

# 340 g/t Gold Assay in Nagambie Mine Thrust

# Highlights

- 340 g/t gold (Au) over 0.2m downhole from 144.5m in NAD028 is a new record high assay for the Nagambie Mine. The assay occurs 60m vertically below surface within a NAD028 economically-mineable intersection in the Nagambie Mine Thrust (NMT) of 1.21m EHT (estimated horizontal thickness) at 46.0 g/t Au.
- The NAD028 intersection opens the likelihood that the NMT could host high-grade shoots along its known strike length of at least 2.0 km. High-grade shoots along thrust faults is the primary mineralisation model for the Fosterville Mine.
- The 40 economically-mineable intersections (or potential stopes) to date have a weighted average of 3.7m downhole, 1.6m EHT and 14.5 g/t AuEq (gold equivalent) (5.4% Sb (antimony) plus 4.7 g/t Au).
- The average gold-equivalent grade of 14.5 g/t or approximately 0.47 oz/t is very high by industry standards, and 4.8 times the estimated mineable cut-off grade of 3.0 g/t AuEq. This indicates potentially very-low operating cost, very-high operating margin mineralisation.
- The average antimony grade of 5.4% makes the Nagambie Mine underground discovery the highest-grade antimony mineralisation in Australia and one of the highest in the World.
- The calculation of the maiden economically-mineable JORC Inferred Resource for the shallow underground mineralisation, incorporating the 40 intersections to date, is progressing well with anticipated finalisation, sign-off and reporting in the March 2024 quarter.

### Commentary

**Nagambie Resources' Executive Chairman, Mike Trumbull,** commented: *"Following the discovery of the C1, C2, C3 and N1 lode systems under and to the west of the West Pit, the latest 340 g/t Au assay in a quartz vein within the NMT is a new exciting result. The high-grade underground mineralisation being drilled at the Nagambie Mine is now showing attributes of both Costerfield-Mine-style and Fosterville-Mine-style.* 

"The laboratory checked the 340 g/t Au assay three times and confirmed that it was real. With no visible gold, and no visible sulphides, the assay represents fine, free gold within the quartz vein. The volume influence of a gold nugget in quartz (nuggety Bendigo / Ballarat style) can be very limited. The volume influence of fine, free gold, by its nature, can be significantly greater.

*"With the deepest intersection to date occurring only 250m vertically below surface, we have only scratched the surface of what could be a major high-grade, antimony-gold orebody."* 

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		-		BD of unmineralised waste: 2.74		EHT and BD Weighting				- <u>9</u>			
				BD of pure Stibnite: 4.56				2	9				
Mineable Intersection	From (m)	To (m)	Downhole	EHT	Au	Sb	AuEq	BD	EHT & BD	EHT & BD	EHT & BD	AuEq	AuEq
(Potential Stope)		,	Length	(m)	Assay	Assay	(g/t)	based		Weighted	Weighted	x EHT	xL
			L (m)	. ,	(g/t)	(Sb %)	(3 )	on Sb%	Au	Sb	AuEq	(g/t x m)	
NRP002 C1 E&W	109.00	136.10	27.10	2.50	4.84	7.51	18.66	2.89		9.15	22.26	55.6	603
NAD008 C1 E	178.20	180.00	1.80	1.20	3.51	3.05	9.12	2.79	3.55	3.26	9.55	11.5	17
Progressive Totals **	16 Septem	ber 2022		3.70								67.1	
NAD009 C1 E	172.34	174.20	1.86	1.20	0.08	2.36	4.42	2.78	0.08	2.52	4.72	5.7	9
NAD009 C1 W	200.00	207.30	7.30	4.70	4.86	4.20	12.63	2.81	5.32	4.74	14.04	66.0	103
NAD010 C1 E	160.00	161.78	1.78	1.20	13.38	16.14	43.22	3.05	13.56	18.44	47.49	57.0	85
NAD010 C1 W	163.56	165.35	1.79	1.20	0.19	2.81	5.39	2.79	0.21	3.05	5.82	7.0	10
NAD011 C1 E	214.30	217.80	3.50	1.20	0.10	1.47	2.82	2.77	0.10	1.61	3.06	3.7	11
NAD011 C1 W	270.70	276.00	5.30	2.25	1.46	10.38	20.56	2.94	1.52	12.01	23.62	53.1	125
Progressive Totals **	16 Novem	ber 2022		15.45								259.5	
NAD012 C2 E	401.40	404.80	3.40	2.62	6.72	2.54	11.40	2.78	6.68	2.57	11.41	29.9	39
NAD012 C2 W	423.00	428.00	5.00	2.42	8.70	5.49	18.81	2.84	9.30	6.17	20.65	50.0	103
Progressive Totals **	23 Januar	y 2023		20.49								339.4	
NAD012 C2 W (Hinge)	416.00	420.00	4.00	1.98	6.27	3.78	13.23	2.80	6.30	3.89	13.45	26.6	54
NAD012 C1 W	130.86	132.20	1.34	1.20	1.67	1.66	4.73	2.77	1.75	1.83	5.11	6.1	7
Progressive Totals **	3 March 2	023		23.67								372.2	
NAD013 C1 E	167.30	171.10	3.80	2.70	3.61	10.02	22.05	2.93	4.32	11.75	25.94	70.0	99
NAD013 C1 W	238.00	240.30	2.30	1.40	7.13	0.05	7.22	2.74	7.13	0.05	7.22	10.1	17
NAD016 N1 (E-W)	180.50	188.00	7.50	2.36	3.12	2.37	7.50	2.78		2.69	8.08	19.1	61
NAD016 N1 (E-W)	174.50	177.00	2.50	1.27	9.37	1.67	12.46	2.77	9.32	1.69	12.43	15.8	31
NAD016 N1 (E-W)	170.00	171.40	1.41	1.20	5.00	0.32	5.59	2.74		0.32	5.59	6.7	8
NAD017 C1 W	217.00	219.48	2.48	1.20	5.92	1.77	9.18	2.77	5.90	1.78	9.18	11.0	23
Progressive Totals **	10 March			33.80								504.8	
NAD020 C1 E-W Link	214.28	216.60	2.32	1.20	0.75	3.93	7.98	2.82	0.75	5.34	10.57	12.7	24
NAD022 C1 E	238.00	239.55	1.55	1.20	3.46	7.70	17.69	2.89	3.96	9.42	21.30	25.5	33
NAD023 C1 W	272.16	276.00	3.84	1.20	0.69	11.98	22.84	2.98	0.68	14.23	26.87	32.3	103
NAD029 N1 (E-W)	285.50	286.75	1.25	1.20	4.59	9.02	21.19	2.92	4.72	10.99	24.95	29.9	31
Progressive Totals **	23 March 2			38.59								605.2	
NAD024 C1 W	250.60	258.20	7.60	2.91	2.70	5.74	13.27	2.84		6.19	14.07	41.0	107
NAD030 C2 E	206.70	208.30	1.60	1.36	1.55	1.34	4.03	2.76		1.35	4.05	5.5	6
NAD030 C2 E	202.50	203.90	1.40	1.20	0.90	3.92	8.16	2.81	0.92	4.39	9.00	10.8	13
NAD030 C2 E	198.20	199.90	1.70	1.20	1.33	1.71	4.50	2.77	1.33	1.76	4.56	5.5	8
NAD031 C2 E	208.00	210.35	2.35	1.20	1.18	3.85	8.30	2.81	1.17	4.23	8.95	10.7	21
NAD034 C2 W (Hinge)	284.50 275.40	286.50	2.00	1.20 1.20	1.53 1.64	1.31	3.96 11.91	2.76	1.56 1.69	1.38	4.09	4.9 16.2	8 20
NAD034 C2 W (Hinge) Progressive Totals **	275.40 22 May 20	276.90	1.50	48.86	1.04	5.58	11.91	2.84	1.09	6.45	13.55	699.9	20
NAD033 C3		206.56	1.56		0.79	5.54	10.99	2 94	0.90	6 27	12.60	15.1	20
NAD033 C3 NAD036 N1 (E-W)	205.00 316.00	206.56	3.00	1.20 1.33	0.79	5.54 3.44	7.07	2.84 2.79	0.89 0.70	6.37 3.50	7.15	9.5	20 21
NAD036 N1 (E-W)	310.00	319.00	4.16	1.33	3.32	3.44 1.24	5.61	2.79		1.27	5.65	9.5 6.8	21
NAD036 N1 (E-W)	310.00	314.16	2.90	1.20	5.32 6.42	10.05	25.00			1.27		42.1	82
NAD030 N 1 (E-W)	253.00	261.30	8.30	1.40	0.42	8.29	15.98	2.89		9.15	17.58	42.1 21.1	146
Progressive Totals **	3 July 202		0.00	55.28	0.70	0.23	10.00	2.00	0.14	0.10	17.00	794.5	140
NAD019 N1 (E-W)	209.50	211.59	2.09	1.20	6.33	3.37	12.52	2.80	6.26	3.74	13.14	15.8	27
NAD038 C3	193.10	197.21	4.11	1.20	0.33	2.22	4.46	2.80		2.42	4.80	5.8	20
NAD038 C3	292.40	296.00	3.60	1.20	2.58	0.96	4.40	2.75		0.98	4.30	5.8 8.3	16
NAD044 C3	330.70	332.89	2.19	1.20	1.37	7.02	14.28	2.87		7.94	15.95	19.2	35
Progressive Totals **	13 Octobe		2.10	60.79	1.07	1.02	. 1.20	2.07		1.34	10.00	843.54	
NAD047 C2 (Ext)	149.80	152.00	2.20	1.20	5.47	0.19	5.82	2.74	5.49	0.19	5.84	7.0	13
NAD028 (NMT)	144.00	145.50	1.50	1.21	45.96	0.01	45.98	2.74		0.01	45.98	55.4	69
Progressive Totals **	24 Januar		146.88	63.20								905.97	
Averages to Date		<u> </u>	3.67	1.58				2.82	4.65	5.36	14.51	22.9	53
			uhlischte d	in velle				2.02			14.01	22.5	

#### Table 1All 40 Economically-Mineable Intersections to Date: EHT => 1.2m and AuEq => 3.0 g/t

New intersections since last report highlighted in yellow;  $AuEq (g/t) = Au (g/t) + (Sb\% \times 1.84)$ ; BD = bulk density; EHT = estimated horizontal stope thickness; \*\* EHT (m) is used to calculate the volume of a mineable stope;  $AuEq (g/t) \times EHT (m)$  is used to calculate the AuEq content of a mineable stope.



#### SIGNIFICANT DOWNHOLE ASSAYS

All remaining unlogged sections of core from the first resource drilling program have been logged and geologically anomalous lengths of core sawn and assayed at On Site Laboratory Services in Bendigo.

All new significant assays (greater than 1.0 g/t Au or 1.0% Sb) received are summarised in Tables 2 and 3. Highlights from the remaining downhole assay results are:

- **340** g/t Au over 0.2m downhole from 144.5m in NAD028; and
- **27.1 g/t Au over 0.4m** downhole from 151.3m in NAD047.

#### ECONOMICALLY-MINEABLE INTERSECTIONS (OR POTENTIAL STOPES)

Nagambie conforms to the JORC Code for the reporting of drilling results by calculating intersections over estimated horizontal thickness (EHT). Estimated true thickness (ETT), at right angles to the dip of the vein or mineralisation, is also acceptable under the JORC Code but Nagambie prefers calculating EHT because of its mineability relevance.

For samples containing significant antimony, the individual Au and Sb assays were weighted for both sample thickness and bulk density. Consideration was then given to the mineable cut-off grade (MCOG) of 3.0 g/t AuEq over a stope width of at least 1.2m EHT.

For full details regarding the calculation of sample bulk density, AuEq calculation, minimum mineable EHT and MCOG, refer to the attached <u>Appendix 1: Summary of Mining-Method Considerations and Developed</u> <u>Assay-Reporting Criteria</u> on pages 13-14. The relevant equations regarding bulk density and AuEq calculation are also repeated in the attached JORC Table 1.

Nagambie calculates AuEq grades by applying a Costerfield Mine AuEq factor, the relative value of 1.0% Sb in the mine to 1.0 g/t Au in the mine. In 2024, **the AuEq factor applied by Nagambie is 1.84** based on Mandalay Resources' (owner of the Costerfield Mine) annual guidance in January 2024 of US\$1,900 / oz Au and US\$11,000 / tonne Sb.

All 40 economically-mineable intersections (potential stopes) within the four lodes to date (C1, C2, C3 and N1 lodes) and the NMT are summarised in Table 1. The two new intersections since the last update are highlighted in yellow:

- 46.0 g/t AuEq (46 g/t Au plus 0.0% Sb) over 1.21m EHT in hole NAD028 (refer Figure 2); and
- 5.8 g/t AuEq (5.5 g/t Au plus 0.2% Sb) over 1.2m EHT in hole NAD047 (refer Figure 3).

The NAD028 1.21m EHT intersection is designated by the yellow line in Photo 1 (1.5m downhole) between the yellow arrows.



#### Photo 1 NAD028 High-Grade Gold in Quartz Intersection in the Nagambie Mine Thrust



#### **GEOLOGICAL SUMMARY TO DATE**

Following the discovery of the C1, C2, C3 and N1 lode systems under and to the west of the West Pit, the latest 340 g/t Au assay in a quartz vein within the NMT is a new exciting result. The high-grade underground mineralisation being outlined at the Nagambie Mine is now showing attributes of both Costerfield-Mine-style and Fosterville-Mine-style.

The four epizonal lode systems delineated to date (C1, C2, C3 and N1) are shown in plan view in Figure 1 and long section view in Figures 2, 3, 4 and 5 respectively. Nagambie's structural model predicts that more lode systems could be delineated over time, particularly to the south west of the West Pit..

The principal anticlinal folding, the anticlinal shears, and the more sandstone-rich sedimentary beds for the C1, C2 and C3 lode systems are shown in Figures 2, 3 and 4 respectively. The Nagambie epizonal mineralisation has not been dated but is considered to have been emplaced circa 375 million years ago.

The deepest intersection to date is 250m vertically below surface (refer Figure 2, C1 lode system, 26.9 g/t AuEq (14.2% Sb plus 0.7 g/t Au) over 1.2m EHT from 272.2m in NAD023). All four lode systems are open at depth and could extend significantly deeper. The Fosterville Mine epizonal mineralisation (65km west of the Nagambie Mine) extends to more than 1,000m vertical depth and the Costerfield Mine epizonal mineralisation (45km west of the Nagambie Mine) is approaching 1,000m vertical depth.

**The lode with the most potential to date appears to be the newly delineated N1 (E-W) lode system** (refer Figures 1 and 5). **It already has a strike length of around 220m and is open both to the west and to the east**. N1 was not predicted and was located in holes designed to intersect the C1 and C2 lode systems. It appears to be related to the NMT thrust fault. Better N1 economically-mineable intersections to date (refer Figure 5) include:

- o 28.4 g/t AuEq (11.8% Sb plus 6.6 g/t Au) over 1.5m EHT from 304.3m in NAD036; and
- o 25.0 g/t AuEq (11.0% Sb plus 4.7 g/t Au) over 1.2m EHT from 285.5m in NAD029;





#### Figure 1 Plan View of the West Pit and the C1, C2, C3, and N1 Lode Systems and a potential NMT high-grade ore shoot





#### Figure 2 Long Section View of the C1 Lode System, also showing the NAD028 intersection of the NMT





#### Figure 3 Long Section View of the C2 Lode System, including the NAD047 intersection extending the lode southwards

INTERCEPTS

06/10/2023



#### Figure 4 Long Section View of the C3 Lode System





#### Figure 5 Long Section View of the N1 (E-W) Lode System





#### Table 2 Remaining Significant Assays for NAD019, NAD025-028 and NAD035-036 Assays =>1.0 g/t Au or =>1.0% Sb

Assays =>1.0 g/t Au or =>1.0% Sb							
HoleID	From (m)	To (m)	Length (m)	Au (g/t)	Sb (%)		
NAD019	258.55	258.85	0.3	1.99	0.01		
NAD019	354	355	1	2.68	0.01		
NAD019	355	356	1	2.03	0.01		
NAD019	356	357	1	1.57	0.01		
NAD019	359	359.3	0.3	1.05	0.01		
NAD019	359.8	360.4	0.6	2.89	0.01		
NAD019	360.4	361	0.6	1.78	0.01		
NAD019	361.4	362	0.6	1.52	0.01		
NAD019	362	363	1	1.78	0.01		
NAD019	363	363.9	0.9	1.00	0.01		
NAD019	363.9	364.4	0.5	1.76	0.01		
NAD019	367.1	368	0.9	1.46	0.01		
NAD019	369	370	1	1.50	0.01		
NAD019	370	371	1	1.22	0.01		
NAD019	372	373	1	1.68	0.01		
NAD025	125.35	125.55	0.2	1.69	0.01		
NAD025	132.2	132.6	0.4	1.69	0.01		
NAD026	176	176.6	0.6	4.09	0.01		
NAD027	99.2	100.2	1	1.10	0.01		
NAD027	177.3	177.5	0.2	1.20	0.01		
NAD027	213	213.7	0.7	3.43	0.01		
NAD028	138.7	139.1		5.48	0.03		
NAD028	144.5	144.7		340.00	0.01		
NAD028	146	147		1.70	0.01		
NAD035	184.5	185.5	1	1.54	0.01		
NAD035	189	190	1	1.66	0.01		
NAD035	190	190.3	0.3	2.22	1.07		
NAD035	190.6	190.8	0.2	2.02	0.02		
NAD035	255	256	1	1.01	0.01		
NAD035	259.7	260	0.3	1.17	0.01		
NAD035	265.5	266.1	0.6	4.44	0.19		
NAD035	292.5	292.7	0.2	3.05	0.01		
NAD036	111	112	1	1.53	0.01		
NAD036	142.6	142.9	0.3	4.82	0.01		
NAD036	223.4	223.6	0.2	1.05	0.01		
NAD036	224.6	224.8	0.2	1.23	0.01		
NAD036	234	234.7	0.7	1.02	0.01		
NAD036	234.7	234.9	0.2	2.27	0.91		



# Table 3 Remaining Significant Assays for NAD037, NAD043 and NAD047 Assays =>1.0 g/t Au or =>1.0% Sh ~/4 A... Ar ->1 0% Sh

HoleID	1.0 g/t Au o From (m)	To (m)	Length (m)	Au (g/t)	Sb (%)
NAD037	161.7	161.9	0.2	2.22	0.01
NAD037	161.9	162.2	0.3	1.39	0.76
NAD037	162.2	162.4	0.2	2.37	0.45
NAD037	162.4	163.2	0.8	7.19	0.32
NAD037	163.2	164	0.8	5.08	0.02
NAD037	164	165	1	3.48	0.02
NAD037	165	166	1	1.71	0.71
NAD037	166	166.4	0.4	1.12	0.09
NAD037	166.4	166.6	0.2	1.12	0.03
NAD037	172.8	173	0.2	3.35	0.01
NAD037	173	173.85	0.85	7.77	0.09
NAD037	174.6	174.9	0.3	3.44	0.07
NAD037	203	203.5	0.5	1.46	0.01
NAD037	230.3	230.6	0.3	2.69	0.02
NAD037	232	233	1	1.49	0.01
NAD037	233	233.5	0.5	2.37	2.87
NAD037	241.9	242.5	0.6	1.26	0.03
NAD037	243.05	243.4	0.35	1.69	0.07
NAD037	243.4	243.5	0.1	2.05	0.02
NAD037	243.5	244	0.5	1.56	0.01
NAD037	244	244.5	0.5	1.10	0.01
NAD037	254.1	255	0.9	2.35	0.01
NAD037	273.2	274	0.8	4.21	0.01
NAD037	278.3	278.7	0.4	1.11	0.01
NAD037	284.2	285	0.8	2.39	0.01
NAD037	285	285.5	0.5	1.27	0.01
NAD043	123.3	124	0.7	5.32	0.01
NAD043	124	124.35	0.35	8.20	0.01
NAD043	148.4	148.7	0.3	1.22	0.01
NAD043	251	251.85	0.85	3.65	0.01
NAD043	252.9	253.35	0.45	1.94	0.01
NAD043	333.7	334.7	1	1.01	0.01
NAD043	365.8	366	0.2	1.48	0.01
NAD043	370.1	371.1	1	1.30	0.01
NAD047	150.5	151.3	0.8	1.52	0.01
NAD047	151.3	151.7	0.4	27.10	1.01
NAD047	180.2	180.6	0.4	1.37	0.01
NAD047	240.7	241.3	0.6	1.14	0.01



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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#### About Nagambie Resources:

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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 will pay 100% of all construction and commissioning costs; thereafter net operating cash flow will be shared 50:50. A future antimony recovery 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. <u>The developed criteria draw heavily on the publicly-available information for the Costerfield Mine, 45 km to the west of the Nagambie Mine and currently Australia's only operating antimony-gold mine.</u>

 The C-veins (Costerfield-Mine-style veins) at Nagambie's 100%-owned Nagambie Mine are generally striking N and dipping vertically or sub-vertically to the W or E. The Nagambie C-vein systems are geologically very similar to the Sb-Au vein systems at the Costerfield Mine, 100%-owned by Mandalay Resources Corporation, a Canadian company. The latest publicly-available comprehensive technical report for Costerfield ("Costerfield Report") is dated 25 March 2022:

#### https://mandalayresources.com/site/assets/files/3408/mnd\_costerfield\_ni-43\_101\_technical\_report\_2022.pdf

- 2) The Nagambie C-veins could be mineable from ~60m vertical depth from surface, the approximate depth of the oxidised zone. An appropriate vertical geotechnical pillar under the West Pit would be determined in due course.
- 3) Like the Costerfield veins, the Nagambie veins to date are sub-vertical (45 degrees to 90 degrees (vertical)) and have good continuity both vertically and horizontally. As such, they are amenable to mechanised mining methods. Long-hole CRF stoping (where CRF stands for cemented rock fill) is the preferred mining method employed at the Costerfield Mine (p254, Costerfield Report). Another description of this method at Costerfield is Up-Hole-Retreat (UHR) stoping with the stope drill drives being 10m vertically apart and these drives being typically 3m high, so that the up-hole blast holes would be typically 7.0m in vertical height. Using cemented rock fill (utilising the underground development waste) would allow for future stopes above, below and besides each filled stope (also as for the Costerfield mine). For an example of a typical Costerfield stope drill drive, from which the up-hole blast holes are drilled, refer p75 of the Costerfield Report.
- 4) Conceptual mine planning for a Nagambie underground mine already indicates that, mining only the C1 & C2 lodes, sufficient stopes could be developed to effectively schedule stoping operations and optimise the antimony and gold grades delivered to the treatment plant. Nagambie remains very confident of delineating additional antimony-gold mineralisation under, to the west, and to the south west of The West Pit.
- 5) Minimum stoping width could be 1.2m estimated horizontal thickness (EHT) (similar to the Costerfield Mine).
- 6) 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.
- 7) 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).
- 8) 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.
- 9) 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).
- 10) 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 Costerfield Report.

#### 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<sub>2</sub>S<sub>3</sub>
- 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).

Nagambie considers that the Costerfield BD 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<sub>2</sub>). 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.



Graph 1: Bulk Density versus % Antimony (Sb)

#### **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 factor = [US\$/tonne antimony price x 0.01 x 0.95 antimony recovery] / [US\$/ounce gold price / 31.10348 grams per ounce x 0.93 gold recovery]

The Costerfield Mine is 100% owned by Mandalay Resources Corporation and the projections for CY2024 on the <u>Mandalay website</u> adopt average prices for gold and antimony of US\$1,900 / ounce gold and US\$11,000 / tonne antimony. For these prices, the AuEq factor using the above equation is <u>1.84</u>.



# JORC Code, 2012 Edition Nagambie Mine NAD019, NAD025-028, NAD035-037, NAD043 and NAD047 Holes Table 1

## **Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Drilling of holes NAD019, NAD025-028, NAD035-037, NAD043 and NAD047 from surface was carried out by Starwest using a Boart Longyear LM75 underground diamond core drilling rig. The diamond core (HQ and NQ sizes) are cut in half following logging with the sawed core lengths determined by the company geologist. One half is sent to the laboratory for analysis and the other half retained on site.</li> <li>Sample lengths will be usually no less than 0.1m or greater than 1.2m.</li> <li>Samples are submitted to On Site Laboratory Services, Bendigo. <ul> <li>Samples are submitted to On Site Laboratory Services, Bendigo.</li> <li>Samples are pulverised and sub-sampled to produce a 30g charge for fire assay. Samples are analysed using technique Au-PE01 (ppm) plus ME-ICP (As, Sb, Ag, Cu, Pb, Zn, Bi, S) method BM011. All Sb analysis using BM011 that are greater than 4000 ppm are further analysed for ore grade using method B050 (% Sb).</li> </ul></li></ul>
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>Diamond drill core is standard 'HQ' and 'NQ'.</li> <li>Core is digitally oriented.</li> <li>Down-hole surveys are carried out every 30m or 40m down hole to EOH.</li> </ul>



Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	Hard-copy details exist for any recorded drilled core loss.
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Logging is being progressively carried out.</li> <li>Qualitative data regarding core loss and drill core recovery is being noted within logging.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Sampling is done using industry standards. Diamond core samples will be one half of cut HQ and NQ sized core.</li> </ul>



Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Assaying carried out by On Site Laboratory Services, Bendigo.</li> <li>Samples are pulverised and sub-sampled to produce a 30g charge for fire assay. Samples are analysed using technique Au-PE01 (ppm) plus ME-ICP (As, Sb, Ag, Cu, Pb, Zn, Bi, S) method BM011. All Sb analysis using BM011 that are greater than 4000 ppm are further analysed for ore grade using method B050 (% Sb).</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Data includes a digital historic drilling database compiled by company geologists.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Collars are picked up with Trimble DA1 DGPS with horizontal accuracy of 10cm.</li> <li>Topographical control in vertical RL has been verified against inhouse mine survey control from previous mining of the open pit in 1993.</li> <li>Grid is reported in GDA 94, Zone 55.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	Diamond drilling is sampled to geological contacts.



Orientation of data in relation to geological structure	•	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	•	Yet to be carried out.	
Sample security	٠	The measures taken to ensure sample security.	٠	The Nagambie Resources core shed is locked at night.	
Audits or reviews	•	The results of any audits or reviews of sampling techniques and data.	•	Audits of the data generated will be undertaken.	

# Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>NAD019, NAD025-028, NAD035-037, NAD043 and NAD047 all drilled on MIN 5412.</li> <li>MIN 5412 is 100% owned by Nagambie Resources Limited.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Not applicable.
Geology	• Deposit type, geological setting and style of mineralisation.	• Style of mineralisation is considered to be "Costerfield-Mine-style, antimony-gold veining".



• A summary of all information material to the understanding of the NAD019: exploration results including a tabulation of the following information E: 341086.7 N: 5926190.1 for all Material drill holes: RI: 129.0 o easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in Dip: -56.5 metres) of the drill hole collar Grid Azi: 94.5 Total Depth: 383.4m o dip and azimuth of the hole o down hole length and interception depth NAD0025: • hole length. E: 341185.6 • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from N: 341185.6 the understanding of the report, the Competent Person should clearly RI: 131.0 Dip: -62.0 explain why this is the case. Grid Azi: 110.0 Total Depth: 255.5m NAD026:

#### NAD026:

E: 341191.93 N: 5926257.34 Rl: 130.17 Dip: -17 Grid Azi: 129.0 Total Depth: 244.6m Target: 228m

#### NAD027:

E: 341191.73 N: 5926257.59 Rl: 129.97 Dip: -19.5 Grid Azi: 113.0 Total Depth: 217.9m Target: 190m



# NAD028:

E: 341191.31 N: 5926257.81 Rl: 130.02 Dip: -22.5 Grid Azi: 107.5 Total Depth: 203.1m Target: 189m

#### NAD035:

E: 340911.638 N: 5926217.359 RI: 128.76 Dip: -55 Grid Azi: 122.0 Total Depth: 362.7m Target: 320m

#### NAD036:

E: 340912.030 N: 5926217.717 Rl: 128.77 Dip: -47.5 Grid Azi: 105.0 Total Depth: 341.7m Target: 303m

#### NAD037:

E: 340912 N: 5926219.5 Rl: 128.77 Dip: -42.5 Grid Azi:132.0 Total Depth: 415.9m Target: 303m



## NAD043:

E: 341086.6 N: 5926190.5 RI: 129.2 Dip: -60.0 Grid Azi: 73.5 Total Depth: 464.8m

#### NAD047:

E: 341160.6 N: 5925890.0 Rl: 130.5 Dip: -37.5 Grid Azi: 303.5 Total Depth: 335.9m



Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> </ul>	<ul> <li>For each sampled interval, gold assays are reported as g/t Au and antimony assays as Sb%.</li> </ul>
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used	Gold equivalent assays are calculated as:
	for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	AuEq g/t = Au g/t + (Sb% x 1.84)
	The gold equivalent factor of 1.84 is calculated using a formula applied at the Costerfield gold-antimony mine, 45 km west of the Nagambie Mine.	
		The Costerfield Mine currently calculates its gold equivalent (AuEq) factor, the relative value of 1.0% antimony (Sb) in the mine to 1.0 gram / tonne gold (Au) in the mine as:
		AuEq factor = [US\$/tonne antimony price x 0.01 x 0.95 antimony recovery] / [US\$/ounce gold price / 31.10348 grams per ounce x 0.93 gold recovery]
		The Costerfield Mine is 100% owned by Mandalay Resources Corporation and the projections for CY2024 on the <u>Mandalay website</u> adopt averages for gold and antimony of US\$1,900/ounce gold and US\$11,000/tonne antimony. For these prices, the AuEq factor using

• <u>Bulk density (BD) used to weight each sample assay</u> in addition to weighting for sample width.

the above equation is 1.84.

BD is calculated for each sample 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/costerfieldmine/mnd\_costerfield\_ni-43\_101\_technical )



		$\begin{array}{l} BD = \\ ((1.3951*Sb\%)+(100-(1.3951*Sb\%)))/((((1.3951*Sb\%)/4.56)+((100-(1.3951*Sb\%))/2.74)) \end{array}$
		<ul> <li>for which:</li> <li>Empirical formula of stibnite: Sb2S3</li> <li>Sb%: Antimony assay as a percentage by mass</li> <li>Molecular weight of Antimony (Sb): 121.757</li> <li>Molecular weight of Sulphur: (S): 32.066</li> <li>1.3951 is a constant calculated by 339.712/243.514 where 339.712 is the molar mass of Sb2S3, and 243.514 is the molar mass of antimony contained in one mole of pure stibnite</li> <li>BD of pure stibnite: 4.56</li> <li>BD of unmineralised waste (predominantly sandstones, siltstones, mudstones): 2.74</li> </ul>
		In time, when a sufficiently representative range of material is available, Nagambie Resources Limited will need to calculate the BD of the unmineralised waste (predominantly sandstones, siltstones and mudstones) at the Nagambie Mine. However, NRL does not consider that it will vary significantly from 2.74.
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Down-hole sample length has been reported for each significant assay sample in NAD019, NAD025-028, NAD035-037, NAD043 and NAD047.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>Drillhole locations have been geo-referenced in diagrams and maps to existing physical features and adjacent drillholes.</li> </ul>
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	No other data to report



Other substantive exploration data	•	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	•	No data to report
Further work	•	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	•	Further drillholes are planned.