

## **DECEMBER 2017 QUARTERLY REPORT**

#### **HIGHLIGHTS**

- Ground IP (Induced Polarisation) geophysical readings at the Nagambie Mine have been completed and analysis is pending. IP readings at the Racecourse Prospect, 2 km to the north of the Nagambie Mine, are underway. The IP results will hopefully indicate better mineralised splays as sulphide-gold drill targets and indicate increasing sulphide mineralisation with depth.
- The Mining Licence at the Nagambie Mine, MIN 5412, has been renewed by Earth Resources Regulation and next comes up for renewal in 13 years' time in January 2031.
- 3) The first Astec GT205S Multi-Frequency Mobile Tracked Screening Plant was delivered to site and commissioned in mid January 2018. Made in the USA, it is the first unit imported into Australia. Nagambie Resources is considering the purchase of a second unit.
- 4) Four sizes of aggregates (7mm, 10mm, 14mm and 20mm) and a coarse sand (plus 0.5mm, minus 2.5mm) can be produced from over 5 million tonnes of mine tailings, together with the fines (minus 0.5mm) containing residual gold. There are also over 7 million tonnes of overburden material at the Nagambie Mine that can be screened into coarse aggregates, 20mm road gravel and crusher dust.
- 5) The Company placed 18,000,000 Series 6 unsecured convertible notes with a face value of \$0.10 during the quarter, raising \$1.8 million. When the price of 10.0 cents was set, the ASX trading price for the fully paid ordinary shares was 6.5 cents, meaning that the issue price for the notes was set at a 54% premium to the share price.
- 6) Geoff Turner, who joined the Board as a Non-Executive Director 10 years ago in December 2007, chose to retire at the 2017 AGM. Geoff is continuing to provide services to the Company as a consultant in respect of the overall direction of gold exploration. Alfonso Grillo was elected as a Non-Executive Director at the AGM. Alfonso has been the Company Secretary for Nagambie Resources since its formation in 2005.

#### **COMMENTARY**

Nagambie Resources' Chairman, Mike Trumbull said: "Results of the first *IP* testing for deep sulphide-gold mineralisation under the oxide gold at the Nagambie Mine and the Racecourse Prospect are eagerly awaited. The *IP* at the Nagambie Mine is the most promising exploration carried out at the mine since the 1990s while the green fields *IP* at Racecourse, if successful, would prove *IP*'s cost effectiveness in rapidly delineating high-grade gold targets.

"The first Astec mobile, multi-frequency screening unit from the US has been commissioned on site and is performing very well.

"Having MIN 5412 renewed for 13 years to January 2031 is excellent news given the various plans we have for the mine site."

#### 25 JANUARY 2018

#### **NAGAMBIE RESOURCES**

The discovery and development of shallow, open-pit and heap-leachable oxide-gold deposits is being methodically advanced. Exploration for high grade sulphide-gold underground deposits has been expedited following spectacular results at the geologically-similar Fosterville Mine to the west.

Underwater storage of sulphidic excavation material (PASS) in the two legacy gold pits at the Nagambie Mine is an excellent environmental fit with major infrastructure projects for Melbourne such as Metro Rail, North-East Link and East-West Link.

Recycling of the overburden and tailings dumps can produce sand and aggregates for concrete, road base material and road gravel.

Quarrying and screening of sand deposits at the mine to produce various sand and quartz aggregate products is planned.

The first landfill site is planned to take advantage of the 17 Ha of engineered black plastic under the mine tailings pad.

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#### Board

Mike Trumbull (Exec Chairman) Kevin Perrin (Finance Director) Alfonso Grillo (Dir/Company Sec)

James Earle CEO

#### **GOLD EXPLORATION**

#### IP Surveys at the Nagambie Mine and Racecourse Prospect

Following the spectacular exploration and production results at the Fosterville Mine, 60 km to the west of Nagambie, Nagambie Resources expanded its exploration strategy to test for high-grade, sulphide-gold deposits beneath known oxide mineralisation. As a first step, comprehensive Induced Polarisation (IP) programs, looking to depths of 400 metres to 500 metres below the known antimony-arsenic-associated oxide gold mineralisation, are being carried out at both the Nagambie Mine and the Racecourse Prospect, which is two kilometres to the north of the mine.

The ground work at the Nagambie Mine has been completed and the geophysical team has commenced the ground work at the Racecourse Prospect. The results for the IP survey at the Nagambie Mine are now being prepared for the Company by the geophysical consultant. Nagambie Resources will make an ASX announcement as soon as full analysis is to hand.



Photo 1 IP Survey – Insulated Wire Crossing the East Pit at Water Level on a North-South Line

The Nagambie Mine has been drill tested to only 150 metres below the pit floors. As the gold is known to be associated with sulphides such as stibnite (antimony), arsenopyrite (arsenic) and pyrite (iron), defining anomalous sulphides at depth with IP will target mineralised splays for drilling.

Better sulphide-gold intersections obtained from the relatively shallow diamond drilling carried out at the Nagambie Mine during the 2006/2007 year included: 26.7 metres at 5.0 g/t gold from 110 metres downhole

in hole NRP02; 15m at 2.1 g/t from 80m in NRP11; 12m at 3.6 g/t from 110m in NRP18; and 10m at 2.7 g/t from 139m in NRP20. The drilling was conducted without the assistance of any geophysics to guide the design of that program. In the light of that and the shallow depth of the sulphide-gold drilling, the better drill intersections obtained are considered very encouraging.

The hope is that sulphide-gold grades at the Nagambie Mine increase with depth as they do at the highgrade Fosterville Gold Mine. The IP results will hopefully indicate better mineralised splays as drill targets and indicate increasing sulphide mineralisation with depth.

#### Gowangardie Exploration Licence Granted, Nagambie Project now totals over 1,150 Sq Km

Exploration Licence EL 6606, Gowangardie, 120 sq km in area and adjoining the Miepoll EL, was granted on 5 January 2018. This grant brings the total area of Nagambie Resources' exploration licences in the Nagambie region to 1,157 sq km. The primary target within the Nagambie Project (refer Figure 1) is antimony-arsenic-associated gold in sediments, both sulphide and overlying surface oxidised mineralisation.

Since discovering Wandean in 2014, and especially since the early bonanza-grade gold intersections at Fosterville became known in 2016, the Company has patiently and methodically increased the total area held under exploration licences in the Nagambie area, both as tenements were dropped by other explorers and as field reconnaissance identified additional east-west structures in the region.





# Fosterville, Lockington and Nagambie all Geologically Similar

Fosterville is 20 km east of Bendigo, 45 km south of Lockington and 60 km west of Nagambie (refer Figure 1). The Fosterville Mine, the Lockington Deposit and the Nagambie Mine are all antimony-arsenicassociated, gold-in-sediments (silicified sandstones and siltstones) deposits formed at the same geological time (around 376 to 377 million years ago). They are very different from the traditional Victorian nuggetty gold-in-quartz-veins deposits such as the Bendigo and Ballarat mines (formed around 420 to 440 million years ago). The Victorian Government intends to put the Lockington tenements (Gold Fields explored them from 2004 to 2007, followed by Timpetra Resources who stopped exploring in 2012) out to tender in the

future and, when they do, Nagambie Resources considers that there will be intense competition for them from Australian and overseas gold majors.

#### NAGAMBIE MINE MINING LICENCE MIN 5412

MIN 5412, first granted in 1989, has been renewed by Earth Resources Regulation and next comes up for renewal in 13 years' time in January 2031.

#### **GOLD TENEMENT CHANGES**

Nagambie Resources group tenements as at 31 December 2017 are shown in Appendix 1 (plan and table).

EL6606 (Gowangardie) of 120.0 sq km was applied for during the quarter.

#### PASS PROJECT

PASS stands for **P**otential **A**cid **S**ulphate **S**oil (or silt or rock). PASS occurs naturally in an anaerobic state below the water table. It is soil, silt or rock containing sulphidic material, principally pyrite (iron sulphide). It is free of any anthropogenic (human made) contamination. PASS is not contaminated soil, nor is it toxic. PASS only becomes a problem when it is excavated from below the water table and exposed to the air for a significant period of time. If excavated PASS is stored above the water table and not thoroughly mixed with sufficient lime, the pyrite will oxidise over time into sulphuric acid and sulphates, resulting in acid drainage.

Underwater storage is the most preferred solution for Melbourne PASS as it prevents the oxidation of the pyrite in the material. The water in the two Nagambie Mine open pits is naturally saline and alkaline, making it ideal for PASS management. Total PASS storage capacity at the site is approximately 6.0 million tonnes, of which 2.5 million tonnes in the West Pit is already fully developed.

Actual developed PASS storage at alternative sites in Melbourne, whether utilising lime treatment or underwater storage, appears to be small by comparison.

#### Future PASS Tenders

Nagambie Resources remains very confident of being awarded large tonnages of PASS management in the tenders to come for major infrastructure projects in Melbourne. Continuously-operated tunnel boring machines (TBMs) are typically used for major infrastructure projects and the PASS generated by them requires uninterrupted handling, transport and management.

The major infrastructure projects that will be of particular interest to Nagambie Resources for PASS Management will be the main Melbourne Metro Rail Project (MMRP), the West Gate Tunnel Project (WGTP), the North East Link Project (NELP) and the East West Link Project (EWLP). The EWLP is recommended by Infrastructure Australia, Infrastructure Victoria and the Victorian Opposition who have committed to fast tracking it if they win the Victorian election in November 2018.

The Environmental Effects Statement (EES) for the MMRP indicates that total tunnel PASS to be managed will be around 1.3 million tonnes. The EES for the WGTP indicates PASS of 0.2 million tonnes. The tonnage of PASS in the NELP tunnels will be indicated in the EES for that project, which is expected to be released during CY2018. The timing and extent of tunnelling for the EWLP is unknown at this stage but the original project involved over 2.0 million tonnes of PASS material.

Previous media reports had indicated that tunnelling for the MMRP and the WGTP would both commence early in CY2018. The State Government has recently announced the ordering of two large TBMs for the WGTP and are expected to shortly announce the ordering of four large TBMs for the MMRP. As it typically takes around 15 months to build overseas, test, ship to Australia and position below ground a large TBM, Nagambie Resources expects that tunnel PASS from these two projects will not require storage and management until the second or third quarters of CY2019.

#### QUARRYING

#### Dry Screening of Overburden Dumps to Produce Coarse Aggregates and Road Gravel

Photo 2 shows the Company's first Astec GT205S Multi-Frequency Mobile Tracked Screening Plant undergoing commissioning in mid January 2018. Made in the USA, it is the first unit imported into Australia. The commissioning is now successfully complete and Nagambie Resources is considering the purchase of a second unit.

There are over 7 million tonnes of overburden material at the Nagambie Mine that could be screened into coarse aggregates, 20mm road gravel and crusher dust.

#### Dry Screening of Mine Tailings to Produce Aggregates and Rock Sand for Concrete Manufacture

Two Astec units in series are planned to screen the mine tailings, totalling over 5 million tonnes.

Four sizes of aggregates (7mm, 10mm, 14mm and 20mm) and a coarse sand (plus 0.5mm, minus 2.5mm) will be produced for sale to concrete manufacturers in regional Victoria and Melbourne. The market for concrete aggregates and sand of consistent quality and reliable long-term supply is strong because of the accelerated infrastructure work being carried out in the CBD and outer reaches of Melbourne.

#### Photo 2 Drone View of the Mobile Screen being Commissioned at the Nagambie Mine

30 tonne excavator loading the hopper which has a 150mm grizzly. Product stockpiles are: Coarse (40mm aggregates), nearest to camera; Medium (20mm gravel), furthest from camera; and Fines (crusher dust), furthest from excavator.

The fine material, minus 0.5mm, will be stockpiled separately and will be regularly sampled and assayed for gold content. Nagambie Resources considers that the fines may well have been over-represented in impermeable zones that formed on the pad during the 1990s heap leaching, and thus be higher in gold content. The fines would only need to be re-agglomerated before being heap leached again to recover residual gold.

#### CORPORATE

#### Cash

At 31 December 2017, total cash held by the group was \$1,789,000 with \$1,000,000 remaining undrawn under the two-year Unsecured Loan Facility.

#### **\$1.8 Million Convertible Notes Raising**

The Company placed 18,000,000 Series 6 unsecured convertible notes with a face value of \$0.10 during the quarter. When the price of 10.0 cents was set, the ASX trading price for the fully paid ordinary shares was 6.5 cents. That is, the issue price for the notes was set at a 54% premium to the share price.

Principal terms for the Series 6 unsecured convertible notes include:

- Issue price of 10.0 cents per note;
- 5-year term;
- 10% per annum interest rate payable every 6 months;
- Notes are convertible at any time within the 5-year term at the option of the noteholder into Nagambie Resources fully-paid ordinary shares on a 1 for 1 basis; and
- Notes are redeemable at 10.0 cents per note after 5 years if not previously converted.

# Retirement of Geoff Turner as a Director, Appointment of Alfonso Grillo and Engagement of Rod Boucher

Geoff Turner, who joined the Board as a Non-Executive Director in December 2007, chose to retire at the 2017 AGM. Geoff is continuing to provide services to the Company as a consultant in respect of the overall direction of its' gold exploration. The most relevant exploration successes under Geoff's direction include the discovery of antimony-arsenic-associated gold mineralisation under thick Murray Basin cover at Lockington for Gold Fields Limited and, most recently, the discovery of antimony-arsenic-associated gold mineralisation at Wandean, 9 km north-west of the Nagambie Mine. Geoff had previously consulted to Perseverance at the Fosterville Mine as they explored for sulphide gold mineralisation. The comprehensive Nagambie regional gold model that Geoff developed has led to Nagambie Resources pegging over 1,150 sq km of exploration licences covering all the outcropping and near-outcropping ground, incorporating all the known oxide gold occurrences, in the highly-prospective Waranga Domain of the Melbourne Zone.

Dr Rod Boucher has been engaged to provide geological services to the company. Rod previously consulted for 6 years from 2001 at the Fosterville Gold Mine during the early sulphide-gold drilling under the open pits. He has also worked with Geoff Turner on various projects previously and Nagambie Resources will benefit greatly from their combined experience with antimony-arsenic-associated gold mineralisation in central Victoria.

Alfonso Grillo was elected as a Non-Executive Director at the 2017 AGM. Alfonso has been the Company Secretary for Nagambie Resources (initially Panaegis Gold Mines) since its formation in 2005. He is a Partner at GrilloHiggins Lawyers and specialises in energy and resources and equity capital markets. Alfonso has extensive experience in corporate governance, capital raising, ASX compliance, mergers and acquisitions, due diligence assessments and asset acquisition and divestment.

James Earle Chief Executive Officer

### STATEMENT AS TO COMPETENCY

The Exploration Results in this report have been compiled by Dr Rod Boucher, who has a PhD in Geology, is a Member and RPGeo of the Australian Institute of Geoscientists, is a Member of the Australian Institute of Mining and Metallurgy, has more than ten years in the estimation, assessment, and evaluation of mineral resources and ore reserves, and has more than 20 years in exploration for the relevant style of mineralisation that is being reported. In these regards, Rod Boucher qualifies as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Rod Boucher is a consultant for Nagambie Resources Limited and 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 Mining 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.

### **APPENDIX 1**



Nagambie Resources Group Tenements as at 31 December 2017

# APPENDIX 1 (Continued)

Tenement Number	Tenement Name	sq.km
MIN 5412	Nagambie Mining Licence	3.6
EL 5430	Bunganail Exploration Licence	182.0
EL 5511	Nagambie Exploration Licence	27.9
EL 5536	Wandean North Exploration Licence	48.0
EL 6212	Reedy Lake North Exploration Licence	41.0
EL 6158	Rushworth Exploration Licence	56.0
RL 2019	Doctors Gully Retention Licence	4.0
EL 6352	Miepoll Exploration Licence	455.8
EL 6421	Pranjip Exploration Licence	138.7
EL 6508	Tabilk Exploration Licence Application	84.0
ELA 6606	Gowangardie	120.0
		1,157.4
EL 6163	Clonbinane South Exploration Licence	78.2
RL 6040	Clonbinane Retention Licence	3.0
EL 5546	Redcastle Exploration Licence	53.7
		1,295.9

### Nagambie Resources Group Tenements as at 31 December 2017