in the ore, in addition to the grinds achieved in the plant.

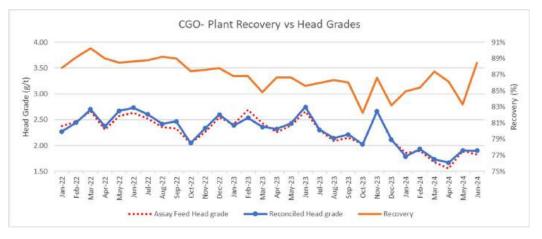


Figure 17-3 Tuckabianna process recoveries v. Head Grade. Source: Westgold.



**Figure 17-4** shows the Head Grade v's Tails grade indicating little relationship between the head grade and tailings grade with pH and grind having more significant effects on recovery. During this period of time the tails has ranged from 0.21 g/t Au to 0.39 g/t Au, with an average tail grade of 0.29 g/t Au.

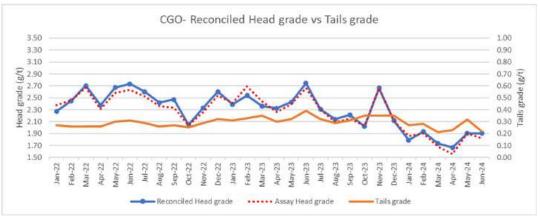


Figure 17-4 Tuckabianna Head grade v. Tails grade: Westgold.

## 18 PROJECT INFRASTRUCTURE

#### 18.1 TUCKABIANNA MILL

The CGO is a well-established mine which has services and infrastructure consistent with an isolated area operating mine.

Infrastructure specific and available to the Tuckabianna Mill includes:

- 1.4 Mtpa processing plant and supporting infrastructure;
- A hybrid power station;
- Medical facilities;
- An accommodation village in Cue;
- Administration blocks and training buildings;
- Fuel storage and dispensing facilities;
- Wastewater treatment plants;
- Water storage and distribution facilities; and
- Tailing storage facilities.

#### 18.1.1 Utilities

Power is generated on site with a hybrid 9.2 MW power station consisting of 5 CAT 3512H gas gensets, 2 dual fuel Cummins KTA50 gensets, along with 6.115 MW solar array and 2.448 MW Battery Energy Storage System (BESS). The site has a 365 kL gas storage tank and a smaller 15 kL diesel storage. (**Figure 18-1**). Electricity is reticulated to all the site buildings, services, and the processing plant.





Figure 18-1 Tuckabianna solar farm and hybrid power generation facility. Source: Westgold.

## 18.1.2 Disposal and Drainage

Domestic and industrial waste is disposed of by burial in designated licensed landfills situated on the Causton's, Try Again and Big Bell Northeast waste rock dumps. CGO employs best practices such as burial and consistent soil cover for landfilled waste materials. Additionally, measures are implemented to control windblown waste escape from each landfill.

Sewage generated from the camps, administration building, and processing plant undergoes treatment at a dedicated wastewater treatment plant. Used oil, grease, and lubricants are collected from site and removed for proper recycling or disposal at licensed facilities. On-site storage of used oil adheres to all relevant regulations, and any oil-contaminated soil is treated using existing bioremediation facilities.

## 18.1.3 Buildings and Facilities

All infrastructure required for mineral processing is in place and operational, including offices, workshops, first aid / emergency response facilities, stores, water and power supply, ROM pad and site roads (**Figure 18-2**, **Figure 18-3** and **Figure 18-4**).





Figure 18-2 Big Bell heavy vehicle workshops - Source: Westgold.



Figure 18-3 Big Bell light vehicle workshops - Source: Westgold.





Figure 18-4 Tuckabianna mill and workshops - Source: Westgold.

CGO operates primarily as a FIFO operation and maintains two camps on site for employees and contractors. A small number of employees drive in / out from regional centres such as Geraldton.

The Cue camp has a room capacity for 266 persons, and contains dry mess facilities, a recreational gymnasium, terrestrial and satellite TV in room entertainment, WiFi connectivity and an entertainment room.

The Big Bell camp has a room capacity for 160 persons, and contains wet and dry mess facilities, a recreational gymnasium, terrestrial and satellite TV in room entertainment, WiFi connectivity and an entertainment room.

# 18.1.4 Communications

The mine site has a communication network of landline and limited mobile coverage within the administration, camp and mill areas, and licensed UHF radio system within the main mining areas. Outside these areas, communication is by means of mobile, radio or satellite phone only.

# 18.1.5 Tailings Storage

Storage is provided in two TSF's with storage capacity for tailings produced at the Tuckabianna Processing Facility. TSF2, a paddock-style facility, has capacity to be utilised for 12 months. Approval for a future lift of the facility is also in place. The Julie's Reward In-Pit TSF was recently utilised and offers only minor top up capacity.

Approval for a new in-pit TSF located at Tuckabianna West is in place, with this facility estimated to provide approximately 4.5 years of storage capacity based on current processing rates. Installation of infrastructure to allow the use of Tuckabianna West is currently being installed. Additionally, permitting and design work is progressing for a future TSF 3, a paddock-style facility that will further expand Westgold's tailings disposal options at Cue.



# 19 MARKET STUDIES AND CONTRACTS

## 19.1 GOLD MARKET STUDIES

The following discussion of gold markets is provided as background to cut-off grade calculations used in this Technical Report and is derived from Devlin *et. al.*, 2024.

As shown in **Table 19-1**, mined gold production totalled 3,625 t in 2022, up from 3,576 t in 2021. Net producer de-hedging of -13 t, plus recycled gold of 1,140 t in 2022, brought the total gold supply to 4,752 t, 45 t higher than 2021. For the YTD Q3 2023 period, total gold supply was estimated to be 3,692 t, 164 t higher than the same period in 2022.

The demand side totalled 4,752 t of gold in 2022. Jewellery, fabrication and technology applications, totalled 2,195 t of demand, while investment, central banks and other institutions net purchases made up the balance of demand. Through the first three quarters of 2023, total gold demand was estimated to be 3,69 t, 101 t higher than the same period in 2022.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD Q3 2023
Supply											
Mine production	3,167	3,270	3,361	3,515	3,576	3,656	3,596	3,482	3,576	3,625	2,744
Net producer hedging	-28	105	13	38	-26	-12	6	-39	-5	-13	25
Recycled gold	1,195	1,130	1,067	1,232	1,112	1,132	1,276	1,293	1,136	1,140	924
Total Supply	4,334	4,505	4,441	4,785	4,663	4,776	4,878	4,736	4,707	4,752	3,692
Demand											
Jewellery Fabrication	2,735	2,544	2,479	2,019	2,257	2,290	2,152	1,324	2,230	2,195	1,583
Technology	356	348	332	323	333	335	326	303	330	309	216
Investment	800	904	967	1,616	1,315	1,161	1,275	1,794	991	1,113	687
Central banks & other inst.	629	601	580	395	379	656	605	255	450	1,082	800
OTC and other	-186	107	83	432	379	334	520	1,060	706	53	407
Total demand	4,334	4,505	4,441	4,785	4,663	4,776	4,878	4,736	4,707	4,752	3,692
LBMA Gold Price (US\$/oz)	1,411	1,266	1,160	1,251	1,257	1,268	1,393	1,770	1,799	1,800	1,931

**Figure 19-1** shows the monthly average price history for gold over the period December 2018 through November 2023. The price generally trended upward over the selected period from a month-average low of US\$1,279/oz at the beginning of the period to a high of US\$1,990/oz in May 2023, ending the selected period at US\$1,985/oz. Over the period 2024 to 2026, consensus annual gold price estimates range from an average annual price of US\$1,921/oz in 2024, US\$1,898/oz in 2025 and US\$1,835/oz in 2026.

The forecast for periods shown in **Figure 19-1** from December 2023 out to 2026 is from data compiled by S&P Capital IQ and is based on averages from a survey of 31 analysts for FY 2024, 27 analysts for FY 2025 and 20 analysts for FY 2026.



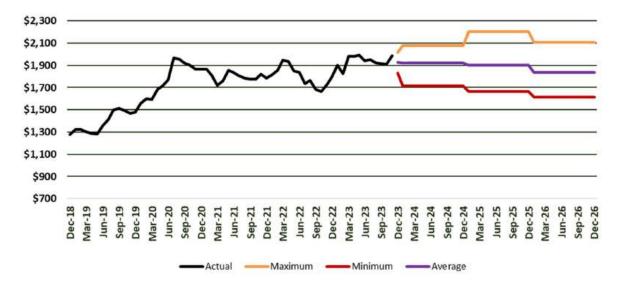


Figure 19-1 Gold price history and consensus forecast - Source: S&P Capital IQ.

# 19.2 CONTRACTS

Westgold conducts all primary mining in-house, via its wholly owned Westgold Mining Services subsidiary. Some specialist mining activities are contracted out where required.

Material contracts relate to haulage of material from the mine to processing facilities, the supply of fuel and electricity for the purposes of mining activities, and the contract for the refining of gold doré produced from Westgold's gold processing facilities. The terms of these contracts are within industry norms.



# 20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

The Cue Gold Operations (CGO) is a multi-deposit operating mine with an operating gold mill (Tuckabianna) that is in possession of all required permits. Environmental permitting and compliance requirements for mining and processing are the responsibility of Westgold. CGO covers over 156.6 km<sup>2</sup> and has a significant disturbance footprint including tailings storage facilities, an operating mill, open pits, underground mines, accommodation villages, office and workshop complexes and haul roads.

# 20.1 CUE GOLD OPERATIONS

## 20.1.1 Environmental Permits

## Mining Act 1978

CGO's mining and processing activities are undertaken within Western Australia's regulatory framework established by the Mining Act 1978 (Mining Act). This framework ensures responsible mining practices and environmental protection throughout the entire mine life cycle. A critical component of this framework is the Mining Lease, which grants CGO the exclusive right to extract minerals from a defined area.

To ensure comprehensive planning and responsible mine closure, the Mining Act requires the submission of a detailed Mining Proposal (MP). The MP outlines the project in detail, including the proposed mining methods, environmental management strategies, and social impact assessments. It also incorporates a Mine Closure Plan (MCP) that details the steps for post-mining rehabilitation to ensure the site's longterm stability and safety.

The Government of Western Australia; Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) administers this process. DEMIRS reviews both the MP and MCP to ensure alignment with the Mining Act and relevant environmental regulations. Once approved, these documents become the guiding principles for CGO's mining operations. A list of the MP and MCP documents that have been approved for CGO are listed as follows:

- Big Bell Project (Reg ID: 119434): Mining Proposal and Mine Closure Plan.
- Cuddingwarra Project (Reg ID: 101167): Mining Proposal.
- Cuddingwarra Project (Reg ID: 115837): Mine Closure Plan.
- Day Dawn Project (Reg ID: 118218): Mining Proposal and Mine Closure Plan.
- Tuckabianna Project (Reg ID: 122437): Mining Proposal and Mine Closure Plan.



# **Environmental Protection Act 1986**

To facilitate the operation of CGO's mining and processing activities, DEMIRS has granted the following clearing permits for the removal of native vegetation in accordance with the Environmental Protection Act 1986 (EP Act):

- CPS 8087/3, granted on 08 September 2018 and valid until 07 September 2028, permits the clearing of up to 319 hectares (ha) at the Big Bell, Day Dawn and Cuddingwarra mining areas.
- CPS 9228/1, granted on 25 May 2021 and valid until 24 May 2026, permits the clearing of up to 363 ha at the Big Bell Accelerator/Indicator mining area.
- CPS 8293/2, granted on 02 March 2019 and valid until 02 March 2029, permits the clearing of up to 26.87 ha at the Day Dawn Kinsella mining area.
- CPS 9435/1, granted on 26 February 2022 and valid until 25 February 2027, permits the clearing of up to 250 ha at the Tuckabianna mining area.

The EP Act further regulates certain industrial facilities, designated as "prescribed premises," which require a licence for operation. The Department of Water and Environmental Regulation (DWER), under the authority of the EP Act, has issued prescribed premises licenses and works approvals to support CGO's ongoing operations. The approved categories for each project area are as follows:

- L8934/2015/1 (Big Bell and Cuddingwarra: Cat 6: Mine Dewatering up to 5,324,556 tonnes per annual period, Cat 12: Screening of Material up to 400,000 tonnes per annual period, Cat 64: Putrescible Landfill up to 600 tonnes per annual period and Cat 85: Sewage Facility up to 50 cubic metres per day).
- L8907/2015/1 (Day Dawn: Cat 6: Mine Dewatering up to 1,150,000 tonnes per annual period and Cat 12: Screening of Material up to 500,000 tonnes per year).
- L8644/2012/1 (Tuckabianna: Cat 5: Processing or Beneficiation of Ore up to 1,400,000 tonnes per annual period, Cat 6: Mine Dewatering up to 1,700,000 tonnes per annual period, Cat 61: Liquid Waste Facility up to 1,000,000 tonnes per annual period and Cat 64: Class II Putrescible Landfill up to 500 tonnes per annual period).
- L8978/2016/1 (Comet: Cat 6 Mine Dewatering up to 1,000,000 tonnes per annual period).
- W6603/2021/1 (Cat 6: Mine Dewatering up to 193,000 tonnes per annual period).
- W6864/2023/1 (Cat 5: Processing or Beneficiation of Ore up to 850,000 tonnes per annum).
- W6880/2024/1 (Cat 5: Processing or Beneficiation of Ore up to 1,400,000 tonnes per annum).



# Rights in Water and Irrigation Act 1914

In Western Australia, the Rights in Water and Irrigation Act 1914 governs activities such as constructing bores, extracting surface and groundwater, and undertaking works that may impact watercourses. However, a collaborative agreement exists between the DEMIRS and DWER. This agreement streamlines the permitting process for certain mining activities. While these activities may be exempt from formal DWER approval, they are still subject to oversight through a mining proposal approved by DEMIRS (DEMIRS and DWER, 2021).

Westgold maintains a compliant water management strategy, evidenced by the possession of six current water licenses: GWL 156542 (7), GWL 176056 (5), GWL 207140 (1), GWL 207611 (1), GWL 207612 (1) and GWL 207613 (1). These licenses authorise a combined withdrawal of 12,540,000 kilolitres for water supply.

Additionally, CGO maintains water abstraction licenses issued by DWER pursuant to the Rights in Water and Irrigation Act 1914. Key licences and approvals for the operation of mining and processing activities at CGO are listed in **Table 20-1**.

Reference	Approval	Issuer	Date Commenced	Expiry Date	Project
CPS 8087/3	Clearing Permit for Native Vegetation (up to 319 hectares) for Mineral Production and Associated Activities	DEMIRS	8/09/2018	7/09/2028	Big Bell, Day Dawn, Cuddingwarra
CPS 9228/1	Clearing Permit for Native Vegetation (up to 363 hectares) for Mineral Production and Associated Activities	DEMIRS	25/05/2021	24/05/2026	Big Bell - Accelerator Indicator
CPS 8293/2	Clearing Permit for Native Vegetation (up to 26.87 hectares) for Mineral Production	DEMIRS	2/03/2019	2/03/2029	Day Dawn - Kinsella
CPS 9435/1	Clearing Permit for Native Vegetation (up to 250 hectares) for Mineral Production and Associated Activities	DEMIRS	26/02/2022	25/02/2027	Tuckabianna
L8934/2015/1	Prescribed Premises Licence for: - Cat 6: Mine Dewatering up to 5,324,556 tonnes per annual period - Cat 12: Screening of Material up to 400,000 tonnes per annual period - Cat 64: Putrescible Landfill up to 600 tonnes per annual period - Cat 85: Sewage Facility up to 50 cubic metres per day	DWER	7/03/2016	6/03/2026	Big Bell, Cuddingwarra
L8907/2015/1	Prescribed Premises Licence for: - Cat 6: Mine Dewatering up to 1,150,000 tonnes per annual period - Cat 12: Screening of Material up to 500,000 tonnes per year	DWER	19/10/2015	18/10/2025	Day Dawn
L8644/2012/1	Prescribed Premises Licence for: - Cat 5: Processing or Beneficiation of Ore up to 1,400,000 tonnes per annual period - Cat 6: Mine Dewatering up to 1,700,000 tonnes per annual period - Cat 61: Liquid Waste Facility up to 1,000,000 tonnes per annual period - Cat 64: Class II Putrescible Landfill up to 500 tonnes per annual period	DWER	27/08/2012	26/08/2027	Tuckabianna
L8978/2016/1	Prescribed Premises Licence for: - Cat 6 Mine Dewatering up to 1,000,000 tonnes per annual period	DWER	5/09/2016	4/09/2036	Comet
W6603/2021/1	Works Approval for: - Cat 6: Mine Dewatering up to 193,000 tonnes per annual period	DWER	28/02/2022	27/02/2025	Big Bell - Accelerator Indicator

#### Table 20-1 CGO licences and approvals.



Reference	Approval	Issuer	Date Commenced	Expiry Date	Project
W6864/2023/1	Works Approval for: - Cat 5: Processing or Beneficiation of Ore up to 850,000 tonnes per annum	DWER	26/02/2024	26/02/2027	Big Bell
W6880/2024/1	Works Approval for: Cat 5: Processing or Beneficiation of Ore up to 1,400,000 tonnes per annum	DWER	10/05/2024	09/05/2030	Tuckabianna
GWL 156542 (7)	Water Abstraction Licence for the abstraction of up to 1,150,000 kL per annual period	DWER	26/07/2022	10/03/2029	Day Dawn
GWL 176056 (5)	Water Abstraction Licence for the abstraction of up to 5,000,000 kL per annual period	DWER	26/07/2022	10/03/2029	Big Bell
GWL 207140 (1)	Water Abstraction Licence for the abstraction of up to 200,000 kL per annual period	DWER	21/03/2022	20/03/2024	Big Bell - Accelerator Indicator
GWL 207611 (1)	Water Abstraction Licence for the abstraction of up to 2,800,000 kL per annual period	DWER	26/07/2022	10/03/2029	Cuddingwarra
GWL 207612 (1)	Water Abstraction Licence for the abstraction of up to 690,000 kL per annual period	DWER	26/07/2022	10/03/2029	Comet
GWL 207613 (1)	Water Abstraction Licence for the abstraction of up to 2,700,000 kL per annual period	DWER	26/07/2022	10/03/2029	Tuckabianna

Proposals with the potential for significant environmental impact fall under Part IV of the EP Act. Although the EP Act itself does not provide a specific definition of "significant impact," the Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2012 offer detailed criteria. CGO does not trigger any requirements for a separate assessment under Part IV of the EP Act.

# 20.1.2 Required Environmental Permits and Status for Future Mining

CGO's mining strategy has utilised both underground and open-pit methodologies. Currently authorised underground mining operations include the Big Bell, Fender, Comet, Comet North, Causton's, Shocker/1600, and Great Fingall. Open pits have been established across all project areas. Construction of the Accelerator, Indicator, Fleece Pool group, Emily Well, City of Sydney group, Jim's Find South, South Victory, Katie's, TMC and Racecourse pits has been approved, however, these remain undeveloped.

The dewatering of both underground and open-pit mines is permitted, with designated discharge locations. Discharge from the Big Bell, Cuddingwarra, and Day Dawn projects is approved for discharge at Lake Austin, via a series of pipeline corridors, while an ephemeral creekline is approved to receive discharge from the Accelerator-Indicator projects.

The Tuckabianna Processing Facility has a permitted annual capacity of 1.7 million tonnes of ore. Water for the mill is sourced from a network of open pits located across the Tuckabianna and Comet areas. Additionally, recently constructed production bores supplement water supplies, ensuring long-term sustainability. An application for the expansion of the TSF capacity was recently approved by the relevant regulatory bodies. The proposed Tuckabianna West In-Pit TSF and upstream TSF3 aim to extend operational capacity for an additional eleven years, as approved under Mining Proposal (REG ID: 122437) and Works Approval (W6880/2024/1).

DEMIRS recently granted approval (REG ID: 119434) for the construction of a paste plant at the Big Bell mine to support underground mining operations. The corresponding Works Approval (W6864/2023/1) was secured in February 2024.



Construction of the Big Bell paste plant infrastructure has not yet commenced, however drilling of the paste plant borehole has been completed.

## 20.1.3 Environmental Compliance

In 2019, Westgold identified elevated levels of sulphate and total dissolved solids (TDS) in monitoring bore TBS3, located near the Tuckabianna Tailings Storage Facility 2 (TSF2). These levels exceeded the limits outlined in EP Act Licence L8644/2012/1 (issued 2012). While the licence limits have since been adjusted, exceedances were again reported in 2024.

An investigation was conducted to determine the source and extent of the elevated readings. The findings indicated that seepage appears to be localised around bore TBS3 and unlikely to migrate significantly beyond this immediate area. This conclusion is supported by the presence of natural clay barriers and stable groundwater table depths. It is anticipated that TDS concentrations will stabilise upon the cessation of tailings deposition in TSF2, scheduled for 2025.

Westgold maintains a detailed Environmental Management Plan that includes site specific processes and procedures. The site has a detailed record of the applicable legislation and legal requirements as well as various management and monitoring programs required to ensure compliance with legal and legislative requirements.

## 20.1.4 Environmental Studies

## Flora, Vegetation and Fauna

Biodiversity assessments have been conducted across all four project areas within CGO. These assessments aimed to characterise the flora and fauna within the designated disturbance envelopes, with a particular focus on threatened and conservation-significant species.

The assessments revealed that all mining areas support assemblages of flora and fauna typical of the Murchison bioregion. However, all areas also exhibited evidence of historical mining activity, indicating some degree of ecological disturbance. Importantly, no threatened ecological communities were identified within the disturbance footprints.

Weed infestations were documented in all project areas. However, the assessments in Tuckabianna and Comet did not identify any Weeds of National Significance (WoNS) within the impact zones. Conversely, Day Dawn and Cuddingwarra harboured some WoNS species. Priority flora species, classified as having a higher conservation priority within Western Australia, were identified in all project areas. Notably, no threatened flora species were observed in any of the assessments.

Targeted fauna surveys in Tuckabianna, Comet, and Cuddingwarra did not yield any direct observations of conservation-significant fauna species. However, Day Dawn identified potential habitat for the West Coast Mulga Slider (*Lerista eupoda*). Similarly, both Tuckabianna and Big Bell offered potential habitat for the Shield-backed Trapdoor Spider (*Idiosoma nigrum*), a vulnerable species. It is important to note that despite suitable habitat, no individuals of this spider were located during surveys.



The approaches to assessing subterranean fauna (fauna residing underground) differed between the project areas. Tuckabianna and Comet lacked dedicated surveys for subterranean fauna. Conversely, Cuddingwarra identified a diverse subterranean fauna community within the Taincrow Calcrete Priority Ecological Community (PEC). The project design for Cuddingwarra, including its relatively small scale and staged dewatering process, is predicted to have minimal impact on this underground community. A pilot survey for stygofauna (groundwater fauna) has been undertaken but did not locate any specimens.

When considering the broader ecological context, the biodiversity assessments suggest that the mining activities are unlikely to have significant impacts on the overall environmental health of the project areas. Several factors contribute to this outlook. Firstly, the surrounding landscapes offer similar habitat for the flora and fauna identified within the mining area. Secondly, some project areas already exhibit signs of past ecological disturbance due to historical mining activities.

#### Soils

A recent analysis of soil characteristics across CGO identified distinct properties for each location. The dominant soil type across the regions is a shallow sandy loam, characterised by low organic matter and nutrient content. Notably, the area relies on surface stony materials for stability against wind erosion. Soil pH exhibits regional variability, ranging from very moderately acidic to moderately alkaline. With the exception of elevated arsenic levels in some Cuddingwarra samples, there is no significant enrichment of metals across the investigated areas.

At Cuddingwarra and Big Bell, the soil profile is primarily comprised of loams and loamy sands with variable coarse material content. These soils are classified as dispersive, indicating instability and a propensity for hardsetting and erosion. Additionally, the soils exhibit moderate to strong alkalinity and extreme salinity, coupled with a low capacity to store water. Some areas within Cuddingwarra demonstrate high sodium content.

Day Dawn presents textures ranging from loamy sand to light clay. These soils are partially dispersive, suggesting a moderate risk of erosion. Similar to Cuddingwarra, Day Dawn experiences moderate alkalinity, with pockets of extreme salinity. The analysis revealed generally low to moderate levels of organic carbon and plantavailable nutrients. While the majority of Day Dawn soils are classified as non-sodic, isolated areas exhibit sodic and highly sodic characteristics.

In contrast to the other mining areas, Tuckabianna and Comet are dominated by stable, non-dispersive sandy loams with variable coarse material content. This translates to a lower risk of hardsetting and erosion. Soil pH is more variable, encompassing a wider range from strongly acidic to moderately alkaline. Tuckabianna and Comet exhibit a mix of saline and non-saline areas, with all locations sharing a low capacity to store water. A key distinction from the other regions is the absence of sodic soils.



# Hydrology

CGO is within the Murchison River catchment, experiencing low rainfall and ephemeral creeklines. Most precipitation evaporates or drains internally towards Lake Austin.

While Big Bell boasts a slightly more intricate network of ephemeral watercourses compared to Tuckabianna and Day Dawn, whose smaller catchments contribute even less surface water, the overall flood risk remains low across all regions. This is primarily due to the disconnect from larger regional catchments and the ephemeral nature of water flow. Standard flood mitigation measures are sufficient for most areas, with a levee required for protection of TSFs at Tuckabianna and Big Bell. No known surface water users exist in the immediate vicinity of the mining areas, and current infrastructure appears to adequately manage surface water runoff.

# Hydrogeology

Low rainfall and impermanent streams characterise the region, necessitating the utilisation of fractured bedrock, alluvial deposits, and calcrete aquifers as water sources. These aquifers exhibit variable permeability.

Localised pockets of brackish to fresh groundwater may exist near bedrock outcrops due to localised recharge events. Groundwater flow generally exhibits a southerly direction towards the highly saline Lake Austin. However, local variations in topography and underlying geology can influence flow patterns.

Mining operations have resulted in localised declines in the water table attributable to dewatering activities. Nonetheless, the broader impact on regional groundwater flow is considered minimal. Existing pit lakes, including Lake Austin, function as groundwater sinks, with salinity levels progressively increasing over time. Pastoral activities rely on bores and wells to access brackish groundwater. There is no current public use of water for human consumption within the mining lease areas.

A critical aspect of groundwater management in the Cue region is the recognition of its inherently limited availability. Potential environmental receptors are identified prior to the commencement of mining operations, and ongoing monitoring programs are undertaken to assess potential impacts on groundwater quality and levels. Big Bell contains potable groundwater resources in the form of production bores, while Cuddingwarra's groundwater sources are not considered to have any beneficial uses except Black Swan South 5 Pit for potential livestock watering. Day Dawn's pit water exhibits salinity levels that render it unsuitable for livestock, and Tuckabianna's existing pit voids directly intersect and extract from the water table, most of which are suitable for livestock watering.



## 20.1.5 Mine Rehabilitation and Closure

The CGO tenements are subject to the *Mining Rehabilitation Fund Act 2012* (MRF Act). A 1% levy is paid annually by tenement, and the pooled funds are utilised by DEMIRS to rehabilitate abandoned mine sites in Western Australia. As required, Westgold contributes an annual levy of approximately A\$267,000 to the MRF. The most recent payment covered the period ending June 2024, and the next contribution is due in July 2025.

Westgold recently reviewed and updated its closure cost model for CGO. The estimated closure cost for the CGO tenements is approximately A\$23.1 million.

As mandated by the Mining Act, Westgold, as the current tenement holder, is responsible for the rehabilitation and closure of any areas disturbed by its mining operations. As a result, rehabilitation efforts are actively incorporated throughout the mining process. As mining progresses in specific areas, Westgold works concurrently to restore the land. Westgold also prioritises the rehabilitation of the mining areas that were disturbed before its acquisition, addressing any environmental issues arising to remediate legacy landforms.

## 20.1.6 Aboriginal Heritage Act 1972

There are a number of Aboriginal sites within the CGO tenements, as documented in the Government of Western Australia's Aboriginal Heritage Inquiry System (AHIS). The Department of Planning, Lands and Heritage (DPLH) preserves all Aboriginal sites in Western Australia whether or not they are registered. Aboriginal sites may exist that are not recorded on the register.

Various ethnographic and archaeological surveys have been undertaken over the CGO tenements. No sites of ethnographic or archaeological significance were recorded that would impact on the operation of the Tuckabianna Mill or associated mining activities.

There are a number of registered Aboriginal Sites within the CGO tenements, however no current or planned activities relating to the operation of the existing underground mines and Tuckabianna Mill require disturbance of these Aboriginal Sites. Registered heritage sites or potential heritage sites in close proximity to project areas have been demarcated, adequately signed and removed from any mining activities use.



# 20.1.7 Social and Community

The Cue region has a substantial history of exploration and mining. Cue was one of the earliest mining centres in Western Australia, taking its name from Mr. Tom Cue who discovered alluvial gold in 1891. In the same year Heffenan pegged the auriferous Day Dawn Reef, subsequently known as the Great Fingall Reef (Woodward, 1907). The nearby Big Bell goldfield was discovered by Harry Patton in 1904. Major periods of production include:

- Great Fingall mine, which yielded 1,224,473 oz gold from 1,881,842 t ore (inclusive of foreign ore sources), for a recovered grade of 20.27 g/t, between 1891 and 1929.
- Big Bell Between 1937 and 1955 where 5.6 Mt of ore was processed for 730,000 oz of gold.
- Between 1984 and 2003 modern processing infrastructure was established and mining was undertaken at Golden Crown underground mine, the Big Bell open pit and subsequently underground mine, and satellite open pits in the Big Bell, Cuddingwarra and Day Dawn regions before the project was shuttered in 2003.
- Metals X (Westgold) reopened the project in 2016, with mining commencing at the Comet underground mine. CGO has been in continual operations since.

The nearest town to CGO is Cue, with a population of 215 (2021 Census), 25 km west of the Tuckabianna Mill. Cue is serviced by several general stores, a service station, hotel, caravan park and boarding house. Transport links between Cue and Perth are predominantly via the Great Northern Highway, although charter flights service the Cue airport, and commercial flight options are available in the nearby towns of Meekatharra (110 km north) and Mouth Magnet (90 km South).

Geraldton, the primary regional centre with a population of 38,634 (2021 Census), is located 420 km via road, to the southwest of CGO. Geraldton is the regional centre for the Mid-West and is a regional hub for transport, communications, commercial activities and community facilities.

The current workforce at CGO (Westgold employees and contractors) comprises 391 personnel. All are accommodated on site during their rostered-on periods. Most workers permanently reside in Perth and FIFO from Perth to CGO on either a 4 days-on/3 days-off, 8 days-on/6 days-off or 14 days-on/7 days-off rotation. The FIFO workers are supplemented by workers who reside in regional towns such as Geraldton, Western Australia.

Geraldton is also the nearest port, 420 km via road, to the southwest of CGO.



# 21 CAPITAL AND OPERATING COSTS

Capital and operating costs are derived from current site costs, in addition to recent supplier quotations. As such, these costs are well understood and allow enough detail for Mineral Reserves to be declared.

Westgold apportions their group costs against each region. This is done by pooling the total costs and proportioning them according to the proposed ounce profile within the mine plan. The group costs are constantly reviewed and updated as part of the Westgold forecasting and budgeting processes to ensure these costs are aligned to the actuals determined from site.

## 21.1 CUE

## 21.1.1 Cue Complex

## 21.1.1.1 Capital Costs

The wider Cue complex consumes specific processing and mining upfront and sustaining capital costs. Major capital specific to the mines will be attributed to those mines whereas costs associated outside of those mines will sit within the complex costs.

Capital Costs	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Processing Capital	\$A M	62.0	39.0	2.0	5.0	2.0	6.0	5.0	3.0			
Processing Sustain	\$A M	29.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0

#### Table 21-1 Cue Complex capital costs.

Other capital includes closure costs of A\$23.5 and any non-specific capital costs required to be associated to the region. This can also include any major capital upgrades such as power projects or miscellaneous capital not captured as part of the regional plan.

## 21.1.1.2 Operating Costs

Operating costs associated to the Cue Complex include the following:

- Processing.
  - Additives.
  - o Power.
  - Additional variables.
- Site administration.
  - o Insurance.
  - Information technology.
  - Compliance.
  - Occupational Health and Safety.
  - Environment.



- o Stores.
- Corporate allocations.
- Other (consumables, unbudgeted costs).
- Exploration.
  - o Tenement.
  - Salaries and travel.
  - Exploration (Westgold exploration).
  - Other (consumables, unbudgeted costs).

As such the operating costs for the Cue Complex are shown below.

Table 21-2 Cue Complex operating costs.

Operating Costs	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Processing	\$A M	573.6	91.0	53.2	56.0	532.	57.2	56.2	54.2	51.2	51.2	50.4
Site Administration	\$A M	217.8	22.8	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	16.7
Exploration	\$A M	20.0	5.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.3

## 21.2 BIG BELL

## 21.2.1 Big Bell

21.2.1.1 Capital Costs

As an operating mine, most major infrastructure capital is already in place at Big Bell. The operation intends to primarily incur sustaining capital costs as the planned production rates are achieved with the infrastructure networks that are already in place. New heavy vehicle equipment purchases already made in 2022, along with existing heavy vehicles, are expected to last the life of the Mineral Reserves schedule.

The sustaining capital expenditure is allocated for ongoing capital development, mining equipment costs (rebuilds and major overhauls), and other underground infrastructure refurbishment. Sustaining capital requirements also include extensions to the ventilation, pumping and electrical networks that follow capital decline development as the mine goes deeper. This includes an allowance for sustaining costs associated with ongoing processing plant infrastructure maintenance. The sustaining capital costs per annum are detailed below.

#### Table 21-3 Big Bell capital costs.

Capital	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Costs	\$A M	110.5	28.9	19.6	12.8	9.7	12.1	9.1	8.1	3.2	3.3	3.7



## 21.2.1.2 Operating Costs

As an established operation, Big Bell has a good understanding of its costs and has a functioning cost management system. Operating cost inputs are based on site actual costs, this is inclusive of the following cost profiles:

- Mine development (operating only).
- Mine production.
- Surface haulage.
- Geology.
- Mine services (power, water, ventilation).
- Administration.

Operating Costs	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Mining Operating	\$A M	1,400.8	120.6	140.5	128.8	149.8	154.5	153.3	160.7	136.1	126.0	130.4
Processing	\$A M	181.6	37.6	26.7	25.7	20.8	18.6	19.3	18.5	15.8	11.0	12.5
Overhead	\$A M	196.9	21.5	17.0	14.8	20.1	21.6	21.4	22.0	20.5	18.2	19.8
Royalties	\$A M	70.9	5.4	5.5	5.6	7.8	8.6	8.4	8.2	7.3	6.7	7.4

#### Table 21-4 Big Bell operating costs.

## 21.2.1.3 Closure

Closure costs have been included in the wider Cue cost profile.

The rehabilitation cost of areas requiring restoration at Big Bell is estimated to total \$6.1 million. The largest areas needing rehabilitation are the tailings storage facilities at 38.73 ha and the waste rock dumps at 37.22 ha. These areas also represent the most significant financial commitments, with estimated costs of \$2.1 million and \$1.1 million respectively.

Transport infrastructure corridors add another 71.15 ha for rehabilitation, requiring \$875,000. Buildings cover a much smaller area (2.26 ha) but still necessitate \$550,000 for restoration.

Several other categories, including the run of mine pad (13.8 ha, \$336,000), airstrip (18.86 ha, \$208,000) and laydown areas (33.77 ha, \$179,000) contribute to the overall area and cost of rehabilitation. Borrow pits, the sewage pond, and dams are expected to incur little to no expense for restoration.



# 21.2.2 Fender

## 21.2.2.1 Capital Costs

As an operating mine, most major infrastructure capital is already in place at Fender. The operation intends to primarily incur sustaining capital costs as the planned production rates are achieved with the infrastructure networks that are already in place. New heavy vehicle equipment purchases already made in 2022, along with existing heavy vehicles, are expected to last the life of the Mineral Reserves schedule.

The sustaining capital expenditure is allocated for ongoing capital development, mining equipment costs (rebuilds and major overhauls), and other underground infrastructure refurbishment. Sustaining capital requirements also include extensions to the ventilation, pumping and electrical networks that follow capital decline development as the mine goes deeper. This includes an allowance for sustaining costs associated with ongoing processing plant infrastructure maintenance. The sustaining capital costs per annum are detailed below.

Conital Coata	Units	Total	Year 1
Capital Costs	\$A M	16.6	16.6

Table 21-5 Fender capital costs.

## 21.2.2.2 Operating Costs

As an established operation, Fender has a good understanding of its costs and has a functioning cost management system. Operating cost inputs are based on site actual costs, this is inclusive of the following cost profiles:

- Mine development (operating only).
- Mine production.
- Surface haulage.
- Geology.
- Mine services (power, water, ventilation).
- Administration.

Table 21-6 Fender operating costs.

Operating Costs	Units	Total	Year 1
Mining Operating	\$A M	44.6	44.6
Processing	\$A M	12.5	12.5
Overhead	\$A M	6.4	6.4
Royalties	\$A M	2.9	2.9

# 21.2.2.3 Closure

Whilst Fender is located at the Cue Gold Operations (CGO) region, it is processed at MGO due to mill restrictions at CGO. Costs associated to Fender are applied to MGO. However, closure costs sit within the CGO modelling and closure allowances.



# 21.3 CUDDINGWARRA

## 21.3.1 Historic Mining Areas

## 21.3.1.1 Closure

Transport infrastructure corridors represent the most significant area requiring rehabilitation at Cuddingwarra, encompassing 29.26 ha. Restoring these corridors to meet the post-mining land use will cost \$376,000. The workshops, which are currently being utilised for road haulage maintenance, have a footprint of 4.58 ha and a projected cost of \$55,000 for rehabilitation.

Laydown areas (6.01 ha, \$32,000), fuel storage facilities (0.02 ha, \$20,000), building sites (0.20 ha, \$16,000) and dams (1.39 ha, \$24,000) contribute to the overall rehabilitation cost of \$549,000.

## 21.4 DAY DAWN

## 21.4.1 Great Fingall – Golden Crown

## 21.4.1.1 Capital Costs

Major capital costs include pit dewatering, ablutions, offices, workshops, and refuge chambers. Whilst Great Fingall was mined previously, it is expected that there will likely not be the ability to leverage off any existing mine development and / or capital. Consequently, there is a large capital upfront and sustaining expenditure for the mine. All capital is shown below.

#### Table 21-7 Great Fingall – Golden Crown capital costs.

Capital	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Costs	\$A M	71.0	33.1	10.8	11.4	3.7	5.1	5.1	7.4	1.8

# 21.4.1.2 Operating Costs

Operating costs at Great Fingall and Golden Crown are determined from similar size mines across the business using actual costs (where available) and/or quotes from suppliers. Reviews of operational costs are completed during Westgold's budgeting processes. A functioning cost management system has been established for the mine with the following input into the cost profiles:

- Mine development (operating only).
- Mine production.
- Surface haulage.
- Geology.
- Mine services (power, water, ventilation).
- Administration.



Operating Costs	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Mining Operating	\$A M	483.8	27.1	62.3	74.5	77.2	73.0	73.0	71.9	24.8
Processing	\$A M	109.1	3.1	10.9	14.6	18.8	18.3	18.3	19.0	6.1
Overhead	\$A M	64.6	1.8	6.5	8.7	11.1	10.8	10.8	11.3	3.6
Royalties	\$A M	44.0	0.7	4.8	7.4	8.1	6.9	6.9	7.0	2.2

Table 21-8 Great Fingall – Golden Crown operating costs.

# 21.4.1.3 Closure

Closure costs have been included in the wider Cue cost profile.

The restoration of legacy tailings storage facilities encompassing 26.01 ha is the priority at Day Dawn. The estimated restoration cost for these facilities is \$1.4 million of the total cost of \$2.7 million to rehabilitate the Day Dawn site. The network of transport corridors (spanning 32.24 ha) is slated for restoration at a cost of \$399,000. Incomplete waste rock dumps cover 12.8 hectares and necessitate a \$377,000 investment for rehabilitation.

The run of mine pad, low grade stockpiles, laydown areas, and various buildings and infrastructure require rehabilitation for a cost of up to \$335,000. Mining voids, spanning 25.12 ha, will cost \$198,000 to close.

# 21.5 TUCKABIANNA

# 21.5.1 Comet

# 21.5.1.1 Capital Costs

As a recently operating mine, most major infrastructure capital is already in place at Comet. The operation intends to primarily incur sustaining capital costs as the planned production rates are achieved with the infrastructure networks that are already in place.

The sustaining capital expenditure is allocated for ongoing capital development, mining equipment costs (rebuilds and major overhauls), and other underground infrastructure refurbishment. Sustaining capital requirements also include extensions to the ventilation, pumping and electrical networks that follow capital decline development as the mine goes deeper. This includes an allowance for sustaining costs associated with ongoing processing plant infrastructure maintenance. The sustaining capital costs per annum are detailed below.

Conital Costa	Units	Total	Year 1	Year 2	Year 3				
Capital Costs	\$A M	7.2	0.1	7.1	0.0				

#### Table 21-9 Comet capital costs.



# 21.5.1.2 Operating Costs

As a recent operation, Comet has a good understanding of its costs and has a functioning cost management system. Operating cost inputs are based on site actual costs, this is inclusive of the following cost profiles:

- Mine development (operating only).
- Mine production.
- Surface haulage.
- Geology.
- Mine services (power, water, ventilation).
- Administration.

Operating Costs	Units	Total	Year 1	Year 2	Year	
Mining Operating	\$A M	57.1	6.7	36.0	14.3	
Processing	\$A M	8.5	0.5	5.5	2.5	
Overhead	\$A M	5.0	0.3	3.3	1.5	
Royalties	\$A M	2.3	0.1	1.4	0.7	

## Table 21-10 Comet operating costs.

## 21.5.1.3 Closure

Closure costs are covered as part of the wider Cue closure liabilities.

The total estimated cost for rehabilitating the Comet mine site is \$677,000. This cost covers a variety of tasks, including closure of the mining void (\$123,000), run of mine pad (\$238,000) and transport corridors (\$181,000).

# 21.5.2 Causton's

# 21.5.2.1 Capital Costs

Due to the proximity of Causton's to the Tuckabianna mill, much of the capital required for the Causton's start-up will be leveraged off the existing infrastructure. Consideration of capital required for initial ventilation, equipment, and pumping has been employed. Costs are based on similar size mine start-ups across the Westgold business.

The sustaining capital expenditure is allocated for ongoing capital development, mining equipment costs (rebuilds and major overhauls), and other underground infrastructure refurbishment. Sustaining capital requirements also include extensions to the ventilation, pumping and electrical networks that follow capital decline development as the mine goes deeper. This includes an allowance for sustaining costs associated with ongoing processing plant infrastructure maintenance. The sustaining capital costs per annum are detailed below.

Capital Casta	Units	Total	Year 1	Year 2	Year 3
Capital Costs	\$A M	9.9	4.2	5.7	0.0



# 21.5.2.2 Operating Costs

Westgold has established operations throughout the Murchison therefore has a good understanding of its operational cost base and has a functioning cost management system considered for Causton's. Operational costs were based upon cost modelling completed on similar size mines actuals and where required, quotes from suppliers. This is inclusive of the following cost profiles:

- Mine development (operating only).
- Mine production.
- Surface haulage.
- Geology.
- Mine services (power, water, ventilation).
- Administration.

## Table 21-12 Causton's operating costs.

Operating Costs	Units	Total	Year 1	Year 2	Year 3
Mining Operating	\$A M	30.9	8.6	21.1	1.2
Processing	\$A M	7.4	1.4	5.8	0.1
Overhead	\$A M	4.4	0.9	3.4	0.1
Royalties	\$A M	3.4	0.6	2.8	0.1

# 21.5.2.3 Closure

Closure costs are covered as part of the wider Cue closure liabilities.

The total estimated cost for rehabilitating the Tuckabianna mine site is \$6.2 million. This cost covers a variety of tasks, including the rehabilitation of tailings facilities (\$2.8 million) and rehabilitating the transport corridor (\$1.1 million). The mill and processing facility (4.44 ha, \$859,000), buildings (11.80 ha, \$431,000, waste rock dumps (5.56, \$164,000), mining voids (47.39 ha, \$158,000) and hardstand areas (23.54 ha, \$125,000) will also require significant investment for rehabilitation.

The airstrip, workshop, fuel storage facility, dams, water production and containment infrastructure and exploration disturbance will cost a total of \$256,000 to rehabilitate.

# 21.5.3 Stockpiles

# 21.5.3.1 Capital Costs

There are no specific capital costs associated to stockpiles. All group costs proportioned to the stockpiles are considered operational.



# 21.5.3.2 Operating Costs

It is determined that all operational (mining, administration, contractor management) costs have been consumed as part of the mining process. The costs associated with the stockpiles shall only include the proportional group costs, haulage (where required), processing and royalties.

Operating Costs	Units	Big Bell LGSP	Big Bell Tails	Cuddingwarra LGSP	Day Dawn LGSP	Tucka LGSP	Fingall Sands	Tucka ROM	Tuka Mill GIC	Mine ROM
Processing	\$A M	0.4	104.6	8.9	1.6	3.0	4.9	0.3	0.5	5.5
Equipment	\$A M	0.06	17.7	1.5	0.3	0.5	0.8	0.05	0.08	0.9
Exploration	\$A M	0.02	6.9	0.6	0.1	0.2	0.3	0.02	0.03	0.4
Site Admin	\$A M	0.1	29.7	2.5	0.4	0.8	1.4	0.08	0.1	1.6
Corporate	\$A M	0.05	15.0	1.3	0.2	0.4	0.7	0.04	0.07	0.8
Haulage	\$A M	0.2	50.5	2.9	0.2	0.0	0.8	0.0	0.0	0.0
Royalties	\$A M	0.02	5.9	0.7	0.1	0.2	0.3	0.03	0.4	0.8
Total	\$A M	0.8	230.5	18.4	2.9	5.0	9.1	0.5	1.2	9.9

21.5.3.3 Closure

An allowance for rehibition of all stockpiles is included in the wider Cue closure liabilities.



# 22 ECONOMIC ANALYSIS

# 22.1 CASH FLOW ANALYSIS

Westgold is using the provision for producing issuers, whereby producing issuers may exclude the information required under Item 22 for Technical Reports on properties currently in production and where no material production expansion is planned.

The Mineral Reserve declaration for the Cue Gold Operations is supported by a positive cash flow.

# 22.2 COMMENTS ON SECTION 22

An economic analysis was performed in support of estimation of Mineral Reserves. This indicated a positive cash flow using the assumptions and parameters detailed in this Technical Report.



# 23 ADJACENT PROPERTIES

## 23.1 CUE GOLD PROJECT

Ramelius Resources Limited (Ramelius) owns the Cue Gold Project. The Project is located immediately to the south and adjacent to CGO's Day Dawn and Tuckabianna project areas.

The following information is taken from Ramelius, 2024.

## 23.1.1 Cue Gold Project Overview

Ramelius acquired the Cue Gold Project in September 2023, from Musgrave Minerals Ltd. The Cue Project is located predominantly between the townsites of Mount Magnet and Cue within the Murchison region of Western Australia, and 40 km north of the Checkers Mill at Ramelius' Mount Magnet Gold Mine. Access is via the Great Northern Highway. The project has previously been sub-divided into the Moyagee and Tuckabianna (Cyprium JV) areas, with the latter situated 20 km east of Cue.

At Tuckabianna, a joint venture agreement has been executed with Cyprium Australia Pty Ltd, where Cyprium has earned an 80% interest in the non-gold rights over the northern tenements at the Cue Project. Ramelius retains the gold rights to the tenure and a 20% free carried interest on the non-gold rights.



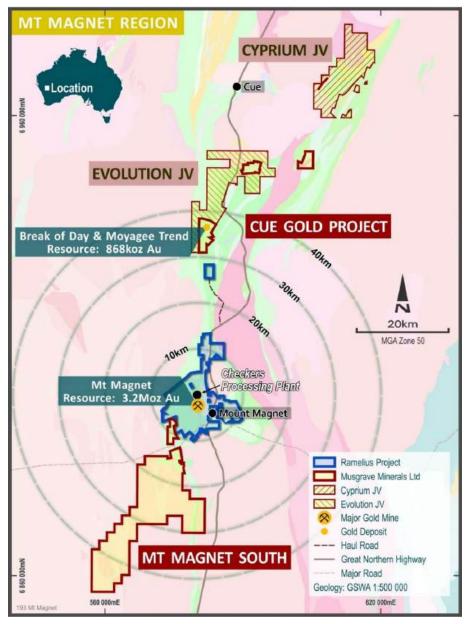


Figure 23-1 Cue Gold Project location relative to Ramelius' Mount Magnet Project tenure. Source: Ramelius, 2024.

In September 2019, Musgrave announced that it had entered into an Earn-In and Joint Venture Exploration Agreement with Evolution Mining Ltd over a select area of Lake Austin and surrounds (JV Area) of the Cue Project in the Murchison District of Western Australia. The JV Area excluded all the known resources and the Mainland option area. Evolution earned a 75% interest in the JV Area by sole funding A\$18 million on exploration. Evolution has elected to manage the joint venture.

In early 2023, Musgrave exercised an Option to acquire 100% of the non-alluvial gold rights to the Mainland Project, directly adjacent to the 100% owned tenure at Cue. Mainland has seen very limited basement drilling but has produced significant quantities of alluvial gold since circa 1900.



## 23.1.2 Cue Gold Project Geology

The Cue gold project is located within the Murchison Domain of the Youanmi Terrane, featuring volcano-sedimentary rocks of the Norrie and Polelle groups, part of the Murchison supergroup. Significant mafic and felsic intrusive units have been emplaced into the volcanic sequence. The dominant structural feature in the area is the regional-scale, north-south trending, Cuddingwarra Shear. At Moyagee, a second order shear zone splays off the Cuddingwarra towards the northeast. This structure, the Lena shear, is spatially associated with much of the mineralisation at Moyagee.

The Cue project contains a current mineral resource estimate of 12.3 Mt at 2.3 g/t for 927 koz. Of this, 10.8 Mt at 2.5 g/t for 868 koz is situated at the Moyagee project, with 1.5 Mt at 1.2 g/t for 59 koz at Tuckabianna. A key component of the Cue resource is the high-grade Break of Day trend, which hosts 982 kt t 10.4 g/t for 327 koz.

The Qualified Person has been unable to verify the information on these adjacent properties. This information is not necessarily indicative of the mineralisation on the property that is the subject of the Technical Report.

## 23.2 MOUNT MAGNET GOLD PROJECT

Ramelius Resources Limited (Ramelius) also owns the Mount Magnet Gold Project. The Project is located approximately 80 km south of CGO along the Great Northern Highway.

The following information is taken from Ramelius, 2024.

## 23.2.1 Mount Magnet Gold Project Overview

The Mount Magnet gold project is located immediately adjacent to the town of Mount Magnet, 500 km north-east of Perth in the Murchison Goldfield of the Western Australian Yilgarn Craton.

Ramelius acquired Mount Magnet Gold Pty Ltd in 2010 from Harmony Gold and restarted operations in late 2011.

The Mount Magnet project consists of numerous open pit and underground mines plus exploration targets situated on established mining and prospecting leases. The total project area covers 225 km<sup>2</sup>.



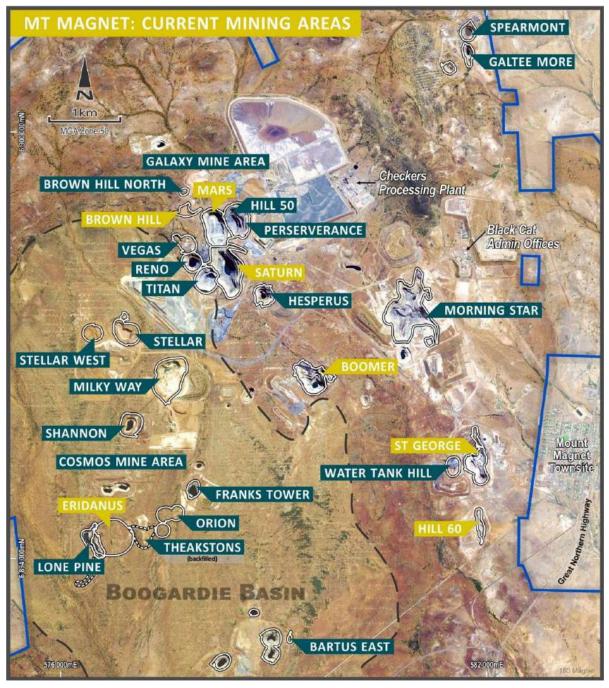


Figure 23-2 Mount Magnet Current Mining Locations - Source: Ramelius, 2024.

Historically, Mount Magnet produced over six million ounces since discovery in 1891 and has significant potential to host new discoveries. The Hill 50 underground mine produced over 2.1 Moz of gold and was the largest gold producer in the field until the mine was closed in 2007. It has been mined to 1,500 m below surface, demonstrating the depth continuity of high-grade mineralised shoots within the Mount Magnet project area.



# 23.2.2 Mount Magnet Gold Project Geology

The Mount Magnet project is located within the north-south striking Meekatharra-Mount Magnet greenstone belt of the Western Australian Murchison Province. The greenstone belt lithologies comprise a succession of steeply dipping and intensely deformed plus interlayered mafic and ultramafic extrusive and intrusive rocks, felsic volcanics and banded iron formations (BIF). Granitic rocks intrude the greenstone belt stratigraphy.

Banded iron formations are the dominant host rocks for gold mineralisation in the project area. Gold mineralisation is typically associated the pyrite and pyrrhotite replacement of magnetite in the banded iron. High grade ore shoots are developed along the intersection of the BIF and a swarm of northeast trending faults, colloquially referred to as Boogardie Breaks.

Significant gold mineralisation is also found in porphyritic felsic units of the Boogardie Basin. Mineralisation generally occurs as a stockwork style of sericite-silica-pyrite veining and alteration within felsic porphyry units intruded into ultramafic flow sequences. Gold mineralisation tends to occur along felsic margins adjacent to the ultramafic contact. The Cosmos area consists of this style.

# 23.2.3 Mount Magnet Gold Project Mining

From 2011 to 2017, Ramelius' operations have consisted of large open pit cutbacks on the Galaxy mining area, consisting of a number of large open pit cutbacks.

Mining operations employ leading contract mining companies, MACA Limited in open pits and Byrnecut Australia for underground.

From 2018, a series of new pits in the Cosmos mining area commenced. Milky Way is a large, low-grade, felsic hosted, stockwork deposit providing major mill feed. It is complemented by the smaller Stellar, Stellar West and Shannon pits.

The Water Tank Hill underground mine is a high-grade BIF hosted ore body and was accessed from the adjacent Saint George underground decline. Mining of Water Tank Hill has contributed low tonnage, high grade ore.

Subsequent production areas include the Shannon and Hill 60 undergrounds and the Eridanus and Morning Star open pits.

# 23.2.4 Mount Magnet Gold Project Milling

The Checkers Gold Mill is a 1.9 Mtpa conventional semi autogenous grinding (SAG) gold mill located approximately 4 km from the Cosmos mining area. The mill has previously been operated at 2.4 Mtpa and could be reconfigured if required.

The Qualified Person has been unable to verify the information on these adjacent properties. This information is not necessarily indicative of the mineralisation on the property that is the subject of the Technical Report.



## 23.3 DALGARANGA

Spartan Resources Limited (Spartan) owns the Dalgaranga Gold Project. The Dalgaranga Gold Project is located approximately 60 km south of CGO.

The following information is taken from Ramelius, 2024.

## 23.3.1 Dalgaranga Gold Project Overview

Spartan's Dalgaranga Gold Project is located 475 km north-east of Perth and approximately 65 km north-west of Mount Magnet in Western Australia.

The Dalgaranga Gold Project includes a fully-developed gold mining operation (currently on care and maintenance) and an extensive exploration landholding with opportunities for new discoveries.

The Dalgaranga Mine was initially commissioned in 2018 and comprises a fully established gold mine, >2.5 Mtpa carbon-in-leach processing facility, modern camp accommodation and airstrip.

The mine produced 71,153 oz for the 2022 financial year before being placed on care and maintenance in November 2022 to facilitate the implementation of a new strategic operating plan and a financial restructure.

## 23.3.2 Never Never Gold Discovery

Never Never is a new high-grade gold deposit which strikes and plunges to the westsouth-west. The deposit was discovered while following up wide, high-grade drill intercepts from the earlier Gilbey's North extension discovery immediately north of the Gilbey's open pit at Dalgaranga and is within 1 km of the process plant.

Never Never is distinct from the Gilbey's North discovery due to considerable differences in tenor, thickness of mineralisation, mineralogy, scale, orientation and host structure/rock-type. Despite these differences, due to the close spatial association of the two deposits, the Never Never and Gilbey's North deposits are collectively known as the "Never Never Gold Deposit".

Never Never is higher grade than any of the previously defined ore bodies at Dalgaranga and appears to be more structurally (fold and/or shear)-hosted as opposed to the more stratigraphic/shale-associated historically defined Gilbey's series of gold deposits.

On 24 July 2023 Gascoyne released an updated Never Never Gold Deposit Mineral Resource Estimate of 721,200 ounces (3.83 Mt at 5.58 g/t Au).



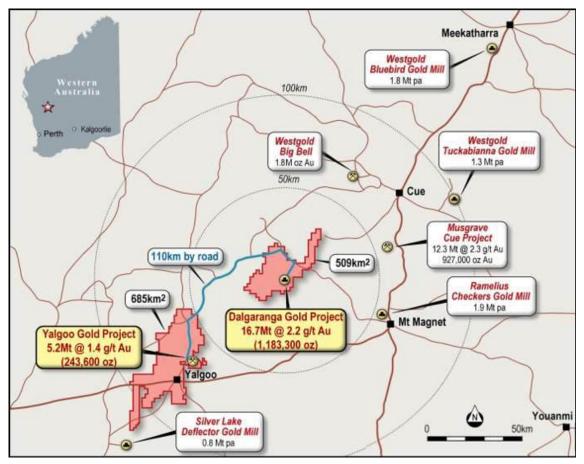


Figure 23-3 Spartan Projects - Source: Spartan, 2024.

The Qualified Person has been unable to verify the information on these adjacent properties. This information is not necessarily indicative of the mineralisation on the property that is the subject of the Technical Report.



# 24 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.



# 25 INTERPRETATION AND CONCLUSIONS

The Cue Gold Operations marked a significant milestone in 2023 with the commitment to the Big Bell Longhole Open Stope Expansion project and the Great Fingall mine, both of which will be long-term sources of ore for the Tuckabianna Mill. The continued growth of the Cue Gold Operation Mineral Resources post replacement of mine depleted Mineral Resources at CGO provide a strong foundation for ongoing investment in the operations.

Specific conclusions by area follow.

# 25.1 MINERAL RESOURCES

The future of the CGO is reliant on the ongoing replacement and growth of the Mineral Resources across the four CGO Mineral Fields, primarily Big Bell and Day Dawn. This is highlighted by Westgold's production plan which has Big Bell supplying 1.1 Mtpa of the total 1.3 Mtpa mill feed to the Tuckabianna Mill during FY2025, with contributions from Great Fingall and stockpiles.

The long life of Westgold's mines provides confidence for ongoing investment in CGO. The updated Consolidated Measured and Indicated Gold Mineral Resource totals 2.3 Moz, a decrease of 15% over previously reported June 30, 2023 estimate (Westgold, 2023). This decrease reflects a year where focus has been on operational execution rather than resource development due to the significant life of the mine plans already defined at Big Bell and Great Fingall – Golden Crown. The Consolidated Inferred Gold Mineral Resource now totals 1.4 Moz, a 1% increase (**Figure 25-1**).

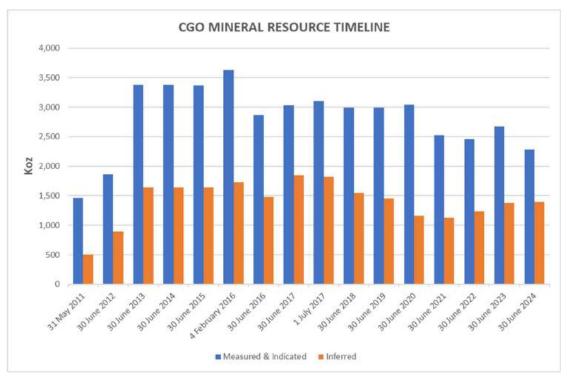


Figure 25-1 Consolidated Gold Mineral Resource timeline, 2011 to 2024 – Source : Westgold.

The property-wide exploration potential for both gold remains significant and is outlined in 07.



## 25.2 MINERAL RESERVES

The 2024 Mineral Reserve statement represents a 4% decrease in the Mineral Reserves over the previously reported June 2023 estimate for CGO with a majority of the decrease due to resource definition adjustments at Great Fingall. No other major changes to the Mineral Reserve occurred.

Although the decrease, the gold Mineral Reserve provides a fundamentally strong basis for a robust future production profile. It is recommended that exploration and resource definition work at CGO is conducted with the aim of adding to the current Mineral Resource and Reserve base to offset mining depletion.

## 25.3 MINERAL PROCESSING

There is limited risk associated with the ongoing processing of mineralisation at CGO. All current ore sources (Big Bell, Fender and Great Fingall) have been or are current being processed through the Tuckabianna Mill.

## 25.4 MINING

CGO's mine plan for FY2025 is based on production from the Big Bell, Fender and Great Fingall underground mines, all of which are currently active.

It is recommended that required regulatory approvals are progressed to allow for the mining of the Mineral Reserves. CGO and Westgold has a demonstrated history of gaining regulatory approvals in time to allow for mining and it can be reasonably expected that Westgold will complete the work required to gain approvals prior to mining of the Mineral Reserves.

## 25.5 ENVIRONMENTAL

Environmental Risk Registers are in place for each mining area at CGO. These registers proactively identify potential environmental hazards associated with mining and processing activities. Westgold further strengthens its environmental management by assigning specific risk mitigation and control measures to each high-risk activity. These measures are designed to reduce environmental risks to an acceptable level.

Furthermore, Westgold utilises a comprehensive Environmental Management Plan and procedures to ensure the ongoing effectiveness of the implemented controls. This structured approach ensures that environmental risks are consistently managed within acceptable parameters.

Water, tailings management and legacy landform management are a key focus area for Westgold. Since acquiring CGO, Westgold has undertaken significant efforts to ensure full compliance with all relevant environmental approvals, licences, and permits.



In March 2023, Westgold completed the third stage of a four-stage consolidation and lift program of its tailings storage facility (TSF 2–4) at Cue. The remaining approved tailings storage capacity at TSF 2–4 is estimated to be approximately 15 months with 9 months remaining in the constructed TSF2-3 lift. Independent analysis and design were undertaken by CMW Geosciences. Regulatory approvals have been received for all four stages although construction of Stage 4 lift is yet to be confirmed. Westgold currently expect approval for tailings disposal into Tuckabianna West In-Pit TSF shortly, and are advancing construction to allow disposal at the end of life of TSF2-3. Tuckabianna West TSF will provide 4.5 years storage capacity at current throughput rates. Feasibility studies and approvals for the next tailings storage facility, TSF 3, is also being progressed.

# 25.6 CAPITAL REQUIREMENTS

The capital modest for CGO is moderate for the following reasons:

- The Tuckabianna Mill is fully functional requiring limited capital to maintain current production rates. Supporting capital requirements including multiple office complexes and workshops, accommodation villages in Cue and Big Bell, and a fully stocked store including most critical spares are also in place.
- Ongoing sustaining capital will be required for the current mines and TSF capacity.
- Growth capital will be invested in the Big Bell Longhole Open Stoping Expansion Project (FY25 = A\$8 M) and at Great Fingall (FY23 / 24 = A\$12.5 M).

All capital requirements are fully accounted for in mine, site and consolidated Group budgets.

# 25.7 GOLD EXPLORATION POTENTIAL

The Murchison Province has a significant gold endowment with approximately 35 million ounces in past production and remaining resources documented (the second largest endowment in the Yilgarn Craton after the Kalgoorlie region). It also contains a number of +1 million ounce deposits, including Big Bell, Great Fingall, Bluebird – South Junction, Hill 50 and Morning Star.

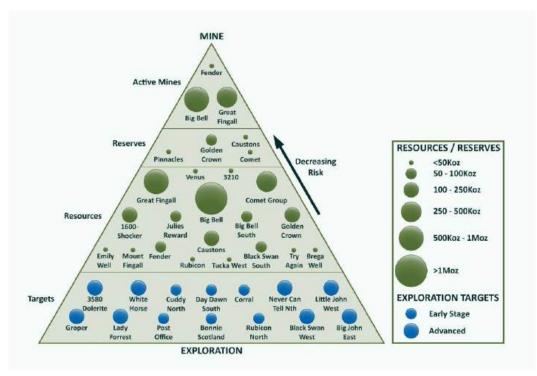
A significant component of this historical production has been from small pits and mines, typically less than 50,000 oz. Mining of these small resources has provided the basis for a number of profitable operations.

The Westgold tenements encompasses approximately 1,145 km<sup>2</sup> are located in the southern and central sections of the Murchison Province, centred upon the Cue and Meekatharra districts. The Murchison Province has received less exploration activity than the similar, highly mineralised, Eastern Goldfields region, despite Westgold's tenement holdings having a current endowment in excess of ten million ounces in past production and remaining resources. The district is therefore considered to hold excellent potential for the discovery of further economic resources.



CGO has a large number of prospects at various stages of progress to potentially deliver new resource. The Resource Definition and Growth teams at CGO use a milestone-based system to rank and target these prospects (**Figure 25-2**). Very little greenfields exploration has occurred in recent decades with drilling focusing on upgrading existing resources, and as such there have been a lack of significant discoveries in the last 25 years on CGO tenure. This is more a reflection of a lack of work than indicative of the prospectivity of the property.

Exploration drilling planned for 2024 includes follow up aircore, RC and diamond drilling programs predominantly on targets within the Day Dawn and Cuddingwarra block. Of these, the highest priority is a series of geophysically interpreted analogous structural positions to that of Great Fingall and Golden Crown at Day Dawn as detailed below.





# 25.7.1 Big Bell Project Area Exploration and Resource Development

# 25.7.1.1 East Big Bell (Irishman-Marybelle trend and outer magnetic targets- M20/0418 and M20/0435)

East of the Big Bell Mine Sequence and adjacent to the Big Bell deposit is the Irishman-Marybelle trend which is comprised of two discrete mineralised zones characterised by historic shafts and significant drill intercepts. This mineralised trend is closely associated with a highly magnetic lineament on tenements M20/0017 and M20/0418. Scope exists here for additional drilling along the Irishman-Marybelle trend to delineate further high-grade near surface deposits as well as expanding the known extents of mineralisation.



Scope also exists for the discovery of additional mineralisation in two untested magnetic lineaments to the east of, and parallel to the Irishman-Marybelle trend. The westerly of the two trends is more subtle and shows some disruption potentially indicative of enhanced alteration and perhaps mineralisation.

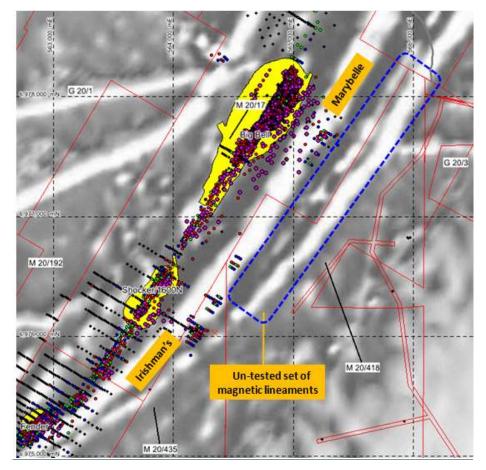


Figure 25-3 Aerial magnetic view of the Big Bell area showing two untested magnetic lineaments east of the Irishman-Marybelle trend: Westgold.

# 25.7.1.2 Northeast Big Bell

The 5800N prospect, named after its northing on the local grid, is situated circa 2 km northeast of the Big Bell open pit on tenement M20/0050. The prospect is characterised by several deep shafts and anomalous drill intercepts extending several hundred metres, with the best intercept being 6 m at 11 g/t from 22 m (including 2 m at 32.3 g/t) in RC hole BRC448. Mineralisation is east of the Mine Sequence and appears hosted in the equivalent magnetic lineament as that hosting Irishman's-Marybelle prospects to the south. A small component of RC drilling would evaluate the down-dip and along strike potential of this prospect.



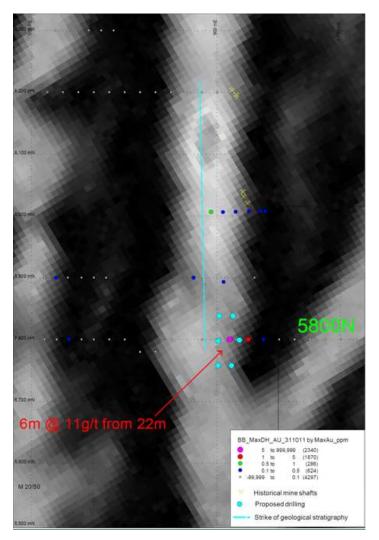


Figure 25-4 Aerial magnetic view of 5800N area within the eastern portion of the Big Bell stratigraphy showing the most significant drill intercept – Source: Westgold.

# 25.7.1.3 Fender South

Fender South (000N) prospect is situated circa 150 m southwest of the Fender open pit on tenement M20/0099. High-grade mineralisation was intercepted in drill hole BBRC077, which has not been adequately followed-up. The presence of a laterite cap as well as a depletion zone may mean mineralisation in the area is "blind" to the surface, though potential still exists for mineralisation to extend up-plunge, especially to the north.



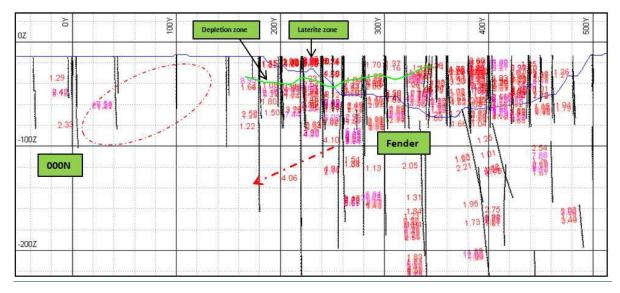


Figure 25-5 Long section of the Fender South prospect northwards to the Fender Open pit. Potential exists for additional mineralisation in the untested area represented by the dashed shape – Source: Westgold.

## 25.7.1.4 Big Bell Project Area Resource Development

Little in the way of further resource work is required at Big Bell based upon current development plans. However, the density of drilling is such that adequate definition of the higher-grade Big Bell shoots can be improved.

Whilst it is unlikely that it will eventuate in large-scale changes to shoot geometry, there is the potential to better define the area currently within the mine plan, which will have a significant impact on the economics of the project with additional ounces potentially realised for little additional mining cost.

# 25.7.2 Cuddingwarra Project Area Exploration and Resource Development

#### 25.7.2.1 East Cuddingwarra, Fleece Pool and Chieftain Trends

Mineralisation in the East Cuddingwarra domain is characterised by kilometre scale zones of north-northeast-trending anomalism associated with magnetic lineaments of likely doleritic composition. Fleece Pool, Chieftain and Emily Well trends are the three standout examples of such mineralised trends. Production in this domain is concentrated in several small but high-grade pits along the Chieftain Trend.

Drilling along the northern part of the Chieftain Trend as well as the more easterly Fleece Pool Trend has delineated multiple discrete zones of high-grade. In 2019 infill and extensional RC drilling was completed at Fleece Pool and Fleece Pool South. Further drilling and resource modelling is warranted.

Additional high-grade zones as well as lesser explored part of both the Fleece Pool and Chieftain Trends will also be considered for evaluation.



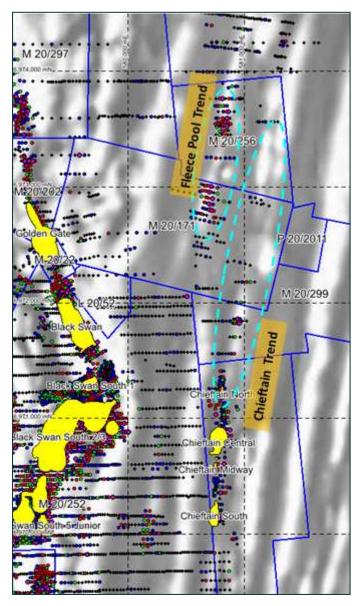


Figure 25-6 Plan view of East Cuddingwarra showing existing drilling and deposits overlain on aerial magnetics. The north-northeast-trending Chieftain and Fleece Pool trends are shown, with those portions that show potential for further infill drilling, outlined in blue – Source: Westgold.

#### 25.7.2.2 North Cuddingwarra

The northern tenements of Cuddingwarra are characterised by relatively small footprint deposits including City of Chester, Coventry North and South, and Jim's Find. Multiple undrilled zones large enough to host similar-sized analogues exist in the area, which could be evaluated with an aircore rig. The presence of an east-west drainage system could hamper access into some of this ground, especially during periods of inclement weather.



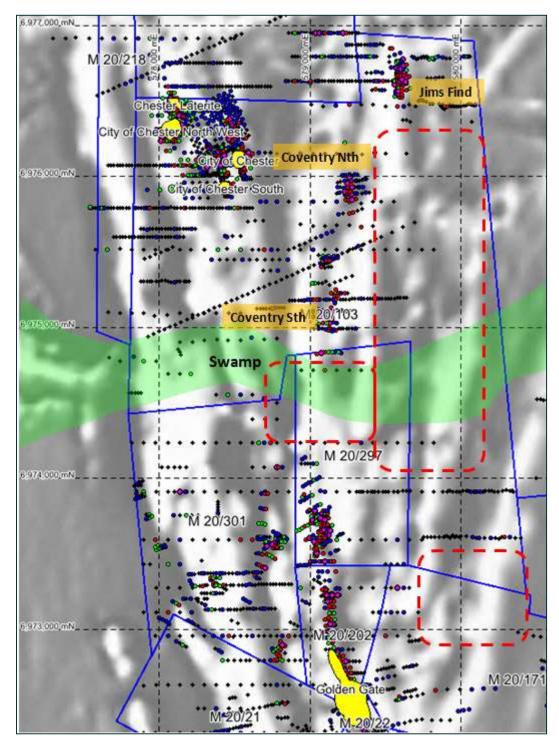


Figure 25-7 Plan view of northern Cuddingwarra showing existing drilling and deposits overlain on aerial magnetics. Under-explored zones considered to be large enough to host undiscovered mineralisation are highlighted in red – Source: Westgold.

## 25.7.2.3 Black Swan South

Black Swan South is a significant past producer within the Cuddingwarra region, with gold hosted by stockwork veining within porphyry bodies and at the contact between the porphyry bodies and the host mafic / ultramafic packages. There exists significant open pit and underground mining potential within the Black Swan South region.



The Black Swan South open pit consists of thin north-south striking interlayered mafic and ultramafics that are crosscut by a large northeast-southwest striking quartzofeldspathic porphyry intrusion forming the primary ore host for BSS Pit 2. The intrusion and the mafic layers dip steeply to the east and plunge gently to the north. Several smaller porphyry units also intrude the area, with several satellite pits based on mineralisation of these porphyry units forming the remainder of the Black Swan South group of pits.

Mineralisation is mainly confined to the porphyry and the lodes are typically steep easterly dipping bodies that striking parallel to porphyry-mafic contact. Abundant quartz slickensides within the fresh porphyry indicate major northeast-southwest trending dextral strike slip movement. Gold is related to dilational quartz veins within the porphyry and their alteration halos. Free gold can be found in quartz veins. Gold carrying quartz is typically dark brown and iron rich. Clear or milky quartz is typically barren.

The porphyry is typically quartz, coarse feldspars, fine grained felsic groundmass and fine-grained biotite. Typically, limonite-goethite-hematite alteration occurs on joint planes and around quartz veining. Abundant sulphides are disseminated throughout the porphyry, and are comprised of mainly pyrite cubes, with minor galena, sphalerite, chalcopyrite and rare arsenopyrite. Pyrite and sphalerite are disseminated throughout the porphyry and closely associated with quartz veins and the surrounding alteration halos. Galena is generally restricted to the quartz veins, chalcopyrite within quartz vein haloes and as mineral lineations on slip planes. Tourmaline is present as radiating crystals growing from the vein walls. Minor tourmaline is also within quartz veins.

The first phase of a diamond drilling program to test for continuation of broad high grade stockwork veining trends plunging to the south below Pit 2 was completed in 2017. The drilling proved the continuity of the porphyry host at depth, but no significant stockwork veining was encountered. The resource will be remodelled in the forthcoming reporting period.

#### 25.7.2.4 Rheingold Deeps

Rheingold has been a significant past producer in modern times at Cuddingwarra with gold associated with a major quartz reef system, stockwork veining within porphyry bodies and at the contact between porphyry bodies and the host mafic / ultramafic packages.

Re-interpretation and re-modelling of the Rheingold - Rheingold South region in FY2013 highlighted the potential for underground mining development along both the main mineralised shears and at the projected intersection point of the Rheingold Reef and the Rheingold South Reef.



Recommendations for potential future work at Rheingold are:

- Further drilling of the Rheingold and Rheingold South reef to determine the extent of high-grade mineralisation.
- Re-drilling of hole 15RHRD005 from surface targeting the Rheingold and Rheingold South reef intersection.
- If economic grades are intercepted re-drilling 15RHRD005, then further drilling up and down plunge of the reef's intersection.

# 25.7.2.5 Regional Cuddingwarra

The majority of gold mineralisation in the Cuddingwarra area (including the Black Swan deposits) is hosted by the central mafic / ultramafic (and felsic porphyry) sequence. The region has gone through multiple deformation events, however mineralisation has shown to be spatially related to the D2 and D3 events, with gold tenor maximised where structures from both were coincident. This is also enhanced and controlled by competency contrasts across, and flexures along, layer-parallel D2 shear zones, and is maximised where transected by corridors of northeast striking D3 faults and fractures.

Distinct alteration assemblages and mineralisation geometries provided vectors to both styles of mineralisation, and each could be targeted accordingly. Exploration strategies were directed towards locating and evaluating brittle mafic and felsic porphyry units situated between ultramafic-hosted D2 shear zones, particularly where potentially dilatant curves are present. It is recommended that future exploration should focus on locating cross-cutting structures via the presence of late felsic porphyries on detailed geophysical datasets and drilling to account for any varying orientation of the intersection between D2 and D3 structures. In particular, areas indicating a high D3 fracture density would be more favourable target sites for high fluid : rock ratios and therefore more likely to host mineralisation given suitable lithologies.

# 25.7.3 Day Dawn Project Area Exploration and Resource Development

# 25.7.3.1 Princess Royal (M21/0065)

The Princes Royal mine is hosted within the AGF3 unit of the GFD circa 4 km northeast of the Great Fingall Mine. The mine has a recorded historic production of 12,108 oz. Au from 14,560 t of ore. An evaluation of the non-digitised mine workings over four levels in conjunction with the sparse drill data available shows potential for further development.

#### 25.7.3.2 2023 Geophysical Targets

Targets derived from the 2021 high resolution aeromagnetics and 2023 gravity surveys have been selected for drill testing as shown on Figure 25-8. While some of these targets correspond with historic workings or targeting (e.g. T2, T3 and T4 at The Dames and T5 at Bergs), the others are newly defined targets.



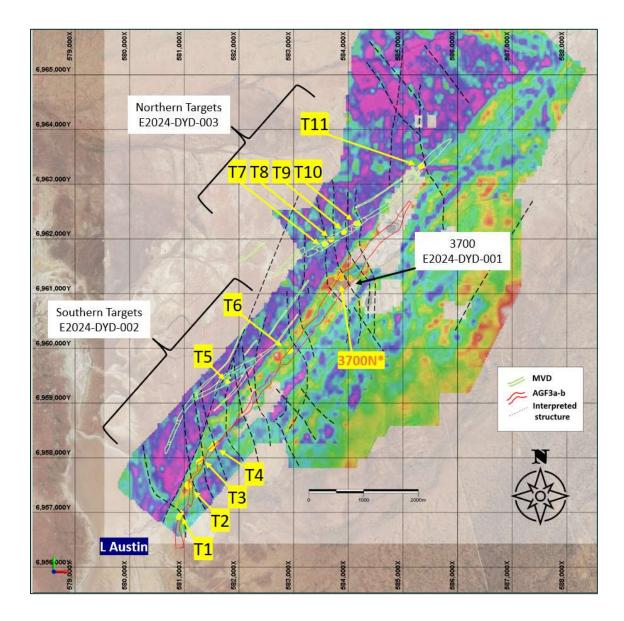
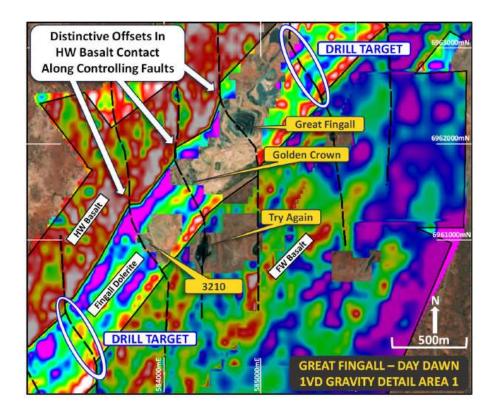
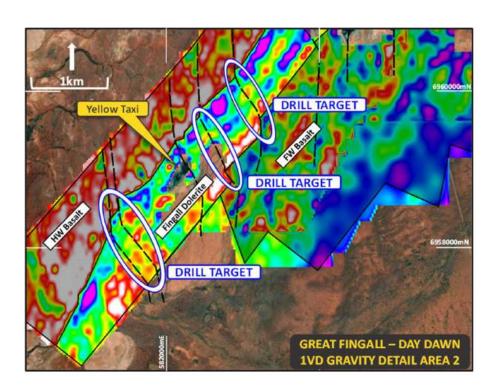


Figure 25-8 Day Dawn region - plan view displaying inverse coloured 1VD gravity image superimposed on early aerial photography showing the distribution of interpret structures, prospective geologic hosts (Mountain View Dolerite MVD, and The AGF3A-B units of the GFD) – Source : Westgold.





(a)



(b)

Figure 25-9 Day Dawn region - Day Dawn (a) north and (b) south 1VD gravity images highlighting interpreted Great Fingall / Golden Crown analogous structures and 2024 drill targets – Source : Westgold.



## 25.7.3.3 The Dames (M210/007)

Three prospects named (from north to south): Dame Edna, Dame Kiri and Dame Joan occur along the AGF3 unit of the GFD the southeast of the Mount Fingall deposit. These prospects occur in marginal lake conditions and were discovered by step out RAB drilling, with subsequent drilling better delineating the mineralisation.

All three of these prospects are in the early stages of exploration maturity. A review and the remodelling of historic data, using recently obtained structural data from the open pit mining of Yellow Taxi South and new geophysical datasets has refined the targets for drilling in 2024.

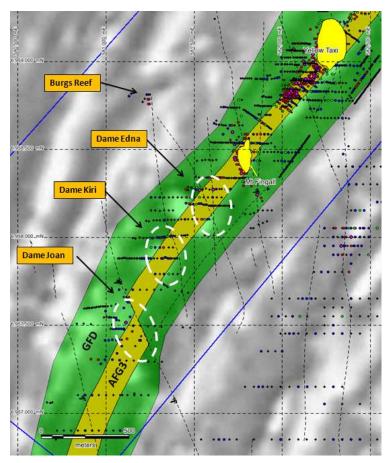


Figure 25-10 Plan view of the southern portion of the GFD showing existing drilling, surface geology (GFD and central AGF3 sub-unit), and structural interpretation, overlain on aerial magnetics. The positions of the three Dames prospects are shown - Source: Westgold.

#### 25.7.3.4 Yellow Taxi West (M21/0007)

Yellow Taxi West is a series of quartz blows in the Hanging Wall Basalts (HWB) to the northwest of the Yellow Taxi open pit on tenement M21/0007, and likely represents the northern continuation of either the Yellow Taxi or Yellow Taxi South structures as they trend into the HWB. The prospect hosts several documented shafts (now rehabilitated) and significant intercepts in historic RAB drilling, including 2 m at 8.05 g/t Au from 23 m in RAB154 and 3 m at 1.81 g/t Au from 31 m in hole RAB185. Scope exits for mineralisation to extend especially to the south towards Yellow Taxi where it intersects an interpreted dolerite unit.



## 25.7.3.5 Burg's Reef (M20/0007)

Burg's Reef is a north - south striking quartz reef hosted within the HWB. Early RAB drilling has intercepted several medium-grade intervals including 3 m at 1.77 g/t Au from 12 m in RAB170 and 2 m at 3.8 g/t Au from 20 m in hole RAB171. It is likely that this structure represents the northern extension of either of the Dame Kiri or Dame Edna prospects hosted within the GFD. Potential exists for this structure to host significant mineralisation to the south, especially where it transects an interpreted dolerite unit as interpreted from the magnetics and gravity.

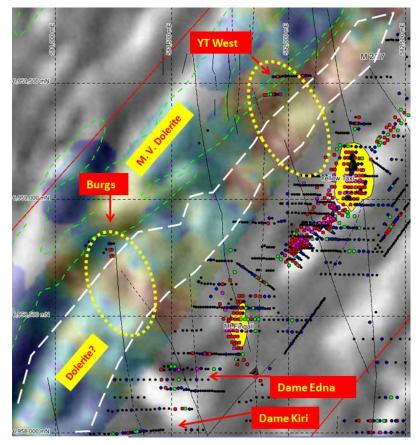


Figure 25-11 Plan view of southwest portion of M21/0007 showing existing drilling, prospects of interest (Burg's and Yellow Taxi West), extent of interpreted dolerite (white outline), and soil anomalism. The dashed yellow zones represent the southern continuation of both the Burg's and Yellow Taxi West structures through an untested potential dolerite band - Source: Westgold.

#### 25.7.4 Tuckabianna Project Area Exploration and Resource Development

The Tuckabianna Project area is a significant past producer, with a total of 500 koz+ of gold recovered between discovery in 1915 and cessation of mining by Silver Lake Resources in 2013.

Throughout the next financial year, assessment of the Tuckabianna resources will determine the priorities for exploration and resource development.



# 26 **RECOMMENDATIONS**

At CGO, the authors recommend that Westgold use the recently defined gold Mineral Reserve as the basis for providing medium- to long-term security for the ongoing development of CGO.

Specific recommendations include the following:

- Using the security of the Gold Mineral Reserve to develop medium- to long-term improvements in operational performance and costs, and also to provide leverage for capital investment if required.
- Complete a property-wide review of the Mineral Resources with the aim to prioritise extensional opportunities to support the combined mill capacity for future production.
- Realise the growth potential of the project by supporting exploration with sufficient funds to test high quality greenfields exploration targets.
- Progress regulatory approvals to allow the mining of the Mineral Reserve.
- The authors are unaware of any other significant factors and risks that may affect access, title or the right or ability to perform the exploration work recommended for CGO.



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World Gold Council: www.gold.org



# 28 APPENDIX 1 DEFINITIONS

All currency amounts are stated in Australian dollars (A\$ or AUD). The choice of currency reflects the underlying currency for an item and location of the operations, for example:

Capital and operating costs are expressed in A\$ as this is the currency in use at site. Moreover, the size of the Australian economy is such that these costs are relatively insensitive to variation in the exchange rates.

Commodity prices in this Technical Report are generally expressed in A\$.

Quantities are generally stated using the Système International d'Unités (SI) or metric units, the standard Australian and international practice, including metric tonnes (t), kilograms (kg) or grams (g) for weight, kilometres (km) or metres (m) for distance and hectares (ha) for area.

Wherever applicable, imperial units have been converted to SI units for reporting consistency.

Frequently used acronyms and abbreviations are listed below.

Aboriginal Heritage Act 1972 (WA)	AHA
Aboriginal Heritage Inquiry System	AHIS
Aircore	AC
Annum (year)	а
Atomic Absorption Spectroscopy	AAS
'Australasian Code for Reporting of Mineral Resources and Ore Reserves' 2012 Edition prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Mineral Council of Australia	JORC Code
Australian Height Datum	AHD
Australian Securities Exchange	ASX
Banded Iron Formation	BIF
Bank cubic metre	bcm
Base of alluvial	BOA
Base of complete oxidation	BOCO
Bureau Veritas	BV
Calendar year	CY
Canadian Securities Administrators	CSA
Carbon-in-leach	CIL
Centimetre	cm
Certified reference material	CRM
Coefficient of variation	CV
Commonwealth of Australia	Cth
Cubic metre	m <sup>3</sup>
Degree	0
Degrees Celsius	°C
Department of Biodiversity, Conservation and Attractions	DBCA
Department of Climate Change, Energy, the Environment and Water	DCCEEW



Department of Water and Environment Regulation, amalgamation of previous government bodies: Department of Environmental Regulation and Department of Water	DWER, DoW, or DER
Department of Mines, Energy, Industry Regulation and Safety	DEMIRS, DMP
Department of Planning Lands and Heritage	DPLH
Department of Water	DoW
Digital terrain model	DTM
Downhole	DH
Effective grinding length	EGL
Electromagnetic	EM
End of hole	EOH
End of mine	EOM
Environmental Protection Act 1986	EP Act
Environmental Protection Authority	EPA
Estimated true width	ETW
Fly-in/fly-out	FIFO
Footwall	FW
Footwall Basalts	FWB
Fortnum Gold Operations	FGO
Front end loader	FEL
General and Administrative	G&A
Geological Database Management System	GDMS
Great Fingall Dolerite	GFD
Gold	Au
Grade control	GC
Gram	g
Grams per litre	g/L
Grams per tonne	g/t
Greater than	>
Greenstone-hosted quartz-carbonate vein	GQC
Hangingwall	HW
Hectare (10,000 m²)	ha
Cue Gold Operations	CGO
Hangingwall	HW
Hangingwall Basalts	HWB
High grade	HG
Hour	h
Inductively coupled plasma	ICP
Inductively coupled plasma atomic emission spectroscopy	ICP-AES
Inductively coupled plasma mass spectrometry	ICP-MS
Inductively coupled plasma optical emission spectroscopy	ICP-OES
Interim Biogeographic Regionalisation for Australia	IBRA
Inverse distance	ID
Inverse distance squared	ID <sup>2</sup>
Inverse distance cubed	ID <sup>3</sup>
Joint Ore Reserves Committee	JORC



Kilogram	kg
Kilometre	km
Kilovolts	kV
Kilowatt hour	kWh
Kilowatt	kW
Kriging neighbourhood analysis	KNA
Less than	<
Life of mine	LOM
Line-of-lode	LOL
Liquified natural gas	LNG
Litre	L
Litres per second	L/s
Load-haul-dump	LHD
Longhole open stoping	LHOS
Low grade	LG
Maxwell Data Model	MDM
Metals X Limited	Metals X or MLX
Metre	m
Metres above sea level	masl
Metres reduced level	mRL
Meekatharra Gold Operations	MGO
Micrometre (micron)	μm
Milligal; unit of acceleration typically used in precision gravimetry	mgal
Millimetre	mm
Million	M
Million troy ounces	Moz
Million pounds	Mlbs
Million pounds per annum	Mlbs/a
Million tonnes per annum	Mtpa
Million years	Ма
Mine Closure Plan	MCP
Mineable Shape Optimizer	MSO
Mineral Titles Online	MTO
Minimum design width	MDW
Minimum mining width	MMW
Mining Act 1978 (WA)	Mining Act
Mining Proposal	MP
Mining Rehabilitation Fund	MRF
Mining Rehabilitation Fund Act 2012 (WA)	MRF Act
Minute (plane angle)	1
Minute	min
National Instrument 43-101	NI 43-101
Native Title Act 1993 (Cth)	NTA
Not applicable	N/A
Notice of Intent	NOI
Ordinary kriging	OK



Parts par billion	nnh
Parts per billion Parts per million	ppb
Percent	ppm %
	<sup>≫0</sup> PMT
Polar Metals Pty Ltd	
Portable X-ray fluorescence	pXRF
Pound(s)	lb(s)
Power Purchase Agreement	PPA
Preliminary economic assessment	PEA
Prefeasibility study	PFS
Proven and Probable	2P
Qualified Person	QP
Quality Assurance and Quality Control	QA/QC
Ramelius Resources Limited	Ramelius
Real-time kinematic	RTK
Reasonable prospects for eventual economic extraction	RPEEE
Reduced level	RL
Return air rise	RAR
Reverse circulation	RC
Reverse circulation/diamond tail	RCD
Rock Quality Designation	RQD
Rotary airblast	RAB
Run of mine	ROM
Second (plane angle)	
Selective mining unit	SMU
Spartan Resources Limited	Spartan
Specific gravity	SG
Square kilometre	km2
Square metre	m2
System for Electronic Document Analysis and Retrieval	SEDAR+
Tailings storage facility	TSF
Thousand tonne	kt
Thousand tonne per day	kt/d
Thousand troy ounces	koz
Top of fresh rock	TOFR
Tonne (1,000 kg)	t
Tonnes per day	t/d
Tonnes per hour	t/h
Tonnes per year	tpa
Total dissolved solids	TDS
Troy ounce (31.10348 grams)	OZ
Two Boy Shear Zone	TBSZ
Unconfined compressive strength	UCS
Underground	UG
Waste rock landform	WRL
Westgold Resources Limited	Westgold or WGX



# 29 CERTIFICATE OF QUALIFIED PERSON

#### Jake Russell

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To accompany the Technical Report titled: 'Ni 43-101 Technical Report, Cue Gold Operations, Murchison Goldfield, Western Australia' dated October 31, 2024, with an effective date of June 30, 2024.

I, Jake Russell, BSc. (Hons.), MAIG, do hereby certify that:

- 1. I am General Manager Technical Services for Westgold Resource Limited, with an office at Level 6, 200 Saint George's Terrace, Perth, Western Australia, Australia.
- 2. I am a graduate from University of Tasmania, Tasmania Australia in 2000 with a B.Sc. Hons in Economic Geology; and I have practised my profession continuously since 2001. My relevant experience for the purpose of the Technical Report is: Over 20 years of gold industry experience in exploration, resource development, resource estimation/auditing, mining and management of gold, copper, tin and nickel deposits throughout Australia.
- 3. I am a Member of the Australian Institute of Geoscientists.
- 4. I have read the definition of 'Qualified Person' set out in National Instrument 43- 101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a 'Qualified Person' for the purposes of NI 43-101.
- 5. I have prior involvement with the properties that are the subject of the Report. This involvement is my various roles between 2001 and the present for Westgold Resources and preceding owners of the Cue Gold Operation. My last visit to the site for the purpose of technical review of the project was a single day visit on 6 August 2024.
- 6. I am responsible for the following sections in the Technical Report entitled 'Ni 43-101 Technical Report, Cue Gold Operations, Murchison Goldfield, Western Australia' dated May 31, 2024: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 19, 20, 22, 23, 24, 25, 26, and 27.
- 7. I am not an independent 'qualified person' within the meaning of section 1.5 of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators.
- I have read NI 43-101 and Form 43-101F1 and have prepared and read the previously mentioned section of the report entitled 'Ni 43-101 Technical Report, Cue Gold Operations, Murchison Goldfield, Western Australia' dated October 31, 2024 for Westgold Resources Limited, in compliance with NI 43-101 and Form 43-101F1.
- 9. That, at the effective date of this technical report June 30, 2024 to the best of my knowledge, information, and belief it contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

This 31st day of October 2024

Original Signed and Sealed.

Jake Russell



# 30 CERTIFICATE OF QUALIFIED PERSON

#### Leigh Devlin

Westgold Resources Limited Level 6, 200 Saint George's Terrace Perth WA 6000, Australia

Telephone: +61 (0) 8 9462 3400 Email: leigh.devlin@westgold.com.au

To accompany the Technical Report titled: 'Ni 43-101 Technical Report, Cue Gold Operations, Murchison Goldfield, Western Australia' dated October 31, 2024, with an effective date of June 30, 2024.

I, Leigh Devlin, BEng., FAusIMM, do hereby certify that:

- 1. I am Group Manager Mining Engineering for Westgold Resource Limited, with an office at Level 6, 200 Saint George's Terrace, Perth, Western Australia, Australia.
- 2. I am a graduate from University of Adelaide, South Australia, Australia in 2005 with a BEng. (Mech), I have a GradDipEng (Mining) from Federation University and a BA from University of Southern Queensland; I have practised my profession continuously since 2007. My relevant experience for the purpose of the Technical Report is: Over 15 years of gold industry experience in operational, management and technical positions throughout Australia.
- 3. I am a Fellow of the Australasian Institute of Mining and Metallurgy.
- 4. I have read the definition of 'Qualified Person' set out in National Instrument 43- 101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a 'Qualified Person' for the purposes of NI 43-101.
- 5. I have prior involvement with the properties that are the subject of the Report. This involvement is my various roles between 2018 and the present for Westgold Resources and preceding owners of the Cue Gold Operation. My last visit to the site for the purpose of technical review of the project was a single day visit on 8 July 2024.
- 6. I am responsible for the following sections in the Technical Report entitled 'Ni 43-101 Technical Report, Cue Gold Operations, Murchison Goldfield, Western Australia' dated May 31, 2024: 13, 15, 16, 17, 18 and 21.
- 7. I am not an independent 'qualified person' within the meaning of section 1.5 of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators.
- 8. I have read NI 43-101 and Form 43-101F1 and have prepared and read the previously mentioned section of the report entitled 'Ni 43-101 Technical Report, Cue Gold Operations, Murchison Goldfield, Western Australia' dated October 31, 2024 for Westgold Resources Limited, in compliance with NI 43-101 and Form 43-101F1.
- 9. That, at the effective date of this technical report June 30, 2024 to the best of my knowledge, information, and belief it contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

This 31<sup>st</sup> day of October 2024 Original Signed and Sealed.

Leigh Devlin

