

#### April 2025

PRICE	A\$0.018/share
PRICE TARGET	A\$0.15/share

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www.breakawayresearch.com

#### **Company Information**

ASX Code	NAG
Share Price (5 April 2025)	A\$0.018
Ord Shares	803.3m
Market Cap	A\$14.5m
Options/Performance Rights	144.7m
Market Cap (fully diluted)	A\$17.1m
Cash (31 December 2024)	A\$0.8m
Total Book Debt (31 Dec 2024)	A\$4.7m
Unused Line of Credit (Jan 25)	A\$1.3m
Enterprise Value	A\$20.9m

#### **Directors and Senior Management**

Chairman	Kevin Perrin
Executive Director	Michael Trumbull
Director (Non-Exec)	William Colvin
Director (Non-Exec)	Alfonso Grillo
& Co. Secretary	Alloliso Grillo
CEO	James Earle

#### **Company Details**

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# NAGAMBIE RESOURCES LIMITED (ASX: NAG)

## Quality Resource unrecognised by the market

#### Recommendation: BUY NAGAMBIE IS A COMPELLING VALUE PROPOSITION GETTING STRONGER WITH DRILLING

We believe Nagambie should be trading at A\$0.07/sh today, and our 12 month price target is A\$0.15/sh.

#### The 12 month target is driven by:

- Our base case valuation of Nagambie at A\$0.15/sh assumes a Reserve of 1.35Mt (current Resource 539kt) and an antimony selling price of US\$25,000/t (current spot US\$57,300/t cif USA).
- The November 2024 Resource was based on drilling to January 2024, at a very low cost of A\$1.77M. The neighboring Costerfield mine has very similar geology. It started production on the same size of Resource in 2010 and has since mined over 2Mt of ore.
- Our analysis of the antimony market indicated that very high prices are likely to persist for another three years and the long term incentive price to keep non-Chinese production in line with non Chinese demand is US\$25,000/t.

## Our A\$0.07/sh current valuation is supported by multiple arguments including:

- At a price of US\$25,000/t and at a 540kt Reserve, our base case valuation which includes a processing plant is A\$0.073/sh. This scenario assumes no addition to the Resource (only the conversion of the Resources to a Reserve).
- Alternatively, if Nagambie completed its planned exploration decline and then produced 100ktpa from a Reserve of 270kt (ie 50% of the current Resource) and sold direct shipping ore, it would be worth A\$0.08/sh at US\$35,000/sh.
- Nagambie's peers' share prices have risen 182% to 1328% (ie 2.82x to 14.28x) in the last twelve months to trade at enterprise values of A\$150-460/Resource gold equivalent ounce, while Nagambie at 1.8cps is up only 28% and trades at A\$53/AuEq oz. If Nagambie's share price rose to our target of A\$0.07/sh, it would be priced at A\$183/AuEq oz (i.e. near the lower end of range).
- At 31 December 2024, the company had A\$0.84M cash and a A\$2M debt facility (now a \$3M facility) drawn to A\$1.7M. The company also has A\$2.96M in convertible notes which have traditionally been repaid by share issues.
- Drivers of share price appreciation are expected to be:
  - $\circ$   $\quad$  Value recognition as company marketing increases from a low base
  - o Additional drilling success
  - $\circ$   $\quad$  More focus on the potential for direct shipping ore

Our valuation of the company today is A\$0.07/sh, and with additional exploration success and derisking of the project over the next 12 months, we expect the market will focus on the longer term project value of A\$0.15/sh.

Hence, Breakaway Research has a BUY recommendation on Nagambie Resources with a 12 month price target of A\$0.15/share.

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## Nagambie's quality assets do not justify the underperformance vs peers

Over the last 12 months, as the antimony story unfolded and as Nagambie delivered a maiden Resource, its share price has risen 29%, while over the same period:

- Perpetua has risen 182% (ie the share price is up 2.82x)
- Mandalay and Trigg have risen 254% and 230% respectively (ie 3.54x and 3.3x)
- Southern Cross (SXG to 29 January 2025 then SX2) has risen 372% (ie 4.72x)
- Larvotto has risen 1328% (14.28x)

On peer valuation using Enterprise Value per ounce of gold equivalent (with antimony converted into gold at the same rate for all projects) suggests the Nagambie share price should be between A\$0.05/sh and A\$0.16/sh and the most common comparison is in the A\$0.05-0.06/sh range (Table 9).

## The exploration of Nagambie's tenements has only just started with more to come

Nagambie has reported a Resource of 539kt of 3.3g/t gold and 3.9% antimony or a gold equivalent grade of 18.6g/t located between 95m and 280m below surface and it has cost A\$1.77M in drilling or A\$5.49/gold equivalent ounce finding cost which is exceptionally low by Australian standards.

This is currently a small but highly economic discovery that the market is so far ignoring. The mineralisation is in discrete lodes which are open at depth and along strike. A few million dollars of additional drilling is highly likely to increase the Resource substantially.

#### What is gold equivalence?

Before going any further, it is important that the reader understands gold equivalence. It is a way of comparing a Resource containing 3.3g/t gold and 3.9% antimony with one that contains 7.5g/t gold and 1.8% antimony.

In this report, Gold equivalent (AuEq) assays are calculated as: AuEq g/t = Au g/t + (Sb% x 3.94) and the same factor has been used for all the other companies' Resources.

Because the stock market is more familiar with gold stocks than antimony stocks, the antimony companies convert into gold equivalent rather than converting the gold into antimony equivalent.

Investors should keep in mind that gold equivalence will change as the relative prices on gold and antimony change. At the current spot prices of gold and antimony (around A\$4800/oz and A\$80000/t the factor would now be closer to 5.18. That is, 1% of antimony is now worth 5.18g/t compared to 3.94g/t back in November 2024.

## Higher share price supported by fundamental valuation

We have constructed a financial model entirely on publicly available information and Breakaway assumptions. While these assumptions are not based on the work that would go into a Scoping or Feasibility Study, the estimates do benefit from having a very appropriate mine to compare with and for which there has been significant operating cost disclosure. Capital costs have a number of recently announced and relevant Pre-Feasibility Studies to draw on. The company has targeted 150ktpa production and it is possible to construct a financial model with capital costs, operating costs and selling costs to provide some guidance for investors.

By forming a view regarding capital and operating costs, the major valuation unknowns reduce to the antimony price outlook and the ultimate size and quality of the Resource.

## Nagambie should be trading at A\$0.07/sh today

Peer analysis suggests that gold antimony projects typically convert 50% of Resource into Reserve at any point in time. If Nagambie discovered nothing more than its existing Resource, converted that into a 270kt Reserve, mined and sold it as direct shipping ore, the resultant cash flow would value the company at between A\$0.047/sh at US\$25,000/t antimony or A\$0.128/sh at US\$50,000/t antimony. The price Nagambie would receive depends on how quickly it starts production.

Our A\$0.07/sh valuation of Nagambie today assumes a selling price of US\$32,500/t, 30% above our long term incentive price, but significantly below the spot price into the USA. We believe this is conservative, as long as Nagambie is one of the first to bring supply to the market

While management may not choose to go down the direct shipping route, the value of this close to hand option should be reflected in the share price right now because this is a highly credible option for the following reasons:

- The Resource is on a permitted mining lease requiring minimal approvals, which is a significant
  advantage in Victoria. The export of ore produced from underground will create no tailings and very
  modest waste, so there would be very little surface disturbance.
- US Antimony Corporation (NYSE:UAMY) announced on 20 December 2024 that after 120 days of negotiation the company signed a contract to secure up to 300 tonne/month in ore supplies from an unnamed supplier in Australia, to be shipped to its smelter in Mexico. Direct shipment of ore is happening, and we believe there are other buyers. The significance of the 120 days negotiation is that it started when the antimony price was between US\$20,000/t to US\$30,000/t.
- The current value of a tonne of material at Nagambie's Resource grade is A\$3283/t at U\$\$50,000/t antimony price and after costs delivered to the smelter would net A\$1208/t, or A\$120M cash flow pre-tax per year at 100ktpa or ore sold.

#### 25000 50000 Antimony Price US\$/t 12000 AUDUSD 0.65 0.65 0.65 Antimony grade 3.86% 3.86% 3.86% Antimony Recovery 95% 95% 95% Antimony Value A\$/t 677 1410 2821 3000 3000 Gold Price US\$/oz 3000 Gold Grade g/t 3.35 3.35 3.35 Gold Recovery % 93% 93% 93% Gold Value A\$/t 462 462 462 Ore Value A\$/t 1139 1873 3283 Smelter Charges 36% -508 -1015 -244 Gold Smelter Charges 22% -102 -102 -102 -110 -110 Toll Concentrator Charge -110 Victorial State Royalty A\$/t -19 -32 -57 NAG costs A\$/t -791 -791 -791 1208 Operating Cash Flow A\$/t -126 331 Operating Cash Flow at 100ktpa A\$Mpa -12.6 33.0 120.8

#### TABLE 1 CALCULATION OF CASH FLOW FROM SELLING HIGH GRADE ORE DIRECTLY TO CUSTOMERS

Source: See column 1

## 12 month price target of A\$0.15/sh requires Resource growth

The Costerfield Mine is 37km from Nagambie and started operating under Mandalay ownership in 2010 with a Resource similar in size to what Nagambie has now. It produces from mining narrow veins underground at 150,000tpa. Nagambie management appear to be modelling their operation to be similar to Costerfield.

The A\$0.15/sh valuation is supported by processing to concentrate on site either from a Reserve of 1.35Mt at a selling price of \$25,000/t or by a smaller Reserve at a higher selling price.

While forecasting exploration success and forecasting volatile commodity prices are speculative, we believe the combination of the two is a persuasive story.

At a minimum, to support 150,000tpa of production, the project would require a Reserve of five years or 750,000 tonnes, so Nagambie has some drilling to do. To date, it has found 539kt for A\$1.77M in drilling costs, a finding cost of A\$3.15/t finding cost, so on these numbers, another A\$1M of drilling should find another 300kt.

Costerfield reached 1.4Mt of endowment (Cumulative production + Resources) by the end of 2012, that is in two years, and we see a similar outcome being very achievable for Nagambie, subject to availability of funding.

Our financial model assumes A\$6Mpa of drilling and feasibility work.

The model also assumes that a decline access system to the top or mineralisation is developed at a cost of A\$30M (Breakaway estimate). The decline would reduce the cost of drilling by providing more and better located drill sites closer to mineralisation. It would also provide direct access to the mineralisation which would be invaluable for feasibility work.

The decline system would also allow production of direct shipping ore and the cash flow from such sales could be substantial. Our base case includes two years of direct ore shipping while the exploration is being completed and the process plant is constructed, all funded by ore sales.

## On peer comparison Nagambie is worth A\$0.05-0.16/sh

From a review of the five peers we could locate world-wide that have reported Resources, our conclusion is that Nagambie should be trading at between A\$0.05/sh and A\$0.155/sh with the median or most frequent value

around A\$0.06/sh. The other deposits are usually gold antimony so we have combined the two metals into a gold equivalent using the same ratio as Nagambie used in its November 2024 Resource (See Page 9).

The valuation range matches the range of Nagambie valuations generated by fundamental financial modelling, with Nagambie currently trading below the bottom end of that range.

#### Southern Cross is at the top end of the peer range so it is worth comparing to Nagambie in detail

Southern Cross Gold (ASX: SX2) has a market capitalisation of over A\$1000m and has yet to publish a Resource so we have used its upper exploration target to compare it with Nagambie.

TABLE 2 SOUTHERN CROSS HAS A MARKET CAPITALISATION OF A\$1100M AND NAGAMBIE HAS 15% OF THE METAL AT 4X THE CUTOFF GRADE AND WITH A QUARTER OF THE DRILLING

	Nagambie	Southern Cross Target	Comment
Resource/ Target '000t	539	9600	
Grade AuEq g/t	18.6	11.9	
Contained AuEq koz	322	3700	11.5x
Cutoff	4g/t AuEq	1g/t Au	Lower cutoff adds tonnes.
Top of Mineral (m below			
surface)	95	0	SX2 top assumed to be 0
Deepest m	280	1120	
Vertical Endowment oz/vm	1739	3300	
Drilling m	12745	78,898	6x more drilling
Drilling Cost A\$M	1.77	na	NAG spend very low
Market Capitalisation A\$M	14.5	1102.2	
Share Price Change in yr	29%	372%	One tenth the response

Source: NAG release 15 November 2024, SGX/SX2 release 4 March 2025. Share prices at 28 March 2025

Nagambie has a Resource, while Southern Cross only has reported an exploration target, which should favour Nagambie. Setting this aside, the table above makes the case that a large difference between Nagambie and Southern Cross Gold's Sunday Creek deposit is that they have used a cutoff grade one quarter of that used by Nagambie and have drilled 6x as many metres.

It would be interesting to contemplate what the Nagambie news flow would be like if it could spend the funds that Southern Cross has at its disposal. Nagambie's ounces per vertical metre is half that of Southern Cross (1739oz/vertical metre vs 3300oz/vertical metre) and the lower Southern Cross cutoff grade would be part of that, but Nagambie has only drilled to 280m vs 1120m and has a higher grade.

## VALUATION

## Valuation range A\$0.047/sh to over A\$0.155/sh or more

The wide valuation range reflects the problems of determining value with the underlying commodities (gold and antimony) being so volatile and at a time when the exploration of Nagambie's project is at such an early stage.

However the clear message is that at A\$0.018/sh, the Nagambie share price is significantly below where it should be on both fundamental and peer valuation.

#### China's departure from the export market should mean higher prices for longer

When China set the antimony price, it was often at a floor price of US\$12000/t. At that price, we believe Nagambie with its own processing plant would still be cash positive, but that would not be enough to incentivise any new non-Chinese project developer.

Our long-term price of US\$25,000/t is Breakaway's assessment of the incentive price required to keep junior companies sufficiently cashed up to be able to fund the exploration and development costs of filling a deficit we estimate to be 45ktpa to 73ktpa and growing (see Antimony Commodity section pp34-39).

Most antimony mines will produce the metal as a co-product or by-product, typically of gold. The mines also tend to become lower grade in antimony and higher in gold as they go deeper, so continued mine construction is likely to be required in the long term to meet the 2-4%pa growth forecast and infill for the falling grades from existing operations.

Established mining companies are very unlikely to prioritise antimony exploration, because it is a small market, and there is no cost curve to be in the lowest quartile of. Almost all the mines that produce antimony cover the cost of operations with the gold or base metals they produce, and the antimony is produced for at zero or

negative cost. That means the established mining companies will focus on gold and base metal exploration, not antimony.

## Fleshing out the development scenarios: Valuation based on estimated cash flow

Note: Our discussions of valuation focus on June 2026 after the equity dilution to fund the decline.

## Direct shipping of ore from a Reserve half the size of the current Resource

We believe investors should focus on the valuation generated by initially the mining of 50% of the current Resource and selling as direct shipping ore. The NPV breakeven antimony price for this case is high at A\$16,219/t, or US\$10,543/t.

TABLE 3 MINING 50% OF CURRENT RESOURCE GENERATES A VALAUTION RANGE OF A\$0.044/SH TO A\$0125/SH

All asset valued after tax	A\$M	A\$/sh	A\$M	A\$/sh	Sb B/E	Sb B/E
Date of NPV Estimate:	Jun	-25	Jun	-26	A\$/t	US\$/t
DSO Only on 50% of Resource						
Antimony Price US\$25,000/t	31.0	0.039	75.5	0.047	16,219	10,543
Antimony Price US\$32,500/t	65.1	0.081	114.6	0.072	16,219	10,543
Antimony Price US\$50,000/t	144.5	0.180	206.0	0.128	16,219	10,543

Source: Breakaway estimates. Sb B/E means Antimony price at which the FY26 valuation is zero

## Processing to concentrate from 1.35Mt Reserve

Our base case financial model assumes a mine plan of 2.5x the current Resource and the construction of a processing plant. A number of development configurations are considered.

### TABLE 4 VALUATION BASED ON MINE PLAN 2.5X CURRENT RESOURCE ASSUNING VARIOUS PROJECT CONFIGURATIONS

All asset valued after tax	A\$M	A\$/sh	A\$M	A\$/sh	Sb B/E	Sb B/E
Date of NPV Estimate:	Jun-25		Jun	Jun-26		US\$/t
At US\$25,000 antimony AUDUSD 0.65						
DSO Only	142.6	0.18	203.9	0.13	17,922	11,291
Stand Alone Plant \$ DSO	175.3	0.22	241.6	0.15	13,681	8,619
JV Plant & DSO	196.0	0.24	265.3	0.17	11,250	7,088
Stand Alone no DSO	147.5	0.18	209.5	0.13	13,679	8,618
At US\$50000/t antimony AUDUSD 0.63						
DSO Only	474.5	0.59	585.6	0.37		
Stand Alone Plant & DSO	501.4	0.62	616.5	0.38		
JV Plant & DSO	522.0	0.65	640.2	0.40		
Stand Alone no DSO	430.3	0.54	534.7	0.33		

Source: Breakaway estimates Sb B/E means Antimony price at which the FY26 valuation is zero

The project configurations include:

- Direct Shipping Ore based on the larger Resource so is a different scenario from the one in Table 3 which mines a Resource that is 5x smaller
- Stand Alone Plant & DSO assumes mining starts with two years of direct shipping ore then a plant is built by Nagambie costing A\$55M and concentrate becomes the product sold.
- Joint Venture Plant & DSO assumes Golden Camel build an oxide processing plant at Nagambie and Nagambie build a sulphide processing circuit inside that plant and assumes two years of direct or shipping.
- Stand alone no DSO is the stand alone plant without a preceding direct shipping ore stage.

While the return on capital is better for the Direct Shipping Ore case, the breakeven operating cost is higher at A\$17922/t antimony compared to A\$11250-13600/t for the cases with processing plants, and producing a concentrate makes the company less vulnerable to smelter bargaining pressure and processing chain disruptions outside the company's control.

## **Risks and sensitivity to assumption changes**

The Direct Shipping Ore from 50% of Resource scenario has modest sensitivity to most of the variables below. It has significant upside sensitivity to grade. It is very likely that the mineralisation could be high graded to maximise cash returns in the short term.

### TABLE 5 SENSITIVITY ANALYSIS FOR THE DIRECT SHIPPING RE PROJECT BASED ON 50% OF CURRENT RESOURCE

	Input	Change in Valuation at June 25		<b>-</b>	in Valuation lune 26
For 50% case	Increase	A\$M A\$/sh		A\$M	A\$/sh
Delay in start of production - years	1	-3.4	-0.004	-9.3	-0.006
Operating cost	10%	-4.8	-0.006	-5.5	-0.003
Capital Cost A\$M	10	-6.8	-0.008	2.1	-0.004
Antimony Grade	1.0%	30.4	0.038	35.0	0.022
Gold Price A\$/oz	1000	8.1	0.010	8.0	0.005

Source: Breakaway estimates

The Standalone project with a mine plan 2.5x the current Resource is more sensitive to everything and particularly to the size of the Resource itself. With a starting valuation of A\$0.155/sh, reducing the Mine Plan by 540kt changes the valuation by A\$0.045/sh.

	Input	Change ii at June 2	n Valuation 5	Change in Valuation at June 26		
		A\$M	A\$/sh	A\$M	A\$/sh	
Delay in start of production - years	1	-20.4	-0.025	-28.7	-0.018	
Operating cost	10%	-17.6	-0.022	-20.3	-0.013	
Capital Cost A\$M	10	-6.4	-0.008	-7.3	-0.005	
Reserves/Resources	-100%	-63.4	-0.079	-73.0	-0.045	
Antimony A\$/tonne	10000	130.4	0.162	150.0	0.093	
Gold Price A\$/oz	100	2.8	0.004	3.3	0.002	

Source: Breakaway estimates

On sensitivity to operating costs, we are confident that our costs are reasonable, because they are based on actual costs of a mine 37km away and because the Nagambie mineralisation is more compact and closer to surface, using larger heading dimensions. Those factors all argue that Nagambie's operating costs should be materially less than those of Costerfield and less than the costs used in our financial model.

## **Dilution from new equity issuance**

A major source of risk to shareholders is from the dilution in their current shareholding required to fund development. This does not impact the valuation of the project in A\$M but does impact the value in A\$/sh, which is what investors see.

Splitting development into a direct shipping ore stage, which needs only a decline, then developing a processing plant later, means the cash flow from the direct shipping ore stage can fund the process plant and equity needs are limited to funding the decline only.

When considering what the appropriate price of share issuance may be, primary investor focus should be on the direct shipping ore on 50% of Resource option, but investors should not lose sight of the facts that initial antimony selling prices will probably be higher than A\$25000/t, and that the project is highly likely to lead into a longer life development.

#### Breakaway assumes A\$40M equity issue, but could be reduced by alternate funding options

The financial model assumes that the decline and start of direct shipping ore is financed entirely by equity, which means that the required issue is very large relative to the company's current market capitalisation and its forecast capitalisation at our target price of A\$0.07/sh.

Such an issue would be made possible by the existence of specialist microcap investment funds.

However, there are alternative sources of funding either as equity or as soft loans from commercially interested parties, including:

- US, Australian, and other governmental support organisations determined to promote antimony supply diversification. Note that in the antimony price booms during the two world wars, governments intervened directly to ensure supply.
- Mining contractors are accepting part payment in scrip.
- Trading companies are offering pre-payments against future shipments to secure access to commodities. Prepayments are a form of debt.

Breakaway's assumption of all equity funding is the most conservative approach that can be adopted. The actual funding is more likely to be a mix of equity and the sources above.

#### Direct Shipping Ore for 50% of current Resource funded by 100% equity

As shown in the table below, at US\$32,500/t antimony price, issuance below A\$0.09/sh is at a discount to value, and issuance at A\$0.05/sh is at a 30% discount to the valuation.

The table shows a large change in the A\$M valuation from 2025 to 2026. That occurs because the FY26 capital spend is added to the FY25 valuation and one year of 15% discounting rolls off.

TABLE 7 IMPACT OF DIFFERENT ISSUE PRICES ON THE PER SHARE VALAUTION OF THE DSO ON 50% RESOURCE OPTION

All asset valued	Jur	Jun-25						
after tax	A\$M	A\$/sh	A\$M	A\$/sh	A\$/sh	A\$/sh	A\$/sh	A\$/sh
Nagambie	76.4	0.095	118.9	0.025	0.042	0.066	0.074	0.095
Corporate Overhead	-12.4	-0.015	-12.2	-0.003	-0.004	-0.007	-0.008	-0.010
Tax Benefit	6.4	0.008	7.4	0.002	0.003	0.004	0.005	0.006
Cash on hand	1.5	0.002	4.4	0.001	0.002	0.002	0.003	0.004
Debt	-5.5	-0.007	-3.1	-0.001	-0.001	-0.002	-0.002	-0.002
Net Working Capital	-1.1	-0.001	-0.4	0.000	0.000	0.000	0.000	0.000
Valuation A\$M	65.4	0.081	115.0	0.024	0.041	0.064	0.072	0.092
Exploration	0.0	0.000	0.0	0.000	0.000	0.000	0.000	0.000
Total	65.4	0.081	115.0	0.024	0.041	0.064	0.072	0.092
Issued Shares M		803		4803	2803	1803	1603	1248
Major Funding issue Pr	ice A\$/sh			0.01	0.02	0.04	0.05	0.09
Current Equity Owners	share of F	Project		16.7%	28.7%	44.5%	50.1%	64.4%

Source: Breakaway estimates

#### Standalone project based on 2.5x the current Resource

The table below assumes our long-term antimony price of US25,000/t and shows that any issue price up to A20.20/sh is at a discount. At an issue of A20.05/sh the discount is 66% to valuation.

There is an argument that the company should complete the Feasibility Study on 150ktpa processing prior to any development. However, the decline is probably essential to gain access to the deposit for Feasibility work and brings with it the bonus of earlier production at the time of the best selling prices.

#### TABLE 8 IMPACT OF ISSUE PRICE ON PER SHARE VALAUTION OF THE STANDALONG LONG LIFE PROJECT

All asset valued	Jun-25		Jun-25 Jun-26							
after tax	A\$M	A\$/sh	A\$M	A\$/sh	A\$/sh	A\$/sh	A\$/sh	A\$/sh		
Nagambie	197.7	0.246	258.4	0.054	0.092	0.160	0.212	0.254		
Corporate Overhead	-22.5	-0.028	-23.8	-0.005	-0.008	-0.015	-0.020	-0.023		
Tax Benefit	6.4	0.008	7.4	0.002	0.003	0.005	0.006	0.007		
Cash on hand	0.4	0.000	4.5	0.001	0.002	0.003	0.004	0.004		
Debt	-5.5	-0.007	-3.1	-0.001	-0.001	-0.002	-0.003	-0.003		
Net Working Capital	-1.1	-0.001	-0.4	0.000	0.000	0.000	0.000	0.000		
Valuation A\$M	175.3	0.218	243.0	0.050	0.086	0.150	0.200	0.239		
Exploration	0.0	0.000	0.0	0.000	0.000	0.000	0.000	0.000		
Total	175.3	0.218	243.0	0.050	0.086	0.150	0.200	0.239		
Issued Shares M		803		4817	2817	1617	1217	1017		
Major Funding issue Price A\$/sh				0.01	0.02	0.05	0.10	0.20		
Current Equity Owners sh	nare of Proj	ject		16.7%	28.5%	49.7%	66.0%	79.0%		

Source: Breakaway estimates



This section conducts a simple comparison of Enterprise Value to gold equivalent ounces. Nagambie is trading at A\$53/oz. While the full range of peer values is A\$62/oz to A\$460/oz, we believe investors should ignore the lowest comparison, Trigg, which has only recently acquired its Resource and the market may not have fully assessed its value. This means that range becomes A\$150/oz to A\$460/oz or A\$0.05/sh to A\$0.155/sh.

## TABLE 9 SUMMARY OF COMPARATIVE PEERS

	Perpetua Nasdaq PPTA	Southern Cross (ASX:SX2)	Mandalay Resources (TSX:MND)	Larvotto ( ASX LVR)	Trigg (ASX TMG)	Nagambie (ASX NAG)
Issued Shares M	71.3	222.2	93.9	410.0	923.9	803.3
Share Price A\$/sh	17.78	4.96	6.02	1.000	0.033	0.018
Capitalisation A\$M	1266	1102	565.5	410.0	30.5	14.5
Debt A\$M	0	0	43.71	0.16	0.00	3.55
Cash A\$M	70	7	109.10	28.02	6.86	0.84
EV A\$M	1196	1095	500.1	382.1	23.63	17.18
Operating Assets			77.9	50.0		
Net EV A\$M	1196	1095	422.2	332.1	23.63	17.18
Gold Equivalent koz	2600	3675	2435	2218	380	322
Net EV A\$/oz	460	298	173	150	62	53
Value Ratio	8.62	5.58	3.25	2.80	1.16	1.00
Implied NAG Share						
Price A\$/sh	0.155	0.101	0.058	0.050	0.021	0.018
Price Change 12mth	182%	372%	254%	1328%	230%	29%

Source: Companies December 2024 financial statements adjusted for issues, Table 10. Share prices at 28 March 2025. EV= Enterprise Value

To do this comparison, we have selected all the listed equities available globally with reported Resources that we could find. We excluded US Antimony Corporation because its main business of processing.

### TABLE 10 SUMMARY OF PEERS REPORTED RESOURCES

	000		AuEq	Gold		Gold	
	tonnes	AuEq g/t	koz	g/t	Sb %	koz	Sb kt
Nagambie Resource	es (ASX NAG	)					
Nagambie	539	18.6	322	3.3	3.9%	58.0	20.8
Trigg Minerals (ASX	TMG)						
Wild Cattle Ck	1530	7.7	380		2.0%		30.1
Larvotto Resources	(ASX LRV) N	Aeasured Indic	ated and In	ferred			
Hillgrove	7264	9.5	2218	4.4	1.3%	1036.0	93.0
Southern Cross (AS	X SX2) Explo	ration Target					
Lo Target	8100	9.6	2500	6.4	0.8%	1700	66.6
Hi Target	9600	11.9	3700	8.3	0.9%	2600	88.2
Mandalay Resource	es (TSX MWI	) Measured Ir	ndicated and	l Inferred			
Costerfield	1735	17.1	953	8.1	2.3%	450	39.9
Bjorkdal	21546	2.14	1482	2.14	0.0%	1482	
Combined	23281		2435				
Perpetua (Nasdaq F	PTA) Measu	red Indicated	and Inferre	d			
Stibnite	19864	4.1	2600	2.08	0.51%	1327	101

Source: Perpetua Stibnite 43-101 22 December 2020, SXG release 4 March 2025 Mandalay Costerfield 43-101 28 March 2024, Trigg 19 December 2024, NAG release 15 November 2024.

We have used the same gold equivalent ratio as used by Nagambie in its November 2024 Resource release. As a result, the gold equivalents reported for other companies will differ to that which they have reported.

Mandalay owns two mines. Costerfield is the antimony producer and Bjorkdal is pure gold. We have combined the two mines on gold equivalent for this analysis. Mandalay is also in production, so it is the most derisked and should be on a higher rating. To allow for the fact it owns producing plants, we have reduced its Enterprise Value by the amount of its reported net assets at December 2024, adjusted for Cash and Debt recorded separately. On this basis Mandalay is implying a comparative share price of A\$0.058/sh for Nagambie.

Likewise, Larvotto already have a 250ktpa plant installed at Hillgrove. It probably requires rehabilitation, and the project includes an expansion to 500ktpa. We have assumed a value of the existing surface assets at A\$50M for this exercise. The Larvotto valuation implies a A\$0.05/sh price for Nagambie.

Southern Cross Gold (ASX SX2) has only reported an exploration target and has intimated it includes only half the drill results. For this analysis we have used the higher end of the exploration target range, which has Southern Cross trading at a premium to Mandalay. Southern Cross implies a value of A\$0.18/sh for Nagambie.

## FINANCIAL MODEL OF OPERATIONS

## **Overview of Base Case financial model**

## Breakaway's unrisked Base Case is A\$0.151/sh at June 2026

TABLE 11 NAGAMBIE VALUATION SUMMARY BASED ON STAND ALONE PROCESSING AFTER INITIAL DIRECT SHIPPING

All asset valued after tax	A\$M	A\$/sh	A\$M	A\$/sh
Date of NPV Estimate:	Jun-	-25	Jun	-26
Nagambie	197.7	0.25	258.4	0.16
Corporate Overhead	-22.5	-0.03	-23.8	-0.01
Tax Benefit	6.4	0.01	7.4	0.00
Cash on hand	0.4	0.00	3.1	0.00
Debt	-5.5	-0.01	-3.1	0.00
Net Working Capital	-1.1	0.00	-0.4	0.00
Valuation A\$M	175.3	0.218	241.6	0.151
Exploration	0.0	0.00	0.0	0.00
Total	175.3	0.218	241.6	0.151
Issued Shares M		803		1603

Source: Breakaway estimates

The Base Case financial model assumes that a stand-alone processing plant is built following a short period of direct ore shipments. All the other scenarios discussed above are variations to this basic model.

The following analysis makes assumptions about a possible project based on the Nagambie Mine Resource. Readers should note that the financial model assumes a mine plan 2.5x larger than the current Resource.

The company has not produced a feasibility study or a scoping study, so readers should be clear that all the numbers in the following analysis have been generated by Breakaway.

However, in the absence of additional information from the company, the market must come to a view on the correct value for Nagambie and this report is designed to assist in that process.

This valuation is based on the following major assumptions which are discussed in detail later in this report (for costs see from page 13 to page 23; for antimony price refer pages 34 to 39).

- Long term commodity prices of US\$3000/oz for gold and US\$25000/tonne for antimony.
- AUDUSD of 0.65.
- Discount rate of 15%pa with an inflation assumption of zero.
- The capital required for the access decline is assumed to be A\$30m and funded entirely by equity. The Base Case issue price is assumed to be A\$0.05/sh.
- Production is assumed to be 150ktpa which is a target the company has set itself.
- Initial production and sale of direct shipping ore is assumed for the period from the completion of the decline until the ramp up of the processing plant at 50Ktpa.
- The costings for the processing plant in the Base Case is A\$55M and assumes Nagambie build a standalone plant without the support of the proposed Golden Camel Joint Venture plant. The plant construction is assumed to be 100% debt funded.
- The operating costs are based on those reported for Costerfield, a gold and antimony concentrate producer located 37km away operating in very similar geology but at greater depth.



## **Model Summary**

TABLE 12 NAGAMBIE STAND ALONE BASE CASE MODEL VOLUMES AND REVENUE CALCULATION

	Sum/Ave	Jun-26	Jun-27	Jun-28	Jun-29	Jun-30
Ore Mined t	1347500	0	40000	100000	125000	150000
Gold g/t	3.35	0.00	3.35	3.35	3.35	3.35
Antimony %	3.86%	0.00%	3.86%	3.86%	3.86%	3.86%
Contained Gold oz	145033		4305	10763		3.80% 16145
		0			13454	
Contained Antimony t	52040	0	1545	3862	4827	5793
Processed Ore	4207500	0	0	0	125000	450000
Ore Processed t	1207500	0	0	0	125000	150000
Gold g/t	3.35	0.00	3.35	3.35	3.35	3.35
Antimony %	3.86%	0.00%	3.86%	3.86%	3.86%	3.86%
Contained Gold oz	129964	0	0	0	13454	16145
Contained Antimony t	46633	0	0	0	4827	5793
Gold Recovery	93%	93%	93%	93%	93%	93%
Antimony Recovery	95%	95%	95%	95%	95%	95%
Recovered Gold oz	120867	0	0	0	12512	15014
Recovered Antimony t	44302	0	0	0	4586	5503
Processed Saleable Products						
Gold in Dore oz	80981	0	0	0	8383	10060
Gold in Conc oz	39886	0	0	0	4129	4955
Gold to Bullion	67%	67%	67%	67%	67%	67%
Gold in Concentrate Payability	78%	78%	78%	78%	78%	78%
Antimony Payability	64%	64%	64%	64%	64%	64%
Payable Bullion oz	80981	0	0	0	8383	10060
Payable Gold in Conc oz	31111	0	0	0	3221	3865
Payable Gold Produced oz	112092	0	0	0	11604	13924
Payable Antimony Produced t	28353	0	0	0	2935	3522
Revenue Calculation						
Realized Gold US\$/oz	3000	3000	3000	3000	3000	3000
Realized Antimony US\$/oz	25000	25000	25000	25000	25000	25000
AUDUSD	0.65	0.65	0.65	0.65	0.65	0.65
Cost Inflation	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tax Rate	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
DSO Revenue						
Contained Gold oz	15068	0	4305	10763	0	0
Contained Antimony t	5407	0	1545	3862	0	0
Payable Gold %	72.5%	0.0%	72.5%	72.5%	72.5%	72.5%
Payable Antimony %	60.8%	0.0%	60.8%	60.8%	60.8%	60.8%
Payable Gold oz	10931	0	3123	7808	0	0
Payable Antimony t	3287	0	939	2348	0	0
Concentrator Charge A\$/t ore	120	0	120	120	120	120
Gold Value A\$M	15.2	0.0	4.3	10.8	0.0	0.0
Antimony Value A\$M	126.4	0.0	36.1	90.3	0.0	0.0
Conc Charge	-16.8	0.0	-4.8	-12.0	0.0	0.0
DSO Revenue A\$M	124.8	0.0	35.7	89.1	0.0	0.0
Processed Products Revenue	124.0	0.0	33.7	55.1	0.0	0.0
Gold Bullion oz	80981	0	0	0	8383	10060
Gold in Conc oz	31111	0	0	0	3221	3865
Antimony in Conc t	28353	0	0	0	2935	3522
Gold Bullion Revenue A\$M	373.8	0.0	0.0	0.0	38.7	46.4
Gold Conc Revenue A\$M	130.9	0.0	0.0	0.0	13.5	16.3
Antimony in Conc Rev A\$M	1090.5		0.0	0.0	112.9	
		0.0				135.5
Processed Product Revenue A\$M	1595.1	0.0	0.0	0.0	165.1	198.2

Source: Breakaway estimates. DSO = Direct Shipping Ore

## TABLE 13 NAGAMBIE STAND ALONE BASE CASE MODEL COSTS AND FINANCIALS

	Sum/Ave	Jun-26	Jun-27	Jun-28	Jun-29	Jun-30
Capital Development	85.0	25.0	6.0	6.0	6.0	6.0
PPE	64.0	0.0	27.5	27.5	1.0	1.0
Capitalised Explorationn	14.0	6.0	6.0	2.0	0.0	0.0
Rehabilitation A\$M	5.5	0.0	0.0	0.0	0.0	0.0
Total Capital Exp	168.5	31.0	39.5	35.5	7.0	7.0
Costs A\$M						
Mining	404.3	0.0	12.0	30.0	37.5	45.0
Processing	132.8	0.0	0.0	0.0	13.8	16.5
G&A	96.6	0.0	0.0	0.0	10.0	12.0
DSO Costs	66.8	0.0	19.1	47.7	0.0	0.0
Total	700.4	0.0	31.1	77.7	61.3	73.5
Royalty Rate	0.0	0.0	0.0	0.0	0.0	0.0
Royalty A\$M	47.3	0.0	1.0	2.5	4.5	5.4
Operating Cost A\$M	747.7	0.0	32.1	80.1	65.8	78.9
Operating Cost A\$/oz equiv	0.0	0.0	0.0	0.0	1824.3	1824.3
All In Sustaining Costs A\$M	0.0	0.0	71.6	115.6	72.8	85.9
All In Sustaining Costs A\$/oz	0	0	0	0	2018	1986
Mining A\$/t mined	300	300	300	300	300	300
Processing A\$/t Processed	110	110	110	110	110	110
G&A A\$/t Processed ex Royalty	80	80	80	80	80	80
Total A\$/t Processed	490	490	490	490	490	490
DSO Costs US\$/t ore	310	310	310	310	310	310
Revenue	1719.92	0.00	35.66	89.15	165.13	198.15
Cost	-680.97	0.00	-12.98	-32.45	-65.79	-78.95
EBITDA	1038.95	0.00	22.68	56.70	99.34	119.20
D&A	-168.50	0.00	-5.00	-12.50	-15.63	-18.76
EBIT	870.45	0.00	17.68	44.19	83.70	100.45
Тах	-261.14	0.00	-5.30	-13.26	-25.11	-30.13
NPAT	609.32	0.00	12.37	30.93	58.59	70.31
Sustaining Capex A\$M	57.00	0.00	0.00	0.00	7.00	7.00
Rehabilitation A\$M	5.50	0.00	0.00	0.00	0.00	0.00
Pre Prodn Capex A\$M	106.00	31.00	39.50	35.50	0.00	0.00
Exploration	0.00	0.00	0.00	0.00	0.00	0.00
Other A\$M	0.00	0.00	0.00	0.00	0.00	0.00
Free Cash Pre tax	870.45	-31.00	-16.82	21.20	92.34	112.20
Pre Tax NPV	0.00	373.35	446.18	491.91	473.36	432.16
Free Cash Flow After Tax	609.32	-31.00	-22.12	7.94	67.22	82.07
Post Tax NPV	0.00	258.37	319.25	359.20	345.86	315.67

Source: Breakaway estimates. DSO = Direct Shipping Ore

## TABLE 14 DIRECT SHIPPING ORE FROM 50% OF CURRENT RESOURCE MODEL VOLUMES AND REVENUES

	Sum/Ave	Jun-26	Jun-27	Jun-28	Jun-29	Jun-30
Ore Mined t	269500	0	40000	100000	100000	29500
Gold g/t	3.35	0.00	3.35	3.35	3.35	3.35
Antimony %	4.25%	0.00%	4.25%	4.25%	4.25%	4.25%
Contained Gold oz	29007	0	4305	10763	10763	3175
Contained Antimony t	11449	0	1699	4248	4248	1253
Revenue Calculation						
Realized Gold US\$/oz	3000	3000	3000	3000	3000	3000
Realized Antimony US\$/oz	25000	25000	25000	25000	25000	25000
AUDUSD	0.65	0.65	0.65	0.65	0.65	0.65
Cost Inflation	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tax Rate	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
DSO Revenue						
Contained Gold oz	29007	0	4305	10763	10763	3175
Contained Antimony t	11449	0	1699	4248	4248	1253
Payable Gold %	72.5%	0.0%	72.5%	72.5%	72.5%	72.5%
Payable Antimony %	60.8%	0.0%	60.8%	60.8%	60.8%	60.8%
Payable Gold oz	21041	0	3123	7808	7808	2303
Payable Antimony t	6961	0	1033	2583	2583	762
Concentrator Charge A\$/t ore	120	0	120	120	120	120
Gold Value A\$M	32.1	0.0	4.8	11.9	11.9	3.5
Antimony Value A\$M	267.7	0.0	39.7	99.3	99.3	29.3
Conc Charge	-32.3	0.0	-4.8	-12.0	-12.0	-3.5
DSO Revenue A\$M	267.5	0.0	39.7	99.3	99.3	29.3

Source: Breakaway estimates. DSO = Direct Shipping Ore

TABLE 15 DIRECT SHIPPING ORE FROM 50% OF CURRENT RESOURCE MODEL COSTS AND FINANCIALS

	Sum/Ave	Jun-26	Jun-27	Jun-28	Jun-29	Jun-30
Capital Development A\$M	43.0	25.0	6.0	6.0	6.0	0.0
PPE A\$M	2.0	0.0	0.0	0.0	1.0	1.0
Capitalised Exploration A\$M	14.0	6.0	6.0	2.0	0.0	0.0
Rehabilitation A\$M	5.5	0.0	0.0	0.0	0.0	0.0
Total Capital Exp	64.5	31.0	12.0	8.0	7.0	1.0
Costs A\$M						
Mining	80.9	0.0	12.0	30.0	30.0	8.9
DSO Costs	128.5	0.0	19.1	47.7	47.7	14.1
Total	209.4	0.0	31.1	77.7	77.7	22.9
Royalty A\$M	7.4	0.0	1.1	2.7	2.7	0.8
Operating Cost A\$M	216.7	0.0	32.2	80.4	80.4	23.7
Mining A\$/t mined	300	300	300	300	300	300
DSO Costs US\$/t shipped	310	310	310	310	310	310
Revenue	267.51	0.00	39.71	99.26	99.26	29.28
Cost	-88.21	0.00	-13.09	-32.73	-32.73	-9.66
EBITDA	179.31	0.00	26.61	66.53	66.53	19.63
D&A	-64.50	0.00	-9.57	-23.93	-23.93	-7.06
EBIT	114.81	0.00	17.04	42.60	42.60	12.57
Тах	-34.44	0.00	-5.11	-12.78	-12.78	-3.77
NPAT	80.36	0.00	11.93	29.82	29.82	8.80
Free Cash Pre tax	114.81	-31.00	14.61	58.53	59.53	18.63
Pre Tax NPV	0.00	104.03	105.02	62.24	12.04	-4.78
Free Cash Flow After Tax	80.36	-31.00	9.50	45.75	46.75	14.86
Post Tax NPV	0.00	79.36	81.76	48.27	8.76	-4.78

Source: Breakaway estimate. DSO = Direct Shipping Ore



## **Assumptions**

## **Resource to Mine Plan conversion**

Nagamble is early in its exploration effort and needs to prove up more tonnes of a similar grade, but it has a Resource and the best place to explore for high grade ounces plus antimony is to drill near an existing Resource.

Nagambie has reported an Inferred Resource of 538kt at 3.3g/t gold and 3.9% antimony. This is not dissimilar to the position of Costerfield 15 years ago and Costerfield was in production.

#### Costerfield's Changing Resource Endowment over time

In December 2010, Mandalay's Costerfield had a Resource of 502.5kt at 9.7g/t and 5.1% antimony and Reserves of 65.6kt at 7.4g/t and 4.2%. Production in the 2010 year of 50.7kt at 7.4g/t and 4.2%.

By 2014, the cumulative production totalled 516kt at 8.5g/t and 4.1g/t, very close to the 2010 Resource, and the total Resource in 2014 had grown to 1518kt at 6.8g/t and 3.3%. It is not possible to tell if the ore produced came from the 2010 Resource or from additional Resources discovered since, but it is likely that more of the 2010 Resource was mined than what was in the 2010 Reserve.

For underground mines, particularly those in narrow vein environments, conversion of Resources into Reserves is a expensive exercise and Costerfield has operated with a few years life in Reserves and a substantial amount of inferred Resource. Costerfield operated initially on only one year in Reserves while it was ramping up production from 50ktpa to 150ktpa.





Source: Mandalay Resources annual reports





Source: Mandalay Resources annual reports

#### FIGURE 3 ANTIMONY ENDOWMENT 2010 TO 2023 (CUMMULATIVE PRODUCTION PLUS RESOURCES)



Source: Mandalay Resources annual reports

Costerfield was in production because it had existing processing plant and underground development, but that doesn't hide the fact it operated from 2010 to 2013 with only one year of Reserves rising to three years for most of its life.



FIGURE 4 PREVIOUS YEAR'S RESERVE/ORE PRODUCTION

Source: Mandalay Resources annual reports

#### Costerfield's endowment appears to have plateaued from 2018

It is interesting to note that since 2018 the total endowment (ie cumulative production plus remaining Resource has plateaued, and a jump in Resource in 2021 appears to be unwinding. This is typical of a mine approaching end of life. Costerfield could still discover a new lode and may have done so at True Blue which has no Resource at this time, but on published Reserves, it has another 4 years and maybe an additional year of Measured and Indicated Resources, with little change since 2017.

In the 2024 43-101 Reserve Technical Report at the end of Section 18.3, the report noted that the Brunswick west Tailings Storage Facility would provide 5 years of storage ie to the end of 2029, meeting the requirements of the current Life of Mine.

#### Likely realisable mining grade based on peer Resource to Reserve conversion

In the Breakaway Standalone financial model, the mined grade of gold and antimony has been assumed to be the same as the reserve grade and in the direct shipping ore on 50% of the Resource case, an antimony grade 10% higher than the Resource has been assumed.

Looking at the peers, we see that the Resource to Reserve conversion on tonnes is generally 50%, and where it is higher, as in the case of Hillgrove, the grade appears to suffer.

Nagambie has calculated its Resource on the basis on minimum mining widths, so there is some basis for thinking that the Resource grade will not be diluted. Also, both Costerfield and Fosterville Reserve grades are higher than their Resource grade while at Costerfield the antimony Reserve grade is lower than the Resource. Given that until last year, the gold price was rising strongly but antimony was at lows, it would have made sense to optimise on gold. With very high antimony prices, it may be better to seek out the higher antimony zones, possibly lifting

antimony grade. Without the detailed geology, we believe it makes sense to stick to the unchanged Resource grades.

## TABLE 16 SUMMARY OF RESOURCE TO RESERVE CONVERSIONS ACHIEVED BY PEERS

	Tonnes kt	Au g/t	Sb %	Au koz	Sb kt
Conversion					
Costerfield	50.5%	104.8%	72.0%	52.5%	36.8%
Hillgrove	73.2%	67.5%	81.4%	49.4%	59.6%
Fosterville	50.0%	115.6%	na	57.8%	na

Source: Nagambie Resource release 15 November 2024, other companies refer Tables 17 18 19

## TABLE 17 COSTERFIELD RESOURCES AND RESERVES

	Tonnes (kt)	Au Grade (g/t)	Sb Grade (%)	Cont. Au (koz)	Cont. Sb (kt)
Reserves					
Proven Underground	307	11.4	2.1	113	6.5
Proven Stockpile	43	5.7	0.8	8	0.3
Probable	253	5.9	1.7	48	4.3
Proven + Probable	604	8.7	1.8	168	11.1
Resources					
Measured Underground	412	13.6	3.6	180	14.8
Measured Stockpile	43	5.7	0.8	8	0.3
Indicated	741	5.5	2.0	132	15.0
Measured + Indicated	1197	8.3	2.5	320	30.2
Inferred	538	7.5	1.8	130	9.7
Converting:					
Measured to Proven	74.5%	83.8%	58.3%	62.8%	43.9%
Indicated to Probable	34.1%	107.3%	85.0%	36.4%	28.7%
M&I Resource to Reserve	50.5%	104.8%	72.0%	52.5%	36.8%

Source: Mandalay Resources Costerfield 43-101 Technical Report 2023 dated March 2024

## TABLE 18 HILLGROVE RESOURCES AND RESERVES

Hillgrove	Tonnes kt	Au g/t	Sb %	Au koz	Sb kt	AuEq g/t
Metz	1984	4.8	1.6%	308	31	8.4
Garibaldi	1466	5.2	0.9%	245	13	7.3
Clarks Gully	266	2.0	3.8%	17	10	10.6
Brakins Spur	713	4.3	1.7%	98	12	8.2
Total Resource	4429	4.7	1.5%	668	67	8.1
Mine Plan excl Inferred	3240	3.2	1.2%	330	40	
Resource to Mine Plan	73.2%	67.5%	81.4%	49.4%	59.6%	

Source: Larvotto release 2 August 2024

#### TABLE 19 FOSTERVILLE RESOURCES AND RESERVES

	Tonnes (kt)	Au Grade (g/t)	Cont. Au (koz)
Reserves			
Proven Underground	888	5.77	165
Probable	8666	5.33	1486
Proven + Probable	9553	5.37	1650
Resources			
Measured Underground	1362	5.25	230
Indicated	17760	4.60	2628
Measured + Indicated	19121	4.65	2857
Inferred	12761	4.31	1769
Converting:			
Measured to Proven	65.2%	109.9%	71.7%
Indicated to Probable	48.8%	115.8%	56.5%
M&I Resource to Reserve	50.0%	115.6%	57.8%

Source: Agnico Eagle Reserves 2024 from company website



## **Recovery and payability**

All the antimony recovery occurs in the flotation circuit while gold is recovered from the gravity circuit to doré/bullion and from the flotation circuit into the antimony concentrate. The split between gravity and flotation gold is critical because the mine is paid for 100% of the gold in doré and much less for the gold in the concentrate. The grade of the antimony concentrate is also important because it can affect the amount of metal the smelter is prepared to pay for.

In the financial model we have assumed recovery of 93% for gold and 96% for antimony. The gold is in line with Costerfield overall, while the antimony recovery is higher because of the higher Nagambie Resource grade. We have estimated the Nagambie antimony recovery by assuming the same tailings grade at Costerfield.

#### TABLE 20 PEER HEAD GRADE AND METALLURGICAL RECOVERIY

	Head G	rade	Recovery			
	Au g/t	Sb %	Sb in	Au in	Gold in	Total
			Conc	gravity	Conc	Gold
Costerfield 2023 Act	9.5	2.3%	92.0%	67.0%	77.9%	92.7%
Hillgrove 2015	1.16-3.38	0.95-3.83%	86.0%	48.9%	66.9%	83.1%
Blue Spec	15.5	1.9%	89.0%			95.0%

Source: Costerfield from Mandalay Resources quarterlies, Hillgrove from Larvotto Reserve release 5 August 2024, Blue Spec from Calidus Resources release 4 October 2022

#### TABLE 21 PEER CONCENTRATE GRADE AND PAYABILITY BY PRODUCT (PAYABILITY IS WHAT THE SMELTER PAYS THE MINER)

	Sb in conc	Gravity Gold	Gold in Conc	Gold Overall
Costerfield 2023 Act	64.4%	100.0%	81.5%	93.9%
Hillgrove 2021	55.3%	100.0%	64.8%	82.0%
Stibnite	68.0%			

Source: Costerfield from Mandalay Resources quarterlies, Hillgrove from Larvotto Reserve release 5 August 2024, Stibnite from Perpetua 43-101 Reserve Technical Report 2023

There is limited commentary on the grades of the antimony concentrates. We have calculated the concentrate grades planned for Hillgrove and Perpetua's Stibnite and both are 38% Sb. Pure stibnite is  $Sb_2S_3$  and is 71.7% antimony, so it looks like a typical concentrate is around 50% Stibnite mineral and 50% other sulphides.

The financial model assumes the smelters will pay 64% for antimony and 78% for gold in concentrate. The mine would receive 99% of the value of gold in doré.

## **Capital Cost Estimation and timing of expenditure**

There are three capital cost scenarios to consider

- Standalone project where Nagambie builds its own processing plant
- Golden Camel Joint Venture funds plant construction
- Ore is sold as direct shipments ex mine.

#### TABLE 22 SUMMARY OF CAPITAL COST ESTIMATES USED IN THE BREAKAWAY FINANCIAL MODELS

Mine decline	Plant	Support	Total
30	0	0	30
30	20		50
30	20	35	85
	decline 30 30	decline           30         0           30         20	decline         0           30         0         0           30         20         0

Source: See following text

The table above summaries the discussion below and represents the capital cost numbers used in our financial model scenarios. Any crushing and potentially ore sorting plant required for direct shipping is assumed to be leased.

### Expenditure Timing: Gap between mine development and processing plant development

The timing of each of these expenditure scenarios will be determined by external events specific to each line item.

The development of direct shipping ore depends of availability of funding for the decline. Timing of the stand alone plant depends on drilling success producing sufficient Resource.

The joint venture processing plant timing will be determined by Golden Camel. While there has been some indication that some work on construction has commenced, the general comment from Nagambie in the

December quarterly statement was that Golden Camel was seeking funding. It is possible that the joint venture plant is operating before Nagambie's mine is in operation, in which case, Nagambie will have a tolling income stream.

In the figure below, the timeline is independent of whether the joint venture plant is built of not. If it was in operation by the time Nagambie commits to building its sulphide flotation plant, the cost of the plant would be less (ie the additional A\$35M estimated by Breakaway would not be required).

	Mar-25	Jun-25	Sep-25	Dec-25	Mar-26	Jun-26	Sep-26	Dec-26	Mar-27	Jun-27	Sep-27	Dec-27	Mar-28	Jun-28	Sep-28	Dec-28	Mar-29	Jun-29	Sep-29	Dec-29
Explore to 750kt																				
Construct Decline																				
Explore to 5yrs Reserve																				
Construct Processing Plant																				
Commercial Production 150kt	ра																			
Direct Ship Ore Sales 50ktpa																				

#### FIGURE 5 POTENTIAL TIMELINE FOR THE DEVELOPMENT OF NAGAMBIE (WITH OR WITHOUT THE JOINT VENTURE PLANT)

#### Source: Breakaway estimates

Nagambie is in control of the development of the other assets subject also to funding availability, but assuming funding is available, the company has indicated that its plan is to:

- continue drilling from surface until a Resource of 600-750kt has been identified, then
- develop the decline to allow the next generation of drilling to take place underground.

That would probably place the decision to start development in the September 2025 quarter.

The twin decline would be a major undertaking which the company would struggle to fund from a market capitalisation base around current levels but would be achievable if the market capitalisation increased to around A\$50-100M. In the event the market does not re-rate the share price, Nagambie is likely to continue exploring from surface. At the lower end of that range Nagambie will need to use funding support from interested parties (Governments, traders and mining contractors).

Once the decision was taken to develop the decline, around three months would see the site established and the box cut completed, then underground declining would take between three and six months with a further three to six months of development at the base of the declines, giving a total of nine to 15 months. For the Breakaway financial model, a construction period of 12 months has been assumed.

Once the initial development is concluded, drilling to extend Resources and infill drilling to convert Resources to Reserves would begin in earnest. Once underground, we believe that Reserves sufficient to support the construction of a processing plant for one to two years of operation and have indications of at least a five year life would be achieved in two years or less if the mineralisation continues as currently expected. However, geology is uncertain and the risk is that the exploration success does not continue at depth or along strike, which is why investors like to see sufficient Reserves in advance of large capital decisions.

If the equity was available, Nagambie could start building the processing plant to come on line as early as six months after the decline development, but if the plant is to be funded by debt, a 5 year Reserve will probably be required which would delay the plant construction.

If the prices of antimony and gold remain at current levels, the value of the ore would be sufficient to support direct shipments of ore, which would be a way to fund the drill out.

Direct ore shipments are assumed to be 50ktpa in the first year rising to 100ktpa for two years.

## Costing the initial mine development A\$25-30M (Breakaway estimate)

Mining Plus was contracted to design a decline that could be used for both exploration access and for production. Its design specifically avoids disturbing the sand beds that dominate the region. The planned twin decline is in basement rock from surface to below the sand level. One decline would be for access and intake airway, the other for ventilation exhaust. A costing of this development has not been released.



Source: NAG release 12 April 2023

The decline bottoms 105m below surface so would be 735m long, requiring 1470m of drivage plus the development at the base of 500m to gain access to the C1 and C2 mineralised zones (the red and green drives in the figure above). Development in mineralisation (ie the grey lines) would add another 800m of development.

The total development including initial development in mineralisation on two levels would be around 2800m.

FIGURE 7 GOLD SPEC AND BLUE SPEC PLANNED UNDERGROUND DEVELOPMENT



Source: Calidus Reserve release 4 October 2022

The initial development of Blue Spec appears to be similar in magnitude to the access proposed at Nagambie. The decline from surface to Blue Spec appears to involve twin declines of around 200m each (400m) to the top of Gold Spec the 2200m of decline and 450m of vent rise to access Blue Spec. If initial development in ore is included, the total appears to be around 3500m.

The published capital cost in 2022 for Gold Spec/Blue Spec comprised

- Underground development A\$26M for3500m or A\$7430/m
- Box Cut (yellow in Figure 7) A\$3M
- Accommodation village, access and mine infraftructureA\$5M

Based on the Blue Spec 2022 estimates, the estimated cost of developing the initial mine access at Nagambie would be similar, with mine infrastructure and village possibly costing less because the Nagambie region has accommodation and utilities close to hand.

Overall, Breakaway estimates a cost of A\$30M. This comprises:

• 2800m of development at A\$7500/m (Same as Blue Spec) – A\$21m



- Boxcut (yellow in Figure 6) at top of decline (Same as Blue Spec) A\$3M
- Site infrastructure (Less than Blue Spec because less remote) A\$2M
- Development of mining positions in preparation to start production A\$4M

Of the A\$30M, A\$26M would be spent developing the "exploration" decline, and the remaining A\$4M is for the start of production and cash flow, which by its nature could be a different funding exercise (ie debt).

#### Processing Plant and supporting infrastructure

FIGURE 8 PLANNED LOCATION OF THE GOLDEN CAMEL JOINT VENTURE OXIDE PROCESSING PLANT (RED RECTANGLE)



Source: NAG release 11 October 2021

The cost to Nagambie depends on whether its joint venture partner, Golden Camel, can deliver the proposed plant, and what throughput Golden Camel leaves available.

On 17 September 2024, Nagambie Resources announced that Golden Camel Mining Pty Ltd (GCM), the Manager of the Nagambie Joint Venture (NJV) between GCM (50%) and Nagambie (50%), had advised Nagambie that earthworks to establish the foundations for the Stage 1 treatment plant was to commence that day.

The Stage 1 treatment plant incorporates a 300,000 tonnes per annum carbon-in-leach treatment (oxide) plant and a dry stacked tailings storage facility at the Nagambie Mine. Under the NJV Agreement, GCM will pay 100% of all the construction and commissioning costs for the Stage 1 facilities and Nagambie is free carried. After commissioning, all tolling revenues and operating costs for the plant are to be shared 50:50.

If the joint venture plant is built, Nagambie will still be responsible for building its own flotation plant which would presumably utilise 150ktpa of the joint venture oxide plant for crushing and grinding before passing to the flotation plant.

#### Blue Spec 80ktpa flotation plant cost estimated at A\$24M in 2022

Again, Blue Spec has some costings of relevance. Calidus was proposing to build a sulphide flotation plant adjacent to its existing 2.4Mtpa oxide plant at Warrawoona in the Western Australian Pilbara. The actual capacity was not explicitly stated in the Reserve report of 4 October 2022 but based on the expected mine life and total ore processed appears to be around 80ktpa capacity. It also includes its own crushing and grinding circuit, which avoided the need to batch the Blue Spec ore through the crush and grind on the main plant.

The sulphide plant would use the infrastructure available at Warrawoona. The capital cost of the 80ktpa plant was reported as A\$24M. The cost of the equivalent plant with 150Ktpa capacity would be around A\$35M. If



Nagambie utilised the joint venture plant's crushing and grinding capacity, we would estimate the capital cost would be A\$15M to A\$20M based on Hillgrove expansion costs.

#### Hillgrove is expanding its sulphide plant from 250ktpa to 500-550ktpa for A\$20M

Larvotto plans to expand Hillgrove by adding additional crushing, screening, flotation, regrind and thickener capacity. The additional plant is located withing the footprint of the existing plant, unlike the Blue Spec plant which is close to but separate from the main plant. As a result, Larvotto is adding 250-300ktpa of capacity relatively cheaply.

#### Cost of a sulphide circuit inside the joint venture plant A\$15-20M (Breakaway estimate)

If Nagambie were to build its sulphide plant inside the Joint Venture plant, it would potentially access similar cost benefits. The flotation and regrind capacity of over 250ktpa being added by Larvotto is greater than Nagambie's 150ktpa plan. We estimate the cost to Nagambie would be A\$15-20M if it was integrated into the joint venture plant.

#### Cost of Nagambie going alone on a 150ktpa plant A\$55M (Breakaway estimate)

If Golden Camel does not deliver the 300ktpa oxide plant and related infrastructure, Nagambie could still build the stand alone 150ktpa plant which we estimated would cost A\$35m compared to the 80Ktpa Blue Spec plant costing A\$24M.

We believe there would be additional costs for support services, commissioning working capital, tailings disposal in dry stack and contingency. Estimating these costs without access to the detail of work required is problematic but would probably fall in the range of A\$5M to A\$20M.

The total cost of a stand alone processing plant at Nagambie could be around A\$40-65M, and we have assumed A\$55M in our modelling.

#### **Operating Cost Estimation**

The most direct comparative peer to Nagambie is Mandalay's Costerfield operation. This is the only source of cost information necessary in our view because:

- Costerfield is in production, mining similar narrow vein sub-vertical underground lodes at 150ktpa as proposed for Nagambie, using equipment similar to or smaller than that proposed for Nagambie and is 38km away so in an identical socio-economic setting.
- The information available in the public domain on Costerfield is far more detailed than what is available on any other peer and is based on actual costs rather than feasibility study estimates.

#### TABLE 23 COSTERFIELD ACTUAL OPERATING COSTS AND ESTIMATES USED IN BREAKAWAY FINANCIAL MODEL

	2024 4	3-101	Model		2024	1 Q4
	FS Units	FS Costs	A\$/t	Kt	Est A\$M	Actual A\$M
Jumbo development	A\$/t	238		17.3	4.1	
Stoping	A\$/t	186		24.0	4.5	
Mine Admin	A\$/day	13094			1.2	
Geology - Resource Definition	A\$/day	7597			0.7	
ROM Haulage	A\$/t milled	5		41.3	0.2	
Mining	A\$/t milled	259	300		10.7	
Processing Plant	A\$/t milled	114		35.0	4.0	
Site Services	A\$/day	7068			0.7	
Processing & Site Services		133	110		4.6	
General & Admin	A\$/day	24940			2.3	
Concentrate truck/ship	A\$/t conc	178		1.2	0.2	
Total SG&A		71	80		2.5	
Total Operating Costs	A\$/t ore	463	490		17.8	18.9
Sustaining Development	A\$/t mined	42	42		23.0	

Source: Mandalay Resources Costerfield 43-101 Technical Report 2024 tables 21.2 and Mandalay December 2023 Quarter Management Discussion and Analysis

The table above shows the cost breakdown from the 2024 Reserve 43-101 technical report which was based on actual Q4 2024 costs which is shown in the columns marked "FS Units" and "FS Costs" which should be read together. Those costs have been multiplied by the relevant number of tonnes reported in Q4 2024 or by the days in the quarter to generate A\$M costs. These have been grouped together as Mining. Processing and General Overhead including selling costs.

The resultant numbers derived from the detail appear to be close to the US\$M numbers Mandalay reported in its quarterly financials.

The table above also shows the cost assumptions used in our financial model which are A\$27/t overall higher.

#### Cost of Tailings Disposal

In the Costerfield December 2024 quarter Management Discussion and Analysis, the company noted that it was disposing of tailings in geotubes while waiting for the approval of its new tailings storage facility. Geotubes are an expensive way to store tailings and the company reported an increase in operating costs of A\$29/t largely as a result.

If the reader is unfamiliar with geotubes this reference may be useful:

https://www.geofabrics.co/sites/default/files/2024-07/GEOTUBE\_Dewatering\_for\_mining\_and\_mineral\_processing\_APAC\_1123\_Web%281%29.pdf

The Golden Camel plant proposes to drystack tailings in geotubes (NAG annual report 2024 p24). Larvotto has also decided to use drystack tailings storage (LRV release 17 February 2025) to avoid waiting for New South Wales Government approval for the Tailings Dam proposed in the Preliminary Feasability Study.

Data on the extra cost of drystack compared to conventional wet tailings has been hard to find, but is already included in the Costerfield operating costs, which are the basis of our financial model operating costs.

#### **Cost of Direct Shipping**

The direct shipping of ore from Australia has apparently already started with an unknown source already contracted to deliver ore to US Antimony Corporation in March 2025. The route appears to be from Australia and Thailand to Mexico for concentrating then to USAC's smelter in Montana USA for conversion into antimony products. These contracts were entered into in the second half of 2024, when the prices of antimony and gold were lower than currently.

Bulker bags in 25t 20 foot container	Container Cost US\$	Cost A\$/t	Source
Mining + Site Services		300	
Contract Processing		9	
Truck to Melbourne 159km 50t per truck		18	Truckit.com
Melbourne to Los Angeles	3000		globy.com
Insurance 1.2% of value	1515		cargoloop.com
Truck to Montana 1200 miles at US\$2.44/km	2928		DynamicLogistix.com
Total	7443	464	
Total Cost A\$/t cif		791	
Logistics Costs in US\$/t shipped		310	(ie 7443/25+18*0.63)

#### TABLE 24 ESTIMATED COSTS FOR TRANSPORTING ORE BY CONTAINER FROM VICTORIA TO MONTANA USA

Sources: See last column

At prices of A\$80000/t for antimony and A\$4800/oz for gold, the value of the ore depending on grade would be A\$2678/tonne to A\$4787/t per the table below. This is adjusted for the recovery into concentrate at a toll concentrator. At current prices it would make sense to high grade the mine initially to maximise cash flow during what is likely to be a short period of these prices.

In the Costerfield 2024 43-101 Technical Report, the selling cost was reported as A\$178/t concentrate (Table 23) which would translate to US\$116/t. The cost of shipping and insurance assumed in the table above totals US\$180/t which appears to be conservative against the Costerfield actual, which is the cost of delivering to smelters in China.

#### TABLE 25 ESTIMATED CONTAINED VALUE OF VARIOUS ORE GRADES AT CURRENT SPOT PRICES

	Mined (	Grade	Met. Re	covery			
	Au g/t	Sb %	Au	Sb	Au A\$/t	Sb A\$/t	Total A\$/t
					US\$3000	US\$32500	
Prices Assumed					/oz	/t	
Resource 15/11/24	3.35	3.86%	93%	95%	462	1834	2296
Antimony Grade +10%	3.35	4.25%	93%	95%	462	2018.75	2481
C1 East Resource	3.2	5.60%	93%	95%	442	2660	3102

Source: Tables 30 and 20

Potential ore buyers include US Antimony Corporation. There are likely to be others. We note that Oman has smelting facilities with a capacity to produce 20ktpa of antimony but shut in early 2024 and we have not seen a reopening announcement. The reason for closure was not publicised but appears to be initial plant



underperformance in a period of low antimony prices and insufficient capital resources. It may also have been lack of feed. New sources of ore and much higher antimony prices could reboot Oman and make it a destination for ore sales.

## Splitting the margin between miner and smelter for Direct Shipping Ore

US Antimony Corp's 2024 10K report page 71 noted that its Montana facility purchases ore primarily from one supplier located in Canada. In February 2025, the Company renewed its annual contract with this supplier for calendar year 2025, which had similar terms and conditions as the prior contract other than as follows

- larger quantities of ore supply for fiscal year 2025 were projected,
- pricing terms were amended to include tiered pricing based on ore supply volume, and
- immediate termination or suspension of the contract by either party was included should the cost of any tariff, import duty, or other similar charge make this arrangement uneconomical.

The last clause would be a nod to the Trump Administration Canadian import duties.

The split of value between the miner and the smelter has traditionally 68% for the miner. In practice there can be penalties for impurities like arsenic which reduce the net payable to the miner. Costerfield appears to operate on a payability of 64% (refer Table 21).

The US Antimony Corp accounts for the 2024 year show an antimony revenue of US\$11.1M and a gross margin of US\$3.58M or a margin of 32.5%, suggesting the standard smelting terms are being applied. The payment terms would have to include a charge for concentrating, and that may be why USAC's new contract with the Canadian supplied changes with volume.

We assume the concentrator charge is similar to the cost of a 150ktpa concentrator in Australia.

## FINANCIAL STATEMENTS

The financial statements presented below relate to the Direct Shipping Ore from 50% of the current Resource, because we believe this will be the first stage of the mine's development that investors will be asked to finance.

PROFIT & LOSS	Jun-24	Jun-25	Jun-26	Jun-27	Jun-28	Jun-29	Jun-30
Revenue	0.3	0.4	0.3	40.0	99.5	99.5	29.5
Operating Costs	0.0	0.0	0.0	-13.1	-32.7	-32.7	-9.7
Corporate OH	-1.4	-1.4	-3.0	-4.0	-7.0	-7.0	-7.0
Exploration	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Costs	-1.4	-1.4	-3.0	-17.1	-39.7	-39.7	-16.7
EBITDA	-1.2	-1.0	-2.8	22.9	59.8	59.8	12.9
D&A	-0.3	-0.1	0.0	-9.6	-23.9	-23.9	-7.1
EBIT	-1.5	-1.1	-2.8	13.3	35.8	35.8	5.8
Interest Costs	-1.3	-0.6	-0.5	-1.1	-2.1	-1.8	-1.0
РВТ	-2.8	-1.7	-3.3	12.2	33.8	34.1	4.8
Tax Expense	0.0	0.0	0.0	0.0	-6.4	-10.2	-1.5
NPAT	-2.8	-1.7	-3.3	12.2	27.4	23.9	3.4
Dividend \$M	0.0	0.0	0.0	0.0	5.5	14.3	2.0
Franking	0.0	0.0	1.0	1.0	1.0	1.0	1.0
Payout Ratio	0.0	0.0	0.0	0.0	0.2	0.6	0.6
Shares on Issue	796.6	803.3	1603.3	1603.3	1603.3	1603.3	1603.3
Diluted Shares on Issue	941.3	891.8	1691.8	1691.8	1691.8	1691.8	1691.8

TABLE 26 DIRECT SHIPPING ORE FROM 50% OF CURRENT RESOURCE -PROJIT AND LOSS

Source: Breakaway estimates

## TABLE 27 DIRECT SHIPPING ORE FROM 50% OF CURRENT RESOURCE - CASH FLOW

CASH FLOW	Jun-24	Jun-25	Jun-26	Jun-27	Jun-28	Jun-29	Jun-30
<b>Receipts From Customers</b>	0.2	0.5	0.3	39.2	98.4	99.5	30.9
Payments to Suppliers	-1.3	0.6	-3.5	-17.1	-41.5	-40.4	-14.8
Cash Flow from Operations	-1.0	1.1	-3.3	22.1	56.9	59.1	16.0
Interest Received	0.0	0.0	0.0	0.0	0.2	0.7	0.8
Financing Costs	-0.9	-0.6	-0.5	-1.1	-2.3	-2.4	-1.7
Taxes Paid	0.0	0.0	0.0	0.0	0.0	-6.4	-10.2
Net Cash from Operations	-1.9	0.5	-3.8	21.0	54.8	51.0	4.8
PP&E	0.0	0.0	-31.0	-12.0	-8.0	0.0	0.0
Mine Development	0.0	0.0	0.0	0.0	0.0	-7.0	-1.0
Investing Activity	-1.1	-0.3	-31.0	-12.0	-8.0	-7.0	-1.0
Issue of Equity	1.1	0.0	40.0	0.0	0.0	0.0	0.0
Forward Contracts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividends	0.0	0.0	0.0	0.0	0.0	-5.5	-14.3
Net Borrowings	1.2	0.9	-2.4	12.0	8.0	-5.8	-5.8
Financing Costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financing Activity	2.3	0.9	37.6	12.0	8.0	-11.3	-20.1
FX Difference	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Increase in Cash	-0.7	1.1	2.8	21.0	54.8	32.7	-16.3
YE Cash on Hand	0.4	1.5	4.4	25.4	80.2	112.9	96.7

Source: Breakaway estimates

### TABLE 28 DIRECT SHIPPING ORE FROM 50% OF CURRENT RESOURCE - BALANCE SHEET

BALANCE SHEET	Jun-24	Jun-25	Jun-26	Jun-27	Jun-28	Jun-29	Jun-30
Cash	0.4	1.5	4.4	25.4	80.2	112.9	96.7
Receivables	0.0	0.0	0.0	0.8	1.9	1.9	0.6
Inventories	0.0	0.0	0.5	3.0	7.1	7.1	3.0
Prepaid Costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Current Tax Assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Current Assets	0.5	1.6	4.9	29.2	89.2	121.9	100.2
Financial Assets	0.8	0.8	0.8	0.8	0.8	0.8	0.8
PP&E	1.3	1.2	32.2	34.6	18.7	-5.2	-12.3
Expln & Mine Devt	20.8	21.3	21.3	21.3	21.3	28.3	29.3
Deferred Tax Asset	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Non Current Assets	22.9	23.3	54.3	56.7	40.8	23.9	17.8
Total Assets	23.4	24.9	59.2	85.9	130.0	145.8	118.0
Trade Payables	0.5	1.2	0.9	3.2	5.2	4.4	1.8
Prepaid Revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Borrowings	4.6	5.5	3.1	15.1	23.1	17.3	11.6
Current Tax Liabilities	0.0	0.0	0.0	0.0	6.4	10.2	1.5
Deferred Tax Liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Provisions	2.9	4.3	4.5	4.7	10.4	19.5	7.5
Total Liabilities	8.0	11.0	8.6	23.1	45.2	51.5	22.3
Net Assets	15.4	13.9	50.6	62.9	84.8	94.3	95.7
Issued Capital	38.3	38.3	78.3	78.3	78.3	78.3	78.3
Reserves	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Retained Profits	-27.0	-28.7	-31.9	-19.7	2.2	11.8	13.1
Shareholder Equity	15.4	13.6	50.4	62.6	84.5	94.1	95.4

Source: Breakaway estimates

## Location

Fosterville Gold Mine Revolution Fosterville Gold Mine Revolution Fosterville Gold Mine Revolution Revolutio

FIGURE 9 NAGAMBIE LOCATED IN A MINING DISTRICT WITH TWO MAJOR OPERATIONS WITHIN 70KM

Source: NAG release 31 January 2025

The Nagambie Mining Licence is 159km by road to the Port of Melbourne, a two hour drive by vehicle. There is grid power to the mine site and a number of towns in the region that could supply and house a mine workforce.

There are mines close by with the 150ktpa Costerfield gold antimony mine and the high grade 200ktpa Fosterville gold mine within 65km.



FIGURE 10 NAGAMBIE'S NEIGHBOURS IN 2020

Source: NAG release 27 February 2020



## Tenure

## **Mineral Tenements**

The company owns 100% of all its tenements and there are no options or farm ins related to the minerals. The existing Resource is contained in the mining licence MIN 5412 which is next up for renewal on 24 January 2031.

Nagambie owns the land on which MIN 5412 is located and has options over additional land around the mining licence.

Tener	nent Number	Tenement Name	Sq Km
MIN	5412	Nagambie Mining Licence	3.5
EL	7205	Angustown Exploration Licence	49.0
EL	5430	Bunganail Exploration Licence	160.0
EL	7208	Cullens Road Exploration Licence	29.0
EL	7209	Goulburn West Exploration Licence	34.0
EL	7237	Kirwans North 1 Exploration Licence	20.0
EL	7238	Kirwans North 2 Exploration Licence	9.0
EL	7210	Locksley Exploration Licence	26.0
EL	6352	Miepoll Exploration Licence	342.0
EL	5511	Nagambie Central Exploration Licence	21.0
EL	6508	Tabilk Exploration Licence	33.0
EL	6877	Nagambie Exploration Licence	8.0
EL	6937	Nagambie East Exploration Licence	2.0
EL	7264	Resource Recovery Exploration Licence	1.0
EL	7265	Nagambie Town Exploration Licence	8.0
EL	7690	Nagambie South Exploration Licence	4.0
EL	6212	Reedy Lake Exploration Licence	17.0
EL	6158	Rushworth Exploration Licence	46.0
EL	6748	Waranga Exploration Licence	102.0
Total	·		914.5

#### **TABLE 29 NAGAMBIE'S SCHEDULE OF TENEMENTS**

Source: NAG December 2024 quarterly activities statement

#### Buying the surrounding farms

In FY2021 the company made a strategic acquisition of a 565 acres farm immediately to the south of the mine. Settlement has been deferred by agreement with the vendor, the balance due on or before the 15 October 2025 will be \$1,693,488. The land as an asset and the balance due at settlement as a liability have not been brought to account since control and the title will not pass until settlement.

## **Golden Camel Joint Venture**

Nagambie Resources Limited and Golden Camel Mining Proprietary Limited have established a joint venture to construct a 300,000 tonne per annum oxide-gold treatment plant at the Nagambie Mine. Golden Camel Mining Proprietary Limited is fully funding the construction, and tolling revenue and operational costs will be shared equally post-commissioning.

On 17 September 2024, Nagambie announced the commencement of earthworks for the Stage One treatment plant, which includes a carbon-in-leach facility and dry-stacked tailings storage. Nagambie is free carried in the construction costs.

If Golden Camel delivers the oxide plant, Nagambie would have access to 150,000 tpa of processing capacity for its project at no cost. It would have to build its own flotation plant to remove the antimony bearing sulphides, and the tailings from the flotation circuit would be probably returned to the oxide plant for leaching.

#### Principal terms of the 50:50 JVA announced on 11 October 2021 include:

For the initial treatment plant with a nominal capacity of 180,000tpa (now 300,000tpa) Golden Camel will pay for all the procurement, construction and commissioning costs and pay for the first fill of all consumables. Golden Camel will also pay for the upgrade of associated site infrastructure such as the main mine entry, power supply and internal haul roads.

Once steady state ore throughput and gold recovery has been achieved, all toll treatment revenues, operating costs, rehabilitation costs and sustaining capital will be shared 50:50 by Nagambie and Golden Camel.

All future plant expansions and gold recovery improvements will be paid for 50:50 by NRL and Golden Camel.

Golden Camel will be the Manager of the JV with Nagambie and Golden Camel being equally represented on the JV Committee. All JV Committee decisions will be unanimous and there will be no fee payable to the Manager.

The initial ore will be trucked from the Golden Camel Mine;

Toll treatment charges for third parties providing ore to the plant will be approved by the JV Committee based on recommendations from the Manager.

If Nagambie proceeds to recover residual gold from the historic Nagambie Mine Heap Leach Pad using bacterial solutions, the JV will periodically treat the pregnant solution and pour gold bars to Nagambie's account.

## Geology

At Nagambie, the Devonian basement comprises marine sediments, comprising fine grained mudstones/siltstones with minor sandstone, and is generally covered by Murray Basin sediments, which are highly prized as a source of potable water and therefore environmentally sensitive. Nagambie is planning to mine with no disturbance to the aquifer.

The basement strata 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.

The basement was further subjected to 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.

The antimony rich orebodies appear in the N to S structures while the E to W structures have less antimony and more gold. The gold exploration drilling has traditionally been north to south and the big change in Nagambie's fortunes started when the drilling was switched to East – West and the high-grade antimony was picked up.

## **Resource Position**

TABLE 30 NAGAMBIE 2024 RESOURCE STATEMENTS (MAIDEN RESOURCE REPORTED IN MAY AND NOVEMBER UPDATE)

Vein Domain	Tonnes	AuEq (g/t)	AuEq (oz)	Au (g/t)	Au (oz)	Sb (%)	Sb (t)	BD
	024 JORC Infer							
C1 East	39,452	25.3	32,111	3.2	4,092	5.6	2,212	2.84
C1 Center	50,838	17.8	29,098	3.5	5,792	3.6	1,840	2.81
C1 West	103,307	21.9	72,635	2.2	7,300	5.0	5,158	2.81
Subtotal	193,597	21.5	133,845	2.8	17,184	4.8	9,210	2.81
C2 East	47,687	13.9	21,302	2.9	4,430	2.8	1,332	2.78
C2 West	148,547	19.0	90,763	4.1	19,366	3.8	5,636	2.80
Subtotal	196,234	17.8	112,065	3.8	23,796	3.6	6,968	2.80
C3 East	13,633	29.6	12,971	0.9	391	7.3	993	2.86
C3 West	26,291	7.8	6,565	1.7	1,442	1.5	404	2.76
Subtotal	39,924	15.2	19,536	1.4	1,833	3.5	1,398	2.80
N1	109,025	16.0	56,250	4.3	15,200	3.0	3,241	2.79
Total	538,779	18.6	321,696	3.3	58,013	3.9	20,816	2.80
May 2024 m	aiden JORC Inf	erred Resou	urce by Veir	n Domain				
C1 East	27,144	17.2	14,974	3.9	3,445	7.2	1,941	2.87
C1 Center	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
Subtotal	147,702	13.2	62,548	2.8	13,238	5.6	8,328	2.83
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
Subtotal	174,850	10.6	59,626	3.7	21,044	3.7	6,522	2.80
C3 East	757	17.0	1,192	0.8	53	8.8	192	2.89
N1	91,835	10.2	30,006	4.6	13,456	3.0	2,798	2.79
Total	415,144	11.5	153,372	3.6	47,791	4.3	17,840	2.80

Source: NAG release 15 November 2024

#### **Gold Equivalent calculation**

The following describes how Nagambie calculated gold equivalence for its November 2024 Resource. The same factor has been used to convert all the other companies' Resources on the same basis.

Gold equivalent (AuEq) assays are calculated as: AuEq g/t = Au g/t + (Sb% x AuEq Factor)

The AuEq Factor is calculated by comparing the relative value of 1.0% Sb in-the-ground to 1.0 g/t Au in-the ground and is calculated as:

AuEq factor = [A\$/tonne Sb price x 0.01 x % Sb treatment plant recovery] / [A\$/ounce Au price / 31.10348 grams per ounce x % Au treatment plant recovery]

For this report all companies' resources have been converted at the same factor, which was calculated by Nagambie on the 31 October 2024 market prices of A\$52,856/t for Sb and A\$4,167/ounce for Au, the AuEq Factor equation becomes:

AuEq factor = [A\$52,856 x 0.01 x 0.93] / [A\$4,167 / 31.10348 grams per ounce x 0.93] = [A\$491.56] / [A\$124.59] = 3.94

## 2000oz Gold Equivalent per vertical metre translates to A\$10M value per vertical metre

The figure below shows the distribution of the mineralisation over depth. The Resource is very shallow starting at 80m below surface and a maximum depth limited by drilling of 280m. The lateral extent of the deposit is small at 350m strike so this is a compact high value deposit which should lend itself to efficient mining.

Our financial model costs are based on Costerfield which is operating at 1000m below surface and over a much more extended strike. Nagambie intend to use larger drives and larger more productive mining equipment which should also result in lower costs than our model assumes.

## FIGURE 11 VERTICAL GOLD/ANTIMONY DISTRIBUTION AT NAGAMBIE



### Source: NAG release 15 November 2024

## The distribution of gold in the Resource has been determined "Non Nuggetty"

In layman's terms, this is important because it means that the grade of the gold is sufficiently consistent to allow an Inferred Resource to be declared on a drill spacing on 50m by 50m. Nuggetty or highly variable gold orebodies would require much denser drilling and at higher cost.

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.

## **Resource lodes spatially compact**

#### FIGURE 12 NAGAMBIE LODES IN PLAN VIEW UNDER THE OLD WEST PIT



Source: NAG release 15 November 2024



## The Resource comprises a number of lodes

The Inferred Resource estimation has modelled lode systems for the updated JORC Inferred Resources – 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 are vein domains within the C1 lode system.

The arrangement of the lodes is shown in the plan view (Figure 12).

The C lodes strike in the North – South orientation and contain the high grde antimony gold mineralisation, while the N lodes are East-West striking and as a generalisation would be richer in gold and poorer in antimony. However, the known N1 lode Resource is similar in grade to a number of the currently known C lodes.

The N lodes were not specifically targeted. 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 subvertically 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.

#### More N structures expected

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

#### The NMT lode position represents immediate upside potential

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.



#### FIGURE 13 C1 EAST AND C1 CENTRAL SHOWN IN THE PLANE OF THE LODE

Source: NAG release 15 November 2024



#### Minimum mining width of 1.2m used

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.

### FIGURE 14 C1 WEST AND C2 WEST SHOWN IN PLANE OF THE LODE



Source: NAG release 15 November 2024

FIGURE 15C2 EAST AND C3 EAST AND WEST SHOWN IN PLANE OF THE LODE



Source: NAG release 15 November 2024

#### Basis of Resource estimate

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

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.

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 ( $ID^2$ ) influence.  $ID^2$  was considered the most appropriate influence calculation for the maiden and updated Nagambie JORC Inferred Resources as there was not sufficient close-spaced data to carry out any detailed continuity analysis (variography) – required for alternative estimation methods such as kriging.

Lower and upper cut-off grades of 4.0 g/t AuEq and 100.0 g/t AuEq respectively were applied.



FIGURE 16 N1 LODE SHOWN ON PLANE OF THE LODE

Source: NAG release 15 November 2024

## Mining and Metallurgy likely to be similar to Costerfield

## Metallurgy

Nagambie considers that both gold and antimony will be economically recoverable at the Nagambie Mine. As at the Costerfield Mine, 38 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. 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.

### Mining

The most appropriate and efficient mining method for its sub-vertical narrow veins is likely to be 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

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 and equipment access, plus ventilation requirements.

Below that first major level, a single decline could be developed for man and equipment access while vertical raise bored 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 (Figure 6). 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).

## OTHER COMPANY ASSETS AND INCOME SOURCES

No value has been ascribed to the following assets in the valuation of Nagambie. This is conservative and these assets represent upside. This upside could materialise as an exploration discovery, or as an asset sale that reduces the requirement for future share issuance.

## **Other Exploration Targets**

Nagambie Resources has two key exploration targets outside the Nagambie project. All these properties are 100% Nagambie ownership and are located within 30km of the Nagambie Project, so any discovery here could be combined with a development at Nagambie.

- Whroo
- Wandean

The Whroo target is located in the Waranga Domain and includes the Balaclava Mine. Along strike is the White Hills target which includes the historic Doctors Gully mine.

These northern mines are located in a roughly-east-west trend of several Whroo anticlines and thrust faults. The northern Balaclava and Doctors Gully Thrust Faults relate to the east-west-striking Nagambie Mine, Racecourse, Wandean and Wandean North Thrust Faults to the south.

Historical drilling has located antimony at depth (Figure 18).

The Wandean Crustal Fault is the likely mineralising pathway for the company's Nagambie Mine, and the Wandean prospect is likely to receive some drilling attention in the future.

## FIGURE 17 LOCATION OF WANDEAN AND WHROO (BALACLAVA HILL) EXPLORTION TARGETS



Source: NAG release 27 February 202

FIGURE 18 HISTORICAL DRILLING AT WHROO SHOWING SIGNIFICANT ANTIMONY INTERSECTIONS AT DEPTH



Source NAG release 10 February 2025

## **Department of Defence Rental Income**

In FY24, Nagambie reported A\$211,870 of rental income from farming and the Department of Defence. Most of this income is related to the Australian Department of Defence using the east end of the East Pit for underwater explosives testing. The first payment of A\$37,500/quarter plus GST was made on 1 October 2014. We also understand that the payment is indexed to the CPI and has a term of 20 years (NAG 2015 annual report).



## Royalty on sale of aggregate

Nagambie receives royalty payments from a contractor who is mining the historic waste dumps for aggregate used in concrete. Nagambie originally expected and annual income of A\$300,000 to A\$500,000 per year, but production has been highly seasonal and in the last five years, annual receipts have fluctuated between A\$15,000 and A\$44,000.

### **PASS Storage**

Nagambie Resources has an Environment Protection Authority of Victoria (EPA)-A18 Permit to store Waste Acid Sulphate Soil (WASS) in the legacy water-filled pits at the Nagambie Mine as part of the proposed rehabilitation of those pits. The water in the Nagambie Mine open pits is naturally saline and alkaline, making it ideal for WASS management.

The potential scale of the Nagambie WASS Project is illustrated below (per NAG release of 21 June 2021:

- Total Capacity to Store WASS Under Water: 6.2 million tonnes
- Potential Storage per Year: 1 million tonnes

The tunnel boring contractor in Melbourne is currently using sites closer to Melbourne which we understand is appropriate as long as there are no sustained periods of wet weather. If the weather were to change, alternatives to Nagambie might be limited and the company would have some additional income for the period of wet weather.

## ANTIMONY COMMODITY REVIEW

## Antimony Price Outlook

The current extraordinarily high antimony price is more than sufficient to attract new supply into the market, so while the price may go higher in the short term, the two key questions the investor would ask are:

- How long are prices likely to stay at these elevated levels?
- When prices fall what is the likely long term price likely to be?

## Elevated prices likely to last four years from the start a year ago

## FIGURE 19 RECENT ANTIMONY METAL PRICE HISTORY – THE PRICE SURGE IS CURRENTLY AROUND A YEAR OLD



#### Source: Argus

The antimony market is one year into the price cycle, and even the fastest shovel ready projects will take another six to twelve months of Feasibility study and permitting, followed by one to two years of development. In the meantime, prices are likely to go higher but could be very volatile, driven by phases of specific consumer panic buying driving prices higher, followed by price falls as emergency supplied are located and the panic subsides.

The chart above shows the Chinese export price, and the price landed in the USA. The Chinese price has detached from the market price because of the export ban in place since September 2024 and is of little relevance in determining the price of antimony today. The upcycle started in q1 2024.

The chart below shows the long-term antimony price history in US dollars in blue and production in orange. The chart starts in 1913 and ends in 2020. During that time there have been a number of price spikes:

- 1914-1918 Demand driven by World War 1 and lasted four years
- 1939-1944 Demand driven by World War 11 and lasted 5 years
- 1950-1953 Korean War three years
- 1970 then 1974-1978 Flame regulations for apparel five years
  - 1993-1997 Commodity Supercycle on emerging economy demand four years
- 2022-2016 Grenfell Tower fire disaster and fire retardant regulations 14 years?

#### FIGURE 20 LONG TERM ANTIMONY PRODUCTION (TONNES) AND PRICE IN 1983 US\$/TONNE



### Source: Resilience https://www.sciencedirect.com/science/article/pii/S0921344922004219

Most of the events were wars and demand eased as soon as the wars ended. Currently there are wars in Ukraine Myanmar and Gaza but these are probably secondary drivers compared to the withdrawal of Chinese supply from the global market. That said, an outbreak of peace would probably ease price tensions sufficient to create some downward volatility.

#### Supply Demand balance suggests that 45ktpa to 73ktpa of new supply is required

The supply demand picture fits the four years of high prices scenario. The non Chinese world starts with a deficit due to China's departure from the market. There are also signs of new sources of demand for antimony, if reliable supply was available, on top of ongoing growth of existing usage.

Since 2016, antimony prices have been falling suggesting the production growth from 145ktpa to 174ktpa may have been surplus to requirements. Since then, production is estimated to have fallen to 100ktpa and we are experiencing a shortage. The shortage was in evidence before the Chinese export restrictions from September 2024, and the restrictions made the situation worse.

On this simplistic analysis, it appears that the market may be short 45ktpa plus demand growth since 2016 ie nine years ago. At a modest 2% pa that would be total demand of 173ktpa or a shortage of 73kt. If the shortfall is somewhere between these two numbers, it will require a substantial mine building effort to balance the market.

Individual mines typically produce less that 5000tpa of antimony, so the world will need over ten typical mines to get to the low end of the range.

## TABLE 31 MINE PRODUCTION OF ANTIMONY BY COUNTRY 2013-2018

	2013	2014	2015	2016	2017	2018
China	152104	140389	120732	107535	101000	95286
Russia	6520	6400	7420	6620	6120	30828
Tajikstan	7307	7000	6800	12700	12600	28881
Turkey	4512	3013	1917	2700	4750	3570
Iran	400	432	1020	1765	1800	2551
Australia	3062	3680	3926	5004	4294	2866
Myanmar	7000	4234	5777	2700	3000	5400
South Africa	2332	816	400	0	0	0
Other	9763	9036	8008	5976	5436	4618
World	193000	175000	156000	145000	139000	174000
World per USGS	193000	175000	150000	148000	144000	147000

Source: Mainly British Geological Service, with last line from US Geological Survey

TABLE 32 MINE PRODUCTION OF ANTIMONY BY COUNTRY FROM 2019 TO 2024

	2019	2020	2021	2022	2023	2024
China	60229	60995	42622	39000		
Russia	21671	17532	9000	11000		
Tajikstan	29898	24000	24000	24000		
Turkey	3810	2570	4210	10692		
Iran	5264	5006	5000	5000		
Australia	2170	3903	3380	2290		
Myanmar	5000	3800	2300	3000		
South Africa	0	0	0	0		
Other	3958	3194	4488	5018		
World	132000	121000	95000	100000		
World per USGS	162000	110000	110000	83100	106000	100000

Source: Mainly British Geological Service, with last line from US Geological Survey

The bulk of the fall in capacity is in China and Russia. China is now absent. Russia is embargoed and appears to be prioritising gold production over antimony possibly for national priorities.

#### TABLE 33 KNOWN POTENTIAL SOURCES OF NEW MINE SUPPLY

YE December	2024	2025	2026	2027	2028	2029	2030
USAC	662	827	1027	1227	1427		
Hillgrove	0	0	0	100	5800	5800	5800
Costerfield		1100	1800	2400	2400	1500	1000
Nagambie					1608	3537	3858
Stibnite					3737	13078	11320
Golden Camel							
Blue Spec							
Increase from 2024	0	1265	2165	3065	14311	23258	21316

Source: USAC December 2024 MDA, Hillgrove PFS, Mandalay 2024 43-101, Stibnite 2021 43-101, Breakaway estimates

The projects with published numbers we can find eventually total 23ktpa by 2029 which would help ease the shortage, but if the deficit is over 45ktpa, there will still be a shortage.

Turkey is one of the major global suppliers of antimony having added 6000tpa of capacity in 2022. The companies are not particularly forthcoming with their future volumes but would surely have potential to expand by another 6000-12000tpa.

## Scrap could be a source of supply

There are likely to be other sources of supply. For instance, antimony is used in lead acid batteries at between 0.5% and 2.5% of the battery's weight depending on application. Lead batteries are part of the most efficient recycling chain in modern industry.

As shown in the table above, at 0.5% antimony in battery lead amounts to over 40,000tpa of antimony that is recycled every year.

## TABLE 34 LEAD SUPPY DEMAND AND RECYCLED LEAD AS A SOURCE OF ANTIMONY

2020	2021	2022	2023	2024
4437	4552	4433	4469	4555
8108	8448	8347	8772	8458
12545	13000	12780	13241	13013
12392	12956	12964	13088	12977
41	42	42	44	42
	8108 12545 12392	8108         8448           12545         13000           12392         12956           41         42	8108         8448         8347           12545         13000         12780           12392         12956         12964           41         42         42	8108         8448         8347         8772           12545         13000         12780         13241           12392         12956         12964         13088           41         42         42         44

Source: International Lead Study Group, Breakaway estimates

It would be possible that the companies scrapping batteries separate the antimony from the lead and the new battery makers substitute other metals for antimony. We have used lower antimony concentration because the batteries that still have 2.5% probably have not been able to substitute otherwise that would have done so already and that metal is probably unavailable at almost any price.

Of the 40ktpa of antimony circulating, we estimate that the current prices would incentivise refiners to pull out 8-10ktpa adding to supply in premium applications, while leading to demand destruction in the battery sector.

All up, it is possible that 45ktpa of additional supply could materialise by 2029, and if peace was achieved in Ukraine by then that might be the end of elevated levels of antimony pricing, but it is more likely that demand growth will maintain pressure for more supply.

## Prices likely to settle at US\$25000/t longer term

The long run price floor evident in Figure 19 of US\$12000/t has been the floor price since around 2010 and represents the lowest we would expect the price to go if the market returned to oversupply and China resumed supply to the rest of the world.

In the absence of Chinese supply, the non-Chinese cost curve becomes relevant. However, at current gold price levels of US\$3000/oz, all the new supply including Nagambie are likely to have a negative cost of antimony production measured on an All In Sustaining Cost basis, so the straight cost curve analysis provides no basis for price setting.

Because antimony is such a small global market, we do not expect any of the established mining companies get involved. Specifically, the mining majors like commodities with steep cost curves and they like owning mines in the lowest cost quartile. That is not possible in antimony, hence their lack of interest.

In general, the non-Chinese mining industry will continue to develop gold mines, silver mines and base metal mines on the fundamentals of those commodities and if they happen to contain antimony, that will be a nice bonus. We believe that the bulk of the exploration dollars that will be spent looking specifically for antimony will be at the micro-capitalisation end of the market, which means the spend will be relatively small, and the discoveries relatively modest.

Our selection of US\$25000/tonne long term antimony price is arbitrary, but it is our estimate of what a microcap company would need to stimulate the equity market sufficiently to generate the exploration dollars and to support mine construction.

## Overview of the global antimony trade

As a general overview of the antimony industry, we recommend the white paper produced by US listed Perpetua Resources. <u>https://perpetuaresources.com/wp-content/uploads/Antimony-White-Paper.pdf</u>

China's dominance in antimony, as for lithium and rare earths, is in the processing midstream, where the concentrate from mines is converted into the precursor materials for industrial use such as metal, antimony trioxide and high purity antimony sulphide.

If the West wants to be independent of China, it will have to redirect existing non Chinese production away from being processed in China, and well as sponsoring new mines.

#### FIGURE 21 TRADE FLOWS OF CONTAINED ANTIMONY IN ORE AND CONCENTRATE IN 2018



Source: Mandalay Resources Costerfield 2023 43-101 Technical Report Fig 19.3 quoting Roskill 2019. Note that the country of origin in where the various shades areas are close to the outer ring, and the destination country is where the shading is further from the ring.

The figure above shows the flows from mine to smelter in the form of concentrates, with the flow starting from the closest to the shaded flow area, and goes to the smelting country where the flow is more distant.

The figure below shows the flow based on US dollar value of high purity precursor products from smelter countries to end consumers. It does not show trade flows. For instance, most of the Tajik production is destined for China and now the flow from China is likely to be very small following the export ban in September 2024.



#### FIGURE 22 MAJOR EXPORTERS AND IMPORTERS OF ANTIMONY (IN METAL, OXIDE AND HIGH PURITY SULPHIDE FORMS)

Exporters of Antimony (2022 - 2023)

#### Importers of Antimony (2022 - 2023)

Source: https://oec.world/en/profile/hs/antimony

## Substitution

Substitution of antimony in lead-acid batteries is possible while retaining performance, with combinations of calcium, copper, selenium, sulphur, and tin as substitutes for alloys in lead-acid batteries. In other antimony products such as antimony chemicals in enamels, paint and pigments, there are also possibilities for substitution with chromium, tin, titanium, zinc, and zirconium (USGS, 2020).

However, for some applications, including flame retardants, substitution can have undesirable consequences, such as weakening of the polymer, therefore antimony is still considered to have superior performance. According to a manufacturing company quoted by the USGS, the development of viable substitutes in flame retardants can take ten or more years.

Overall, in 2018 there was potential for substituting 35% of the antimony uses, including lead-acid batteries 20% and certain antimony chemicals 15%. This proportion is probably unchanged in 2025.

Substitution comes at a cost which is difficult to quantify but once the change from antimony to a substitute has occurred, there can be a cost to return to antimony when prices drop, so there can be a barrier to the demand recovery once the shortage is over.

## Analysis of resilience in the antimony market

### FIGURE 23 STURCTURE OF THE GLOBAL ANTIMONY MARKET IN 2018 WITH A FOCUS ON SUPPLY RESILIENCE



Source: Resilience in the antimony supply chain van den Brink et al https://www.sciencedirect.com/science/article/pii/S0921344922004219

The conclusion of the resilience study was that antimony resilience was very weak in 2018. In our view since then it has weakened further. It will be strengthened by the arrival of new mines, and generation of antimony from lead acid batteries, but scale of the mine build is in excess of the apparent inventory of known deposits (refer Table 33) and exploration to find new projects will take time.

The study quoted below suggests that stockpiling is required to provide the level of resilience in supply required by industry, particularly when committing to to new applications with potentially large antimony offtake requirements.

If a global multi-year stockpiling program is added to the likely underlying demand, it will be very hard for the mine build to catch up.

## **Capital Structure**

TABLE 35 CAPITAL STRUCTURE AT 20 JANUARY 2025

		Million	Exercise A\$/sh	Cash Raised
Ordinary Shares		803.302		
Options				
26-A	pr-25	56.193	0.098	5.513
1-D	ec-25	14.150	0.098	1.388
26-N	ov-26	14.650	0.111	1.62
25-N	ov-27	17.650	0.099	1.74
4-D	ec-28	22.650	0.098	2.222
28-N	ov-29	19.400	0.100	1.94
		144.693		14.42
Convertible Notes		Million	Face Value A\$/sh	Face Value A\$M
Series 9 (matures on 13 April 2026)		23.750	0.100	2.38
Series 10 (matures on 20 July 2027)		7.325	0.080	0.59
		31.075		2.96
Diluted Capital		979.071		14.42
Diluted Capital if Notes convert at A\$0.018	3/sh	967.802		0.00
Source: NAG 2024 annual report and NAG release	arv 2025			

Source: NAG 2024 annual report and NAG release 20 January 2025

The convertible notes count as debt but the history of the notes from series one to eight has been that they are paid out by cash or more usually by converting to ordinary shares at close to the prevailing market share price at the time of conversion.

In the table above the impact on diluted capital is shown if the notes are converted one for one as stated in the note prospectus and also at market (A\$0.018/sh). The Diluted Capital is less in the case of the lower conversion because at that price none of the options would be exercised.

Each series of Convertible Note has the following terms:

- Interest is payable at 10% per annum every six months after the issue date;
- Convertible on a 1 for 1 basis into ordinary shares in the company at any time prior to the maturity date at the option of the note holder;
- Redeemable for cash in full after 5 years, if not converted;
- Unsecured but rank ahead of shareholders; and
- Protected for reorganisation events such as bonus issues and share consolidations.

## Debt

The Company announced on 6 March 2025 that it, and its wholly owned subsidiaries, have entered into an increased loan facility agreement with PPT Nominees Pty Ltd under which Nagambie can draw down up to \$3.0 million (previously \$2.0 million) from PPT. At 31 December 2024, Nagambie had drawn A\$1.7M against this facility, leaving unused credit of A\$1.3M.

The key terms of the Facility are:

- Principal \$3,000,000.
- Facility Fee \$30,000 Availability Period To 13 September 2025, subject to potential extension at the discretion of PPT.
- Drawdowns Minimum of \$100,000; and maximum of \$500,000 per month
- Repayment Date: The earlier of 24 months from the date of the Facility, or an event of default occurring, or earlier at the Company's election without penalty
- Interest 10% per annum on the outstanding amount drawn down, repayable each quarter in arrears.
- Security The Company and its subsidiaries have granted security over their assets and undertakings in favour of PPT pursuant to a general security deed Guarantees Provided by the subsidiaries in respect of the Company's obligations under the Facility Repayments.

 The Company may make repayments at any time to reduce the outstanding amount drawn down without penalty.

	Jun-25	Sep-25	Dec-25	Mar-26	Jun-26	Sep-26
Period End Balances						
Convertible Notes	3.0	3.0	3.0	3.0	0.6	0.6
PPT Debt	2.5	3.0	3.0	3.0	3.0	0.0
Working Capital Facility		0.0	0.0	0.0	0.0	10.0
Total	5.5	6.0	6.0	3.6	3.6	10.6
Movement in Debt						
PPT Debt drawn		3.5				-3.0
PPT Debt repaid		-3.0				
Working Capital Facility						10.0
Series 9 Notes					-2.4	
Series 10 Notes						

## TABLE 36 MOVEMENT OF DEBT ASSUMED IN THE BREAKAWAY FINANCIAL MODEL

Source: Breakaway estimates

The Breakaway financial model assumes that the Series 9 convertible notes are repaid when they mature in April 2026 and the PPT debt is extended 12 months, to be repaid out of a working capital facility that we assume will be arranged to provide the working capital for the direct shipping ore business.

Subject to the sales terms to be negotiated, Nagambie may have to wait for three months before receiving payment for its shipments, hence the need for working capital.

## **Shareholder Structure**

TABLE 37 MAJOR SHAREHOLDERS

	Million	%
Kevin Perrin	151.4	18.8%
PPT Nominees	75.3	9.4%
Southern Cross Gold (SX2)	53.4	6.6%
Other directors	32.7	4.1%
Rest of Top 20	140.4	17.5%
Other	350.2	43.6%
Total Issued	803.3	100.0%

Source: NAG 2024 annual report and NAG releases 2 December 2024 and 20 January 2025

As the major shareholder, the chairman Kevin Perrin has a clear alignment of interest with the rest of the company's shareholders. This provides some comfort to shareholders given Nagambie is taking on debt from a company of which Mr Perrin is a consultant.

## TABLE 38 BOARD AND MANAGEMENT OWNERSHIP OF OPTIONS

Code	End Date	Strike A\$/sh	Trumbull	Perrin	Earle	Grillo	Colvin	Total
NAGO	26-Apr-25	0.0981	4.347	10.248	0.252	0.501	0.135	15.482
NAGAH	1-Dec-25	0.0981	4.000	2.000	2.000	2.000		10.000
NAGAAA	26-Nov-26	0.1106	4.000	1.000	4.000	2.000	2.000	13.000
NAGAI	25-Nov-27	0.0986	4.000	1.000	2.000	2.000	2.000	11.000
NAGAAC	4-Dec-28	0.0981	4.000	2.000	2.000	2.000	2.000	12.000
NAGAAD	28-Nov-29	0.1000						19.400
Total			20.347	16.248	10.252	8.501	6.135	61.482

Source: NAG 2024 annual report

Ownership of the options is dominated by the board and management.

### Mr Kevin Perrin - Non-Executive Chairman

Kevin Perrin is a Certified Practising Accountant (CPA). Since 1 July 2012, he has been a consultant to PPT Accounting after having been a partner in that business for over 40 years. PPT Accounting is a firm of CPA's located in Ballarat which conducts an accounting, taxation, audit and financial advisory practice.

He is also a consultant to PPT Financial Pty Ltd, having been a director and shareholder of that company for over 25 years. PPT Financial Pty Ltd is an independent investment advisory firm holding an Australian Financial Services Licence. Kevin was previously a director of the Company from 17 September 2010 to 30 June 2019, during which time he was the Deputy Chairman of the Board and the Chairman of the Audit and Compliance Committee.

#### Mr Michael Trumbull - Executive Director

Mike Trumbull has a degree in mining engineering (first class honours) from the university of Queensland and an MBA from Macquarie University. A Fellow of the Australian Institute of Mining and Metallurgy, he has over 40 years of broad mining industry experience with mines / subsidiaries of MIM, Renison, WMC, CRA, AMAX, Nicron, ACM and BCD Resources.

From 1983 to 1991, he played a senior executive role in expanding the Australian gold production assets of ACM Gold. From 1985 to 1987, he was Project Manager and then Resident Manager of the Westonia open pit gold mine and treatment plant in Western Australia. From 1987 to 1991, he was General Manager – Investments for the ACM Group.

From 1993 to 2011, he was a Director of the BCD Resources Group and was involved in the exploration, subsequent mine development and operation of the Beaconsfield underground gold mine in Tasmania. From 1993 to 2003, he was the sole Executive Director of BCD and, from 2003 to 2004, was the Managing Director.

#### Mr William Colvin - Non-Executive Director

Bill Colvin is both a Mining Engineer (BSc (Eng) Hons from the Royal School of Mines, London) and a Chartered Accountant (Institute Chartered Accountants of England & Wales). He worked as an auditor for Coopers & Lybrand in London and Sydney before commencing his executive mining career and has over 30 years of broad experience with mines / subsidiaries of RGC / Goldfields, MPI Mines / Leviathan Resources, Beaconsfield Gold / BCD Resources and currently Bayan Airag Exploration LLC.

With Goldfields, Bill had various senior executive roles before becoming General Manager of the Henty Gold Mine in Tasmania and then General Manager, Group Operations. With MPI, he was the General Manager of the Stawell Gold Mine in Victoria, where he transformed the operation from a closure mode to a sustainable future, producing over 800,000 ounces of gold. He was CEO for the BCD Resources group for six years and championed a unique remote mining method that enabled the Beaconsfield Gold Mine to resume operations following its high-profile closure in 2006.

As CEO for Bayan Airag, Bill supervised the permitting, construction and operational start-up of that company's 1 Mtpa gold-silver heap-leach mine in remote western Mongolia that faced difficult climatic, infrastructure and political challenges. The mine has been in continuous production since 2014 and the company is now advancing several other Mongolian copper-gold resources.

#### Mr Alfonso Grillo - Non-Executive Director and Company Secretary

Alfonso Grillo is a founding Partner at GrilloHiggins Lawyers. He holds a Bachelor of Arts and Bachelor of Law degree. Alfonso has over 20 years' experience as a corporate lawyer, including company meeting practice and corporate governance procedures, fundraising and fundraising documentation, ASX Listing Rules and mergers and acquisitions.

Alfonso advises resource industry companies in relation to mining and exploration projects, acquisition and divestment of assets, joint ventures and due diligence assessments.



## Mr James Earle - Chief Executive Officer

James Earle was appointed as Chief Executive Officer on 4 July 2016. He has a Bachelor of Engineering (Geological Engineering) from RMIT University, and Masters of Environmental Management (MEM) from UNSW and an MBA from the University of South Australia.

James has over 20 years of broad experience with permitting and approvals, project management, stakeholder engagement, environmental and rehabilitation management and the provision of strategic advice. The majority of his experience has been in public infrastructure development and site-based environmental management.

He has held positions with global engineering and environmental consultancies, and government departments in Australia and the UK, including GHD, Ramboll, and the Waterman Group. James has also lectured at the Australian National University (Crawford School of Public Policy - Resources, Environment and Development Program).



#### Analyst Verification

I, **Michael Harrowell**, as the Research Analyst, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

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Breakaway Research Pty Ltd (AFSL 503622) and its associates, or consultants may receive corporate advisory fees, consultancy fees and commissions on sale and purchase of the shares of **Nagambie Resources Limited** and may hold direct and indirect shares in the company. It has also received a commission on the preparation of this research note.

We acknowledge that at the date of this report Senior Resource Analyst, **Michael Harrowell**, holds no shares in **Nagambie Resources Limited**.

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