

## Maiden JORC Resource for the 100% owned Gold - Antimony Discovery at the Nagambie Mine

Nagambie Resources Limited (ASX: NAG, "Nagambie" or the Company) is pleased to announce the maiden JORC Resource for the shallow high-grade gold-antimony mineralisation at the Nagambie Mine.

### HIGHLIGHTS

- ▶ **Maiden JORC Inferred Resource of 415,000 tonnes averaging 11.5 g/t gold equivalent, comprising 3.6 g/t gold plus 4.3% antimony.**
- ▶ Maiden in-ground metal content of **153,000 ounces gold equivalent, comprising 47,800 ounces gold plus 17,800 tonnes antimony.**
- ▶ Average **11.5 g/t gold equivalent (AuEq)** Resource grade is **230% of the mineable cut-off grade of 5.0 g/t AuEq**, indicating a **high-margin orebody.**
- ▶ For the JORC Resource, **vein intersection grades were diluted**, by adding additional waste material where required, **to give a minimum horizontal thickness for all intersections of 1.2m.**
- ▶ For gold and antimony metal, average market prices in the March 2024 quarter were approximately **A\$3,000 per ounce of gold** and **A\$20,000 per tonne of antimony.**
- ▶ \$1.77 million total diamond drilling cost for the maiden Resource, comprising 12,745m in 40 holes, was at an average of **\$139/m** and **A\$12/oz in-ground AuEq**, both low by industry standards.
- ▶ The **four shallow gold-antimony lode systems** (C1, C2, C3 and N1) included in the maiden Resource are **all open at depth within Nagambie's freehold land and Mining Licence.** Further infill, strike-extensional and depth-extensional drilling of these four lodes is recommended to increase the size, and improve the quality, of the JORC Inferred Resource.
- ▶ In-ground metal content could be greater than **1,000 oz AuEq per vertical metre** with additional infill drilling, indicating significant upside potential.

### Commentary

Nagambie Chairman, Tom Quinn, said: *"The announcement of this maiden JORC Resource for the high-grade discovery is a watershed moment for the Company. It comes in the context of recent all-time record-high gold prices and strong prices for antimony, an essential metal for military uses and high-performance solar panel manufacture.*

*"We are now focussed on being able to commence the recommended follow-up drilling program, with our target being to significantly increase the maiden Resource."*

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## MAIDEN JORC INFERRED RESOURCE

### 1. Introduction

Nagambie’s maiden JORC Inferred Resource applies only to the sulphide zone that underlies the surface oxide zone in the area of the West Pit at the Nagambie Mine. The sulphide zone considered is open to the east, to the west, and at depth. Oxide gold mineralisation was mined in two pits, the East Pit and the West Pit, between 1989 and 1994 by Perseverance Mining Pty Ltd.

#### 1.1 Diamond Drilling Program

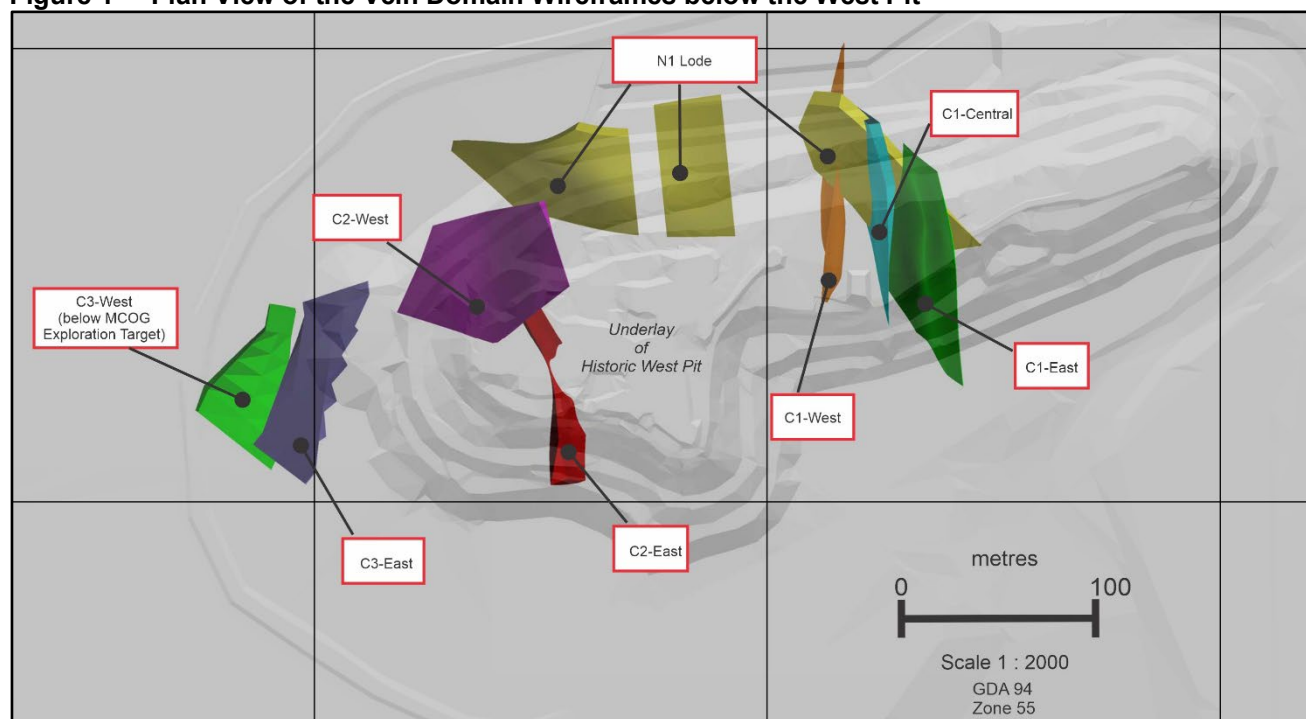
In April 2022, Nagambie commenced diamond drilling in the West Pit area, specifically looking for Costerfield Mine-style (or C-style), N-S striking gold-antimony veins, previously unrecognised at the Nagambie Mine.

Discovery intersections for various lode systems (with specific vein domains within them) were announced progressively by Nagambie, in particular: N-S-striking C1 (ASX release of 16 November 2022); N-S-striking C2 (ASX release of 23 January 2023); and the unpredicted E-W-striking N1 (ASX release of 3 July 2023).

The location of all the vein domains considered for the maiden JORC Inferred Resource calculation are shown in plan view, in relation to the overlying West Pit, in Figure 1.

No drilling, specifically looking for Costerfield Mine-style gold-antimony veins, has yet occurred in the East Pit area or, based on geological and geophysical anomalism, to the south west of the West Pit.

**Figure 1 Plan View of the Vein Domain Wireframes below the West Pit**



#### 1.2 JORC Inferred Resource Calculation

The maiden JORC Resource calculation was independently carried out by Adam Jones Geological Services using Maptek Vulcan (3D Mine Planning & Geological Modelling) software. Adam Jones is a Competent Person as defined in the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”, being a Member of the Australian Institute of Geoscientists (MAIG) and having sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity undertaken.

Details of the drilling program, core logging, data collection and verification, data input, and the Maptek Vulcan generation of 3D wireframes and block models for the vein domains contributing to the maiden JORC Resource are set out in the attached JORC Code (2012 Edition) Table 1.

### 1.3 JORC Inferred Resource Table by Vein Domain Block Model

Table 1 shows the JORC Inferred Resource calculated for each of the vein domain block models for:

- Vein Domain lower and upper cut-off grades of 5.0 g/t AuEq and 100 g/t AuEq respectively;
- Minimum horizontal widths for the vein domains of 1.2m EHT (estimated horizontal thickness); and
- Blocks estimated within a distance of 50m from at least two drill hole intersections.

**Table 1 JORC Inferred Resource by Vein Domain**

Loade System	Vein Domain	Tonnes	AuEq (g/t)	AuEq (oz)	Au (g/t)	Au (oz)	Sb (%)	Sb (t)	BD
	C1 East	27,144	17.2	14,974	3.9	3,445	7.2	1,941	2.87
	C1 Central	42,891	10.4	14,282	3.5	4,894	3.7	1,587	2.81
	C1 West	77,667	13.3	33,291	2.0	4,899	6.2	4,799	2.82
<b>C1</b>	<b>Subtotal</b>	<b>147,702</b>	<b>13.2</b>	<b>62,548</b>	<b>2.8</b>	<b>13,238</b>	<b>5.6</b>	<b>8,328</b>	<b>2.83</b>
	C2 East	35,527	7.1	8,160	1.9	2,140	2.9	1,018	2.78
	C2 West	139,324	11.5	51,466	4.2	18,904	4.0	5,504	2.80
<b>C2</b>	<b>Subtotal</b>	<b>174,850</b>	<b>10.6</b>	<b>59,626</b>	<b>3.7</b>	<b>21,044</b>	<b>3.7</b>	<b>6,522</b>	<b>2.80</b>
<b>C3</b>	<b>C3 East</b>	<b>757</b>	<b>17.0</b>	<b>1,192</b>	<b>0.8</b>	<b>53</b>	<b>8.8</b>	<b>192</b>	<b>2.89</b>
<b>N1</b>	<b>N1</b>	<b>91,835</b>	<b>10.2</b>	<b>30,006</b>	<b>4.6</b>	<b>13,456</b>	<b>3.0</b>	<b>2,798</b>	<b>2.79</b>
<b>Total</b>		<b>415,144</b>	<b>11.5</b>	<b>153,372</b>	<b>3.6</b>	<b>47,791</b>	<b>4.3</b>	<b>17,840</b>	<b>2.80</b>

*BD = Bulk Density*

Nagambie is targeting a significant increase to the maiden Resource with a follow-up diamond drilling program totalling approximately 12,000m of infill, strike-extensional and depth-extensional drillholes (refer to the sections in Figures 2 to 8 which show recommended drillhole intersections for each vein domain).

### 1.4 Gold and Antimony

Historically and economically, antimony is the second most important metallic commodity in Victoria, after gold (Geological Survey of Victoria). The two metals co-exist geologically in the Melbourne Structural Zone of Victoria.

The only current producer of both gold and antimony in Victoria, and Australia, is the Costerfield Mine, 45 km to the west of the Nagambie Mine.

Current market prices for both gold and antimony are strong in historical terms. The average market price for gold in the March 2024 quarter was US\$2,074 per ounce or A\$3,142 per ounce (at an A\$:US\$ exchange rate of 0.66), while the average market price for antimony metal for the March 2024 quarter was US\$13,298 per tonne or A\$20,148 per tonne (at an A\$:US\$ exchange rate of 0.66).

The source for the gold and antimony average US\$ market prices was a market release of 8 April 2024, Table 1, link: <https://mandalayresources.com/news/2024>. Average gold price calculated as the average of the daily LME PM fixes in the period, with price on weekend days and holidays taken from the last business day; average antimony price calculated as the average of the daily average of the high and low Rotterdam warehouse prices for all days in the period, with price on weekend days and holidays taken from the last business day. The sources for daily gold price: [www.transamine.com](http://www.transamine.com), and for daily antimony price: [www.metalbulletin.com](http://www.metalbulletin.com).

Traditional uses of antimony have included the manufacture of lead-acid batteries, ammunition, fire retardant materials, and semiconductors.

Emerging strong demand for antimony is occurring for high-technology military equipment and decarbonisation uses, particularly for high-performance solar panel manufacture and long duration liquid metal grid-scale batteries (Ambri).

### 1.5 Gold-Antimony Veins in the Costerfield-Nagambie District

The Nagambie Mine can be considered geologically to be in the Costerfield-Nagambie District in the northern portion of the Melbourne Structural Zone.

The most detailed publicly-available information for the Costerfield and Nagambie deposits is available from the websites for Nagambie Resources and Mandalay Resources, the Canadian owner of the Costerfield Mine (link below).

<https://mandalayresources.com/operations/costerfield-mine>

The deposits are both underlain by the Selwyn Block, considered to be the source of the gold and antimony in the Melbourne Structural Zone (Geological Survey of Victoria).

Like Costerfield, the antimony in the quartz and quartz-carbonate veins at Nagambie occurs in the form of massive stibnite, a sulphide of antimony ( $Sb_2S_3$ ). The highest theoretical antimony grade of stibnite is 71.7% Sb.

At both Nagambie and Costerfield, finely-disseminated gold occurs within the stibnite, but also occurs to a lesser extent within pyrite and arsenopyrite. Free gold predominately occurs in the quartz and quartz-carbonate veins.

It became clear as the drilling progressed that the veins at Nagambie are similar in many ways to those at Costerfield. The Nagambie veins, like Costerfield's:

- are narrow, predominately 0.1m to 2.0m true width;
- strike predominately north-south;
- dip sub-vertically to the west, predominately 50 degrees to 90 degrees; and
- have good continuity both vertically and horizontally.

The host rocks for the structurally-controlled, gold-antimony veins at both deposits are marine sediments (fine grained mudstones/siltstones with minor sandstone units) that are known to extend to considerable depth above the underlying Selwyn Block. Costerfield's veins have been progressively drilled from underground as mining has extended deeper and are now approaching 1,000m depth from surface. Importantly at Costerfield, vein gold grades have increased with depth.

While the Nagambie veins have only been drill tested to around 250m depth, geologically they are expected to continue at depth and the gold grades of the veins could increase with depth.

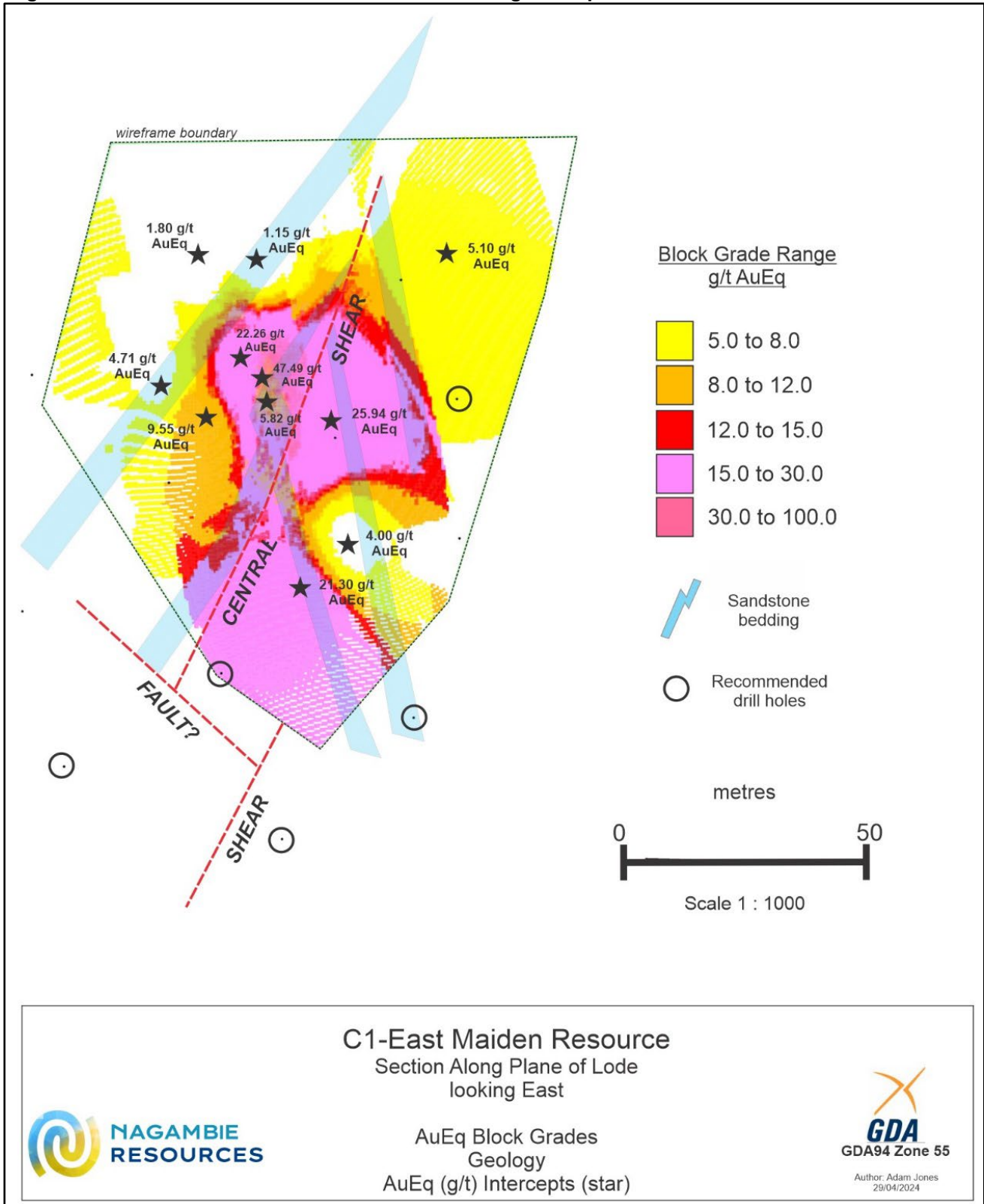
## **1.6 Sections in the Plane of the Vein Domain Block Models +5.0 g/t AuEq**

Sectional AuEq-grade block model images produced by the Maptek Vulcan software, in the plane of the respective vein domains considered in the maiden JORC Resource, are shown for C1 East, C1 Central, C1 West, C2 East, C2 West, C3 East and N1 respectively in Figures 2-8.

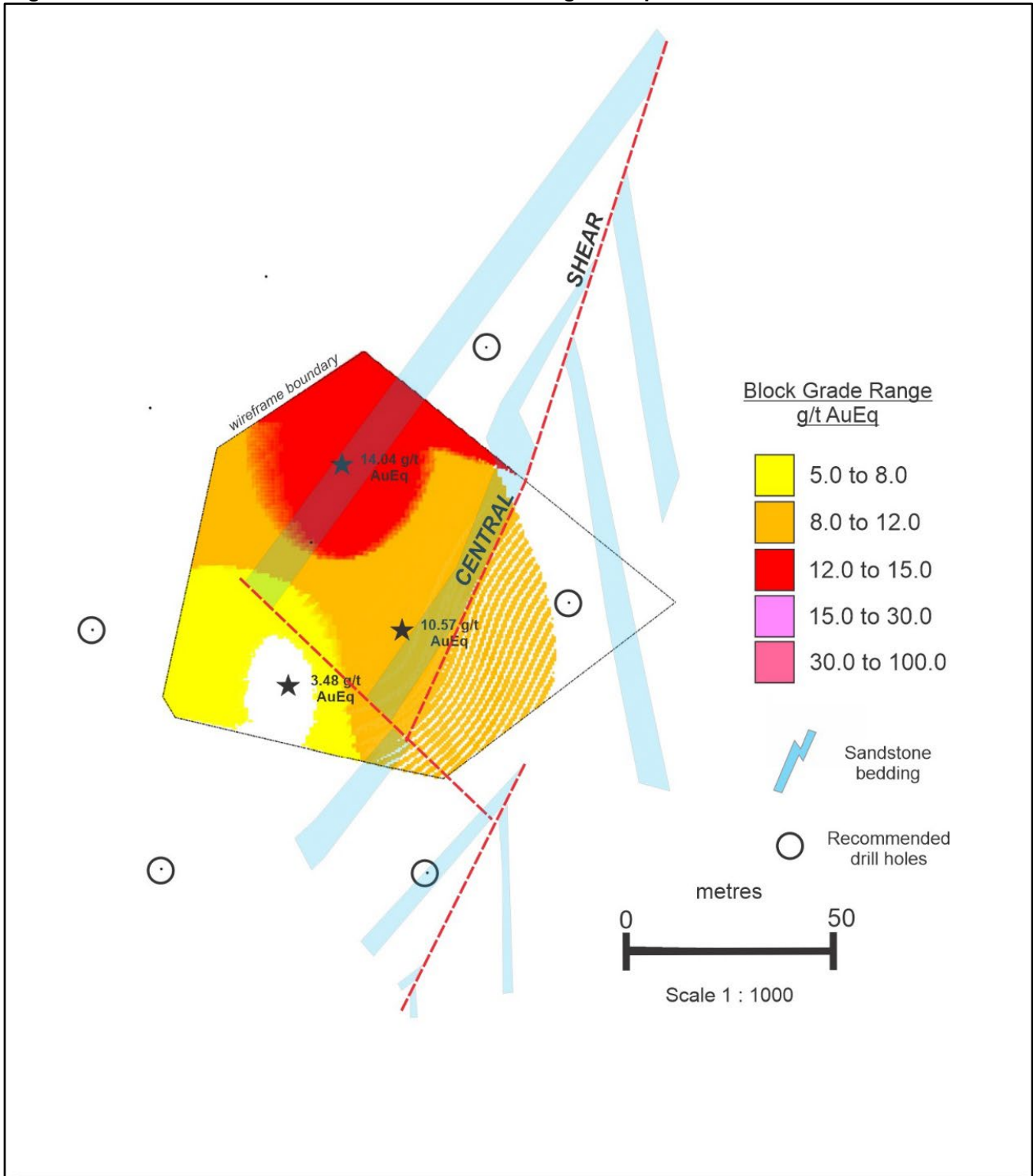
**For each vein domain planar section:**

- the **colours represent block grade ranges** between the lower and upper cut-off grades of 5.0 g/t AuEq and 100 g/t AuEq respectively;
- the **stars and numbers indicate the average AuEq values for the existing drill hole intersections**, incorporating a minimum EHT (estimated horizontal thickness) of 1.2m;
- **interpreted structures and bedding** are added where relevant; and
- the **black rings represent recommended drill holes for each vein domain**.

Figure 2 C1 East Vein Domain Planar Section +5.0 g/t AuEq

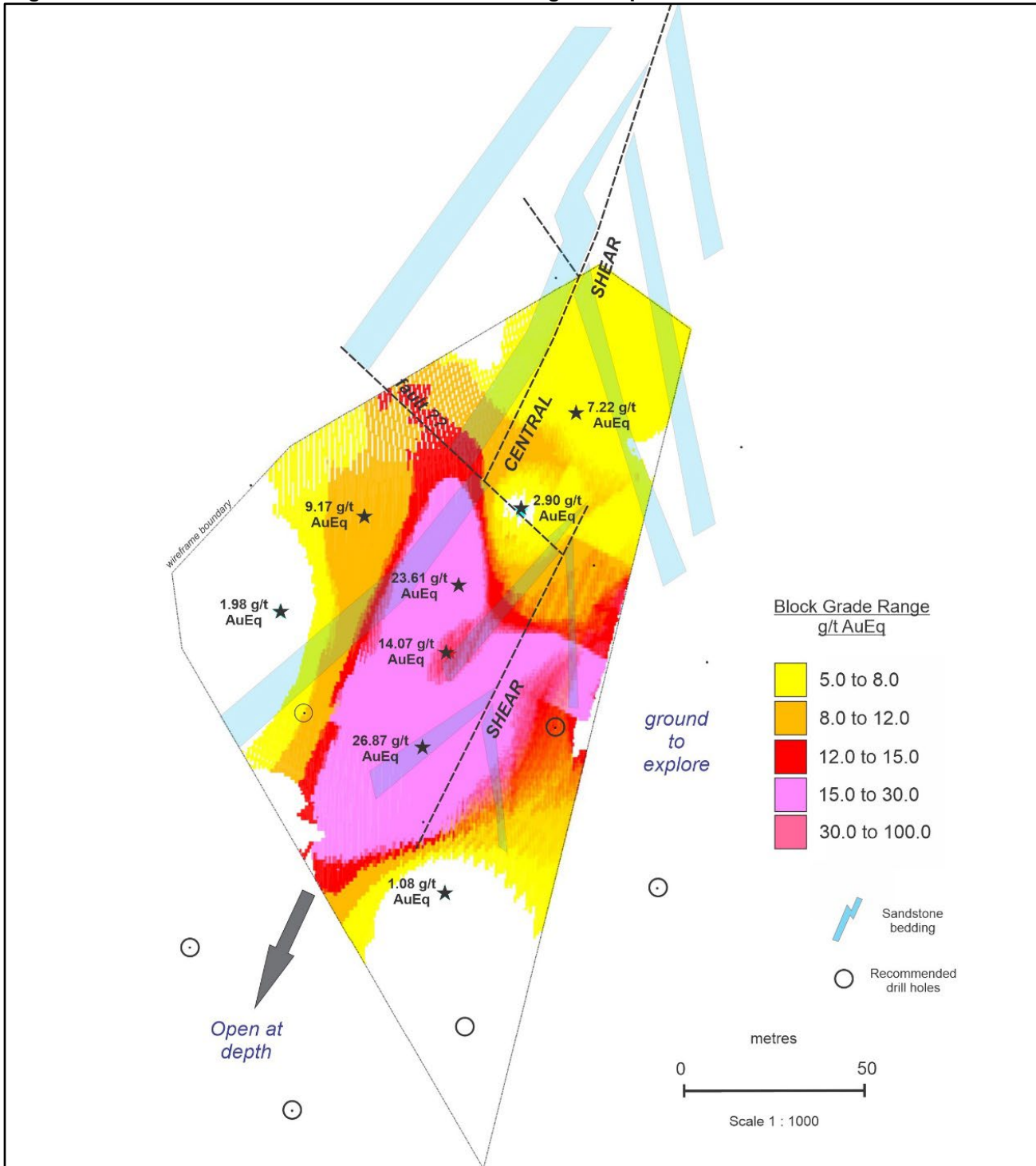


**Figure 3 C1 Central Vein Domain Planar Section +5.0 g/t AuEq**



**C1-Central Maiden Resource**  
Section Along Plane of Lode  
looking East

Figure 4 C1 West Vein Domain Planar Section +5.0 g/t AuEq



**C1-West Maiden Resource**  
Section Along Plane of Lode  
looking East

Figure 5 C2 East Vein Domain Planar Section +5.0 g/t AuEq

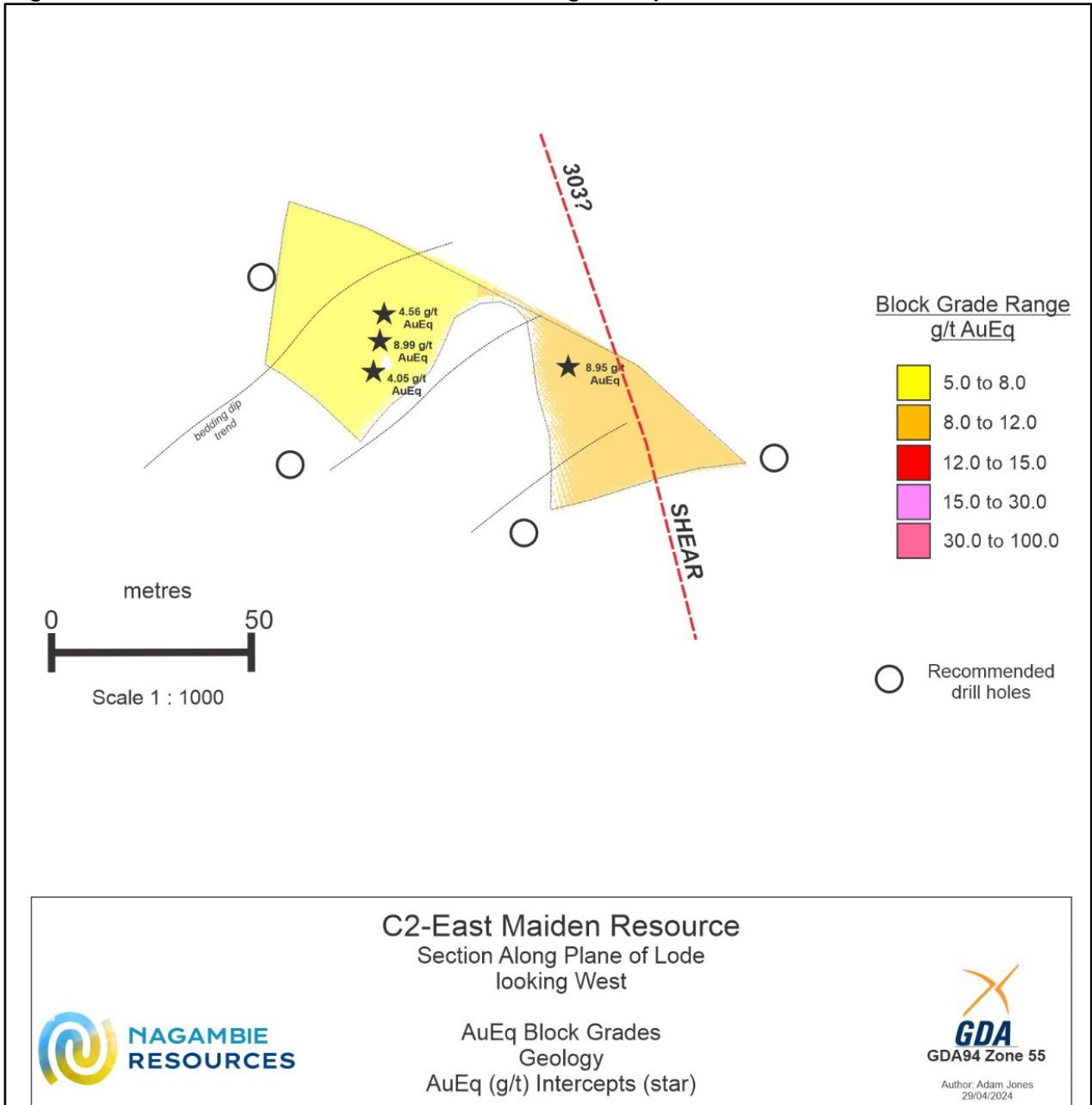
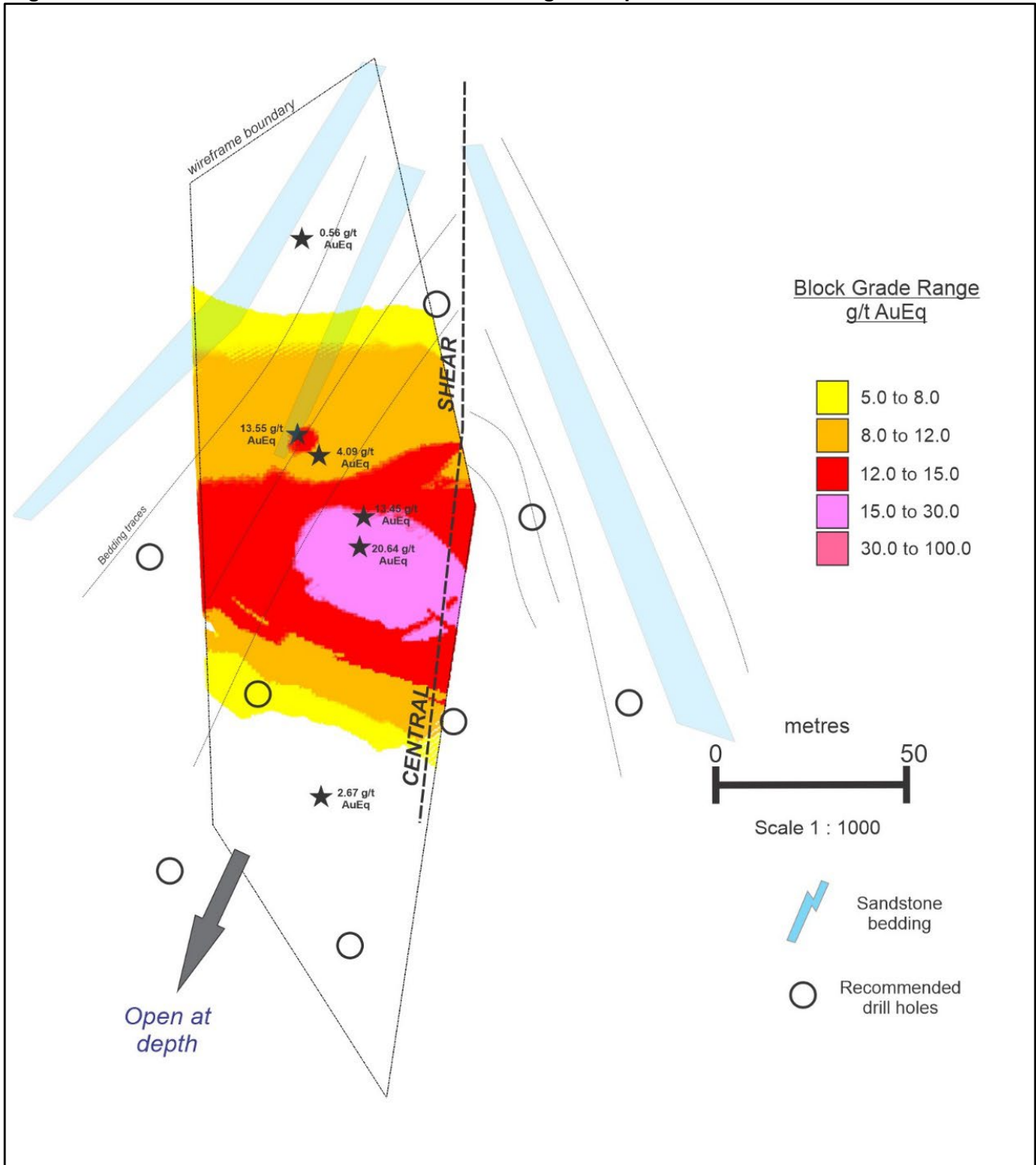




Figure 6 C2 West Vein Domain Planar Section +5.0 g/t AuEq



C2-West Maiden Resource  
Section Along Plane of Lode  
looking East

AuEq Block Grades  
Geology  
AuEq (g/t) Intercepts (star)

Figure 7 C3 East Vein Domain Planar Section +5.0 g/t AuEq

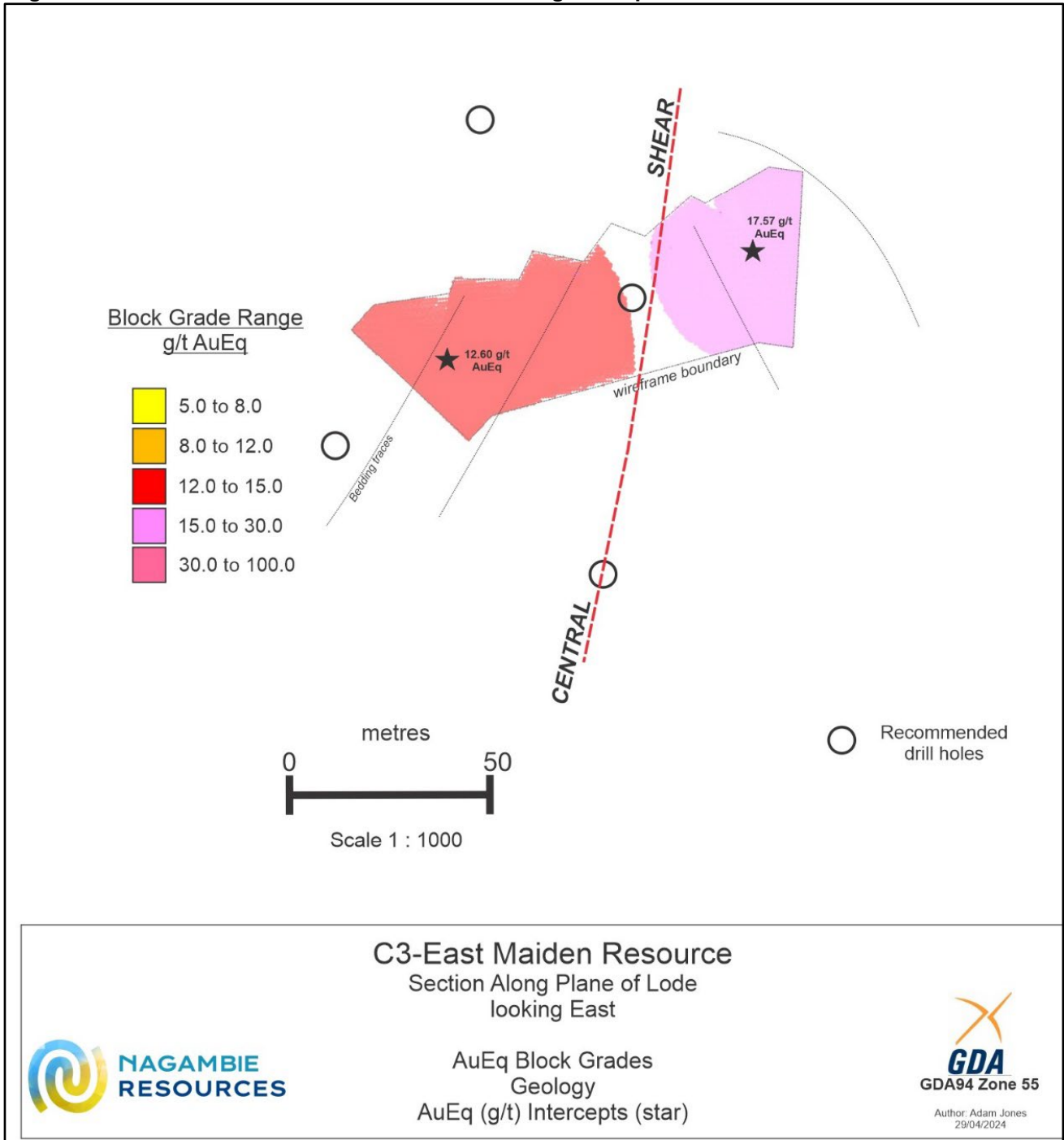
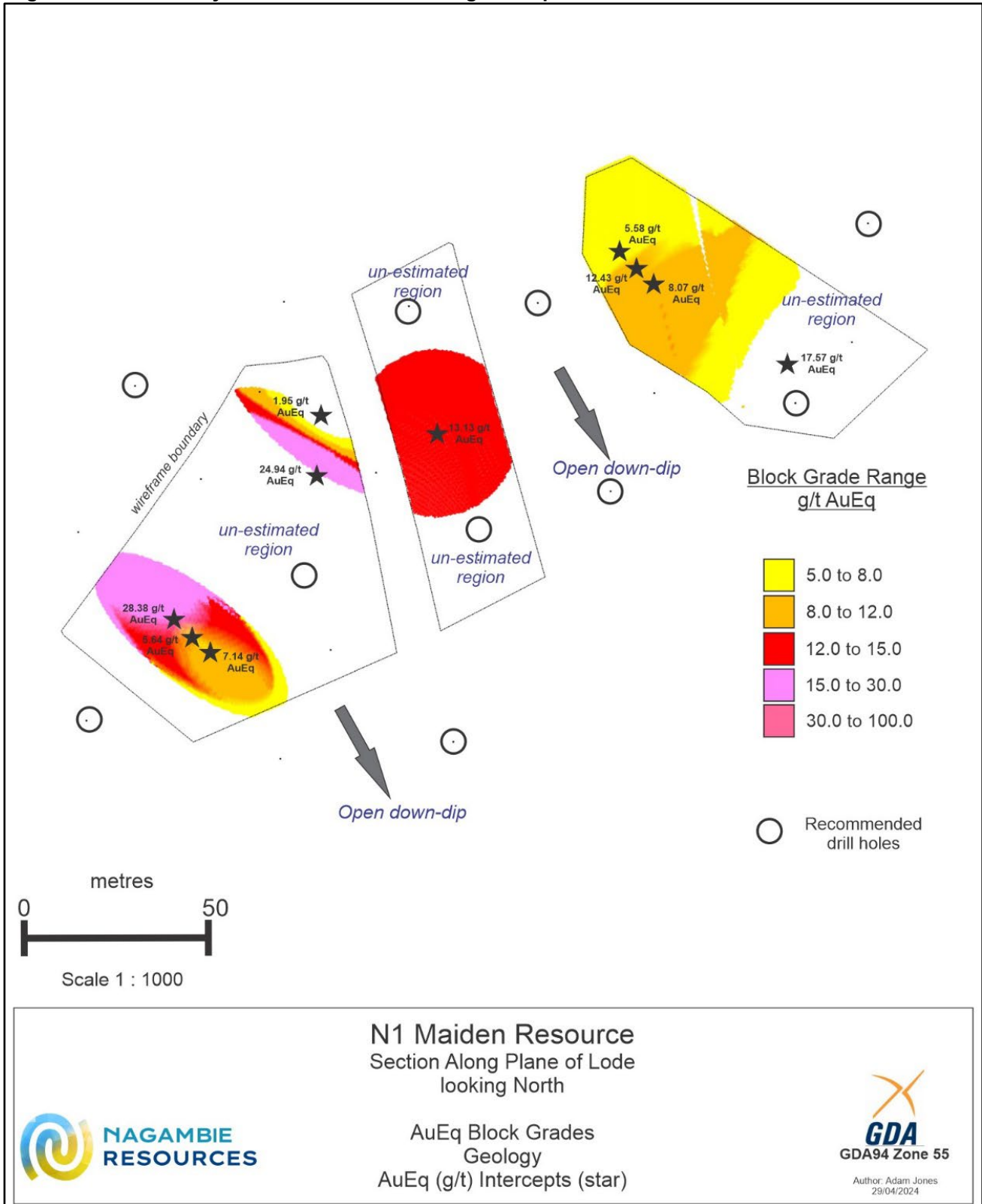


Figure 8 N1 Lode System Planar Section +5.0 g/t AuEq



## 2. Maiden JORC Inferred Resource Estimation Method

Four lode systems were modelled for the maiden JORC Inferred Resource – C1, C2, C3 and N1. Separate vein domains within each lode system were separately block modelled in 3D – for example, the C1 East, C1 Central and C1 West vein domains within the C1 lode system.

### 2.1 Vein Domain Wireframes

For each vein domain, a 3D wireframe was computer generated based on **all mineralised downhole intersections, regardless of grade, with additional waste, if required, to give an intersection EHT (estimated horizontal thickness) of at least 1.2m**, the minimum stope width for the conceptual up-hole-retreat mining method.

Each wireframe consists of a hangingwall (HW) and a footwall (FW) surface, with the surfaces a minimum of 1.2m EHT apart. Each mineralised drill intersection has its calculated values for Au, Sb, and BD (bulk density).

The average of the EHTs of the intersections was approximately 43% of the downhole intersection lengths.

### 2.2 Vein Domain Block Models

For each vein domain wireframe, a computer-generated block model was developed, constrained by the HW and FW of the 3D wireframe. The basic block size implemented was **0.5m x 0.5m x 0.5m for a 0.125 m<sup>3</sup> volume**. The total volume of all the blocks and the total volume of the wireframes (FW to HW) for all of the wireframes varied within 0.05%.

For each computer-generated block model within its wireframe, the computer software then assigned to every block its calculated values based on inverse distance squared (ID<sup>2</sup>) influence. ID<sup>2</sup> was considered the most appropriate influence calculation for the Nagambie JORC Inferred Resource as there was not sufficient close-spaced data to carry out any meaningful continuity analysis (variography) – required for alternative estimation methods such as kriging.

### 2.3 Cut-Off Grades

The Maptek-Vulcan software calculated Inferred Resources for each of the vein domain block models. Lower and upper cut-off grades of 5.0 g/t AuEq and 100.0 g/t AuEq respectively were applied.

The lower cut-off, or **mineable cut-off grade (MCOG) of 5.0 g/t AuEq, is considered appropriately conservative** for Nagambie's maiden JORC Inferred Resource.

In determining an appropriate MCOG to apply, consideration was given to the latest MCOG adopted by the Costerfield Mine of 5.0 g/t AuEq (source: section 14.12, page 157 of link below). This cut-off was based on known costs, mining & treatment recoveries, and metal price forecasts as at 31 December 2023.

[https://mandalayresources.com/site/assets/files/3678/pli031\\_costerfield\\_2023\\_ni43-101\\_rev2.pdf](https://mandalayresources.com/site/assets/files/3678/pli031_costerfield_2023_ni43-101_rev2.pdf)

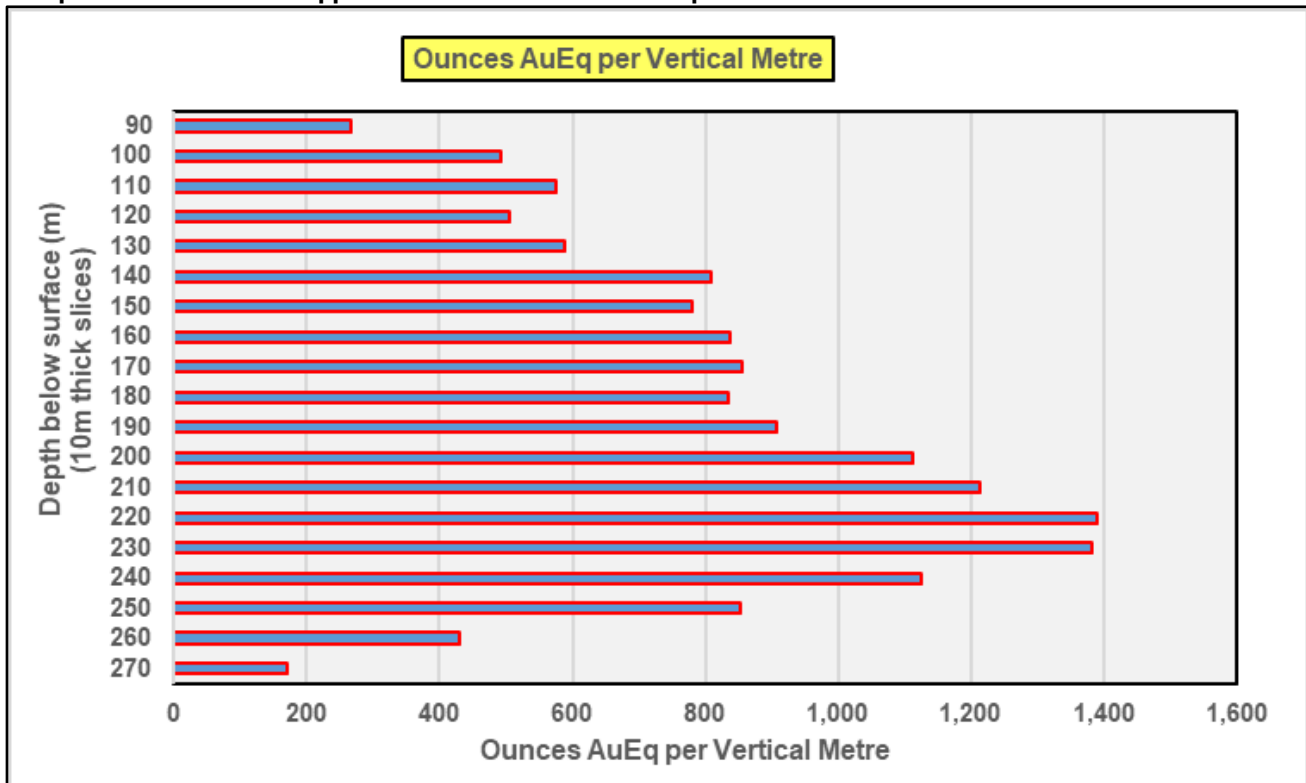
A lower MCOG could be argued for Nagambie's shallow mineralisation outlined to date, however Costerfield is a long established, very efficient narrow-vein underground operation.

## 3. +5.0 g/t AuEq In-Ground Metal Content per Vertical Metre

Metal content per vertical metre is a key measurement in determining the comparative economic worth of a high-grade, narrow-vein, underground deposit. The Maptek Vulcan software calculated the AuEq in-ground metal content for 10m-vertical-thickness slices through each of the vein domain block models.

The great majority of the blocks globally to date are between 90m and 270m vertical depth below surface (refer Graph 1), with AuEq content peaking at around 1,400 oz AuEq per vertical metre. In-ground metal content could average over 1,000 oz AuEq per vertical metre with additional infill and strike-extensional resource drilling, indicating significant upside potential with increasing depth.

**Graph 1 Ounces AuEq per Vertical Metre versus Depth below Surface**



#### 4. Geology, Structures and Mineralisation

At Nagambie, the Devonian basement marine sediments (fine grained mudstones/siltstones with minor sandstone) were subjected to:

- N-to-S regional compression, resulting in E-W trending anticlinal (convex up) and synclinal (convex down) folding of the sedimentary beds;
- continuing N-to-S regional compression caused the folded Devonian rocks to fail with the subsequent development of E-W striking, N-dipping thrusts (or reverse faults). There is initial evidence of the development of E-W striking, S-dipping faults that are conjugal to the N-dipping thrust faults. These thrusts provided the first “plumbing” emplacement system for the injected gold, arsenic and antimony hydrothermal fluids, resulting in disseminated mineralisation;
- ongoing N-to-S regional compression resulting in N-S striking faults occurring at various locations from east to west where the locked-up sedimentary package has failed under the continuing regional compression. These N-S striking structures post-dated the E-W striking structures, displacing them to the south, and provided the second “plumbing” emplacement system for the later injected antimony-rich hydrothermal fluids; and
- while the antimony-rich fluids post-dated the E-W striking primary mineralisation, the diamond drilling has shown that the antimony-rich fluids also made their way into the E-W striking structures and formed massive stibnite veins.

Veins at Nagambie typically comprise quartz (laminated to brecciated), carbonates and sulphides. The dominant sulphide mineral is stibnite ( $Sb_2S_3$ ). In addition to stibnite, arsenopyrite and pyrite occur in minor amounts.

All the Au and Sb mineralisation within the siltstone, mudstone and sandstone sedimentary basement rocks at the Nagambie Mine is structurally controlled, with the complexity of the various structures only being more fully understood as the logging and interpretation of core from the 12,745m resource diamond drilling program progressed. With greater structural complexity, more mineralised structures and increased metal content per vertical metre can occur when compared to systems with lower structural complexity.

#### **4.1 E-W-striking, N-dipping Structures**

Until Nagambie commenced specifically drilling for N-S striking structures in 2022, it had been believed that all economic mineralisation had an E-W strike and was principally related to the E-W striking Central Anticline, the E-W striking Nagambie Mine Thrust (NMT) to the north of the Central Anticline, and the E-W striking 303Z Thrust to the south of the Central Anticline. The NMT, Central Anticline and 303Z structures all dip sub-vertically to the north.

#### **4.2 N-S-striking, W-dipping Structures**

To date, Nagambie has identified three generally N-S striking C-style lode systems containing varying numbers of narrow Au-Sb veins within them. These N-S structures post-date the E-W structures and resulted from the continuing major N-to-S regional compression event.

#### **4.3 E-W-striking S-dipping Structures**

While drilling the N-S striking C-lodes from various drill-collar positions to the north, south and west of the West Pit, a number of E-W striking intersections were obtained which, while not predicted, lined up in a 3D sense. This lode system, called N1, strikes E-W and dips around 50 degrees to the south.

N1 is interpreted as being conjugately related to the NMT thrust fault which dips sub-vertically to the north. That is, N1 and NMT comprise two intersecting, opposed-dipping conjugate structures, having been formed synchronously in geological time. Such conjugate vein structures are typically 60° apart in terms of dip. In the Nagambie case, the NMT dips around 70° N and the N1 dips around 50° S. To date, the N1 is significantly higher grade than the NMT but the NMT remains essentially undrilled at depth.

Having delineated the conjugate N1 structure, a totally undrilled target is a parallel N2 structure to the south of N1, a conjugate to the 303Z thrust fault.

#### **4.4 High-Grade Ore Shoots within the E-W-striking NMT and 303Z Structures**

Diamond hole NAD028 intersected 340 g/t Au over 0.2m downhole from 144.5m in the NMT, within an intersection of 1.21m EHT at 46.0 g/t AuEq. The NAD028 intersection, without any follow-up holes, was not considered in the calculation of the maiden JORC Resource.

The NMT was not targeted with the resource drilling to date, but the NAD028 high-grade intersection occurs where the N-S-striking C1 lode system intersects the E-W-striking NMT. The intersection of two structures or “plumbing” systems can geologically result in the preferred placement of mineralised hydrothermal fluids. The resource drilling to date has shown stronger mineralisation occurring at the intersection of the C-lode structures with the Central Anticline.

The NAD028 intersection therefore increases the likelihood that the NMT and the 303Z thrusts could host high-grade shoots along their E-W strike lengths at the intersection with the various N-S-striking C-lodes.

#### **4.5 Gold and Antimony Mineralisation is Non-Nuggety**

In March 2023, Mining Plus, a global mining consultant, conducted a site visit and reviewed the resource drilling program.

They concluded that the geological logging being carried out was detailed enough to determine the orientation of the veins being delineated.

Mining Plus statistically analysed the grade distribution of Nagambie’s assays at that time, and concluded that the medium variability in both Au and Sb grades shows that the mineralisation is not highly-nuggety and not highly variable (refer Nagambie Resources ASX release of 12 April 2023).

As such, Mining Plus considered that a narrow drill spacing is not required and that a drillhole grid of approximately 50m x 50m could provide sufficient information to understand the scale of any mineralised veins and provide sufficient information to create a JORC (2012) Inferred Resource.

## 5. Drilling Techniques

Exploration drilling commenced in April 2022 using a custom track-mounted Boart Longyear LM35 that had been modified for surface drilling. This setup allowed the flexibility to complete shallow dipping drillholes if needed.

All drilling was diamond core at nominated sizes of HQ (63.5mm core diameter) or NQ (47.6mm core diameter). Drill holes were all collared with HQ diameter core. Where geological conditions were troublesome (typically shear zones), drillholes were completed with the reduced NQ diameter core.

Location of drill holes was surveyed using a Trimble Catalyst DGPS with a 10cm horizontal accuracy. A topographical LIDAR survey of the site was undertaken in 2021 with a vertical accuracy of 10cm. Comparisons between the DGPS and LIDAR topography showed variances less than 10cm horizontally and 0.5m vertically.

The collar co-ordinates were digitised in 3D software. Single-shot downhole surveys were predominately taken every 30m. There was little deviation in the trajectory of the drill traces.

## 6. Geological Logging of Core

All drill core was geologically logged by experienced geologists using a standardised geological logging template. Attention to detail was recorded for:

**Core orientation:** the continuity and accuracy of the marked bottom of hole orientation line recorded at the end of each 3-metre drilled run

**Structure:** Structural alpha and beta measurements taken for bedding, veins, faults, joints and mineralisation (eg stylonitic sulphides).

**Veins and Faults:** All veins (quartz and stibnite) recorded by an abbreviated code referencing hosting structure (bedded, perpendicular etc...) and main chemistry (carbonate, chloritic etc...). Logged width is also recorded. A similar code also detailed any faults logged. These codes connect with the structural database.

**Lithological Features:** The Nagambie deposit is strongly controlled by the east-west striking Central Anticline. Logging detailed main lithological units and younging direction indicators from which the north and south limbs of the anticline can be modelled.

All drill core, with geological and orientation line markup, was digitally photographed prior to sampling and storage. All drill core was covered and stored on-site post logging and sampling and is available for inspection.

## 7. Sampling of Core

Core marked for sampling by the logging geologist is recorded on the core itself and on a separate sampling list. Core is cut using an onsite automated Almonte core saw. Particular attention to vein boundaries is done during the cutting process. Minimum and maximum sampling lengths are 0.1m and 1.2m respectively.

Initial sampling is ½ diameter of core with the other half retained in the core tray for future analysis. Additional samples were cut to ¼ size core as required for additional duplicated laboratory testing and laboratory bulk density testwork.

## 8. Bulk Densities

Bulk density (BD) was estimated by Nagambie for each mineralised intersection of at least 1.2m EHT using the following theoretical formula with Sb% as the variable (source: section 14.6.1, page 122 of a published Costerfield technical report, link below)

[https://mandalayresources.com/site/assets/files/3678/pli031\\_costerfield\\_2023\\_ni43-101\\_rev2.pdf](https://mandalayresources.com/site/assets/files/3678/pli031_costerfield_2023_ni43-101_rev2.pdf)

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

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

For the maiden JORC Resource, the average calculated BD for each of the block modelled vein domains varies between 2.78 and 2.87 (refer Table 1). The overall average BD for the Resource estimate is 2.80.

## Checks

A representative total of 79 core samples from the mineralised intersections, including waste, were selected for testing of bulk density values. Analysis was undertaken at ALS-Adelaide using methods OA-GRA08 or OA-GRA08a (wax coated). Samples that were extensively broken were analysed with the wax coating. All samples were only taken within the fresh, non-oxidation zone. The average BD from laboratory testing came to 2.82. This figure aligns with the slightly more conservative calculated BD value of 2.80.

24 representative core samples of mineralised intersections, including waste, were also measured for BD at the Nagambie Mine core shed using the immersion method. The average BD was 2.81, again aligning with the slightly more conservative calculated BD value of 2.80.

In-house measurements of BD using the immersion method, together with occasional laboratory checks, are considered to be appropriate checks in future drilling programs.

## 9. Laboratory Assaying

Samples from the first four holes, NAD007-010, were analysed at Australian Laboratory Services Perth (ALS) using method Au-TL43 with ore grade analysis on samples  $> 1$  ppm Au (gold analysis), ME-ICP41 (35 elements). Overlimit samples for Sb were analysed using method Sb-XRF15b.

The remainder of the holes sampled were analysed at Onsite Laboratory Services Bendigo (OSLS). Duplicate samples from NAD007-010 were also assayed at OSLS with good correlations. The methods used by OSLS are PE01 (ppm) (for Au) plus ME-ICP (As, Sb, Ag, Cu, Pb, Zn, Bi, S) method BM011. All Sb analysis using BM011 that were greater than 4000 ppm Sb were further analysed for ore grade using method B050 (% Sb).

All samples are pulverised to produce a 30g assay charge.

Nagambie preferred to use OSLS due to its experience in Sb analysis, short distance to deliver samples, and turn-around time. Nearby producers, the Costerfield Mine and the Fosterfield Mine, also use the services of OSLS.

## 10. Mining and Metallurgical Considerations

### 10.1 Conceptual Metallurgical Considerations

Nagambie considers that both gold and antimony will be economically recoverable at the Nagambie Mine.

As at the Costerfield Mine, 45 km to the west of the Nagambie Mine, the antimony in the quartz and quartz-carbonate veins occurs in the form of massive stibnite, a sulphide of antimony ( $Sb_2S_3$ ).

At both Nagambie and Costerfield, finely-disseminated gold occurs within the stibnite, but also occurs to a lesser extent within pyrite and arsenopyrite. Free gold predominately occurs in the quartz and quartz-carbonate veins.

The host rocks at Nagambie, which would be mined as waste along with the mineralised veins, are fine grained mudstones/siltstones with minor sandstone units – the same as at Costerfield.

Given the geological and mineralogical similarities, Nagambie considers that the metallurgical treatment processes, successfully optimised and employed at the Costerfield Mine, would be equally applicable in a treatment plant at the Nagambie Mine.



The Costerfield treatment plant includes a primary crusher, primary and secondary ball mills, a gravity gold circuit, a flotation circuit and filtering. Gravity gold concentrate is sold to a refinery in Melbourne and a gold-antimony flotation concentrate is trucked to the port of Melbourne and shipped to a smelter in China.

### 10.2 Conceptual Mining Method

Nagambie considers that the most appropriate and efficient mining method for its sub-vertical narrow veins is up-hole-retreat stoping. This method has been successfully used for many years at the Costerfield Mine.

The method involves advancing stope drill drives the full estimated strike length of the mineralised vein before an up-hole-retreat stope panel is commenced at the most distant point in the drill drive where the ore grade is above the mineable cut-off grade (MCOG). During the retreat stoping sequence, only those sections of the stope panel that average above the MCOG are up-hole drilled and blasted.

The annual mining rate at the Costerfield Mine is 150,000 tonnes per annum (tpa). Given the large number of potential stoping panels that could be available at the Nagambie Mine, which would allow for greater ease of stope scheduling, an appropriate conceptual target mining rate for Nagambie could also be 150,000 tpa.

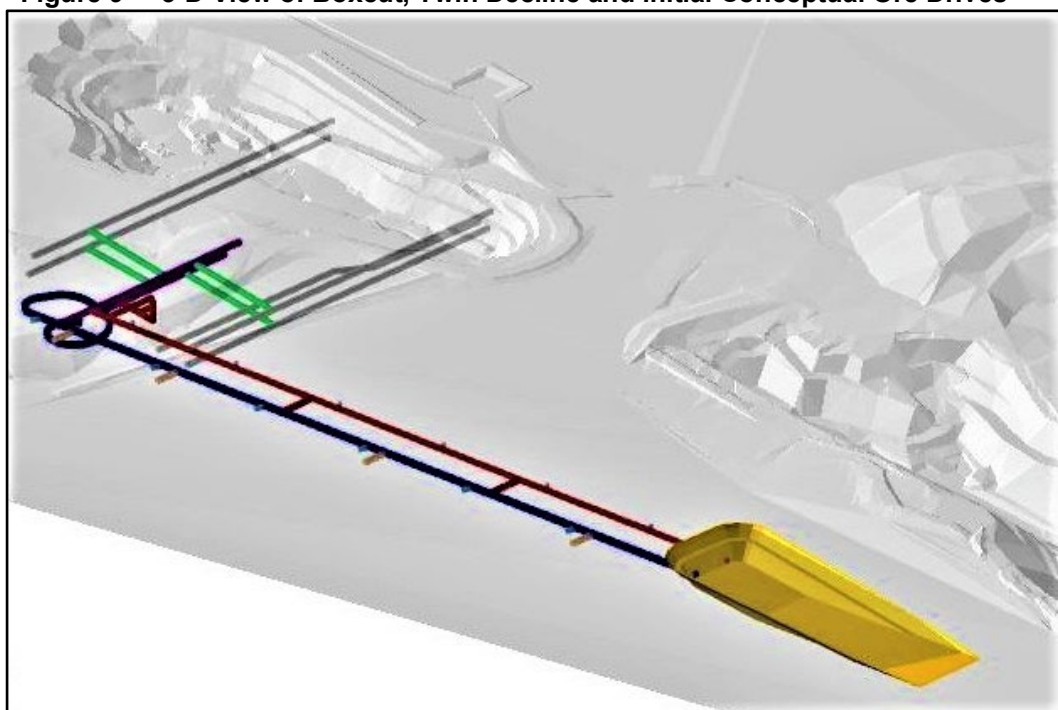
### 10.3 Mine Decline & Ventilation Access

Unconsolidated, permeable Murray Basin sediments (clay layers, quartz sand and quartz gravel layers) overlie the solid Nagambie basement rocks (siltstones, mudstones and sandstones) in the West Pit area, increasing in depth to the west. The East Pit outcrops in the Nagambie basement rocks.

It was determined that all proposed mine development would need to be entirely within the solid basement rocks and well away from the surface unconsolidated, water-bearing sediments. Nagambie decided that a twin-decline from surface, in the vicinity of the East Pit, down to the first major underground level in the West Pit area, at around 100m vertical depth, could best serve long-term man & equipment access plus ventilation access requirements. Below that first major level, a single decline could be developed for man & equipment access while vertical raisebored rises could be progressively developed to extend the ventilation system. Installed steel ladderways in the rises could provide the second means of personnel mine egress.

A surface location for the two decline portals was selected by Nagambie to the south of the East Pit. Mining Plus, a global mining services consultant, confirmed that the location was optimal and designed the surface boxcut, portals and twin declines down to the first major underground level (refer Figure 9). Mining Plus also designed initial development of the ongoing single decline, ore drives and ventilation rising off that level (refer Nagambie ASX release of 12 April 2023).

**Figure 9 3-D View of Boxcut, Twin Decline and initial Conceptual Ore Drives**



This announcement is approved for release by the Board of Directors.

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**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.*

# JORC Code, 2012 Edition – Table 1

## Maiden JORC Inferred Resource Announcement



### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>All samples have been collected from diamond drill core (HQ and NQ sizes). Following logging the core was cut in half with the sawed core lengths determined by the competent 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>The majority of samples have been submitted to On Site Laboratory Services, Bendigo. 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> <li>A number of samples from holes NAD007, NAD008, NAD009 and NAD010 were also analysed at ALS-Adelaide using methods Au-TL43 with ore grade analysis on samples = &gt; 1 ppm Au (gold analysis), ME-ICP41 (35 elements). Overlimit samples for Sb were analysed using method Sb-XRF15b.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>All drill holes used for this Maiden Resource have been drilled from surface by drilling contractor "Starwest" using a Boart Longyear LM75 underground diamond core drilling rig which has been modified to suit drilling of steep and shallow dipping holes from collar. Drill holes are all diamond with core sizes HQ or NQ. Drill runs were up to 3.1m long.</li> <li>Drill core was digitally oriented.</li> <li>Down-hole surveys were carried out every 30m or 40m down hole to EOH.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>All core drilled was assessed run by run by the logging geologist and field assistant. Core was reconstructed back together within angled channel. The length of the drill run was assessed against the drillers recorded run length. The measured length of reconstructed core takes preference over the drillers</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	<p>recorded length. A tolerance of error between the driller's records and the measured core of 0.1m was accepted.</p> <ul style="list-style-type: none"> <li>• Cave in material (if present in core trays) was recorded and marked to not sample.</li> <li>• While core is reconstructed, the bottom of hole orientation confidence line was drawn on with wax pencils.</li> <li>• Metre marks were marked on core.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All core was logged and recorded with attention to detail to: core orientation confidence, structures (faults, bedding, veins), lithological features (lith packages, younging direction). This information was used to reconstruct geological cross sections which were referenced for the construction of the digital wireframe and domain block models.</li> <li>• All core was digitally photographed with orientation line, metre marks, logging and samples marked within the photograph.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All core was cut using an Almonte automatic diamond saw. The core was preferentially cut in half. One half was sampled for laboratory analysis and the other half was returned and stored in the core tray. Duplicate samples or samples used for bulk density measurements were collected by cutting the half core into quarter core.</li> <li>• A minimum core length sample was 0.1m in length, which represents a weight greater than 200g. This ensures all geological contacts are sampled appropriately given the narrow vein nature of the deposit.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels</i></li> </ul>	<ul style="list-style-type: none"> <li>• Assaying was carried out by On Site Laboratory Services, Bendigo.</li> <li>• Samples were 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 were further analysed for ore grade using method B050 (% Sb).</li> <li>• A blank sample was inserted at the start of hole sampled to ensure no smearing of grades at the laboratory.</li> <li>• A CRM was inserted every 25<sup>th</sup> sample or adjacent to a highly mineralised</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>of accuracy (ie lack of bias) and precision have been established.</i>	<p>zone.</p> <ul style="list-style-type: none"> <li>Analysis of the CRM's showed metal concentrations within the 2 to 3 standard deviation range which is appropriate for this level of confidence.</li> <li>The majority of CRM errors were caused by human error. This was identified through the probabilities of expected results.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Holes NAD007, NAD008, NAD009 and NAD010 were analysed at ALS Laboratory. Duplicate samples from these holes were analysed at OSLS-Bendigo. Results verified that the Au and Sb % grades recorded at the first laboratory (ALS) were appropriate in terms of accuracy and precision.</li> <li>A site visit and a review of sampling techniques was undertaken in March 2023 by consultants Mining Plus (MP). MP reported logging and sampling was of high quality.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>All drillhole collar points were surveyed using a Trimble Catalyst DA-2 (DGPS) with minimum accuracy of 10cm horizontal. When compared to a 10cm LIDAR surface survey over the area, there is a maximum variation of 0.5m vertically and 0.0m horizontally.</li> <li>Drillhole traces were surveyed every 30m or 40m downhole using a Boart-Longyear single shot tool. Each survey is only used if it passes a magnetic tolerance.</li> <li>The data used in this estimation model is in grid GDA94 Zone 55 format.</li> <li>A magnetic declination factor of +11.46 degrees is applied to the magnetic azimuth surveys.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>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.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drillhole intercepts used in this estimation are spaced within 50m cartesian distance. Any blocks outside this distance have not been estimated and were not included in the Inferred Resource.</li> <li>Mining consultants Mining Plus concluded a 50m x 50m drill spacing is adequate for an Inferred Resource estimate based on statistical analysis of the variability of Au (g/t) and Sb (%)</li> <li>All samples used in the resource estimation have been composited at a straight run length that has a minimum 1.2m estimated horizontal thickness.</li> </ul>
<i>Orientation of data in relation to</i>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a</i></li> </ul>	<ul style="list-style-type: none"> <li>Down hole sample lengths were used to calculate an estimated true thickness and subsequently the horizontal thickness of the sample using trigonometry formulae. Drillhole dip, angle of sampled structure and sampled length were used to make this converted length. Samples were</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>geological structure</i>	<i>sampling bias, this should be assessed and reported if material.</i>	equally length weighted.
<i>Sample security</i>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>All core is sealed and stored and locked away on-site.</li> <li>Samples are bagged and locked within numbered bags.</li> <li>Delivery to the laboratory from site is less than 1.5 hours' drive.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Consultants Mining Plus visited the site in March 2023. The results of this work were publicly announced here:  <a href="https://www.nagambieresources.com.au/pdf/5e296d04-4aed-4b95-8c65-4454ac9695cc/AntimonyGold-Modelling.pdf">https://www.nagambieresources.com.au/pdf/5e296d04-4aed-4b95-8c65-4454ac9695cc/AntimonyGold-Modelling.pdf</a></li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>This announcement is related to MIN5412. Nagambie Resources holds 100% interest in the tenement. Expiry of MIN5412 is 24<sup>th</sup> January 2031.</li> <li>This resource is encompassed within the freehold land of Nagambie Resources.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>The site had been initially drilled for shallow-oxide gold by Perseverance Corporation.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation is solely bounded by narrow veins often of width from 0.1m to 2m wide. Gold and Antimony are the primary metals of economic importance. The deposit contains medium levels of Arsenic.</li> <li>The Gold-Antimony mineralisation is hosted in veins that strike both perpendicular and parallel to a prominent regional east to west striking anticlinal hinge passing through MIN5412.</li> <li>The near north to south striking Gold -Antimony rich veins are up to 100m long in strike. Dips are generally subvertical to the west for the C-lodes. The N1 lode has a strike length of at least 200m sub-parallel to the main east-west sheared anticline zone and dips to the south at around 50 degrees.</li> </ul>

Criteria	JORC Code explanation	Commentary
<p><i>Drill hole Information</i></p>	<ul style="list-style-type: none"> <li>• <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The mineralised lodes have similarities to the mined lodes at the Costerfield Mine, approximately 45km west of MIN5412.</li> <li>• See previous announcements via the Company website <a href="https://www.nagambieresources.com.au">https://www.nagambieresources.com.au</a> for all individual drillhole information used in the mineral estimate. ASX announcements dated: <ul style="list-style-type: none"> <li>25 May 2022: <b>NAD007</b></li> <li>7 July 2022: <b>NAD007-010</b></li> <li>25 August 2022: <b>NRP002</b></li> <li>16 September 2022: <b>NAD007-008</b></li> <li>16 November: <b>NAD009-NAD011</b></li> <li>23 January 2023: <b>NAD007-012</b></li> <li>20 February 2023: <b>NAD012</b></li> <li>10 March 2023: <b>NAD013-017</b></li> <li>23 March 2023: <b>NAD018, NAD020, NAD022-023</b></li> <li>22 May 2023: <b>NAD021, NAD024, NAD030-031</b></li> <li>3 July 2023: <b>NAD025-028, NAD033, NAD035-038, NAD040, NAD044</b></li> <li>13 October 2023: <b>NAD019, NAD034-035, NAD038-042</b></li> <li>30 January 2024: <b>NAD019, NAD025-027, NAD035-037, NAD043</b></li> </ul> </li> <li>• Drillholes that do not relate to the geological domains have been excluded from the estimate.</li> </ul>
<p><i>Data aggregation methods</i></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Au (g/t) and Sb % values were received for each sample. Both the Au and Sb values are weighted by bulk-density and drill intercept length for each individual assay.</li> <li>• Assay results for Au and Sb were also weighted by the estimated horizontal thickness of the mineralised zone to account for waste dilution during mining. The inferred resource estimate has been calculated using these waste diluted results.</li> <li>• Gold equivalent assays are calculated as: <ul style="list-style-type: none"> <li><math>AuEq\ g/t = Au\ g/t + (Sb\% \times 1.84)</math></li> <li>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:</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<p><b><i>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]</i></b></p> <ul style="list-style-type: none"> <li>The Costerfield Mine is 100% owned by Mandalay Resources Corporation and the projections for CY2024 on the Mandalay website 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 the above equation is 1.84.</li> <li>No cut-off grades have been applied to the individual assays.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>Down hole sample lengths were used to calculate an estimated true thickness and subsequently the horizontal thickness of the sample using trigonometry formulae. Drillhole dip, angle of sampled structure and sampled length were used to make this converted length. Samples were equally length weighted.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Sections and plans of the estimation showing a summary of geology is included.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drilling will need to delineate the further depth and strike of the modelled vein domains.</li> </ul>



## Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Assay results were entered into the database electronically.</li> <li>The database has been compiled from double-checked digital and paper records. Mismatched information has been corrected or verified visually through core photography.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person author of this inferred resource estimate was part of the consultant geological team and was on-site a minimum of 3 days per week since drilling began in 2022. The Competent Person was part of the whole process from drill planning, logging, assay protocols, data-entry to mineral estimation.</li> <li>The Competent Person has been involved with the Nagambie deposit as a Consultant Geologist at a near full-time capacity since 2018.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The wireframe interpretation is of high confidence. Good structural measurements support the interpretation.</li> <li>Structures that do not currently link to other structures have been purposely left out of the geological model and estimation.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>The current inferred resource estimate is contained within 7 modelled wireframes (vein domains). Each C-type vein domain strikes near north-south, is steeply dipping to the west, with strike lengths of around 100m. The N1 lode strikes east-west for at least 200m, requiring infill and extensional drilling.</li> <li>The top of the model is approximately 60m below current surface and currently extends to a depth of 270m below surface.</li> </ul>
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> </ul>	<ul style="list-style-type: none"> <li>The estimation method is entirely by the inverse distance squared (ID<sup>2</sup>) method due to the limited number of samples currently to achieve meaningful continuity analysis (variography) needed for kriging.</li> <li>Estimation, compositing and data analysis has been all completed in Maptek Vulcan software (version 2024). Geological wireframes have been modelled using a Radial based function (RBF) within Maptek Geology Core software</li> </ul>

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	<ul style="list-style-type: none"> <li><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li><i>The assumptions made regarding recovery of by-products.</i></li> <li><i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li><i>Any assumptions behind modelling of selective mining units.</i></li> <li><i>Any assumptions about correlation between variables.</i></li> <li><i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li><i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<ul style="list-style-type: none"> <li>(version 2024).</li> <li>Data checks and validity have been completed within software functions.</li> <li>Size of Parent blocks of 12m x 12m x 12m and Sub-blocks of 0.5m x 0.5m x 0.5m were created for the block model. Sub-blocks have been constructed up to 1m x 1m x 1m within wireframes where possible. The calculated difference of the block model volume to the wireframe volume was less than 0.5%. A minimum mineable block of 1.2m x 1.2m x 1.2m is considered.</li> <li>Search distances to cover the sampled area has been used. Search area is of elliptical shape. Weighting of estimation is normalized to search ellipse.</li> <li>Minimum and maximum samples used in estimating each wireframe domain were tailored to match the composite data. Search octants have been applied to minimize over-estimating blocks outside of the search area.</li> <li>A high-grade threshold has been applied to samples with no supporting samples outside a radial influence of 28.2m (equivalent to the 50m x 50m drill spacing).</li> </ul>
Moisture	<ul style="list-style-type: none"> <li><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>The tonnages have been estimated using a bulk-density equivalent based on the Sb% present from assay. The bulk-density average has been confirmed through the analysis of 52 core samples using method OA-GRA08 or OA-GRA08a at ALS-Adelaide.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li><i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>A cut-off of 5.0 g/t AuEq and a top cut of 100 g/t AuEq have been applied. The lower or mineable cut-off grade aligns with the mineable cut-off grade applied at the Costerfield Mine as at 31 December 2023.</li> <li>Blocks that were further than 50m distance from a sample were not used in the resource estimate.</li> <li>Blocks that were not influenced by at least 2 samples were not used in the resource estimate.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li><i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>A minimum mining width of 1.20m is assumed. This is based on dimensions of mining equipment used in similar deposit styles and employing the up-hole-retreat mining method.</li> <li>This minimum mining width has been considered in Block size and composite length selection.</li> </ul>

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<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li><i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>Nagambie considers that both gold and antimony will be economically recoverable at the Nagambie Mine.</li> <li>As at the Costerfield Mine, 45 km to the west of the Nagambie Mine, the antimony in the quartz and quartz-carbonate veins occurs in the form of massive stibnite, a sulphide of antimony (Sb<sub>2</sub>S<sub>3</sub>). At both Nagambie and Costerfield, finely-disseminated gold occurs within the stibnite, but also occurs to a lesser extent within pyrite and arsenopyrite. Free gold predominately occurs in the quartz and quartz-carbonate veins.</li> <li>The host rocks at Nagambie, which would be mined as waste along with the mineralised veins, are fine grained mudstones/siltstones with minor sandstone units – the same as at Costerfield.</li> <li>Given the geological and mineralogical similarities, Nagambie considers that the metallurgical treatment processes, successfully optimised and employed at the Costerfield Mine, would be equally applicable in a treatment plant at the Nagambie Mine.</li> <li>The Costerfield treatment plant includes a primary crusher, primary and secondary ball mills, a gravity gold circuit, a flotation circuit and filtering. Gravity gold concentrate is sold to a refinery in Melbourne and a gold-antimony flotation concentrate is trucked to the port of Melbourne and shipped to a smelter in China.</li> </ul>
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li><i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>The deposit is within a Mining Licence (MIN5412). Gold was extracted and processed on this licence in the early 1990s. All permits for the development of a minerals processing plant and tailings storage facility have been obtained.</li> </ul>
<i>Bulk density</i>	<ul style="list-style-type: none"> <li><i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></li> <li><i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones</i></li> </ul>	<ul style="list-style-type: none"> <li>Bulk density (BD) was estimated for each mineralised intersection of at least 1.2m EHT using the following theoretical formula with Sb% as the variable (source: page 191 of a published Costerfield technical report, link below)</li> </ul> <p><a href="https://mandalayresources.com/site/assets/files/3408/mnd_costerfield_ni43_101_technical_report_2022.pdf">https://mandalayresources.com/site/assets/files/3408/mnd_costerfield_ni43_101_technical_report_2022.pdf</a></p>

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	<p><i>within the deposit.</i></p> <ul style="list-style-type: none"> <li>• <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<p><b>BD =</b>  <math display="block">\frac{((1.3951 \cdot Sb\%) + (100 - (1.3951 \cdot Sb\%)))}{(((1.3951 \cdot Sb\%) / 4.56) + ((100 - (1.3951 \cdot Sb\%)) / 2.74))}</math></p> <p>for which:</p> <ul style="list-style-type: none"> <li>• Empirical formula of stibnite: <math>Sb_2S_3</math></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 1.3951 is a constant calculated by <math>339.712 / 243.514</math> where 339.712 is the molar mass of <math>Sb_2S_3</math>, 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> <p>For the JORC Resource, the average calculated BD for each of the block modelled vein domains varies between 2.78 and 2.87 and the overall average BD for the Resource estimate is 2.80.</p> <p><b>Checks</b></p> <ul style="list-style-type: none"> <li>• A representative total of 79 core samples from the mineralised intersections, including waste, were selected for testing of bulk density values. Analysis was undertaken at ALS-Adelaide using methods OA-GRA08 or OA-GRA08a (wax coated). Samples that were extensively broken were analysed with the wax coating. All samples were only taken within the fresh, non-oxidation zone. The average BD from laboratory testing came to 2.82. This figure aligns with the slightly more conservative calculated BD value of 2.80.</li> <li>• 24 representative core samples of mineralised intersections, including waste, were also measured for BD at the Nagambie Mine core shed using the immersion method. The average BD was 2.81, again aligning with the slightly more conservative calculated BD value of 2.80.</li> </ul>

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<i>Classification</i>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <i>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The mineral estimate has been classified as Inferred. This is based on the high geological confidence of the modelled structures, the medium variability of sample values up to a 50m x 50m drill spacing. In addition, estimated blocks that fall outside of the 50m x 50m sample spacing and a minimum 2 sample estimation are not included in the Mineral Estimation Statement.</li> <li>• The Competent Person has the required knowledge of the deposit to make an Inferred classification.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The mineral resource estimate was independently calculated and internally reviewed by Nagambie Resources Limited. .</li> </ul>
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> <li>• <i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></li> <li>• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Relative accuracy and confidence of the JORC Inferred Resource estimate result from: <ul style="list-style-type: none"> <li>• Geological knowledge</li> <li>• Umpire samples (OSLS and ALS results)</li> <li>• Bulk Density calculation and checks</li> <li>• Knowledge of Maptek Vulcan estimation and modelling software.</li> </ul> </li> </ul>