

**HIGHLIGHTS**

- ❖ The Nagambie Mine NAD005 and NAD006 diamond drill holes have further confirmed the new geological interpretation that the east-west-striking sedimentary beds that hosted the gold mineralisation in the East Pit are continuing to curve towards the south to the south west of the West Pit. NAD006 has extended the length of the mineralised Nagambie Mine Feeder Zone target to 1.3 km and NAD007 is being planned to intersect the Central Anticline another 0.5 km to the south west.
- ❖ The East and West Pits at the Nagambie Mine plus the Mine's crustal fluids Feeder Zone could extend for a total curved strike length of around 4.0 km. The total system therefore represents a very large Fosterville-style epizonal gold target.
- ❖ Mawson has drilled the first two deep diamond holes under Balaclava Hill within the Whroo JV Property. Assays should be received in February 2022.
- ❖ Golden Camel Mining (GCM) has progressed detailed design and tendered for the major procurement and supply packages for the construction of the gold toll treatment plant at the Nagambie Mine. International supply chain and equipment availability issues are being actively managed with plant commissioning now scheduled by GCM for the December 2022 quarter.
- ❖ Stage 1 of laboratory testwork for the bacterial recovery of gold in the Nagambie Mine heap leach pad has been successfully completed. Stage 2 is being planned by the Perth laboratory and Nagambie Resources will again seek funding from the Federal Government to assist with costs.
- ❖ Following extensive delays, the awarding of PASS Management contracts for the North East Link road tunnels by the Spark Consortium is now anticipated by Nagambie Resources to occur in the first half of CY2022.

**COMMENTARY**

Nagambie Resources' Executive Chairman, Mike Trumbull, commented: *"Encouraging progress achieved on gold exploration with the Nagambie Mine Feeder Zone target continuing to increase in size and Mawson Gold drilling the first two modern holes under historic Balaclava Hill, part of the Whroo JV. The Balaclava gold assays are eagerly awaited as good results could add significant value to our 3,000 sq km plus tenement package in the Melbourne Zone."*

*"Covid-induced supply chain issues are affecting GCM's gold treatment plant overall construction / commissioning schedule. Refurbishment of the ANI ball mill, a critical path activity, is on track."*

**NAGAMBIE RESOURCES**  
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*Oriented diamond drilling of Fosterville-style, structural-controlled, high grade sulphide-gold underground targets within the Waranga Domain tenements is being methodically carried out.*

*Nagambie Resources and Golden Camel Mining (GCM) have received approval for the construction and operation of a gold toll treatment facility at the Nagambie Mine. GCM will pay 100% of all construction and commissioning costs; thereafter all revenues and costs will be shared 50:50.*

*Underwater storage of sulphidic excavation material (PASS) in the two legacy gold pits at the Nagambie Mine is an excellent environmental fit with a major infrastructure project for Melbourne such as the North-East Link.*

*Recovery of residual gold from the 1990s heap leach pad using naturally-occurring bacteria is being investigated.*

*Mining and screening of sand and gravel deposits at the Nagambie Mine to produce sand and quartz aggregate products is also planned.*

**SHARES ON ISSUE**  
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**Board**  
Mike Trumbull (Exec Chairman)  
Bill Colvin (Director)  
Alfonso Grillo (Dir/Company Sec)  
James Earle CEO

**GOLD EXPLORATION**

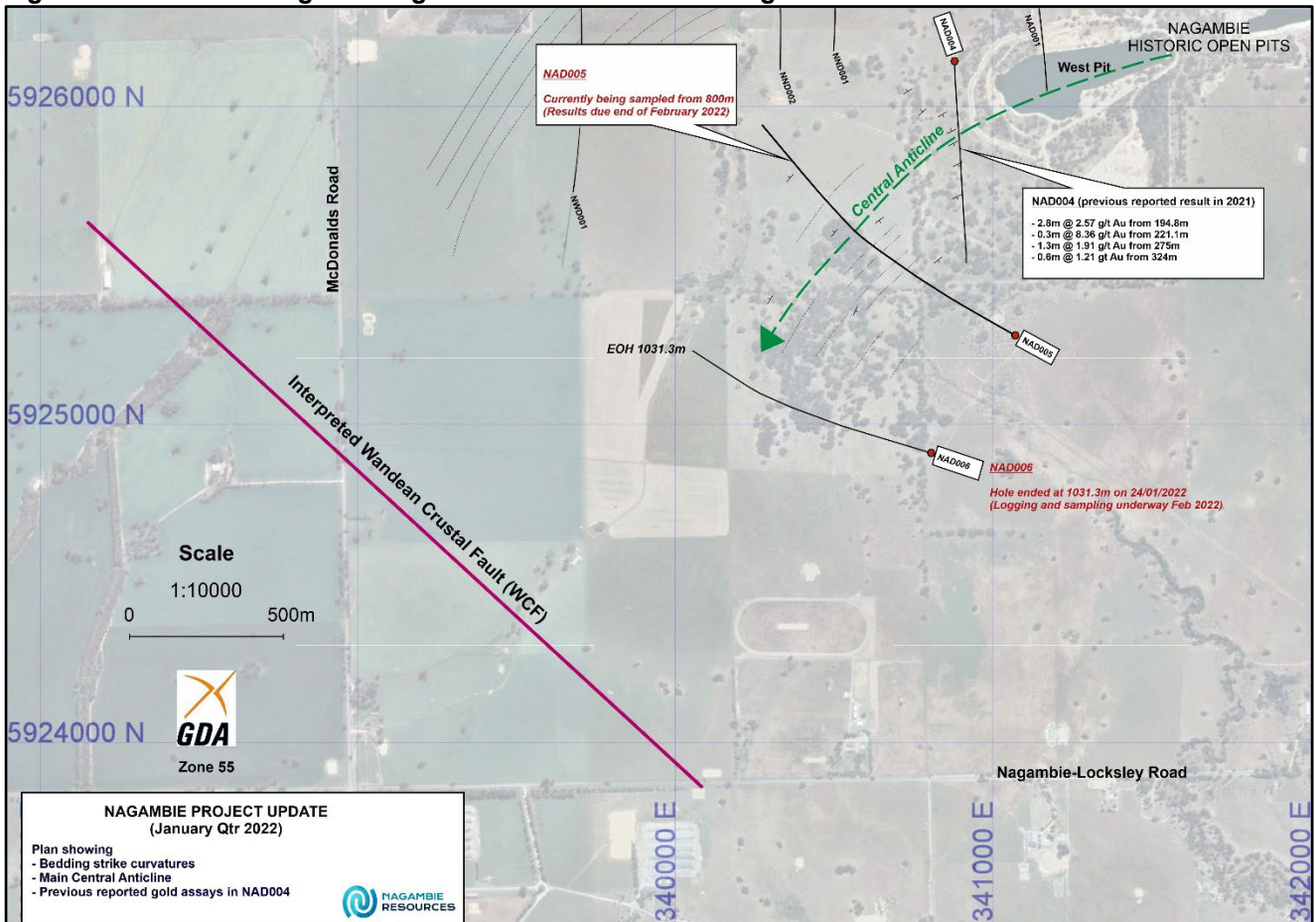
**Diamond Drilling of the Nagambie Mine Feeder Zone Target**

Drilling of NAD005 was completed during the quarter at 1,215m downhole (refer Figure 1). NAD006 was completed in late January 2022 at 1,031m downhole. Detailed logging of the sedimentary bedding strikes for the NAD004 and NAD005 holes, together with preliminary logging for NAD006, is continuing to indicate consistent parallel curvature to the south west of the Nagambie Mine bedding towards the re-interpreted position of the Wandean Crustal Fault (WCF).

NAD006 has extended the known length of the Nagambie Mine Feeder Zone sulphide-gold target to around 1.3 km to the south west of the West Pit. The interpreted WCF is around 1.0 km to the south west of NAD006, indicating that the Feeder Zone target could be around 2.3 km in total length. NAD007 is being planned to intersect the Central Anticline between NAD006 and the interpreted WCF.

The distance between the western end of the West Pit and the eastern end of the East Pit is approximately 1.75 km. The new geological interpretation for the Nagambie Mine indicates that the mineralising hydrothermal crustal fluids initially flowed roughly north east from the WCF, before curving to the east, along the available fluid pathways to the east end of the East Pit, a total distance now estimated to be around 4.05 km. At say 4 km in length, the Nagambie Mine plus its' crustal fluids Feeder Zone target represents a very large Fosterville-style epizonal gold system. The total depth of the gold system below the Murray Basin unconsolidated sediments could be of the order of 4 km or more based on deep seismic work carried out by the Victorian Government.

**Figure 1 Plan showing Bedding Strike Curvature in the Nagambie Mine West Area**



**Redcastle and Whroo Joint Ventures with Mawson Gold**

Mawson Gold Limited (TSX: MAW) currently manages gold exploration within the Redcastle and Whroo JV Properties of 75 sq km and 199 sq km respectively.

### Balaclava Hill, Whroo JV Property

During the quarter, Mawson announced the commencement of the first of two planned deep diamond holes under the Balaclava open pit from which 23,600 ounces of gold were extracted during the 1800s. Assays should be received by Mawson in February 2022.

Under its' option agreement for the Whroo JV Property, Mawson has now paid \$100,000 cash to Nagambie Resources Limited ("NRL") and spent its' first year exploration commitment of \$400,000 to earn 0% interest in the Property. Mawson now has the option to expend a further \$2.25M, a cumulative \$2.75M (exploration expenditure plus cash to NRL), to earn a 60% interest in the Whroo JV Property. When Mawson has earned that 60% interest, NRL has the option to call for the formation of a 60:40 Mawson:NRL Joint Venture. If NRL does not exercise that 60:40 option, Mawson then has two options: (1) to call for the formation of a 60:40 Joint Venture; or (2) to spend an additional \$1.5M (a cumulative \$4.25M of JV expenditure and cash to NRL) to earn a 70% interest in the Whroo JV Property, leading to the formation of a 70:30 Mawson:NRL Joint Venture.

### Gold Tenements

The Company's tenements as at 31 December 2021, totalling 3,334.5 sq km, are listed in Table 1 and their general location in central Victoria is shown in Figure 2.

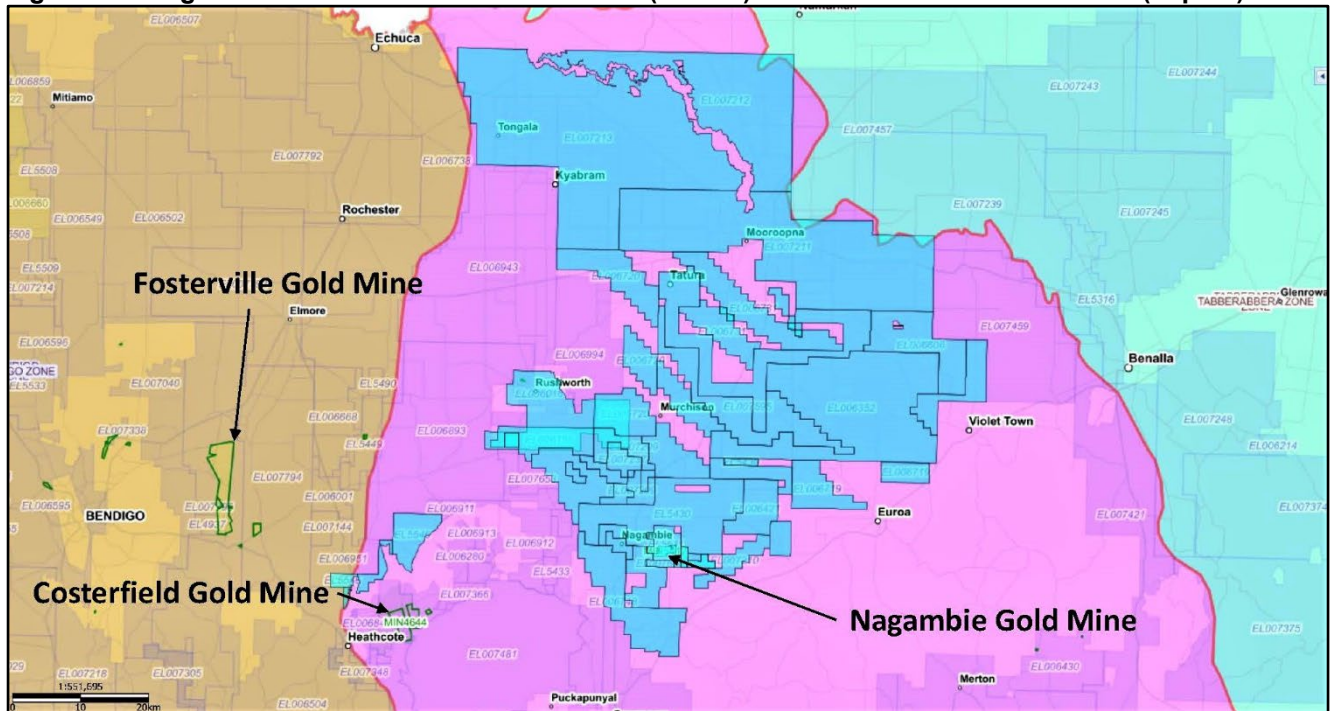
**Table 1 Nagambie Resources Tenements as at 31 December 2021**

Tenement Number	Tenement Name	sq km
MIN 5412	<b>Nagambie Mining Licence</b>	<b>3.5</b>
EL 5430	Bunganail Exploration Licence	160.0
EL 5511	Nagambie Central Exploration Licence	21.0
EL 6158	Rushworth Exploration Licence	46.0
EL 6212	Reedy Lake North Exploration Licence	17.0
EL 6352	Miepoll Exploration Licence	342.0
EL 6421	Pranjip Exploration Licence	45.0
EL 6508	Tabilk Exploration Licence	33.0
EL 6606	Gowangardie Exploration Licence	88.0
EL 6719	Euroa Exploration Licence	81.0
EL 6720	Tatura Exploration Licence	145.0
EL 6731	Arcadia Exploration Licence	218.0
EL 6748	Waranga Exploration Licence	102.0
EL 6937	Nagambie East Exploration Licence	2.0
EL 6877	Nagambie Exploration Licence	8.0
EL 7205	Angustown Exploration Licence	49.0
EL 7207	Arcadia Exploration Licence	156.0
EL 7208	Cullens Road Exploration Licence	29.0
EL 7209	Goulburn West Exploration Licence	34.0
EL 7210	Locksley Exploration Licence	26.0
EL 7211	Shepparton Exploration Licence	444.0
EL 7212	Shepparton North Exploration Licence	321.0
ELA 7213	Pederick Exploration Licence Application	683.0
EL 7237	Kirwans North (1) Exploration Licence	20.0
EL 7238	Kirwans North (2) Exploration Licence	9.0
EL 7264	Resource Recovery Exploration Licence	1.0
ELA 7265	Nagambie Town Exploration Licence Application	8.0
EL 7594	Miepoll East Exploration Licence	47.0
ELA 7595	Miepoll West Exploration Licence Application	113.0
ELA 7690	Nagambie South Exploration Licence Application	4.0
RL 2019	Doctors Gully Retention Licence	4.0
<b>Total Waranga Domain</b>		<b>3,259.5</b>
EL 5546	Redcastle Exploration Licence	51.0
EL 7498	Cornella Exploration Licence	19.0
EL 7499	Sheoak Exploration Licence	5.0
<b>Total</b>		<b>3,334.5</b>

All the Nagambie Resources’ tenements lie within the Melbourne Zone which is considered to be highly prospective for epizonal Fosterville-style mineralisation – the best-known examples of this style being the Fosterville, Costerfield and Nagambie Gold Mines (refer Figure 2). These epizonal gold-stibnite deposits which occur in Victoria within the Melbourne Zone, and importantly the eastern-most portion of the Bendigo Zone immediately to the west, were deposited circa 70 million years more recently than the older mesozonal gold-quartz deposits such as Bendigo, Ballarat and Stawell. The Fosterville-style epizonal deposits are all underlain by the Proterozoic-aged Selwyn Block, thought to be the source of mineralised hydrothermal fluids, including antimony, that moved up deep crustal faults.

The only other tenement holders of size in the northern portion of the Melbourne Zone, apart from Nagambie Resources which has the largest holding, are Falcon Metals (previously Chalice Gold Mines) and Newmont.

**Figure 2 Nagambie Resources’ Gold Tenements (in blue) all within the Melbourne Zone (in pink)**



**NAGAMBIE MINE GOLD TOLL TREATMENT PLANT**

During the quarter, NRL and GCM signed a comprehensive Joint Venture (“JV”) Agreement (“JVA”).

Principal terms of the JVA include:

- ❖ For the initial treatment plant with a nominal capacity of 180,000 tonnes of ore per annum, GCM will pay for all the procurement, construction and commissioning costs and pay for the first fill of all consumables. GCM 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 NRL and GCM;
- ❖ All future plant expansions and gold recovery improvements will be paid for 50:50 by NRL and GCM;
- ❖ GCM will be the Manager of the JV with NRL and GCM 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 GCM’s 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; and
- ❖ If NRL 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 NRL’s account.

## **Construction**

During the quarter, detailed design and plant layout drawings were advanced and the various procurement packages were tendered by GCM. Refurbishment of the ANI (Australian National Industries) ball mill was commenced (refer Photo 1).

Supply chain issues due to the world Covid pandemic is limiting the availability of some of the tendered components. GCM is actively managing the procurement issues and are anticipating a delay to construction / commissioning of several months, with plant commissioning now scheduled in the December 2022 quarter.

**Photo 1 Refurbishment of the ANI Ball Mill (in foreground) underway for the Gold Toll Treatment Plant**



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

During the quarter, Project Tasks 3 and 4 for Stage 1 were completed by the Perth laboratory.

Task 3 involved laboratory-scale flask tests to evaluate the potential to bioleach gold from the heap leach tailings using iodide-oxidising bacteria sourced from an external culture collection. The bioleaching experiments were carried out under various conditions to determine the suitability of mine water as a leaching medium and the need for microbial inoculum with different nutrient additions. The results showed that the highest soluble gold concentrations and leaching yields at the end of the 21-day experiment were detected in those flasks where mine water was used and iodide, carbon, nitrogen and phosphorous were added.

Task 4 involved evaluating the potential for arsenic stabilisation through sulphide formation in laboratory-scale batch flasks using mine water and heap leach tailings. The effect of inoculation with sulphate reducing enrichment culture, organic carbon, nutrient and iron addition was evaluated. The results indicated that iron amendment alone was sufficient to stabilise the tailings and decrease arsenic solubilisation under anaerobic conditions. The results also showed that the presence of microbial inoculum and lactate supplementation appeared to promote arsenic solubilisation.

The Perth laboratory will shortly provide Nagambie Resources with a final report detailing the results and conclusions of the Stage 1 Bioleaching Project. The final report will also contain recommendations for progressing the Gold Bioleaching Project in Stage 2. Nagambie Resources, together with joint venture partner Golden Camel Mining, will again seek funding from the Federal Government to assist with the costs of Stage 2.

## **PASS MANAGEMENT PROJECT**

Following the close of tenders in May 2020, the Spark consortium was announced as the Preferred Bidder for the construction of the North East Link Project (“NELP”) in June 2021. The signing of Financial Close documentation by the State and the Spark consortium, that would allow the finalisation of Spark subcontracts and the physical commencement of the project, is now anticipated by Nagambie Resources to occur in the first half of CY2022.

The NELP will require the management of over five million tonnes of PASS rock to be excavated by two large tunnel boring machines (TBMs). The Spark consortium TBM PASS material produced will be very wet due to the amount of water and drilling additives required during the boring process. This will make the material problematic for “Liming” Management - where lime is added to react with the sulphuric acid produced when the pyrite in the PASS oxidises when exposed to air. The Spark consortium has been progressively engaging with Nagambie Resources for more specific technical and pricing information regarding “Underwater Storage” PASS Management at the Nagambie Mine and Nagambie Resources continues to be confident of being able to secure a significant contract.

## **CORPORATE**

### **Cash**

At 31 December 2021, total cash held by the group was \$190,000.

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

At 30 September 2021, Nagambie Resources held 6.825 million MAW shares which had a total market value of \$1,292,000. During the December quarter, 4.3 million MAW shares were sold for \$800,000 and at 31 December 2021, the remaining 2.525 million MAW shares had a market value of \$506,000.

Under the agreements with Mawson Gold, Nagambie Resources could sell these remaining 2.525 million MAW shares during the March 2022 quarter.

### **2022 SPP**

On 25 January 2022, the Company announced that it was inviting eligible shareholders to participate in the 2022 Share Purchase Plan (“SPP”). The SPP entitles shareholders to purchase between \$1,000 and \$30,000 worth of shares at a discount to market with no associated brokerage costs.

The volume weighted average price for Nagambie Resources’ shares on the ASX, over the five days in which Nagambie Resources’ shares traded prior to the SPP being announced, was 6.32 cents. The SPP offer price of 5.3 cents therefore represents a discount of 16.1% to that price. It also represents a 15.9% discount to the last traded price prior to the SPP being announced of 6.3 cents.

All the directors of Nagambie Resources intend to take up their maximum entitlement for new shares under the SPP of \$30,000 each.

The SPP closes on 24 February 2022 and is currently uncapped apart from the ASX requirement that no more than 30% of the currently issued shares (499.9 million shares) can be issued (that is, 150.0 million shares, equating to a \$7.95 million SPP take up at 5.3 cents per share). The Company will monitor the progress of the SPP and, in the unlikely event that it is required, has reserved the right to cap the SPP at a lower take up of \$2.0 million (equating to 37.7 million SPP shares or 7.5% of the currently issued shares).

### **Related Party Payments**

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

By the order of the Board.



James Earle  
Chief Executive Officer

#### **STATEMENT AS TO COMPETENCY**

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

#### **FORWARD-LOOKING STATEMENTS**

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