

Quarterly Report December 2022

HIGHLIGHTS

- Nagambie announced the discovery of the first high-grade, antimony-gold vein system, C1, on 16 November 2022. Subsequent to the quarter, the second vein system, C2, 200m west of C1, was announced on 23 January 2023.
- The 10 high-grade intersections within the MCOG (mineable cut-off grade) zones for the C1 and C2 vein systems to date average **16.3 g/t AuEq** (gold equivalent) with average antimony and gold being **6.3% Sb** and **4.3 g/t Au** respectively.
- The average grade of 16.3 g/t AuEq is 5.4 times the MCOG of 3.0 g/t AuEq. This indicates potentially very-low operating cost, very-high operating margin mineralisation.
- Greatly increased confidence, due to the discovery of C2, in the structural model that predicts further C-style vein systems will be discovered to the west.
- Preliminary discussions held with a large overseas antimony-gold refinery that approached Nagambie in regard to an offtake arrangement for Nagambie's future antimony-gold flotation concentrate.

Table 1 All 10 MCOG Intersections (Potential Stopes) to date: EHT => 1.2m and AuEq => 3.0 g/t

Intersection and potential stope	From (m)	To (m)	Downhole Length (m)	BD of unmineralised waste: 2.74 BD of pure Stibnite: 4.56				EHT and BD Weighting				Times MCOG
				EHT (m)	Au Assay (g/t)	Sb Assay (Sb %)	AuEq (g/t)	BD based on Sb%	EHT & BD Weighted Au	EHT & BD Weighted Sb	EHT & BD Weighted AuEq	
NRP002 C1 E&W	109.00	136.10	27.10	2.50	4.84	7.51	19.18	2.89	5.42	9.15	22.90	7.6
NAD008 C1 E	178.20	180.00	1.80	1.20	3.51	3.05	9.33	2.79	3.55	3.26	9.77	3.3
NAD009 C1 E	172.34	174.20	1.86	1.20	0.08	2.36	4.58	2.78	0.08	2.52	4.89	1.6
NAD009 C1 W	200.00	207.30	7.30	4.70	4.86	4.20	12.87	2.81	5.32	4.74	14.37	4.8
NAD010 C1 E	160.00	161.78	1.78	1.20	13.38	16.14	44.21	3.05	13.56	18.44	48.79	16.3
NAD010 C1 W	163.56	165.35	1.79	1.20	0.19	2.81	5.56	2.79	0.21	3.05	6.03	2.0
NAD011 C1 E	214.30	217.80	3.50	1.20	0.10	1.47	2.90	2.77	0.10	1.61	3.18	1.1
NAD011 C1 W	270.7	276.00	5.30	2.25	1.46	10.38	21.30	2.94	1.52	12.01	24.45	8.2
NAD012 C2 E	401.40	404.80	3.40	1.68	6.90	1.83	10.41	2.77	6.88	1.86	10.43	3.5
NAD012 C2 W	416.00	417.60	1.60	1.25	3.24	1.94	6.94	2.77	3.23	2.00	7.06	2.4
Average to date				1.84				2.84	4.32	6.25	16.26	5.4

$AuEq (g/t) = Au (g/t) + (Sb\% \times 1.91)$, BD = bulk density

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COMMENTARY

Nagambie Resources' Executive Chairman, Mike Trumbull, commented: "Success in locating C2 200m west of C1 greatly increases the likelihood of progressively locating further C-style vein systems to the SW of the West Pit - as predicted by our structural model. In exploration terms, we are now considering a very significant ultimate target to 1,000m vertical depth, but we are committed to exploring from underground as soon as possible. In production terms, Nagambie's ultimate target is to become the largest and highest-grade antimony mine in the western world.

"Nagambie has been working through a backlog of detailed core logging, the core-sawing of mineralised logged samples, and the assaying of those samples. Changing to the On Site laboratory in Bendigo, with the re-assaying that required, and purchasing / commissioning an Almonte auto core saw during the quarter also caused temporary delays. We expect to have largely caught up by the end of February."

GOLD EXPLORATION

Costerfield-Mine-Style, Antimony-Gold Veins at 100%-owned Nagambie Mine

When reporting gold-antimony, vein-system exploration drilling results, a point of difference with Nagambie is that the Company doesn't only report all significant downhole sample assays. Nagambie simultaneously reports all MCOG intersections (or potential stopes) that meet its developed thresholds of being greater than or equal to 1.2m EHT and being equal to or greater than its mineable cut-off grade of 3.0 g/t AuEq. All relevant criteria are considered - including the weighting of sample assays for both downhole length and bulk density, the dip of the veins intersected, the mining method, and the AuEq factor. The aim of this detailed reporting method is to provide the most accurate, consistent and meaningful way of reporting the gold-antimony drilling results (refer Appendix 1 for further information).

Oriented diamond drill holes testing the C1 and C2 vein systems to date are shown in Figures 1 and 2 (plan and cross-section views). All 10 MCOG intersections to date are summarized in Table 1.

Figure 1 Plan: Diamond drilling of the C1 and C2 antimony-gold vein systems

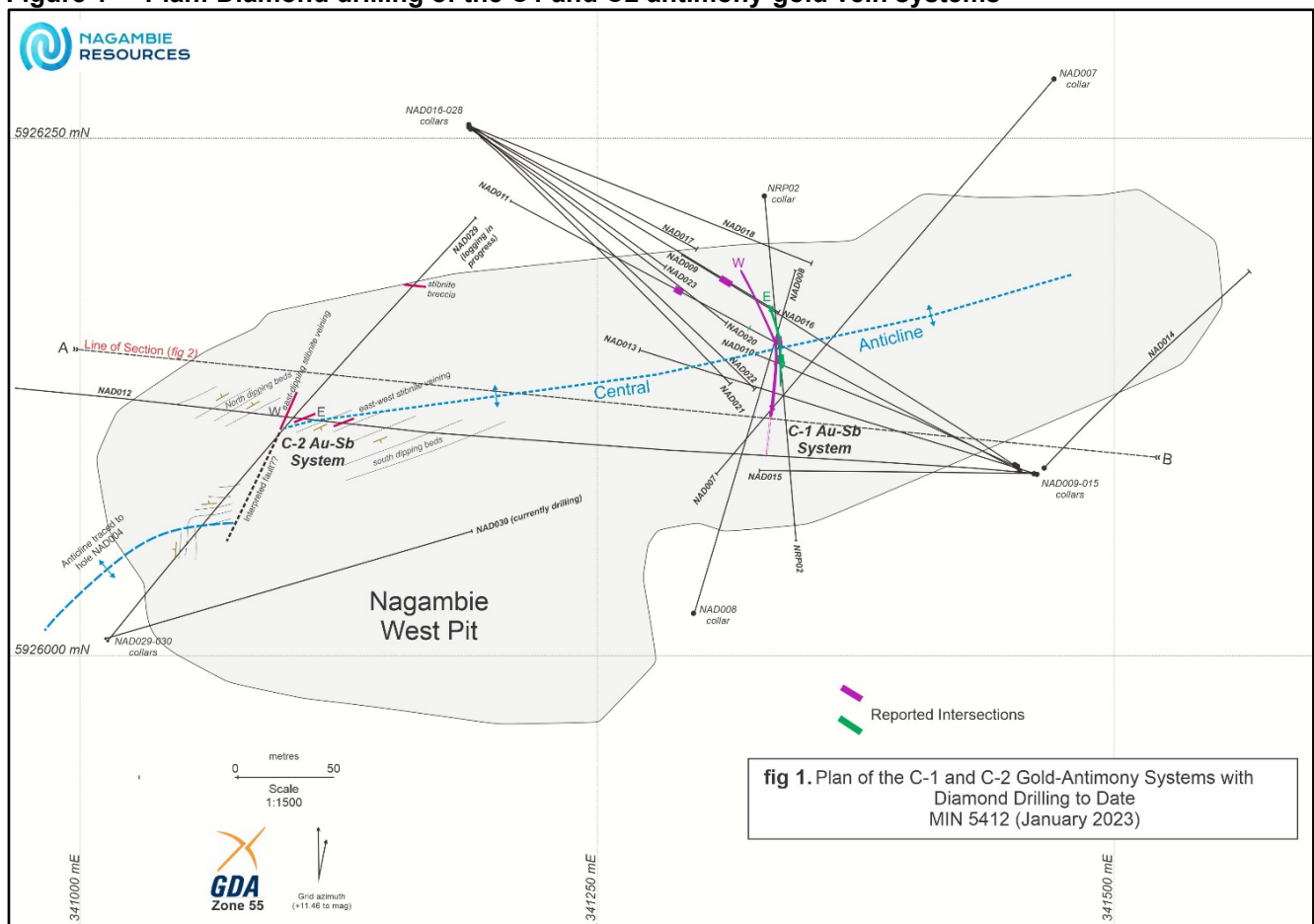
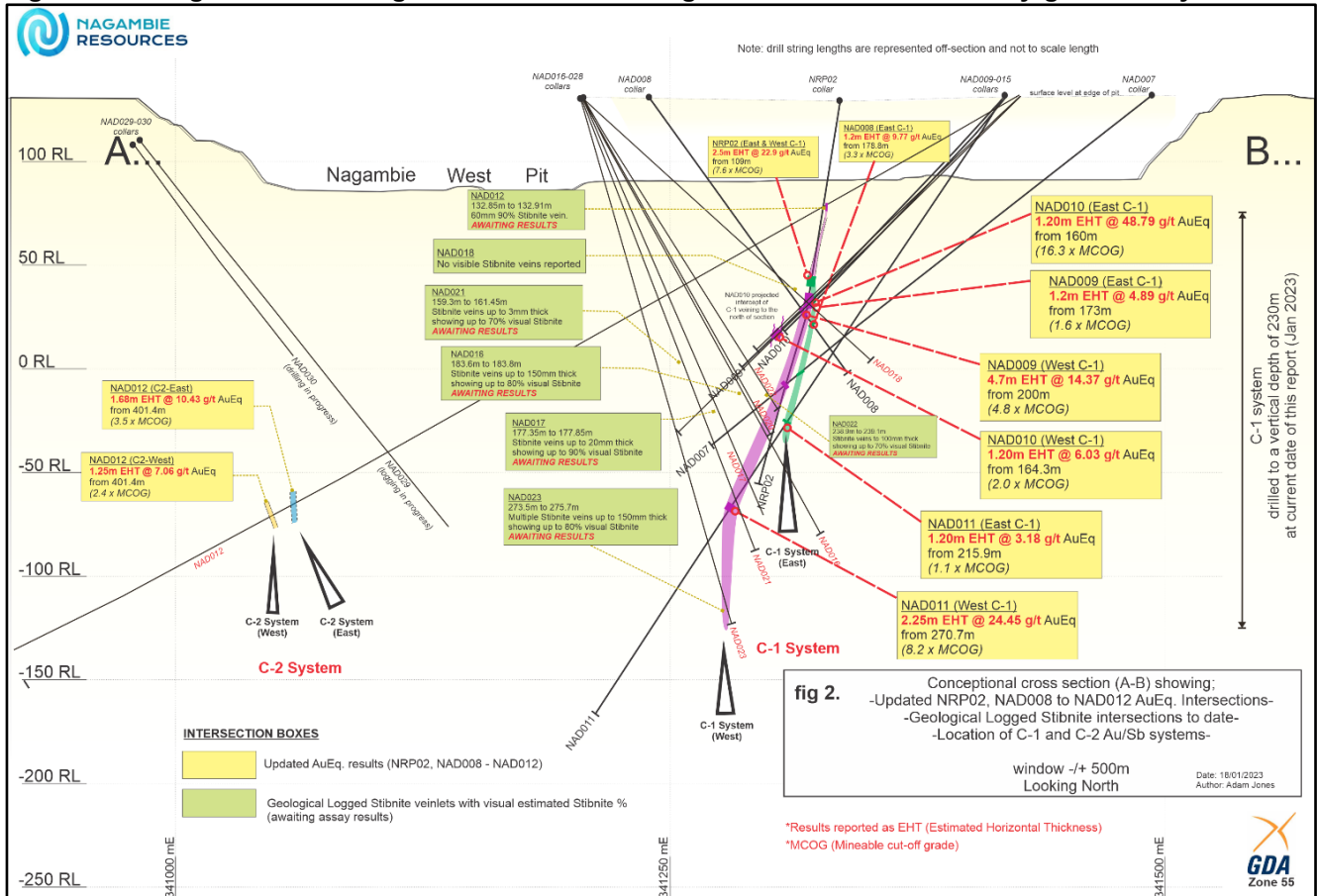


Figure 2 Long Section looking NNE: Diamond drilling of the C1 and C2 antimony-gold vein systems



Trends to Date

The epizonal N-striking C1 and C2 vein systems are associated with the EW-striking Nagambie Mine Central Anticline and the various EW-striking thrust faults which dip to the north (due to the N to S compression event at the time of first mineralisation, circa 375 million years ago) and are known, based on government seismic data, to continue regionally to kilometres in depth.

The strike length of the C1 vein system is currently around 80m. The vertical extent of the C1 vein system is currently around 200m but could increase substantially, to 1,000m or more, with extensive further drilling – initially from surface and later from underground. The Fosterville epizonal mineralisation extends to more than 1,000m vertical depth and the Costerfield epizonal mineralisation is approaching 1,000m vertical depth.

Gold Tenements

The Company’s tenements as at 31 December 2022, totalling 3,336.5 sq km, are listed in Table 2 and their general location in central Victoria is shown in Figure 3.

Redcastle and Whroo Joint Ventures with Southern Cross Gold (ASX: SXG)

Southern Cross currently manages gold exploration within the Redcastle and Whroo JV Properties of 75 sq km and 179 sq km respectively.

Whroo JV Property (NAG currently 100%, SXG has the right to earn up to 60% or 70% at Nagambie Resources’ option)

No material activity during the quarter.

Redcastle JV Property (SXG currently 70%, NAG 30%)

No material activity during the quarter.

Figure 3 Nagambie's Tenements (in blue) all within the Melbourne Zone (in pink)

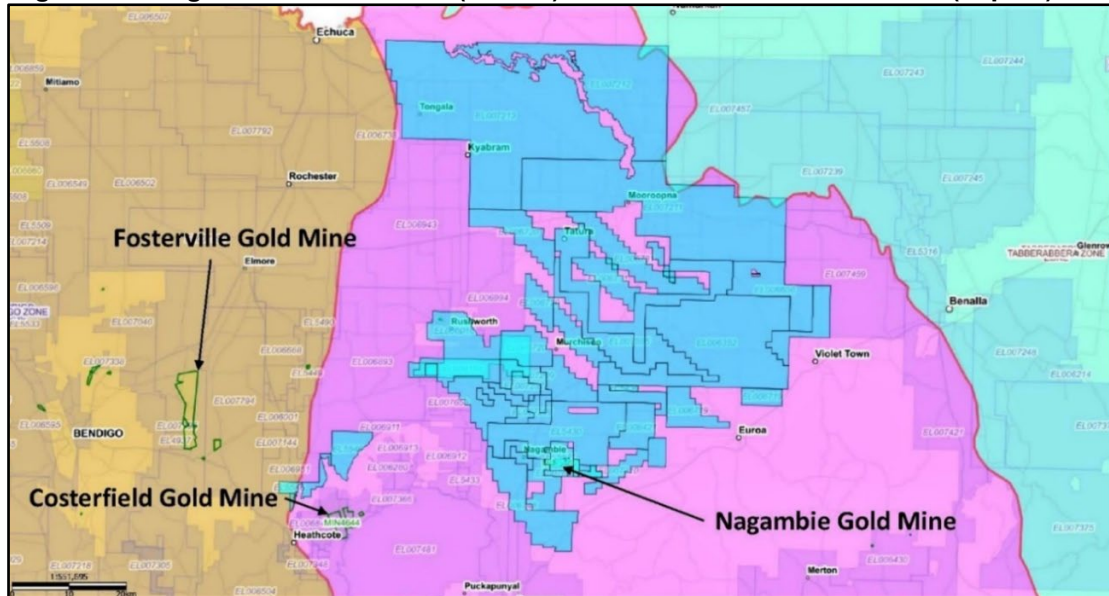


Table 2 Nagambie Resources Tenements as at 31 December 2022

Tenement Number	Tenement Name	sq km
MIN 5412	Nagambie Mining Licence	3.5
EL 5430	Bunganail Exploration Licence	160.0
EL 5511	Nagambie Central Exploration Licence	21.0
EL 6352	Miepoll Exploration Licence	342.0
EL 6508	Tabilk Exploration Licence	33.0
EL 6606	Gowangardie Exploration Licence	88.0
EL 6719	Euroa Exploration Licence	81.0
EL 6720	Tatura Exploration Licence	145.0
EL 6731	Arcadia Exploration Licence	218.0
EL 6748	Waranga Exploration Licence	102.0
EL 6937	Nagambie East Exploration Licence	2.0
EL 6877	Nagambie Exploration Licence	8.0
EL 7207	Arcadia Exploration Licence	156.0
EL 7208	Cullens Road Exploration Licence	29.0
EL 7210	Locksley Exploration Licence	26.0
EL 7211	Shepparton Exploration Licence	444.0
EL 7212	Shepparton North Exploration Licence	321.0
ELA 7213	Pederick Exploration Licence Application	683.0
EL 7264	Resource Recovery Exploration Licence	1.0
ELA 7265	Nagambie Town Exploration Licence Application	8.0
EL 7594	Miepoll East Exploration Licence	47.0
ELA 7595	Miepoll West Exploration Licence Application	113.0
ELA 7690	Nagambie South Exploration Licence Application	4.0
ELA 8082	Tabilk North Exploration licence Application	7.0
ELA 8083	Tabilk East Exploration Licence Application	40.0
Subtotal	Waranga Domain excluding Whroo JV Property	3,082.5
EL 6158	Rushworth Exploration Licence	46.0
EL 6212	Reedy Lake North Exploration Licence	17.0
EL 7205	Angustown Exploration Licence	49.0
EL 7209	Goulburn West Exploration Licence	34.0
EL 7237	Kirwan's North (1) Exploration Licence	20.0
EL 7238	Kirwan's North (2) Exploration Licence	9.0
RL 2019	Doctors Gully Retention Licence	4.0
Subtotal	Whroo JV Property with SXG	179.0
	Total Waranga Domain	3,261.5
EL 5546	Redcastle Exploration Licence	51.0
EL 7498	Comella Exploration Licence	19.0
EL 7499	Sheoak Exploration Licence	5.0
Subtotal	Redcastle JV Property with SXG	75.0
TOTAL	Nagambie Resources Limited Tenements	3,336.5

NAGAMBIE GOLD TREATMENT PLANT

Nagambie Resources and Golden Camel Mining (GCM) are proceeding with the construction and operation of a 300,000 tonnes per annum toll treatment facility at the Nagambie Mine. GCM is the Manager and is paying 100% of all additional infrastructure, construction and commissioning costs. After commissioning, all revenues and operating costs will be shared 50:50. Initial feed for the plant is to be trucked from GCM's Golden Camel Mine.

GCM has been refurbishing key components of the plant and is finalising financial arrangements with external parties. GCM has advised Nagambie that commissioning of the CIL toll treatment plant at the Nagambie Mine is now scheduled for the December quarter 2023.

POTENTIAL BACTERIAL RECOVERY OF GOLD IN 1990s HEAP LEACH PAD

Total recorded gold production from the Nagambie Mine cyanide heap between 1989 and 1997 was 134,000 ounces and Nagambie Resources considers that a significant amount of gold remains in the heap. Extracting this gold in a toll treatment plant or by additional cyanide heap leaching is currently not viable or economic.

Stage 1 of the Bioleaching Project was completed with the findings being that gold can be bioleached from the tailings using native and externally sourced bacteria when suitable conditions are provided. Further research was recommended to refine and improve the rate of gold bioleaching.

\$50,000 of funding assistance for Stage 2 of laboratory testwork, using larger samples from the Nagambie Mine and more bacteria options, has been approved under the Federal Government's Innovation Connections Program. The Perth-based laboratory, which is carrying out the work, has agreed to contribute an additional \$55,000 to the Stage 2 work given its positive assessment of the project. The Stage 2 work has now commenced.

PASS (POTENTIAL ACID SULFATE SOIL) STORAGE

The Spark consortium has placed orders for two large tunnel-boring machines (TBMs) to excavate the road tunnels for the North East Link Project (NELP), commencing early in CY2024. Nagambie Resources is one of the bidders for the NELP PASS storage and is awaiting advice from the Spark consortium.

During the quarter, bids were requested for PASS storage for the first stage of the Victorian Government's Suburban Rail Loop Project. Nagambie submitted a bid for underwater storage of the PASS at the Nagambie Mine.

CORPORATE

Cash

At 31 December 2022, total cash held by the group was \$2,025,000.

\$1.087 Million Share Placement

A total of \$1.087 million of fully-paid ordinary shares were placed at 7.0 cents per share in October 2022. The funds are to be used to continue the C-veins drilling program at the Nagambie Mine and to add to general working capital. Far East Capital was the Lead Manager for the raising.

Up to \$2.0 Million Share Placement Facility

In November, Nagambie received a commitment from Pioneer Resource Partners LLC, a US-based institutional investor, to invest up to \$2 million in Nagambie by way of share placements of ordinary shares of Nagambie Resources. At the end of the quarter, the facility was drawn to \$0.5 million, with \$1.5 million undrawn. The funds are to be used to continue the C-veins drilling program at the Nagambie Mine and to add to general working capital.

Top 20 List of Shareholders

Nagambie publishes the list of the Top 20 shareholders in the company from time to time. On the basis that significant, above-average turnover in Nagambie shares has occurred in recent months, the Top 20 shareholders, as at 28 January 2023, has been included in this Quarterly Report and is shown in Table 3.

Table 3 The names of the 20 largest holders and their shareholding in the quoted shares

Rank	Holder Name	Shares	%
1	PPT NOMINEES PTY LTD	83,766,872	15.70%
2	SOUTHERN CROSS GOLD LTD	53,361,046	10.00%
3	ADARE MANOR PTY LTD <ADARE MANOR SUPER FUND A/C>	31,615,559	5.92%
4	BNP PARIBAS NOMS PTY LTD <DRP>	25,573,313	4.79%
5	MR GEOFFREY MICHAEL WALCOTT & MRS JULIE ANN WALCOTT <GEORET BEACON SUPERFUND A/C>	20,330,000	3.81%
6	PRECISION SUPER PTY LTD	18,877,424	3.54%
7	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	15,903,348	2.98%
8	CYPRON PTY LTD <THE M W TRUMBULL S/F A/C>	14,346,038	2.69%
9	ADMIC SUPER PTY LTD <ADMIC SUPER FUND A/C>	10,000,000	1.87%
10	HEPSBOURNE PTY LTD <RD JOHNS MEDICAL PL SF A/C>	9,471,180	1.77%
11	LINCONRIDGE PTY LTD <G & K MCAULIFFE S/F A/C>	9,369,229	1.76%
12	NORMET INDUSTRIES NOMINEE PTY LTD	8,333,333	1.56%
13	HANSPETER BRENN PTY LTD <HANSPETER BRENN S/F A/C>	6,000,000	1.12%
13	MCCARTHY CATTLE COMPANY PTY LTD <MCCARTHY FAMILY A/C>	6,000,000	1.12%
14	MR ROBERT CARL GUERNIER & MRS JEAN GUERNIER	5,233,644	0.98%
15	MORTANGI HOLDINGS PTY LTD <NEWBEACH A/C>	4,468,289	0.84%
16	JMH SUPER PTY LTD <J & M HANNAN S/F A/C>	4,331,905	0.81%
17	CYPRON PTY LTD <M W TRUMBULL SUPER FUND A/C>	3,908,427	0.73%
18	EGAN SUPERCO PTY LTD <EGAN SF A/C>	3,800,000	0.71%
19	MR RICHARD MOGOROVICH & MRS GIULIANA MOGOROVICH <MOGOROVICH SUPER FUND A/C>	3,542,756	0.66%
20	W I L NOMINEES PTY LTD <F T G T P & R SUPER/F A/C>	3,301,368	0.62%
	Total	341,533,731	64.00%
	Total issued shares	533,610,463	100.00%

Related Party Payments

In accordance with its obligations under ASX Listing Rule 5.3.5, Nagambie Resources advises that the only payments made to related parties of the Company in the quarter, as set out in item 6.1 of the accompanying Appendix 5B, were in respect of directors' and consulting fees.

By the order of the Board.



James Earle
Chief Executive Officer

STATEMENT AS TO COMPETENCY

The Exploration Results in this report have been compiled by Adam Jones who is a Member of the Australian Institute of Geoscientists (MAIG). Adam Jones has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he is undertaking, to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". He consents to the inclusion in this report of these matters based on the information in the form and context in which it appears.

FORWARD-LOOKING STATEMENTS

This report contains "forward-looking statements" within the meaning of securities laws of applicable jurisdictions. Forward-looking statements can generally be identified by the use of forward-looking words such as "may", "will", "expect", "target", "intend", "plan", "estimate", "anticipate", "believe", "continue", "objectives", "outlook", "guidance" or other similar words, and include statements regarding certain plans, strategies and objectives of management and expected financial performance. These forward-looking statements involve known and unknown risks, uncertainties and other factors, many of which are outside the control of Nagambie Resources and any of its officers, employees, agents or associates. Actual results, performance or achievements may vary materially from any projections and forward-looking statements and the assumptions on which those statements are based. Exploration potential is conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. Readers are cautioned not to place undue reliance on forward-looking statements and Nagambie Resources assumes no obligation to update such information.

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Oriented diamond drilling of structurally-controlled, high-grade antimony-gold underground targets within the Nagambie Mine Mining Licence and elsewhere in the 3,000 sq km of tenements in the Waranga Domain is being methodically carried out.

Nagambie Resources and Golden Camel Mining (GCM) have received approval for the construction and operation of a CIL gold toll treatment plant at the Nagambie Mine. GCM is paying 100% of all construction and commissioning costs; thereafter all revenues and costs will be shared 50:50. A future antimony flotation circuit is also planned.

Underwater storage of sulphidic excavation material (PASS) in the two legacy gold pits at the Nagambie Mine is an excellent environmental fit.

Bacterial recovery of residual gold from the 1990s heap leach pad is being investigated.

Mining and screening of sand and gravel deposits at the Nagambie Mine is also planned.

APPENDIX 1: Summary of Mining-Method Considerations and Developed Assay-Reporting Criteria

Mining Plus, a global mining services provider, reviewed the assay-reporting criteria developed by Nagambie Resources for the antimony-gold veins drilling program at the Nagambie Mine and agreed that the criteria were appropriate and meaningful in terms of reporting to the ASX. The developed criteria draw heavily on the publicly-available information for the antimony-gold Costerfield Mine, 45 km to the west of the Nagambie Mine.

- 1) The C-veins (Costerfield-Mine-style veins) at the Nagambie Mine are generally striking N and dipping vertically or sub-vertically to the W or E (similar to the Costerfield Mine).
- 2) The C-veins could be mineable from ~50m vertical depth from surface, the depth of the oxidised zone. An appropriate vertical geotechnical pillar under the West Pit would be determined in due course but could be of the order of 10m.
- 3) The mining method could be up-hole-drill, retreat stoping with ore drill drives 10m vertically apart (as for the Costerfield Mine). Cemented rock fill (using the underground development waste) would allow for future stopes above, below and besides each filled stope (also as for the Costerfield mine).
- 4) Minimum stoping width could be 1.2m estimated horizontal thickness (EHT) (similar to the Costerfield Mine).
- 5) For stopes side by side, the waste between them should be at least 1.5m EHT to cover the additional costs for multiple stopes of strike driving, stoping, backfilling and potential ore mining losses.
- 6) All individual sample assays to be weighted by both EHT and sample bulk density (BD) – using the Costerfield Mine BD formula based on Sb% (see below).
- 7) Gold equivalent grade (g/t AuEq) to be calculated for each sample by multiplying the Sb% by the AuEq factor and adding that figure to the g/t Au. For the relevant formula, see below.
- 8) All intersection grades (Au, Sb, AuEq) to be reported for the EHT of the vein and, where the vein EHT is less than 1.2m, for the minimum mineable EHT of 1.2m by adding appropriate waste dilution (similar to the Costerfield Mine).
- 9) Mineable cut-off grade (MCOG) of 3.0 g/t AuEq over 1.2m EHT or greater (similar to the Costerfield Mine).

Bulk Density Calculation

BD is calculated for each intercept using the formula that the Costerfield Mine uses for the Augusta, Cuffley and Brunswick orebodies - refer page 191 of the 2022 Technical Report for the Costerfield Mine:

(www.mandalayresources.com/operations/overview/costerfield-mine/mnd_costerfield_ni-43_101_technical)

Formula:

$$BD = ((1.3951 * Sb\%) + (100 - (1.3951 * Sb\%))) / (((1.3951 * Sb\%) / 4.56) + ((100 - (1.3951 * Sb\%)) / 2.74))$$

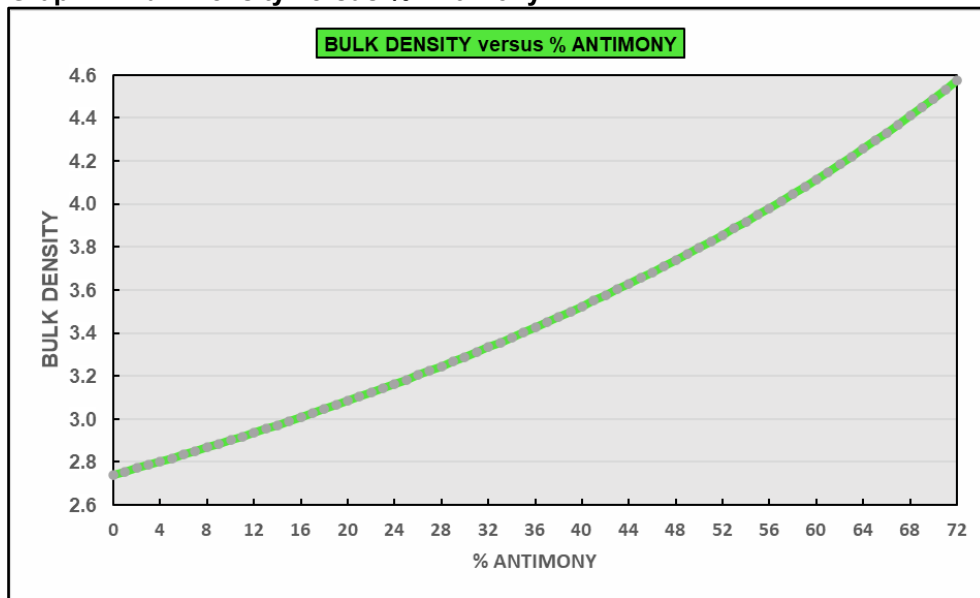
for which:

- Empirical formula of stibnite: Sb_2S_3
- Sb%: Antimony assay as a percentage by mass
- Molecular weight of Antimony (Sb): 121.757
- Molecular weight of Sulphur: (S): 32.066
- 1.3951 is a constant calculated by $339.712 / 243.514$ where 339.712 is the molar mass of Sb_2S_3 , and 243.514 is the molar mass of antimony contained in one mole of pure stibnite
- BD of pure stibnite: 4.56
- BD of unmineralised waste (predominantly sandstones, siltstones, mudstones): 2.74

In time, when a sufficiently representative range of material is available, Nagambie will need to calculate the BD of the unmineralised waste (predominantly sandstones, siltstones and mudstones) at the Nagambie Mine. However, Nagambie does not consider that it will vary significantly from 2.74.

A graphical representation of the Costerfield BD formula is shown in Graph 1. For 0% Sb, BD = 2.74 and for 71.7% Sb (the maximum possible in stibnite), BD = 4.56 (pure stibnite).

Graph 1: Bulk Density versus % Antimony



Nagambie considers that the above bulk density formula, while being appropriate, is a little conservative in that, for both the Costerfield Mine and the Nagambie Mine, the stibnite (Sb_2S_3) is known to contain variable amounts of the gold-antimony mineral, aurostibite ($AuSb_2$). While pure stibnite has a BD of 4.56, aurostibite has a BD of 9.98, reflective of its very high gold content – meaning that otherwise pure stibnite containing aurostibite will have a BD greater than 4.56.

Gold Equivalent Factor

Nagambie considers that both gold and antimony will be economically recoverable at the Nagambie Mine, as they are at the Costerfield Mine which is 45 km to the west of the Nagambie Mine.

The gold-antimony Costerfield Mine currently calculates its gold equivalent (AuEq) factor, the relative value of 1.0% antimony in the mine to 1.0 gram / tonne gold in the mine as:

$$AuEq \text{ factor} = [US\$/tonne \text{ antimony price} \times 0.01 \times 0.95 \text{ antimony recovery}] / [US\$/ounce \text{ gold price} / 31.10348 \text{ grams per ounce} \times 0.93 \text{ gold recovery}]$$

The Costerfield Mine is 100% owned by Mandalay Resources Corporation and the projections for CY2023 on the [Mandalay website](#) adopt average CY2023 prices for gold and antimony of US\$1,797 / ounce gold and US\$10,805 / tonne antimony (refer Graph 2). For these prices, the AuEq factor using the above equation is **1.91**.

Graph 2: Average Quarterly Antimony Price (US\$/Tonne)

