

**HIGHLIGHTS**

- ❖ Drilling is confirming Costerfield-style, antimony-gold mineralisation beneath the 1990s oxide-gold open pits at Nagambie. Assays are pending.
- ❖ Focus to date has been on the C1 vein first intersected in 2006, but a second vein, C2, has also been intersected.
- ❖ The revised structural interpretation is proving very useful in the planning of drill holes with strong veining occurring between 90m and 140m vertically, open at depth and in both directions along strike.
- ❖ Second-stage testwork on bacterial leaching of the historical gold heap leach pads is being funded by AusIndustry and the Perth-based laboratory to an amount of \$105,000.
- ❖ Successful \$3.057 million financing completed post the close of the quarter.

**COMMENTARY**

Nagambie Resources' Executive Chairman, Mike Trumbull, commented: *"It is early days in the C-veins drilling program but the exciting massive-stibnite visual intersections, together with the 2006 NRP02 assays which graded up to 24 g/t gold within massive stibnite grading up to 60% antimony, could be pointing the way to Victoria's first significant high-grade mine development since the Costerfield and Fosterville Mines.*

*"Until this year, our gold model was based on the major N-S compression event (circa 375 million years ago) in the Waranga Domain resulting in E-W-striking anticlines and thrust faults, with quartz-carbonate gold mineralisation emplaced in the resulting E-W 'plumbing system'. With the confirmation of mineralised N to NNW-striking cross faults at the Nagambie Mine, our gold model is now being adapted to consider that these cross faults post-dated and progressively (from east to west at Nagambie) displaced the E-W features southwards in blocks, with massive stibnite being emplaced in the N-NNW 'plumbing system'."*

**NAGAMBIE RESOURCES**  
[www.nagambieresources.com.au](http://www.nagambieresources.com.au)

*Oriented diamond drilling of Costerfield-Mine-style, structural-controlled, high grade antimony-gold underground targets within the Nagambie 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 will pay 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.*

**SHARES ON ISSUE**  
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**Nagambie Resources Limited**  
ABN 42 111 587 163

**Registered, Operations & Head Office**  
533 Zanelli Road  
Nagambie Vic 3608  
(PO Box 339)  
Tel: (03) 5794 1750

[info@nagambieresources.com.au](mailto:info@nagambieresources.com.au)

**Board**

**Mike Trumbull (Exec Chairman)**  
**Bill Colvin (Director)**  
**Alfonso Grillo (Dir/Company Sec)**

**James Earle CEO**

**GOLD EXPLORATION****Confirmation of Costerfield-Mine-Style, Antimony-Gold Mineralisation at Nagambie Mine**

The first four diamond holes drilled in the C-Veins 2022 program, NAD007-010, all intersected significant gold-stibnite mineralisation striking N to NNW.

Historically, all mineralisation was thought to run E-W and all drilling was N-S to hit the expected mineralisation at right angles. It is now evident that post this E-W mineralisation, secondary Costerfield-Mine-style stibnite mineralisation has been emplaced in N to NNW cross faults.

No assays are yet available but holes NAD008-010 had the most impressive intersections visually. They all intersected massive stibnite veining (refer Photos 1-3), including pieces of solid, near-100% stibnite. Further, NAD010 also intersected significant laminated quartz veining with the massive stibnite (refer Photo 4). Such laminated quartz regularly occurs besides the stibnite mineralisation at the Costerfield Mine, where it can contain very high grades of free gold.

The current drilling was initially targeting only the C1 vein (where “C” stands for “Costerfield-Mine-style, antimony-gold veining”) which was intersected by the NRP02 hole in 2006 (refer Table 1 for NRP002 assays) but which was unsuccessfully followed up at that time (refer announcement to the ASX of 3 March 2022). The C1 vein (refer Figure 1) strikes N and is close to vertical in dip. The C2 vein, previously unknown, appears to coalesce with the C1 vein but, where the vein is separate, appears to strike NNW and dip steeply W.

The stibnite veining currently extends in depth between around 90m and 140m vertically below surface (refer Figure 2) but is open in both directions (the upward limit is expected to be the depth of oxidation which is around 60m below surface). The stibnite veining also currently extends over approximately 60m in strike but is open in both directions.

The estimated true widths (ETWs) in Figures 1 and 2 are “visual” – adjusted for oriented strike and dip from the down hole intercepts of massive stibnite veining only. The “cut-off” ETWs could be significantly wider as it is difficult to visually estimate low Sb grades down to a cut-off grade of (say) 1.0% Sb and will only be calculable after the receipt of the detailed laboratory assays. The “visual” ETWs shown in Figures 1 and 2 of 14cm, 44cm, 25cm and 95cm nevertheless compare favourably with the “cut-off” ETWs reported over time for the Costerfield Mine which typically has mined very narrow reefs, down to around 20cm ETW.

**NRP002 Intersection in 2006 – refer Table 1**

The NRP002 intersection was first reported in full to the ASX on 30 October 2006 and was re-reported on 3 March 2022 by Nagambie Resources. Some of the massive stibnite veining intersected in NRP002 is shown in Photo 6. Table 1 sets out the assays for all of the individual intercepts making up the full intercept length of 27.1m from 109m to 136.1m down hole (the “cut-off” ETW for NRP002, due to the approximate N-S drilling angle, could prove to be a small percentage of 27.1m, possibly circa 10% or 270cm).

In Table 1, the high Sb% assays (representative of massive stibnite veining) are highlighted in blue and the Au g/t assays are highlighted in relative orange. For the high Sb% assays, the Au g/t values correlate quite well. Nagambie Resources considers that, in these cases, microscopic gold is probably present within the stibnite (Sb<sub>2</sub>S<sub>3</sub>) as aurostibite (AuSb<sub>2</sub>), giving rise to the correlation. Aurostibite is known to occur at Costerfield within the stibnite. While stibnite has a bulk density of 4.56, aurostibite has a bulk density of 9.98.

In Table 1, where better Au g/t assays are not related to high Sb% assays, Nagambie Resources considers that the gold relates to laminated quartz veins (refer Photo 4).

**Antimony as a Critical Metal and its Price Increase in Recent Years**

Antimony features highly on the critical minerals lists of many countries including Australia, the United States of America, Canada, Japan and the European Union.

Australia’s mine production of antimony currently comes from a single mine, the Costerfield Mine – 45km west of the Nagambie Mine. Costerfield produces an antimony-gold flotation concentrate which is shipped to China where final antimony products (antimony metal or antimony trioxide powder) are produced. Cumulative production of antimony from 2013 to 2020 is shown in Graph 1. China, Russia and Tajikistan dominate production.

Figure 1 Plan of C1 & C2 Veins plus NRP02 and NAD007-010 Drill Hole Traces

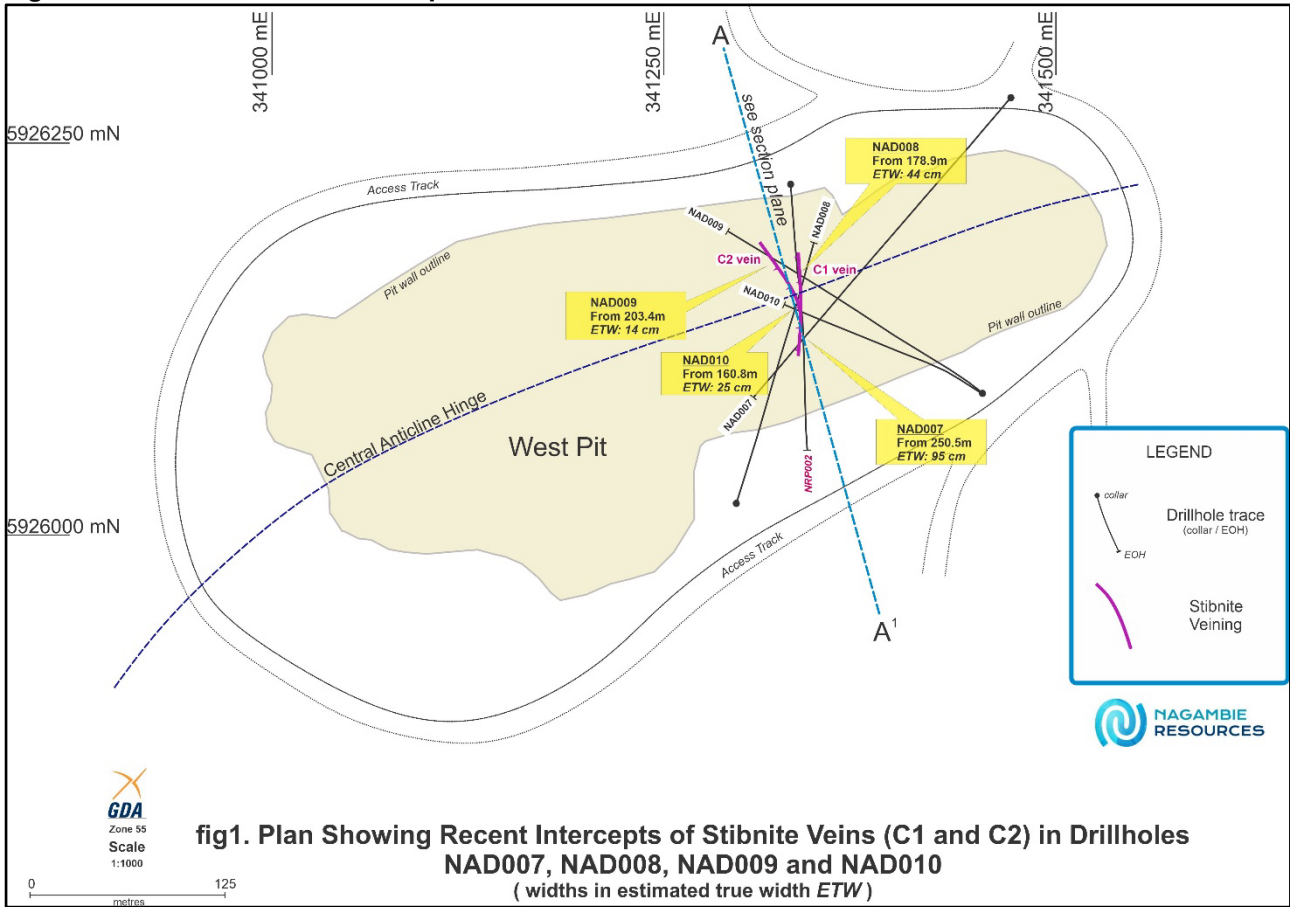
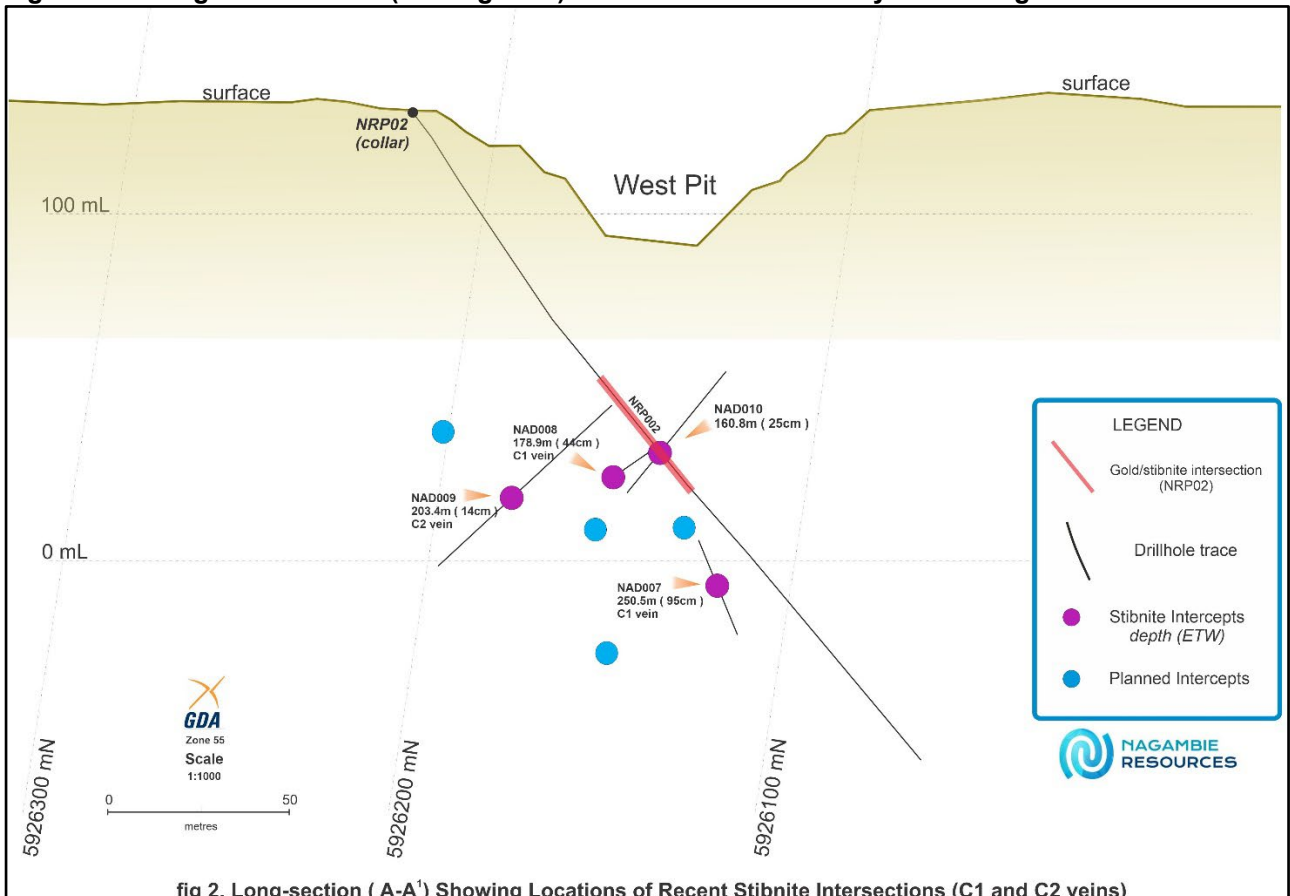


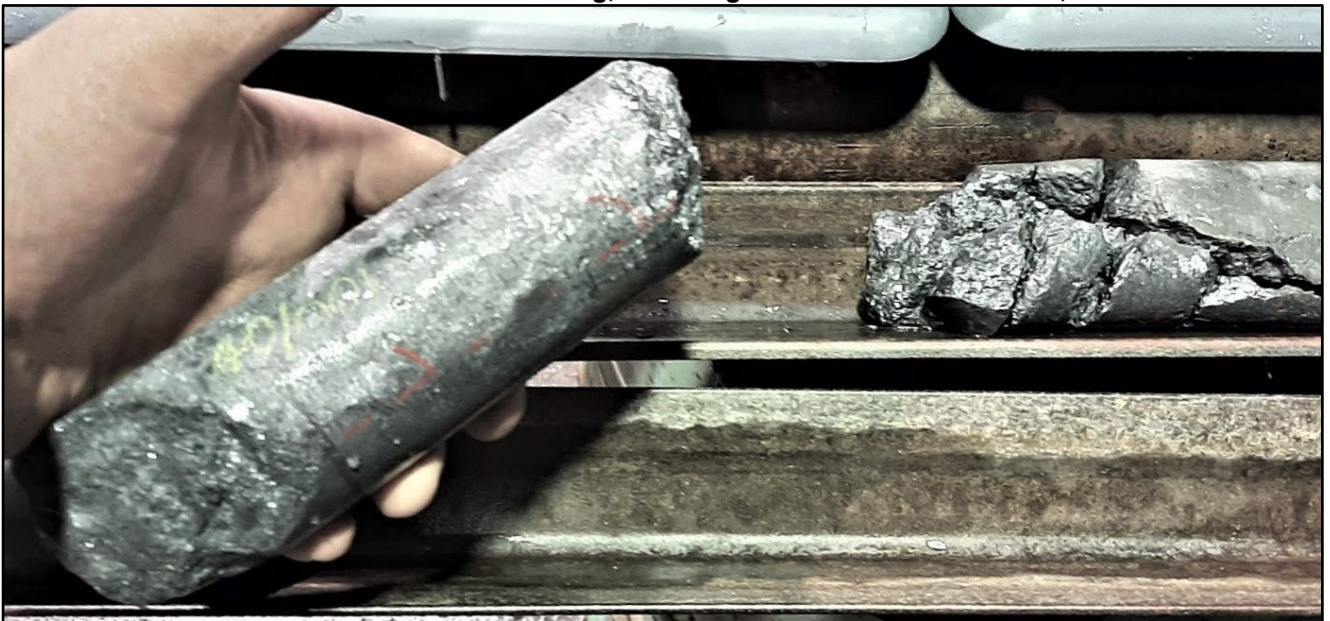
Figure 2 Long-Section View (looking East) of the Plane indicated by A-A' in Figure 1



**Photo 1 Some of the Massive Stibnite Veining in NAD008**



**Photo 2 Some of the Massive Stibnite Veining, including Solid near-100% Stibnite, in NAD009**



Antimony alloys with lead and tin which results in improved properties for solders, ammunition (bullets, artillery shells, rockets, missiles), bearings and batteries. Antimony is a prominent additive for halogen-containing flame retardants. Adequate supplies of antimony are critical to the world's energy transition and to the high-tech industry, especially the semi-conductor and defence sectors. Antimony is a critical element in the manufacture of lithium-ion batteries and for the next generation of calcium-antimony-liquid-metal batteries that are predicted to lead to scalable energy storage for large wind and solar renewable power projects.

Various factors, including declining mine production in China, have led to a significant increase in the antimony price in the last 1-2 years (refer Graph 2).

**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 199 sq km respectively.

**Whroo JV Property (NAG currently 100%, SXG has the right to earn up to 60% or 70% at NAG's option)**

No material activity during the quarter.

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

No material activity during the quarter.

**Photo 3** Some of the Massive Stibnite Veining in NAD010\*\*



\*\* A piece of NAD010 Massive Stibnite Veining is held directly above its space in the core tray – the other piece held for comparison is the Solid 100% Stibnite piece from NAD009 (refer Photo 2).

**Photo 4** Some of the Laminated Quartz Veining Immediately East of the Stibnite Veining in NAD010



**Photo 5 Diamond Drilling Rig – from this position, it drilled NAD009 & NAD010 and is drilling NAD011**



**Photo 6 Some of the Massive Stibnite Veining in NRP002 (2006 photo)**



**Gold Tenements**

The Company's tenements as at 31 March 2022, totalling 3,289.5 sq km, are listed in Table 3 and their general location in central Victoria is shown in Figure 3.

**NAGAMBIE MINE GOLD TOLL TREATMENT PLANT**

Nagambie Resources and Golden Camel Mining (GCM) are proceeding with the construction and operation of a nominal 180,000 tonnes per annum toll treatment facility at the Nagambie Mine. GCM is the Manager and is paying 100% of all infrastructure, construction and commissioning costs – thereafter, 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 advised Nagambie Resources that commissioning of the CIL toll treatment plant at the Nagambie Mine is now scheduled for the June quarter 2023.

**Table 1 NRP002 Hole: Detailed Intercept Assays**

Hole / RC or DD	From (m)	To (m)	Intercept (m)	Gold (Au g/t)	Antimony (Sb %)	Au x m	Sb x m
NRP02 / RC	109	110	1	12.6	1.56	12.60	1.56
NRP02 / RC	110	111	1	0.91	1.01	0.91	1.01
NRP02 / RC	111	112	1	1.76	2.28	1.76	2.28
NRP02 / RC	112	113	1	13.2	2.40	13.20	2.40
NRP02 / RC	113	114	1	12.9	37.60	12.90	37.60
NRP02 / RC	114	115	1	15.8	29.20	15.80	29.20
NRP02 / RC	115	116	1	2.53	1.33	2.53	1.33
NRP02 / RC	116	117	1	2.66	5.91	2.66	5.91
NRP02 / DD	117	117.9	0.9	0.39	0.01	0.35	0.01
NRP02 / DD	117.9	118.8	0.9	0.39	0.01	0.35	0.01
NRP02 / DD	118.8	120.2	1.4	0.29	0.01	0.41	0.01
NRP02 / DD	120.2	122.1	1.9	0.24	0.01	0.46	0.02
NRP02 / DD	122.1	122.7	0.6	0.75	0.39	0.45	0.23
NRP02 / DD	122.7	123.5	0.8	9.11	20.50	7.29	16.40
NRP02 / DD	123.5	124.3	0.8	15.8	19.80	12.64	15.84
NRP02 / DD	124.3	125.7	1.4	1.97	0.14	2.76	0.19
NRP02 / DD	125.7	126.5	0.8	3.5	0.10	2.80	0.08
NRP02 / DD	126.5	128	1.5	2.61	0.05	3.92	0.08
NRP02 / DD	128	129.2	1.2	0.98	0.40	1.18	0.47
NRP02 / DD	129.2	129.5	0.3	24.0	60.20	7.20	18.06
NRP02 / DD	129.5	130	0.5	5.1	1.96	2.55	0.98
NRP02 / DD	130	131.3	1.3	1.27	1.59	1.65	2.07
NRP02 / DD	131.3	132.3	1	22.0	58.70	22.00	58.70
NRP02 / DD	132.3	132.8	0.5	0.86	1.60	0.43	0.80
NRP02 / DD	132.8	134	1.2	0.86	1.60	1.03	1.92
NRP02 / DD	134	136.1	2.1	0.6	2.99	1.26	6.28
	<b>Total</b>		<b>27.1</b>			<b>131.07</b>	<b>203.44</b>
<b>Average Gold (g/t Au) weighted by Intercept (m)</b>						<b>4.84</b>	
<b>Average Antimony (Sb %) weighted by Intercept (m)</b>							<b>7.51</b>

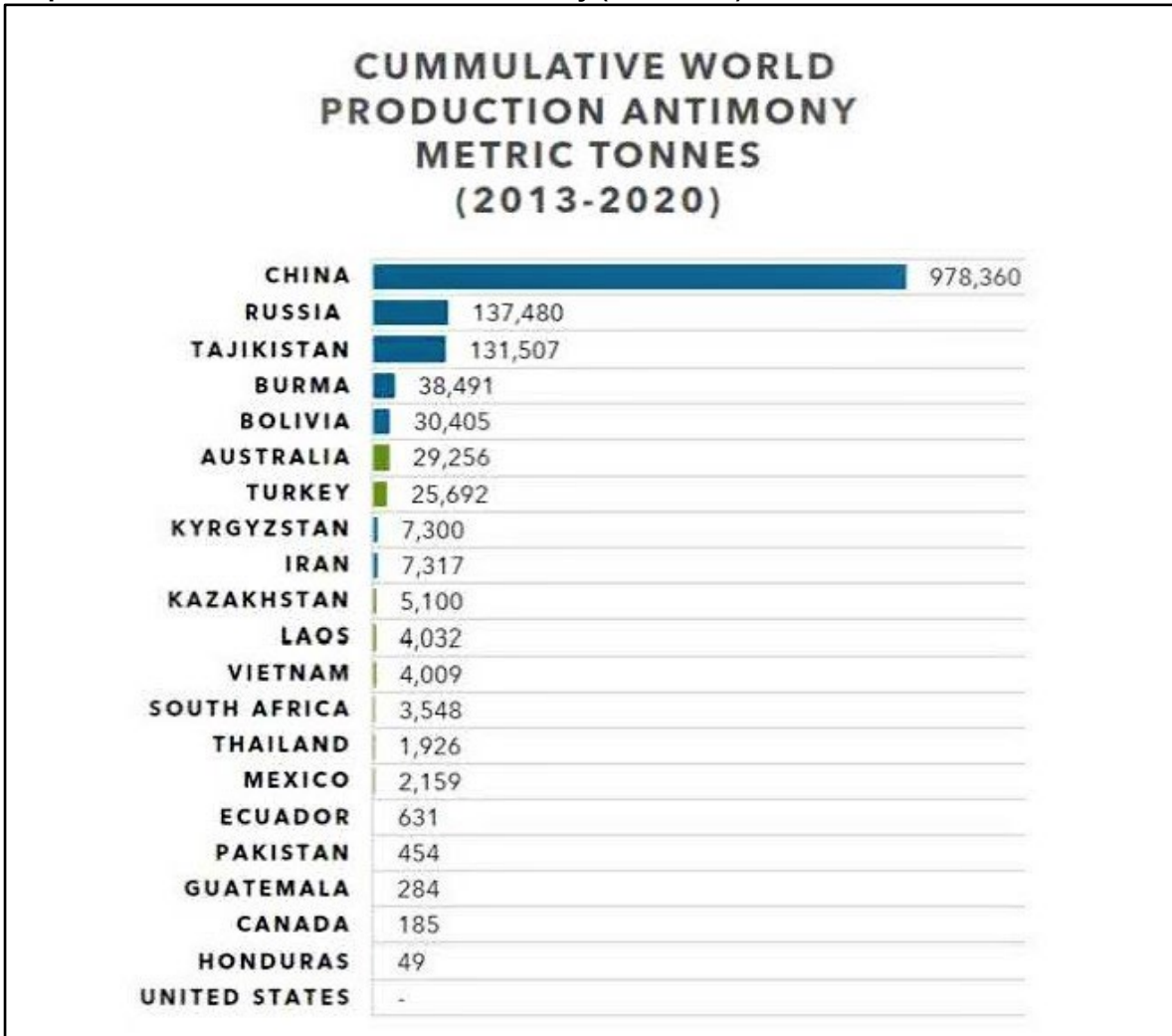
**POTENTIAL BACTERIAL RECOVERY OF GOLD IN 1990s HEAP LEACH PAD**

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 in 2021 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.

Funding assistance for Stage 2 of laboratory testwork, using larger samples from the Nagambie Mine and more bacteria options, has been obtained. AusIndustry is contributing a second-round \$50,000 and the Perth-based laboratory, which is carrying out the work, is contributing \$55,000.

Graph 1 Cumulative Production of Antimony (2013-2020)



From a Southern Cross Gold (ASX: SXG) presentation.

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

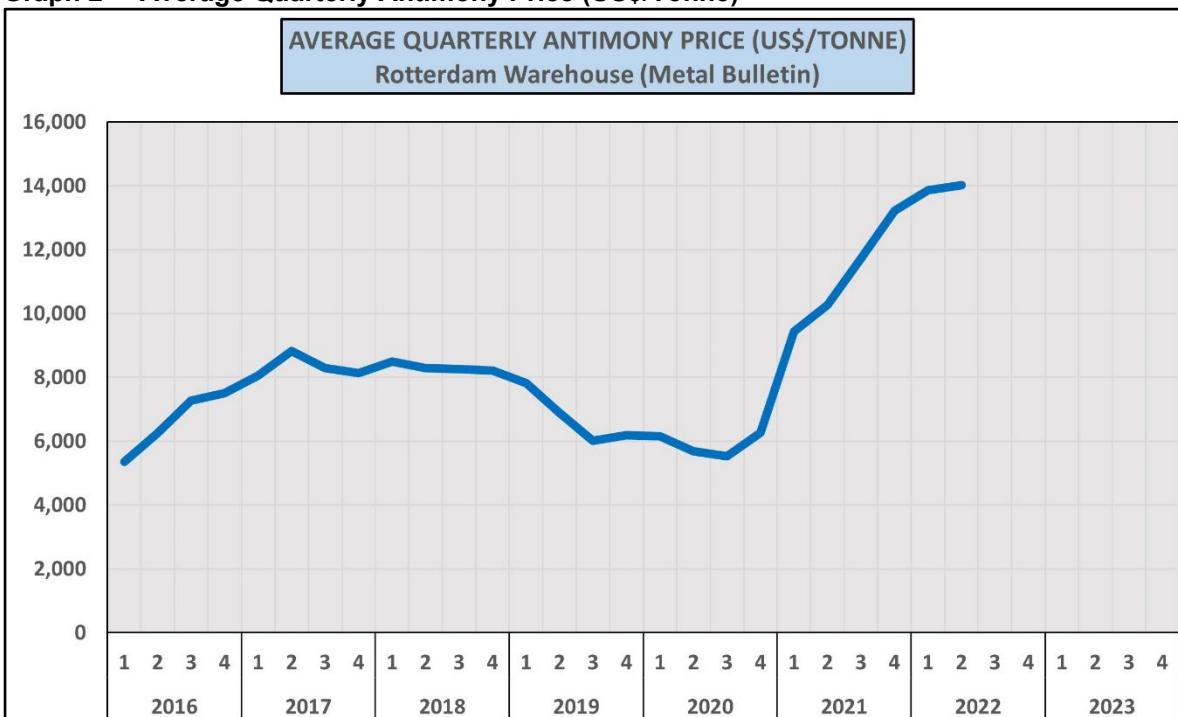
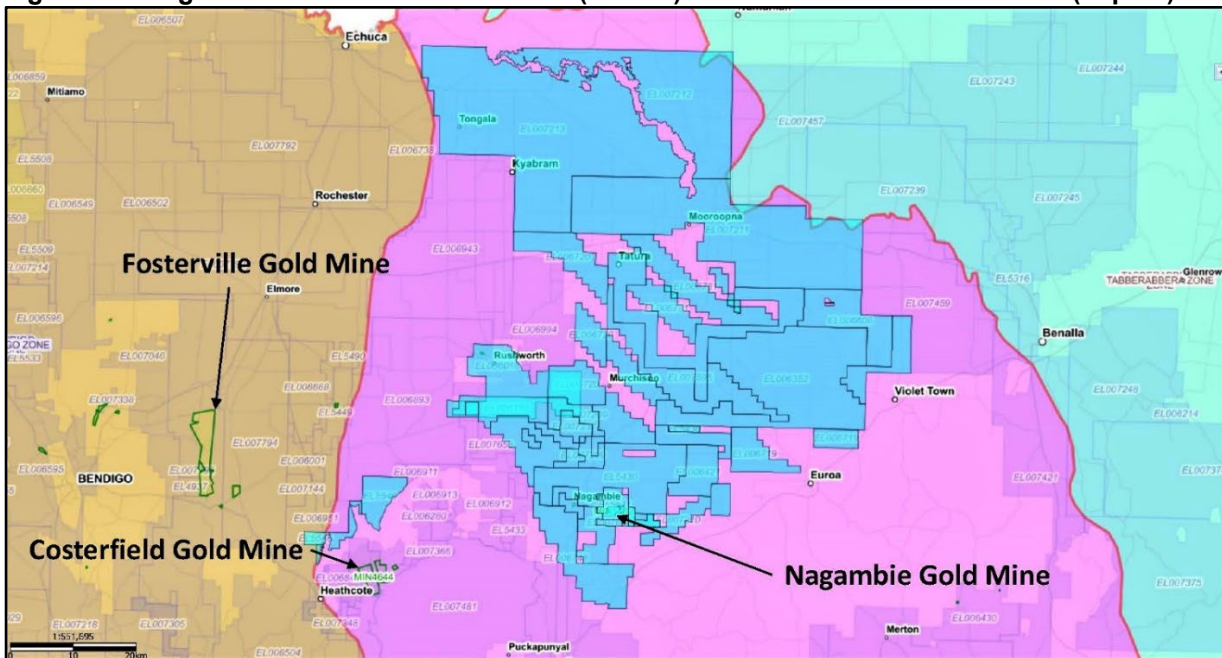




Table 3 Nagambie Resources Tenements as at 30 June 2022

Tenement Number	Tenement Name	sq km
MIN 5412	<b>Nagambie Mining Licence</b>	<b>3.5</b>
EL 5430	Bunganail Exploration Licence	160.0
EL 5511	Nagambie Central Exploration Licence	21.0
EL 6158	Rushworth Exploration Licence	46.0
EL 6212	Reedy Lake North Exploration Licence	17.0
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 7205	Angustown Exploration Licence	49.0
EL 7207	Arcadia Exploration Licence	156.0
EL 7208	Cullens Road Exploration Licence	29.0
EL 7209	Goulburn West Exploration Licence	34.0
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 7237	Kirwans North (1) Exploration Licence	20.0
EL 7238	Kirwans North (2) Exploration Licence	9.0
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
RL 2019	Doctors Gully Retention Licence	4.0
<b>Total Waranga Domain</b>		<b>3,214.5</b>
EL 5546	Redcastle Exploration Licence	51.0
EL 7498	Cornella Exploration Licence	19.0
EL 7499	Sheoak Exploration Licence	5.0
<b>Total</b>		<b>3,289.5</b>

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



**PASS MANAGEMENT PROJECT**

The Spark consortium announced that it had placed orders for two large TBMs to excavate the tunnels for the North East Link and tunnelling, which will generate PASS material, is now scheduled to commence in CY2024.

**CORPORATE****Cash**

At 30 June 2022, total cash held by the group was \$127,000.

**Mawson Gold Limited Shares (TSX: MAW)**

At 31 March 2022, Nagambie Resources held 2.525 million MAW shares which had a total market value of \$378,000. During the June quarter, 0.9 million MAW shares were sold and at 30 June 2022, the remaining 1.625 million MAW shares had a market value of \$220,000. Under the agreements with Mawson Gold, Nagambie Resources could sell these remaining 1.625 million MAW shares during the September 2022 quarter.

**\$3.057 Million of Series 10 Convertible Notes Issued**

The Company announced on 25 July 2022 that \$3.057 million of Series 10 unsecured convertible notes had been issued at 8.0 cents per note. \$1.8 million was used for the early redemption of the Series 6 notes (which had been due to expire on 17 November 2022) with the balance, \$1.257 million, to be used to continue drilling the antimony-gold C-vein targets at the Nagambie Mine and for general working capital.

**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.*